DISIS-2016-001

Definitive Interconnection System Impact Study Report

Published on 2/28/2017

By SPP Generator Interconnections Dept.

REVISION HISTORY

DATE OR VERSION NUMBER	AUTHOR	CHANGE DESCRIPTION	COMMENTS
1/31/2017	SPP	Initial report issued.	Stability analysis has not been completed yet for groups 2, 6, 8, 9, & 16
2/8/2017	SPP	Report re-issued.	Added stand-alone results for all groups except 9, 15, and 16; stability results for groups 6 and 8. Final stand-alone and stability results are expected to be posted by Feb. 28, 2017.
2/28/2017	SPP	Report re-issued.	Reposted to include final revision 0 results

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1 INTRODUCTION

Pursuant to the Southwest Power Pool (SPP) Open Access Transmission Tariff (OATT), SPP has conducted this Definitive Interconnection System Impact Study (DISIS) for generation interconnection requests received during the DISIS Queue Cluster Window which closed on March 31, 2016. The customers will be referred to in this study as the DISIS Interconnection Customers. This DISIS analyzes the impact of interconnecting new generation totaling 11,305.6 MW to the SPP Transmission System. The interconnecting SPP Transmission Owners include:

- American Electric Power West (AEPW)
- Basin Electric Power Cooperative (BPEC)
- Empire District Electric (EMDE)
- Kansas City Power and Light\KCP&L Greater Missouri Operations (KCPL)
- Midwest Energy (MIDW)
- Nebraska Public Power District (NPPD)
- Oklahoma Gas and Electric (OKGE)
- Southwestern Public Service (SPS)
- Sunflower Electric Power Corporation\Mid-Kansas Electric Company (SUNC\MKEC)
- Western Area Power Administration (WAPA)
- Westar Energy, Inc. (WERE)
- Western Farmers Electric Cooperative (WFEC)

The generation interconnection requests included in this System Impact Study are listed in Appendix A by queue number, amount, requested interconnection service type, area, requested interconnection point, proposed interconnection point, and the requested in-service date[1]. A separate analysis for each Interconnection Request for "Stand-Alone" operation has also been performed. This study represents the "Stand-Alone" analysis for remaining Interconnection Requests in the DISIS-2015-002 analysis including higher queued projects and assigned upgrades.

The primary objective of this DISIS is to identify the system constraints, transient instabilities, and over-dutied equipment associated with connecting the generation to the area transmission system. The Impact Study and other subsequent Interconnection Studies are designed to identify required Transmission Owner Interconnection Facilities, Network Upgrades and other Direct Assignment Facilities needed to inject power into the grid at each specific point of interconnection.

[1] The generation interconnection requests in-service dates may need to be deferred based on the required lead time for the Network Upgrades necessary. The Interconnection Customers that proceed to the Facility Study will be provided a new in-service date based on the completion of the Facility Study or as otherwise provided for in the GIP.

2 MODEL DEVELOPMENT (STUDY ASSUMPTIONS)

2.1 INTERCONNECTION REQUESTS INCLUDED IN THE CLUSTER

This DISIS includes all interconnection requests that were submitted during the DISIS Queue Cluster Window that met all of the requirements of the Generator Interconnection Procedures (GIP) that were in effect at the time this study commenced. Appendix A lists the interconnection requests that are included in this study.

2.2 AFFECTED SYSTEM INTERCONNECTION REQUEST

Affected System Interconnection Requests included in this study are listed in Appendix A with the "ASGI" prefix. Affected System Interconnection Requests were only studied in "cluster" scenarios.

2.3 PREVIOUSLY QUEUED INTERCONNECTION REQUESTS

The previous-queued requests included in this study are listed in Appendix B. In addition to the Base Case Upgrades, the previous-queued requests and associated upgrades were assumed to be in-service and added to the Base Case models. These requests were dispatched as Energy Resource Interconnection Service (ERIS) resources with equal distribution across the SPP footprint. Prior-queued requests that requested Network Resource Interconnection Service (NRIS) were also dispatched in separate NRIS scenarios sinking into the area of the interconnecting transmission owner.

2.4 DEVELOPMENT OF BASE CASES

2.4.1 POWER FLOW

The power flow models used for this study are based on the 2015-series Integrated Transmission Planning models used for the 2016 ITP-Near Term analysis. These models include:

- Year 1 2016 winter peak (16WP)
- Year 2 2017 spring (17G)
- Year 2 2017 summer peak (17SP)
- Year 5 2020 summer (20SP)
- Year 5 2020 winter peak (20WP)
- Year 10 2025 summer peak (25SP)

2.4.2 DYNAMIC STABILITY

The dynamic stability models used for this study are based on the 2015-series SPP Model Development Working Group (MDWG) Models. These models include:

- Year 1 2016 winter peak (16WP)
- Year 2 2017 summer peak (17SP)
- Year 5 2020 summer (20SP) (groups 6 & 15 only)
- Year 5 2020 winter peak (20WP) (groups 6 & 15 only)
- Year 10 2025 summer peak (25SP)

2.4.3 SHORT CIRCUIT

The Year 2 and Year 10 dynamic stability summer peak models were used for short-circuit analysis.

2.4.4 BASE CASE UPGRADES

The facilities listed in the table below are part of the current SPP Transmission Expansion Plan, the Balanced Portfolio, or recently approved Priority Projects. These facilities have an approved Notification to Construct (NTC) or are in construction stages and were assumed to be in-service at the time of dispatch and added to the base case models. The DISIS Interconnection Customers have not been assigned advancement costs for the projects listed below.

The DISIS Interconnection Customers' Generation Facilities in-service dates may need to be delayed until the completion of the following upgrades. In some cases, the in-service date is beyond the allowable time a customer can delay. In this case, the Interconnection Customer may move forward with Limited Operation or remain in the DISIS Queue for additional study cycles. If, for some reason, construction on these projects is discontinued, additional restudies will be needed to determine the interconnection needs of the DISIS Interconnection Customers.

SPP Notification to Construct (NTC) ID	Project Owner	Upgrade Name	Estimated Date of Upgrade Completion (EOC)
200223	OGE	Tatonga - Woodward District EHV 345 kV Ckt 2	7/1/2018
200223	OGE	Matthewson - Tatonga 345 kV Ckt 2	7/1/2018
200240	OGE	Chisholm - Gracemont 345 kV Ckt 1 (OGE)	3/1/2018
200255	AEP	Chisholm - Gracemont 345kV Ckt 1 (AEP)	3/1/2018
200255	AEP	Chisholm 345/230 kV Substation	3/1/2018
200255	AEP	Chisholm 230 kV	3/1/2018
200360	SPS	IMC #1 Tap - Livingston Ridge 115 kV Ckt 1 Rebuild	11/16/2018
200360	SPS	Intrepid West - Potash Junction 115 kV Ckt 1 Rebuild	11/16/2018
200360	SPS	IMC #1 Tap - Intrepid West 115 kV Ckt 1 Rebuild	11/16/2018
200360	SPS	Cardinal - Targa 115 kV Ckt 1 Rebuild	5/31/2018
200360	SPS	National Enrichment Plant - Targa 115 kV Ckt 1	8/15/2017
200391	OGE	DeGrasse 345 kV Substation	6/1/2017 (RTO Determined Need Date)
200391	OGE	DeGrasse 345/138 kV Transformer	6/1/2017 (RTO Determined Need Date)
200391	OGE	DeGrasse - Knob Hill 138 kV New Line	6/1/2017 (RTO Determined Need Date)

SPP Notification to Construct (NTC) ID	Project Owner	Upgrade Name	Estimated Date of Upgrade Completion (EOC)
200391	OGE	DeGrasse 138 kV Substation (OGE)	6/1/2017 (RTO Determined Need Date)
200220	NPPD	Cherry Co. (Thedford) - Gentleman 345 kV Ckt 1	10/1/2019
200220	NPPD	Cherry Co. (Thedford) Substation 345 kV	10/1/2019
200220	NPPD	Cherry Co. (Thedford) - Holt Co. 345 kV Ckt 1	10/1/2019
200220	NPPD	Holt Co. Substation 345 kV	10/1/2019
200253	NPPD	Neligh 345/115 kV Substation	6/1/2017
200309	SPS	Hobbs 345/230 kV Ckt 1 Transformer	6/1/2018
200309	SPS	Hobbs - Yoakum 345 kV Ckt 1	6/1/2020
200395	SPS	Tuco - Yoakum 345 kV Ckt 1	6/1/2020
200395	SPS	Yoakum 345/230 kV Ckt 1 Transformer	6/1/2020
200256	SPS	Chaves - Price 115 kV Ckt 1 Rebuild	12/30/2017
200256	SPS	CV Pines - Price 115 kV Ckt 1 Rebuild	12/30/2017
200256	SPS	Capitan - CV Pines 115 kV Ckt 1 Rebuild	12/30/2017
200282	SPS	China Draw - Yeso Hills 115 kV Ckt 1	6/1/2018
200282	SPS	Dollarhide - Toboso Flats 115 kV Ckt 1	6/1/2018
200309	SPS	Hobbs - Kiowa 345 kV Ckt 1	6/1/2018
200309	SPS	Kiowa 345 kV Substation	6/1/2018
200309	SPS	Kiowa - North Loving 345 kV Ckt 1	6/1/2018
200309	SPS	North Loving 345 kV Terminal Upgrades	6/1/2018
200309	SPS	China Draw - North Loving 345 kV Ckt 1	6/1/2018
200309	SPS	China Draw 345 kV Ckt 1 Terminal Upgrades	6/1/2018
200309	SPS	China Draw 345/115 kV Ckt 1 Transformer	6/1/2018
200309	SPS	North Loving 345/115 kV Ckt 1 Transformer	6/1/2018
200309	SPS	Kiowa 345/115 kV Ckt 1 Transformer	6/1/2018
200395	SPS	Livingston Ridge 115 kV Substation Conversion	8/31/2017
200411	SPS	Livingston Ridge - Sage Brush 115 kV Ckt 1	6/1/2018
200309	SPS	Sage Brush 115 kV Substation	12/16/2016
200309	SPS	Largarto - Sage Brush 115 kV Ckt 1	12/15/2016
200309	SPS	Lagarto 115 kV Substation	6/1/2018
200309	SPS	Cardinal - Lagarto 115 kV Ckt 1	12/15/2016
200309	SPS	Cardinal 115 kV Substation	12/15/2016
200411	SPS	Ponderosa - Ponderosa Tap 115 kV Ckt 1	6/1/2017
20097	TSMO	Sibley - Mullin Creek 345 kV	12/31/2016
20097	TSMO	Nebraska City - Mullin Creek 345 kV (GMO)	12/31/2016
20098	OPPD	Nebraska City - Mullin Creek 345 kV (OPPD)	12/31/2016
200395	SPS	Canyon West – Dawn – Panda – Deaf Smith 115kV Ckt 1	12/15/2018
200369	SPS	Canyon East Sub – Randall County Interchange 115kV Ckt 1	12/31/2020
200359	SPS	Carlisle 230/115kV transformer replacement	12/31/2017
200309	SPS	Hobbs – Yoakum – TUCO 345kV project	6/1/2018
200395	SPS	Terry County – Wolfforth 115kV Ckt 1 terminal equipment replacement	6/1/2018
200391	OGE	DeGrasse 345/138kV project	6/1/2017
200396	WFEC	DeGrasse 345/138kV project	6/1/2017
200395	SPS	Harrington East – Potter 230kV Ckt 1 terminal equipment replacement	6/1/2019
200228	WERE	Viola 345/138kV project	6/1/2018
200228	MKEC	Viola 345/138kV project	6/1/2018
200395	SPS	Seminole 230/115kV transformer Ckt 1 & 2 replacement	5/15/2018
200262	SPS	Yoakum County Interchange 230/115kV transformer Ckt 1 & 2 replacement	6/1/2019

2.4.5 CONTINGENT UPGRADES

The following facilities do not yet have approval. These facilities have been assigned to higher-queued interconnection customers. These facilities have been included in the models for this study and are assumed to be in service. This list may not be all-inclusive. The DISIS Interconnection Customers, at this time, do not have cost responsibility for these facilities but may later be assigned cost if higher-queued customers terminate their Generation Interconnection Agreement or withdraw from the interconnection queue. The DISIS Interconnection Customer Generation Facilities in-service dates may need to be delayed until the completion of the following upgrades.

Assigned Study	Upgrade Name	Estimated Date of Upgrade Completion (EOC)
DISIS-2010-002	Twin Church - Dixon County 230kV Line Upgrade	11/1/2018
DISIS-2010-002	Buckner - Spearville 345 kV Ckt 1 Terminal Upgrades	12/31/2017
DISIS-2011-001	Hoskins - Dixon County 230kV Line Upgrade	11/1/2018
DISIS-2011-001	Woodward EHV 138kV Phase Shifting Transformer circuit #1	6/1/2017
DISIS-2013-002	Antelope - County Line - 115kV Rebuild	5/1/2017
DISIS-2013-002	Battle Creek - County Line 115kV Rebuild	5/1/2017
DISIS-2014-002	Arnold-Ransom 115kV Ckt 1	11/25/2017
DISIS-2014-002	Ransom-Ness City 115kV Ckt 1	11/25/2017
DISIS-2014-002	Plant X - Tolk 230kV rebuild circuit #1	5/31/2018
DISIS-2014-002	Plant X - Tolk 230kV rebuild circuit #2	5/31/2018
DISIS-2014-002	TUCO Interchange 345/230kV CKT 1 Replacement	6/1/2018
DISIS-2015-001	Kress Interchange – Swisher 115kV circuit #1 replace terminal equipment.	TBD
DISIS-2015-001	Oklaunion 345kV Reactive Power Support Install two (2) 130Mvar Capacitor Bank(s)	TBD
DISIS-2015-001	(NRIS Only) Potter County Interchange 345/230/13kV Transformer circuit #2, build.	TBD
DISIS-2015-001	(NRIS Only) Renfrow – Renfrow 138kV circuit #1 rebuild.	TBD
DISIS-2015-001	(NRIS Only) Crawfish Draw Substation 345/230kV	TBD
DISIS-2015-001	Build new 345/230kV substation along TUCO – Border 345kV and TUCO – Swisher 230kV. Tie in and Terminate TUCO 345kV, Border 345kV, TUCO 230kV, and Swisher 230kV at Crawfish Draw (TUCO 2). Build 345/230/13kV transformer	TBD
DISIS-2015-002	Beaver County 345kV Reactive Power Support Install +100Mvar SVC at Beaver County Substation.	TBD
DISIS-2015-002	Border - Chisholm 345kV CKT 2	TBD
DISIS-2015-002	Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	TBD
DISIS-2015-002	Chisholm Substation Upgrade 345kV	TBD
DISIS-2015-002	Cleo Corner - Cleo Plant Tap 138kV CKT 1	TBD
DISIS-2015-002	Cleveland - Silver City 138kV CKT 1	TBD
DISIS-2015-002	Cornville Tap - Naples Tap 138kV CKT 1	TBD
DISIS-2015-002	Crawfish Draw - Border 345kV CKT 2	TBD
DISIS-2015-002	Daglum - Dickinson 230kV CKT 1	TBD
DISIS-2015-002	Dickinson 230/115/13.8kV CKT 2	TBD
DISIS-2015-002	Gavins Point - Yankton Junction 115kV CKT 1	TBD
DISIS-2015-002	GEN-2015-063 Tap - Mathewson 345kV CKT 1	TBD
DISIS-2015-002	Grapevine - Nichols 230kV CKT 1	TBD
DISIS-2015-002	Grapevine - Wheeler 230kV CKT 1	TBD

Assigned Study	Upgrade Name	Estimated Date of Upgrade Completion (EOC)
DISIS-2015-002	Naples Tap - Payne 138kV CKT 1	TBD
DISIS-2015-002	Norge - Southwest Station 138kV CKT 1	TBD
DISIS-2015-002	Oklaunion 345kV Reactive Power Support Incremental Upgrade Install +/-100Mvar SVC at Oklaunion	TBD
DISIS-2015-002	Albion - Petersburg - North Petersburg 115kV CKT 1	TBD
DISIS-2015-002	Wheeler - Sweetwater 230kV CKT 1	TBD
DISIS-2015-002	Woodward 345/138/13kV Transformer CKT 3	TBD

2.4.6 POTENTIAL UPGRADES NOT IN THE BASE CASE

Any potential upgrades that do not have a Notification to Construct (NTC) and are not explicitly listed within this report have not been included in the base case. These upgrades include any identified in the SPP Extra-High Voltage (EHV) overlay plan, or any other SPP planning study other than the upgrades listed above in the previous section.

2.4.7 REGIONAL GROUPINGS

The interconnection requests listed in Appendix A are grouped into fifteen (15) active regional groups based on geographical and electrical impacts. These groupings are shown in Appendix C.

To determine interconnection impacts, fifteen (15) different generation dispatch scenarios of the spring, summer, and winter base case models are developed to accommodate the regional groupings.

2.5 DEVELOPMENT OF ANALYSIS CASES

2.5.1 POWER FLOW

For Variable Energy Resources (VER) (solar/wind) in each power flow case, Energy Resource Interconnection Service (ERIS), is evaluated for the generating plants within a geographical area of the interconnection request(s) for the VERs dispatched at 100% nameplate of maximum generation. The VERs in the remote areas are dispatched at 20% nameplate of maximum generation. These projects are dispatched across the SPP footprint using load factor ratios.

Peaking units are not dispatched in the spring case, or in the "High VER" summer and winter peak cases. To study peaking units' impacts, the Year 1 winter peak and Year 2 summer peak, Year 5 summer and winter peaks, and Year 10 summer peak models are developed with peaking units dispatched at 100% of the nameplate rating and VERs dispatched at 20% of the nameplate rating. Each interconnection request is also modeled separately at 100% nameplate for certain analyses.

All generators (VER and peaking) that requested Network Resource Interconnection Service (NRIS) are dispatched in an additional analysis into the interconnecting Transmission Owner's (T.O.) area at 100% nameplate with Energy Resource Interconnection Service (ERIS) only requests at 80% nameplate. This method allows for identification of network constraints that are common between

regional groupings to have affecting requests share the mitigating upgrade costs throughout the cluster.

The following additional sensitivities were run for situations specific to the local area.

- North Dakota – Canadian border – The phase shifting transformer to Saskatchewan Power (also known as B-10T) and Miles City DC Tie were dispatched at the following levels
    - 2016 Winter Peak –
        - Miles City DC Tie– 200MW East to West transfer
        - B-10T – 65MW South to North transfer
    - 2017 Summer Peak –
        - Miles City DC Tie – 200MW East to West transfer
        - B-10T – 200MW North to South transfer
    - Other Seasons
        - Miles City DC Tie – 140MW East to West transfer (20WP)
        - Miles City DC Ties – 92MW East to West transfer (17G & 20L)
        - B-10T – 0MW

2.5.2 DYNAMIC STABILITY

For each group, all interconnection requests are dispatched at 100% nameplate output while the other groups are dispatched at 20% output for VERs and 100% output for thermal requests.

- North Dakota – Canadian border – The phase shifting transformer to Saskatchewan Power (also known as B-10T) and Miles City DC Tie were dispatched at the following levels
    - 2016 Winter Peak –
        - Miles City DC Tie– 200MW East to West transfer
        - B-10T – 65MW South to North transfer
    - 2017 Summer Peak –
        - Miles City DC Tie – 200MW East to West transfer
        - B-10T – 200MW North to South transfer

2.5.3 SHORT CIRCUIT

The dynamic stability models are used for this analysis.

3 IDENTIFICATION OF NETWORK CONSTRAINTS (SYSTEM PERFORMANCE)

3.1 THERMAL OVERLOADS

Network constraints are found by using PSS/E AC Contingency Calculation (ACCC) analysis with PSS/E MUST First Contingency Incremental Transfer Capability (FCITC) analysis on the entire cluster grouping dispatched at the various levels previously described.

For Energy Resource Interconnection Service (ERIS), thermal overloads are determined for system intact (n-0) greater than 100% of Rate A - normal and for contingency (n-1) greater than 100% of Rate B – emergency conditions.

The overloads are then screened to determine which interconnection requests have at least

- 3% Distribution Factor (DF) for system intact conditions (n-0),
- 20% DF upon outage-based conditions (n-1),
- or 3% DF on contingent elements that resulted in a non-converged solution.

Appropriate transmission reinforcements are identified to mitigate the constraints.

Interconnection Requests that requested Network Resource Interconnection Service (NRIS) are also studied in a separate NRIS analysis to determine if any constraint measured greater than or equal to a 3% DF. If so, these constraints are also assigned transmission reinforcements to mitigate the impacts.

3.2 VOLTAGE

For non-converged power flow solutions that are determined to be caused by lack of voltage support, appropriate transmission support will be identified to mitigate the constraint.

After all thermal overload and voltage support mitigations are determined; a full ACCC analysis is then performed to determine voltage constraints. The following voltage performance guidelines are used in accordance with the Transmission Owner local planning criteria.

SPP voltage criteria is applicable to all SPP facilities 69 kV and greater in the absence of more stringent criteria:

System Intact	Contingency
0.95 – 1.05 per unit	0.90 – 1.05 per unit

Areas and specific buses having more-stringent voltage criteria:

Areas/Facilities	System Intact	Contingency
AEPW – all buses EMDE High Voltage	0.95 – 1.05 per unit	0.92 – 1.05 per unit
WERE Low Voltage	0.95 – 1.05 per unit	0.93 – 1.05 per unit
WERE High Voltage	0.95 – 1.05 per unit	0.95 – 1.05 per unit
TUCO 230 kV Bus #525830	0.925 – 1.05 per unit	0.925 – 1.05 per unit
Wolf Creek 345 kV Bus #532797	0.985 – 1.03 per unit	0.985 – 1.03 per unit
FCS Bus #646251	1.001 – 1.047 per unit	1.001 – 1.047 per unit

First-Tier External Areas facilities 115 kV and greater.

Area	System Intact	Contingency
EES-EAI LAGN EES AMMO CLEC LAFA LEPA XEL MP SMMPA GRE OTP ALTW MEC MDU DPC ALTE	0.95 – 1.05 per unit	0.90 – 1.05 per unit
OTP-H (115kV+)	0.97 – 1.05 per unit	0.92 – 1.10 per unit
SPC	0.95 – 1.05 per unit	0.95 – 1.05 per unit

The constraints identified through the voltage scan are screened for the following for each interconnection request. 1) 3% DF on the contingent element and 2) 2% change in pu voltage. In certain conditions, engineering judgement was used to determine whether or not a generator had impacts to voltage constraints.

3.3 DYNAMIC STABILITY

Stability issues are considered for transmission reinforcement under ERIS. Generators that fail to meet low voltage ride-through requirements (FERC Order #661-A) or SPP's stability criteria for damping or dynamic voltage recovery are assigned upgrades such that these requirements can be met.

3.4 UPGRADES ASSIGNED

Thermal overloads that require transmission support to mitigate are discussed in Section 8 and listed in Appendix G-T (Cluster Analysis) and Appendix G1-T (Stand Alone). Voltage constraints that may require transmission support are discussed in Section 8 and listed in Appendix G-V (Cluster Analysis) and Appendix G1-V (Stand Alone). Constraints that are identified solely through the stability analysis are discussed in Section 8 and the appropriate appendix for the detailed stability study of that Interconnection Request. All of these upgrades are cost assigned in Appendix E and Appendix F.

Other network constraints not requiring transmission reinforcements are shown in Appendix H-T (Cluster Analysis) and Appendix H1-T (Stand Alone). With a defined source and sink in a Transmission Service Request, this list of network constraints can be refined and expanded to account for all Network Upgrade requirements for firm transmission service. Additional constraints identified by multi-element contingencies are listed in Appendix I.

In no way does the list of constraints in Appendix G-T (Cluster Analysis) or Appendix G1-T (Stand Alone) identify all potential constraints that guarantee operation for all periods of time. It should be noted that although this study analyzed many of the most probable contingencies, it is not an all-inclusive list and cannot account for every operational situation. Because of this, it is likely that the Customer(s) may be required to reduce their generation output to 0 MW, also known as curtailment, under certain system conditions to allow system operators to maintain the reliability of the transmission network.

4 DETERMINATION OF COST ALLOCATED NETWORK UPGRADES

Cost Allocated Network Upgrades of Variable Energy Resources (VER) (solar/wind) generation interconnection requests are determined using the Year 2 spring model. Cost Allocated Network Upgrades of peaking units are determined using the Year 5 summer peak model. A PSS/E and MUST sensitivity analysis is performed to determine the Distribution Factors (DF), a distribution factor with no contingency that each generation interconnection request has on each new upgrade. The impact each generation interconnection request has on each upgrade project is weighted by the size of each request. Finally the costs due by each request for a particular project are then determined by allocating the portion of each request's impact over the impact of all affecting requests.

For example, assume that there are three Generation Interconnection requests, X, Y, and Z that are responsible for the costs of Upgrade Project '1'. Given that their respective PTDF for the project have been determined, the cost allocation for Generation Interconnection request 'X' for Upgrade Project 1 is found by the following set of steps and formulas:

Determine an impact factor for a given project for all responsible GI requests:

$$Request\ X\ Impact\ Factor\ on\ Upgrade\ Project\ 1 = PTDF(\%)(X) \times MW(X) = X1$$

$$Request\ Y\ Impact\ Factor\ on\ Upgrade\ Project\ 1 = PTDF(\%)(Y) \times MW(Y) = Y1$$

$$Request\ Z\ Impact\ Factor\ on\ Upgrade\ Project\ 1 = PTDF(\%)(Z) \times MW(Z) = Z1$$

Determine each request's Allocation of Cost for that particular project:

$$Request\ X's\ Project\ 1\ Cost\ Allocation\ (\$) = \frac{Network\ Upgrade\ Project\ 1\ Cost\ (\$) \times X1}{X1 + Y1 + Z1}$$

Repeat previous for each responsible GI request for each Project.

The cost allocation of each needed Network Upgrade is determined by the size of each request and its impact on the given project. This allows for the most efficient and reasonable mechanism for sharing the costs of upgrades.

4.1 CREDITS/COMPENSATION FOR AMOUNTS ADVANCED FOR NETWORK UPGRADES

Interconnection Customer shall be entitled to either credits or potentially incremental Long Term Congestion Rights (iLTCR), otherwise known as compensation, in accordance with Attachment Z2 of the SPP Tariff for any Network Upgrades, including any tax gross-up or any other tax-related payments associated with the Network Upgrades, and not refunded to the Interconnection Customer.

5 REQUIRED INTERCONNECTION FACILITIES

The requirement to interconnect the requested generation into the existing and proposed transmission systems in the affected areas of the SPP transmission footprint consist of the necessary cost allocated shared facilities listed in Appendix F by upgrade. The interconnection requirements for the cluster total an estimated $3.4 billion, not including the following costs.

- **Costs Not Included** – Potential additional upgrades required based on review of Laramie Generation Station (LGS) stability limit in southeastern Wyoming. LGS stability limit is to be analyzed by BEPC as part of the Interconnection Facilities Study.
- **Costs Not Included** – Potential additional upgrades required based on review of Gerald Gentleman Station (GGS) stability interface in western Nebraska. GGS stability interface is to be analyzed by NPPD as part of the Interconnection Facilities Study.
- **Costs Not Included** – Additional upgrades needed to relieve adverse impacts to the Wolf Creek Plant that will be completed in coordination with WERE in the Interconnection Facilities Study phase.
- **Costs Not Included** – Costs on Affected Systems for Associated Electric Cooperative Inc. (AECI), Mid-Continent Independent System Operator (MISO), and Minnkota Power Cooperative, Inc (MPC).
- **Costs Not Included** –Particular Interconnection Facilities observing instability in the transient stability analysis due to Interconnection Facilities configuration or Interconnection Customer provided dynamic model settings and parameters. Please refer to Appendix E for requests that are identified as requiring further review or costs for Interconnection Facilities.

Interconnection Facilities specific to each interconnection request are listed in Appendix E. A preliminary one-line diagram for each request is listed in Appendix D. The interconnection requirements for each request studied for the "stand-alone" scenario total an estimated $6.2 Billion. These costs can be found in Appendix E1.

For an explanation of how required Network Upgrades and Interconnection Facilities were determined, refer to the section on "Identification of Network Constraints."

5.1 FACILITIES ANALYSIS

The interconnecting Transmission Owner for each Interconnection Request has provided its preliminary analysis of required Transmission Owner Interconnection Facilities and the associated Network Upgrades, shown in Appendix D. This analysis was limited only to the expected facilities to be constructed by the Transmission Owner at the Point of Interconnection. These costs are included in the one-line diagrams in Appendix D and also listed in Appendix E and F as combined "Interconnection Costs". If the one-lines and costs in Appendix D have been updated by the Transmission Owner's Interconnection Facilities Study, those costs will be noted in the appendix. These costs will be further refined by the Transmission Owner as part of the Interconnection Facilities Study. Any additional Network Upgrades identified by this DISIS beyond the Point of

Interconnection are defined and estimated by either the Transmission Owner or by SPP. These additional Network Upgrade costs will also be refined further by the Transmission Owner within the Interconnection Facilities Study.

5.2 ENVIRONMENTAL REVIEW

For Interconnection Requests that result in an interconnection to, or modification to, the transmission facilities of the Western-UGP, a National Environmental Policy Act (NEPA) Environmental Review will be required. The Interconnection Customer will be required to execute an Environmental Review Agreement per Section 8.6.1 of the GIP.

6 AFFECTED SYSTEMS COORDINATION

The following procedures are in place to coordinate with Affected Systems.

- Impacts on Associated Electric Cooperative Inc. (AECI) – For any observed violations of thermal overloads on AECI facilities, AECI has been notified by SPP to evaluate the violations for impacts on its transmission system. AECI has instructed SPP to notify the affected Interconnection Customers after posting of this study to contact AECI for an Affected System Study Agreement to further study the impacts on the AECI system.
- Impacts on Mid Continent Independent System Operation (MISO) – Per SPP's agreement with MISO, MISO will be contacted and provided a list of interconnection requests that proceed to move forward into the Interconnection Facilities Study Queue. MISO will then evaluate the Interconnection Requests for impacts and will be in contact with affected Interconnection Customers. For potential impacts see Appendix H-T – Affected System and Appendix H-V – Affected System
- Impacts on Minnkota Power Cooperative, Inc (MPC) – MPC will be contacted and provided a list of interconnection requests that proceed to move forward into the Interconnection Facilities Study Queue. MP will then evaluate the Interconnection Requests for impacts. For potential impacts see Appendix H-T – Affected System and Appendix H-V – Affected System
- Impacts to other affected systems – For any observed violations of thermal overloads or voltage constraints, SPP will contact the owner of the facility for further information.

7 POWER FLOW ANALYSIS

7.1 POWER FLOW ANALYSIS METHODOLOGY

The ACCC function of PSS/E is used to simulate single element and special (i.e., breaker-to-breaker, multi-element, etc.) contingencies in portions or all of the modeled control areas of SPP, as well as, other control areas external to SPP and the resulting scenarios analyzed. Single element and multi-element contingencies are evaluated.

7.2 POWER FLOW ANALYSIS

A power flow analysis is conducted for each Interconnection Customer's facility using modified versions of the Year 1 winter peak season, the Year 2 spring, Year 2 summer peak season, Year 5 summer and winter peak seasons, and Year 10 summer peak seasonal models. The output of the Interconnection Customer's facility is offset in each model by a reduction in output of existing online SPP generation. This method allows the request to be studied as an Energy Resource Interconnection Service request (ERIS). Certain requests that are also pursuing Network Resource Interconnection Service (NRIS) have an additional analysis conducted for displacing resources in the interconnecting Transmission Owner's balancing area.

8 POWER FLOW RESULTS

8.1 CLUSTER SCENARIO

The Cluster Scenario considers the Base Case as well as all Interconnection Requests in the DISIS Study Queue and all generating facilities (and with respect to (3) below, any identified Network Upgrades associated with such higher-queued interconnection) that, on the date the DISIS is commenced:

1. are directly connected to the Transmission System;
2. are interconnection to Affected Systems and may have an impact on the Interconnection Request;
3. have a pending higher-queued Interconnection Request to interconnect to the Transmission System; and
4. have no Interconnection Queue Position but have executed a GIA or requested that an unexecuted GIA be filed with FERC.

Constraints and associated mitigations for each Interconnection Request are summarized below. Details are contained in Appendix G-T and Appendix G-V. Cost allocation for the Cluster Scenario is found in Appendix E.

8.1.1 CLUSTER GROUP 1 (WOODWARD AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

Several ERIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations.

GEN-2016-003 was also analyzed in Group 2 due to its close electrical location to other current study Group 2 requests. GEN-2016-001 cost allocation in Appendix E has been updated to provide mitigations for GEN-2016-001 impacting Group 2 upgrades.

Table 8.1 Group 1 Cluster ERIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
CIMARRON - NORTHWEST 345KV CKT 1	956.0	116.0597	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	Updated rating for each element is sufficient for constraint mitigations
DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	173.566	System Intact	DeGrasse 345/138kV Project (Note 1)
DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	187.0	144.2468	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1	
NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	117.0566	System Intact	
NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	234.0	109.8084	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	113.1187	CIMARRON - NORTHWEST 345KV CKT 1	Replace terminal equipment

In addition to the ERIS constraint mitigations, several NRIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations assignable to those requests that elect NRIS.

Table 8.2 Group 1 Cluster NRIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
CLINTON JUNCTION - ELK CITY 138KV CKT 1	152.0	107.1886	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1	Re-conductor/Rebuild approximately 24 miles of 138kV
CONTEMPG - MUSTANG 138KV CKT 1	191.0	113.3803	DAYTON - MUSTANG 138KV CKT 1	Updated rating for each element is sufficient for constraint mitigations
CONTEMPG - SW 5TH 138KV CKT 1	191.0	108.9345	DAYTON - MUSTANG 138KV CKT 1	
G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	104.4987	System Intact	
G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	789.0	109.6733	CIMARRON - MINCO 345KV CKT 1	
PITTSBURG - SEMINOLE 345KV CKT 1	717.0	113.031	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	
LULA - TUPELO TAP 138KV CKT 1	120.0	100.0648	PITTSBURG - SEMINOLE 345KV CKT 1	
DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	136.2649	System Intact	DeGrasse 345/138kV Project (Note 1), and Rebuild DeGrasse – Rose Valley
DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	187	114.9273	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
TUPELO - TUPELO TAP 138KV CKT 1	143	109.3158	PITTSBURG - SEMINOLE 345KV CKT 1	Upgrade Tupelo SW terminal equipment and re-conductor approximately 1.3 miles of 138kV
WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	430.0	106.2349	BENTON - WICHITA 345KV CKT 1	Viola 345/138 Project, Wichita 345/138/13kV transformer circuit #1 and circuit #2 replacement
WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	430.0	122.279	BENTON - WICHITA 345KV CKT 1	

8.1.2 CLUSTER GROUP 2 (HITCHLAND AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

Several ERIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations. The table below summarizes constraints and associated mitigations. Potential voltage collapse is inferred from non-convergence.

Table 8.3 Group 2 Cluster ERIS Non-Convergence Constraints

Contingency	Mitigation
AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1	In addition to high queued assigned upgrades the following new upgrades are required for group 6 potential voltage collapse: 1) Advance Woodward – Tatonga – Mathewson 345kV CKT 2 (NTC) 2) Advance Stevens County 345kV 3) Build a new Grapevine 345kV switching station and Build approximately 65 miles of new 345kV from Potter County – Grapevine 345kV 4) Build approximately 75 miles of new 345kV from Grapevine - Chisholm 5) Build approximately 75 miles of new 345kV from Grapevine – Beaver County 6) Build approximately 125 miles of new 345kV from Beaver County – Clark County
BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	
BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1	
BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1	
BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	
CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1	
CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	
CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1	
CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1	
DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	
FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1	
FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1	
FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1	
G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	
G14-074T 345.00 - OKLAUNION 345KV CKT 1	
G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1	
G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1	
G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1	
G15039_T 230.00 - PLANT X STATION 230KV CKT 1	
G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	
G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	
G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1	
GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	
Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1	
Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1	
HOLCOMB - SETAB 345KV CKT 1	
MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
MINGO - SETAB 345KV CKT 1	
NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1	
P12:345:SPS:J07.1.FINN.HITCH	
STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1	
STLN-DEMARC6 - SWEETWATER 230KV CKT 1	
THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	

Table 8.4 Group 2 Cluster ERIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1	318.7	99.6	System Intact	Constraints are mitigated with new 345kV lines required for potential voltage collapse observed.
FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1	956	99.2	System Intact	
G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	105.2154	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	
G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1793.0	105.2154	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	
G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1	318.7	107.7528	System Intact	
G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	123.1957	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	
G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1793.0	123.1957	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	
G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	126.6254	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	
G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1793.0	126.6254	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	106.8373	System Intact	
ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	154.0	101.7858	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1	Replace terminal equipment
BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	122.1957	System Intact	Replace terminal equipment
CHERRY1 - HARRINGTON STATION 230KV CKT 1	478.0	99	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	Re-conductor/Rebuild approximately 11 miles
FPL SWITCH - WOODWARD 138KV CKT 1	133	99.9	System Intact	Woodward EHV 138kV Phase Shifting Transformer (NTC)
HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	610.0	118.0384	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2	Upgrade bus ties
Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	350.57	131.0206	CHERRY1 - HARRINGTON STATION 230KV CKT 1	Upgrade terminal equipment (NTC)
HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	154.0	108.6911	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1	Upgrade terminal equipment
MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	160.0	104.945	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1	Upgrade terminal equipment
PANTEX NORTH SUB - PANTEX SOUTH SUB 115KV CKT 1	160.0	104.4843	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1	Updated rating for each element is sufficient for constraint mitigations

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
SPSNORTH_STX	1160.0	116.9587	System Intact Flowgate	With new 345kV upgrades this current rating would require re-evaluation.

In addition to the ERIS constraint mitigations, several NRIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations assignable to those requests that elect NRIS.

Table 8.5 Group 2 Cluster NRIS Non-Convergence Constraints

Contingency	Mitigation
BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1	In addition to high queued assigned upgrades the following new upgrades are required for group 6 potential voltage collapse: 1) Advance Woodward – Tatonga – Mathewson 345kV CKT 2 (NTC) 2) Advance Stevens County 345kV 3) Build a new Grapevine 345kV switching station and Build approximately 65 miles of new 345kV from Potter County – Grapevine 345kV 4) Build approximately 75 miles of new 345kV from Grapevine - Chisholm 5) Build approximately 75 miles of new 345kV from Grapevine – Beaver County 6) Build approximately 125 miles of new 345kV from Beaver County – Clark County
CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1	
CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1	
EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1	
FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1	
FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1	
GEN525561 1-TOLK GEN #1 24 KV	
GEN525820 1-TUCO Interchange SVC Bus	
Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1	
JONES STATION - TUCO INTERCHANGE 230KV CKT 1	
MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
P12:230:LPL:K26.1.JONES.LP-HOLLY	
P12:230:LPL:K57.1.LP-WADS.LUBBE	
P12:345:SPS:J02.1.TOLK.EDDY	
P12:345:SPS:J07.1.FINN.HITCH	
P12:LPL:SPS:K64.1.LP-SE.LUBBS	
PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1	

Table 8.6 Group 2 Cluster NRIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
CIMARRON RIVER PLANT - WALKEMEYER 115KV CKT 1	148.2	130.2484	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1	Constraints are mitigated with new 345kV lines required for potential voltage collapse observed.
G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1	350.57	100.6447	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1	
G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	99.6	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	
G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1793.0	99.6	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	
G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	103.4359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	
G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1793.0	103.4359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	350.57	109.0517	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	
KINGSMILL INTERCHANGE - MCCULLOUGH SUB 69KV CKT 1	88.0	107.1765	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	
WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	303.8	128.3522	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1	
WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	137.6407	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1	
CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	136.6904	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1	Canyon West – Dawn – Panda – Deaf Smith 115kV Project (Note #) and Canyon East – Randall 115kV rebuild (Note #)
CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	108.7789	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1	
DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	105.7283	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1	
DEAF SMITH COUNTY INTERCHANGE - Panda Energy Substation Hereford 115KV CKT 1	96.0	101.8175	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1	
CLINTON JUNCTION - ELK CITY 138KV CKT 1	152.0	107.1886	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1	Re-conductor/Rebuild approximately 24 miles of 138kV
CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	160.0	115.766	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1	Re-conductor/Rebuild approximately 3 miles of 115kV
CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	110.1706	System Intact	Replace transformer (NTC)

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	158.0601	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	
CHERRY1 - HARRINGTON STATION 230KV CKT 1	557.0	106.7484	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	Re-conductor/Rebuild approximately 11 miles of 230kV
CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	557.0	101.0044	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	
EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	108.5265	System Intact	Replace terminal equipment
EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	350.57	107.4781	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1	
EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	103.2735	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1	Build second 230/115/13kV transformer
EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	311.0	103.0572	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1	Build third 230/115/13kV transformer
FPL SWITCH - WOODWARD 138KV CKT 1	153.0	112.6139	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1	Woodward EHV 138kV Phase Shifting Transformer (NTC)
G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	105.7261	System Intact	Updated rating for each element is sufficient for constraint mitigations
G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	789.0	110.2643	PITTSBURG - SEMINOLE 345KV CKT 1	
JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	100.6435	System Intact	
JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1	
G15079_T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	350.57	100.8357	HOBBS - YOAKUM_345 345.00 345KV CKT 1	Replace terminal equipment
HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	664.0	101.3823	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2	Upgrade bus ties
Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	104.3115	System Intact	Upgrade terminal equipment (NTC)
Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	360.92	156.5099	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	
JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	351.0	113.6961	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1	Replace terminal equipment
LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	180.0	106.6113	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1	Re-conductor/Rebuild 1.4 miles of 115kV

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	177.08	108.9068	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	Hobbs – Yoakum – TUCO 345kV Project (NTC)
LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	151.3756	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1	Install second transformer
LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	110.7208	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	Install second transformer
SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1	180.0	99.9	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1	Rebuild 1 mile of 115kV
SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	101.0832	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1	Build second 230/115/13kV transformer
TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	153.97	104.5971	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1	Upgrade terminal equipment (NTC)
TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	288.0	100.78	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	Crawfish 115kV substation expand, install 230/115kV transformer, and loop in TUCO – Hale County 115kV
WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	430.0	106.2349	BENTON - WICHITA 345KV CKT 1	Viola 345/138 Project, Wichita 345/138/13kV transformer circuit #1 and circuit #2 replacement
WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	430.0	122.279	BENTON - WICHITA 345KV CKT 1	

8.1.3 CLUSTER GROUP 3 (SPEARVILLE AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

Several ERIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations. The table below summarizes constraints and associated mitigations. Potential voltage collapse is inferred from non-convergence.

Table 8.7 Group 3 Cluster NRIS Non-Convergence Constraints

Contingency	Mitigation
BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	Build 125 miles of new 345kV from Beaver County - Clark County
FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1	
G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
G13-010T 345.00 - POST ROCK 345KV CKT 1	
Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1	

Table 8.8 Group 3 Cluster ERIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	726.6	107.5079	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	Build 125 miles of new 345kV from Beaver County - Clark County
POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1	600.0	102.9535	AXTELL - G16-050-TAP 345.00 345KV CKT 1	
CLEARWATER - MILAN TAP 138KV CKT 1	110.0	123.5737	System Intact	Viola 345/138 Project and Viola HPILS Project (NTC)
HARPER - MILAN TAP 138KV CKT 1	138.6	106.0647	System Intact	
HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	124.8094	CIRCLE - MULLERGREN 230KV CKT 1	Updated rating and build 125 miles of new 345kV from Beaver County - Clark County
KINSLEY - PAWNEE-EDWARDS_JCT 115KV CKT 1	76	99.4	System Intact	Conductor clearance increase
KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	106.9187	System Intact	Build second Knoll – Post Rock 230kV and build 125 miles of new 345kV from Beaver County - Clark County

In addition to the ERIS constraint mitigations, several NRIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations assignable to those requests that elect NRIS.

Table 8.9 Group 3 Cluster NRIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
CLEARWATER - MILAN TAP 138KV CKT 1	110.0	114.1358	System Intact	Viola 345/138 Project and Viola HPILS Project (NTC)
CLEARWATER - MILAN TAP 138KV CKT 1	110.0	135.6174	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
HARPER - MILAN TAP 138KV CKT 1	143.4	111.2862	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
ELLSWTP3 115.00 - MULLERGREN 115KV CKT 1	89.8	99.3	RICE 6 230.00 (RICE T1) 230/115/12.47KV TRANSFORMER CKT 1	Updated rating mitigates this constraint
HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	107.9755	CIRCLE - MULLERGREN 230KV CKT 1	Updated rating and ERIS upgrade, build 125 miles of new 345kV from Beaver County - Clark County
KINSLEY - PAWNEE-EDWARDS_JCT 115KV CKT 1	76.0	99.3	System Intact	ERIS upgrade, conductor clearance increase
KNOLL - N HAYS3 115.00 115KV CKT 1	99.0	143.3409	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	ERIS upgrade, Build second Knoll – Post Rock 230kV and build 125 miles of new 345kV from Beaver County - Clark County
KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	398.0	103.5791	AXTELL - G16-050-TAP 345.00 345KV CKT 1	

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	99.0	150.3397	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	
SMOKYHL6 230.00 - SUMMIT 230KV CKT 1	350.0	104.6862	AXTELL - G16-050-TAP 345.00 345KV CKT 1	
SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	121.4882	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	

8.1.4 CLUSTER GROUP 4 (NORTHWEST KANSAS AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C. No new constraints were observed for this group.

Table 8.10 Group 4 Cluster ERIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
Currently none				

Table 8.11 Group 4 Cluster NRIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
Currently none				

8.1.5 CLUSTER GROUP 6 (SOUTH TEXAS PANHANDLE/NEW MEXICO AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

Several ERIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations. The table below summarizes constraints and associated mitigations. Potential voltage collapse is inferred from non-convergence.

Crawfish Draw – Tolk – Potter County – Chisholm 345kV and Oklaunion reactive power support was required light load conditions to dispatch the DISIS-2016-001 Group 6 generation.

Table 8.12 Group 6 Cluster ERIS Non-Convergence Constraints

Contingency	Mitigation
917X	In addition to DISIS-2014-002, DISIS-2015-001, and DISIS-2015-002 assigned upgrades the following new upgrades are required for group 6 potential voltage collapse: 1) Increase previously assigned Oklaunion +/-100Mvar SVC to +300/-150 SVC and install 200mvars of additional capacitor banks 2) Build GEN-2014-074 Tap +300Mvar SVC 3) Build Crawfish Draw and Seminole 765kV yards and build approximately 325 miles of new 765kV from Crawfish Draw to Seminole 4) Build approximately 64 miles of new 345kV from Crawfish Draw – Tolk 5) Build approximately 115 miles of new 345kV from Tolk – Potter County 6) Build a new Grapevine 345kV switching station and Build approximately 65 miles of new 345kV from Potter County – Grapevine 345kV 7) Build approximately 75 miles of new 345kV from Grapevine - Chisholm 8) Build approximately 75 miles of new 345kV from Grapevine – Beaver County 9) Build approximately 125 miles of new 345kV from Beaver County – Clark County
AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1	
AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	
ARCADIA - NORTHWEST 345KV CKT 1	
AXTELL - G16-050-TAP 345.00 345KV CKT 1	
BENTON - WICHITA 345KV CKT 1	
BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1	
BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2	
BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1	
BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2	
BORDER 7345.00 345KV SWITCHED SHUNT	
BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	
BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1	
BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1	
BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	
BUSHLAND INTERCHANGE 230KV SWITCHED SHUNT	
BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1	
BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2	
CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1	
CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1	
CHERRY1 - HARRINGTON STATION 230KV CKT 1	
CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	
CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	
CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1	
CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	
CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1	
CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1	
CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
CIMARRON - DRAPER LAKE 345KV CKT 1	
CIMARRON - MINCO 345KV CKT 1	
CLEVELAND - G15066_T 345.00 345KV CKT 1	
CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1	
CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	
CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	
CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1	
CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1	
CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	

Contingency	Mitigation
DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	
ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1	
FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1	
FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1	
FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1	
G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1	
G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	
G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	
G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1	
G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1	
G13-010T 345.00 - POST ROCK 345KV CKT 1	
G14_001T 345.00 - WICHITA 345KV CKT 1	
G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	
G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	
G14-074T 345.00 - OKLAUNION 345KV CKT 1	
G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1	
G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1	
G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2	
G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	
G15039_T 230.00 - PLANT X STATION 230KV CKT 1	
G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	
G15063_T 345.00 - WOODRING 345KV CKT 1	
G15066_T 345.00 - SOONER 345KV CKT 1	
G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1	
G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2	
G1524G1525 345.00 - WICHITA 345KV CKT 1	
G1524G1525 345.00 - WICHITA 345KV CKT 2	
G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	
G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	
G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	
G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1	
G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1	
G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1	
G16-050-TAP 345.00 - POST ROCK 345KV CKT 1	
GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1	
GRACEMONT - LAWTON EASTSIDE 345KV CKT 1	
GRACEMONT - MINCO 345KV CKT 1	
GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1	
GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	
GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1	
Hansford County Switch Station - SPEARMAN INTERCHANGE 115KV CKT 1	
HAPPY INTERCHANGE - PALO DURO SUB 115KV CKT 1	
Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	
HITCHLAND INTERCHANGE - Hansford County Switch Station 115KV CKT 1	
HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1	
Hitchland Interchange - OPTIMA 345.00 345KV CKT 1	
Hitchland Interchange - OPTIMA 345.00 345KV CKT 2	
Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1	
Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1	
Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1	

Contingency	Mitigation
Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2	
HOBBS - YOAKUM_345 345.00 345KV CKT 1	
HOBBS (HUPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1	
HOLCOMB - SETAB 345KV CKT 1	
JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1	
JONES STATION - TUCO INTERCHANGE 230KV CKT 1	
KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1	
MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1	
MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2	
MINGO - RED WILLOW 345KV CKT 1	
MINGO - SETAB 345KV CKT 1	
MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	
NEWHART 230 - PLANT X STATION 230KV CKT 1	
NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1	
NORTHWEST - SPRING CREEK 345KV CKT 1	
OKLAUNION 345KV SWITCHED SHUNT	
P12:115:SPS:T14.1.MADDOX.WBENDR	
P12:115:SPS:T53.1.NICHLS.KIRBY	
P12:115:SPS:T54.1.KIRBY.SHM(520)	
P12:115:SPS:V29.1.NICHLS.KNGSMLL	
P12:115:SPS:V80.1.DC_STH.LE-WAIT	
P12:115:SPS:W08.1.HITCH.LASLEY	
P12:138:AEPW:HOB-JCT4:ELKCTY-4	
P12:138:AEPW:REDROCKRD4:WTH_JCT4	
P12:138:AEPW:S.W.S.-4:HOB-JCT4	
P12:138:AEPW:S.W.S.-4:L.E.S.-4	
P12:138:AEPW:SHAM4WT:CHILD4WT	
P12:138:AEPW:WTHWF4:WTH_SE4	
P12:138:AEPW-OGE:WTH_JCT4:JENSEN4	
P12:138:WFEC:MSL03	
P12:138:WFEC:MSL14	
P12:138:WFEC-AEPW:WASHITA4:CLINTJC4	
P12:230:AEPW:ELKCITY6:SWEETWT6	
P12:230:AEPW-SPS:SWEETWT6:WHEELER 6	
P12:230:SPS:K43.1.PRNGLE.HARR_E	
P12:345:SPS:J02.1.TOLK.EDDY	
P12:345:SPS:J07.1.FINN.HITCH	
P12:345:SPS:J15.1.XRDS.TOLK	
PALO DURO SUB - RANDALL COUNTY INTERCHANGE 115KV CKT 1	
PITTSBURG - SEMINOLE 345KV CKT 1	
PITTSBURG - VALLIANT 345KV CKT 1	
POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1	
POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1	
POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 2	
PRINGLE INTERCHANGE - SPEARMAN INTERCHANGE 115KV CKT 1	
STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1	
STLN-DEMARC6 - SWEETWATER 230KV CKT 1	
THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	
TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	
TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1	
TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1	
TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER	

Contingency	Mitigation
CKT 1	
TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2	
WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1	

Table 8.13 Group 6 Cluster ERIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
BUSHLAND INTERCHANGE - HILLSIDE 115KV CKT 1	160.0	110.7716	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	Mitigated by voltage collapse upgrades
BUSHLAND INTERCHANGE (WH 7001795) 230/115/13.2KV TRANSFORMER CKT 1	168.0	110.1162	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	
CHISHOLM6 230.00 - ELK CITY 230KV 230kV CKT 1	353.0	113.9867	System Intact	
CIMARRON - MINCO 345KV CKT 1	1195.0	117.2755	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	
COULTER INTERCHANGE - HILLSIDE 115KV CKT 1	159.0	104.0218	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	
CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96.0	101.0437	System Intact	
DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	117.8449	System Intact	
DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	350.6	129.6424	NEWHART 230 - PLANT X STATION 230KV CKT 1	
G15039_T 230.00 - PLANT X STATION 230KV CKT 1	318.7	101.2007	System Intact	
GRACEMONT - MINCO 345KV CKT 1	1195.0	106.6944	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	
GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	104.9056	BASE CASE	
KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1	249.0	99	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1	
LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	1011.0	101.3643	System Intact	
LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1	143.4	100.1195	BASE CASE	
PLANT X STATION - TOLK STATION EAST 230KV CKT 2	442.0	100.8893	BASE CASE	
PLANT X STATION - TOLK STATION EAST 230KV CKT 2	752.0	104.8655	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	
PLANT X STATION - TOLK STATION WEST 230KV CKT 1	442.0	100.8893	BASE CASE	
PLANT X STATION - TOLK STATION WEST 230KV CKT 1	752.0	104.8655	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1	525.0	102.8262	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	Hobbs – Andrews 230kV (345kV Built) conversion to operate at 345kV, Install two new Andrews 345/115/13kV Transformers
ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	157.2913	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	
ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	156.5215	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	
G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	123.5033	ANDRWSXFMR12	
CHERRY1 - HARRINGTON STATION 230KV CKT 1	502.0	104.1278	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	Re-conductor/Rebuild approximately 11 miles of 230kV
CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	502.0	99.9	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	
CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195	103.9462	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	DISIS-2015-002 upgrade will be constructed at 3000 amp, which mitigates this constraint
CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	219.2477	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1	Re-terminate TUCO – Yoakum –Hobbs 345kV Project from TUCO to Crawfish Draw and build second 345kV Crawfish Draw – TUCO line
CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	547.0	213.0015	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1	
DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	189.9035	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	Re-conductor/Rebuild approximately 2 miles of 115kV
DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	160.0	136.318	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	Re-conductor/Rebuild approximately 7.5 miles of 115kV
DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	160.0	105.028	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	Re-conductor/Rebuild approximately 12.5 miles of 115kV
G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	117.1249	System Intact	Updated rating for each element is sufficient for constraint mitigations
G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	789.0	134.2888	CIMARRON - MINCO 345KV CKT 1	
G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	131.0896	System Intact	
G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	789.0	147.8313	CIMARRON - MINCO 345KV CKT 1	
Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	108.3474	System Intact	Upgrade terminal equipment (NTC)
Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	350.57	143.3681	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	
JAL SUB - TEAGUE SUB 115KV CKT 1	120.0	101.5521	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	Re-conductor/Rebuild approximately 10 miles of 115kV (NTC)

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1	120.0	112.5656	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1	Re-conductor/Rebuild approximately 4 miles of 115kV (NTC)
National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1	120.0	102.3847	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1	Re-conductor/Rebuild approximately 3 miles of 115kV (NTC)
National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	108.4988	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	Re-conductor/Rebuild approximately 7 miles of 115kV (NTC)
TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	123.8739	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1	Install second 345/230/13kV transformer

In addition to the ERIS constraint mitigations, several NRIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations assignable to those requests that elect NRIS.

Table 8.14 Group 6 Cluster NRIS Non-Convergence Constraints

Contingency	Mitigation
BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1	In addition to DISIS-2014-002, DISIS-2015-001, and DISIS-2015-002 assigned upgrades the following new upgrades are required for group 6 potential voltage collapse: 1) Increase previously assigned Oklaunion +/-100Mvar SVC to +300/-150 SVC and install 200mvars of additional capacitor banks 2) Build Crawfish Draw and Seminole 765kV yards and build approximately 325 miles of new 765kV from Crawfish Draw to Seminole 3) Build approximately 64 miles of new 345kV from Crawfish Draw – Tolk 4) Build approximately 115 miles of new 345kV from Tolk – Potter County 5) Build a new Grapevine 345kV switching station and Build approximately 65 miles of new 345kV from Potter County – Grapevine 345kV 6) Build approximately 75 miles of new 345kV from Grapevine - Chisholm 7) Build approximately 75 miles of new 345kV from Grapevine – Beaver County 8) Build approximately 125 miles of new 345kV from Beaver County – Clark County
BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2	
BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1	
CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1	
CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	
CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	
CIMARRON - MINCO 345KV CKT 1	
CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1	
EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1	
G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	
G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	
G14-074T 345.00 - OKLAUNION 345KV CKT 1	
G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1	
GRACEMONT - MINCO 345KV CKT 1	
JONES STATION - TUCO INTERCHANGE 230KV CKT 1	
MUSTANG STATION - SEMINOLE 230KV CKT 1	
OKLAUNION 345KV SWITCHED SHUNT	
P12:115:LCEC:W56.1.HOBBG.LE-LVN	
P12:230:LPL:K26.1.JONES.LP-HOLLY	
P12:230:LPL:K39.1.CRLSLE.LP-MLWK	
P12:230:LPL:K57.1.LP-WADS.LUBBE	
P12:345:SPS:J02.1.TOLK.EDDY	
P12:345:SPS:J15.1.XRDS.TOLK	
P12:LPL:SPS:K64.1.LP-SE.LUBBS	
PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1	
POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1	

Table 8.15 Group 6 Cluster NRIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	360.92	100.3813	P12:115:SPS:T67.1.HAPPY.KRESS	Constraints are mitigated with ERIS upgrades
CIMARRON - MINCO 345KV CKT 1	956.0	104.9454	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	
MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1	119.91	101.3863	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	
CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	99.7	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	DISIS-2015-002 upgrade will be constructed at 3000 amp, which mitigates this constraint
CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	191.5691	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1	Re-terminate TUCO – Yoakum –Hobbs 345kV Project from TUCO to Crawfish Draw and build second 345kV Crawfish Draw – TUCO line
CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	547.0	175.8259	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1	
CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	160.0	132.0544	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	Re-conductor/Rebuild approximately 3 miles of 115kV
CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	155.1081	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	Replace transformer (NTC)
COX INTERCHANGE - HALE CO INTERCHANGE 115KV CKT 1	95.81	112.723	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1	Re-conductor/Rebuild approximately 20 miles of 115kV
DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	160.0	148.0282	MUSTANG STATION - SEMINOLE 230KV CKT 1	Re-conductor/Rebuild approximately 1.5 miles of 115kV
DENVER CITY INTERCHANGE S. - SHELL C2 SUB 115KV CKT 1	175.0	121.0159	P12:115:LCEC:W56.1.HOBBG.LE-LVN	Re-conductor/Rebuild approximately 3.3 miles of 115kV
EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	311.0	103.0572	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1	Build third 230/115/13kV transformer
G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	106.4823	System Intact	Updated rating for each element is sufficient for constraint mitigations
G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	789.0	122.6092	CIMARRON - MINCO 345KV CKT 1	
G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	120.5337	System Intact	
G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	789.0	136.8479	CIMARRON - MINCO 345KV CKT 1	
HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	101.9147	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2	Replace transformer
HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1	141.02	109.5178	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	Sundown 230/115/13kV transformer circuit #2

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	351.0	113.6961	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1	Replace terminal equipment
JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1	Updated rating are sufficient for constraint mitigations
LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	175.0	106.2038	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	Re-conductor/Rebuild 1.4 miles of 115kV
LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	177.08	107.6192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	Hobbs – Yoakum – TUCO 345kV Project (NTC)
LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	151.3756	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1	Install second transformer
LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	145.6657	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1	Install second transformer
LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	110.7208	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	Install second transformer
MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	288.0	106.6532	MUSTANG STATION - SEMINOLE 230KV CKT 1	Install second transformer
SAN_ANDS_TP3115.00 - SEMINOLE 115KV CKT 1	160.0	125.773	MUSTANG STATION - SEMINOLE 230KV CKT 1	Re-conductor/Rebuild 17.5 miles of 115kV
SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	124.9079	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	Replace transformer (NTC)
SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	126.1351	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	Replace transformer (NTC)
SHELL C2 SUB - SHELL C3 TAP 115KV CKT 1	179.0	110.5553	P12:115:LCEC:W56.1.HOBBG.LE-LVN	Re-conductor/Rebuild 2.1 miles of 115kV
SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	120.1031	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1	Build second 230/115/13kV transformer
TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	153.97	104.2168	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1	Upgrade terminal equipment (NTC)
TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	288.0	123.2708	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	Crawfish 115kV substation expand, install 230/115kV transformer, and loop in TUCO – Hale County 115kV
TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2	288.0	123.2144	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	
TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	288.0	123.2708	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	125.9821	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	Replace transformer
YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	112.5263	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	Replace transformer (NTC)
YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	116.8478	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	Replace transformer (NTC)

8.1.6 CLUSTER GROUP 7 (SOUTHWESTERN OKLAHOMA AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

Several ERIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations. The table below summarizes constraints and associated mitigations.

Table 8.16 Group 7 Cluster ERIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	789.0	107.7582	CIMARRON - MINCO 345KV CKT 1	Updated rating are sufficient for constraint mitigations

In addition to the ERIS constraint mitigations, several NRIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations assignable to those requests that elect NRIS.

Table 8.17 Group 7 Cluster NRIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
CLEVELAND - CLEVLND 4 138.00 138KV CKT Z1	371.0	111.6105	CLEVELAND - TULSA NORTH 345KV CKT 1	Replace bus tie breaker with three breaker ring and upgrade associated terminal equipment
CLINTON JUNCTION - ELK CITY 138KV CKT 1	152.0	107.1886	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1	Re-conductor/Rebuild approximately 24 miles of 138kV
CORN TAP - NAPLESTP 138.00 138KV CKT 1	201.0	103.7196	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	Higher queued assigned rebuilds
NAPLESTP 138.00 - PAYNE 138.00 138KV CKT 1	201.0	101.5173	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	
G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	104.4987	BASE CASE	Updated rating is sufficient for constraint mitigations
G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	789.0	109.6733	CIMARRON - MINCO 345KV CKT 1	
Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	360.92	123.2624	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	Upgrade terminal equipment (NTC)
HUGO POWER PLANT - VALLIANT 138KV CKT 1	287.0	104.323	HUGO - VALLIANT 345KV CKT 1	Upgrade terminal equipment
KINZE - STILLWATER KINZIE 138KV CKT 1	287.0	102.1922	CLEVELAND - G15066_T 345.00 345KV CKT 1	Upgrade terminal equipment
LYDIA - VALLIANT 345KV CKT 1	1052.0	105.8951	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1	Updated rating is sufficient for constraint mitigations
PITTSBURG - SEMINOLE 345KV CKT 1	717.0	112.8138	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	Updated rating is sufficient for constraint mitigations
TUPELO - TUPELO TAP 138KV CKT 1	143.0	134.4175	PITTSBURG - VALLIANT 345KV CKT 1	Upgrade Tupelo SW terminal equipment and re-conductor approximately 1.3 miles of 138kV

8.1.7 CLUSTER GROUP 8 (NORTH OKLAHOMA/SOUTH CENTRAL KANSAS AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

- **Note for GEN-2016-012** – Additional analysis of impacts to Wolf Creek will be required in the Facilities Study phase. The scope of this analysis is described in more detail in Appendix K. The analysis will require significant additional study costs and may require additional time for completion beyond the normal Facilities Study timeframe.

Several ERIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations. The table below summarizes constraints and associated mitigations. Potential voltage collapse is inferred from non-convergence.

Table 8.18 Group 8 Cluster ERIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
Non-Convergence	N/A	N/A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	Build approximately 95 miles of new 345kV from Wolf Creek - Neosho
CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766	106.3795	System Intact	Replace terminal equipment
CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106.0	184.2206	System Intact	Re-conductor/Rebuild 5.7 miles of 138kV
CLEVELAND - TULSA NORTH 345KV CKT 1	1135.0	103.411	System Intact	Replace terminal equipment
FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	126.1996	System Intact	Re-conductor/Rebuild 10.3 miles of 138kV
FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	167.456	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1	
G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	123.7516	NORTHWEST - SPRING CREEK 345KV CKT 1	Higher queued upgrade mitigates this constraint
G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	123.214	NORTHWEST - SPRING CREEK 345KV CKT 1	
G16-012-TAP 345.00 - WAVERLY 345KV CKT 1	1141.0	100.6873	NEOSHO - WOLF CREEK 345KV CKT 1	Replace terminal equipment
G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	110.913	System Intact	Re-conductor/Rebuild 31 miles of 345kV
G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195.0	122.1176	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
HUNTERS7 345.00 - WOODRING 345KV CKT 1	1195.0	100.563	VIOLA 7 345.00 - WICHITA 345KV CKT 1	Replace terminal equipment
KILDARE4 - WHITE EAGLE 138KV CKT 1	222.0	121.0178	HUNTERS7 345.00 - WOODRING 345KV CKT 1	Re-conductor/Rebuild 11 miles of 138kV
KINZE - MCELROY 138KV CKT 1	194.0	107.8981	System Intact	Re-conductor/Rebuild 2 miles of 138kV
KINZE - MCELROY 138KV CKT 1	222.0	103.1848	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1	

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209	101.8427	System Intact	Re-conductor/Rebuild 28 miles of 161kV
NEOSHO (N345 TX-2) 345/161/13.8KV TRANSFORMER CKT 1	410.0	99.3	System Intact	Updated rating is sufficient for constraint mitigations
NORTHWEST - SPRING CREEK 345KV CKT 1	1195.0	101.86	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	Replace terminal equipment
OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	105.1799	System Intact	Re-conductor/Rebuild 22 miles of 138kV
OSAGE - WHITE EAGLE 138KV CKT 1	191.0	103.407	CONTINENTAL EMPIRE - WHITE EAGLE 138KV CKT 1	Re-conductor/Rebuild 3 miles of 138kV
RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179.0	104.5504	System Intact	Higher queued upgrade mitigates this constraint
VIOLA 7 345.00 - WICHITA 345KV CKT 1	1076.0	111.6285	HUNTERS7 345.00 - WOODRING 345KV CKT 1	Viola 345/138 Project , Viola HPILS Project (NTC), and second Viola 345/138/13kV transformer
VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	492.8	117.2664	VIOLA 7 345.00 - WICHITA 345KV CKT 1	Build second transformer

In addition to the ERIS constraint mitigations, several NRIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations assignable to those requests that elect NRIS.

Table 8.19 Group 8 Cluster NRIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
Non-Convergence	N/A	N/A	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	Build approximately 95 miles of new 345kV from Wolf Creek - Neosho
BUTLER - MIDIAN 138KV CKT 1	143.0	101.0791	MIDIAN (MIDI TX-1) 138/69/13.2KV TRANSFORMER CKT 1	
WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	110.0	123.842	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	
PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189.0	102.0052	CLEVELAND - TULSA NORTH 345KV CKT 1	
SHIDLER - WEST PAWHUSKA 138KV CKT 1	189.0	102.4344	CLEVELAND - TULSA NORTH 345KV CKT 1	
ALTOONA - BUTLER 138KV CKT 1	96.0	115.0024	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	Re-conductor/Rebuild 10.3 miles of 138kV
CANEYRV7 345.00 - NEOSHO 345KV CKT 1	923.0	106.1701	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	Replace terminal equipment
CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	371.0	135.4459	CLEVELAND - TULSA NORTH 345KV CKT 1	Replace bus tie breaker with three breaker ring and upgrade associated terminal equipment

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
CLEAVELAND - SILVER CITY 138KV CKT 1	174.0	107.892	CLEVELAND - TULSA NORTH 345KV CKT 1	Higher queued upgrade mitigates this constraint
CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	494.0	108.5664	CLEVELAND - TULSA NORTH 345KV CKT 1	Install second 345/138/13kV transformer
FAIRFAX TAP - SHIDLER 138KV CKT 1	211.0	110.1603	CLEVELAND - G15066_T 345.00 345KV CKT 1	Re-conductor/Rebuild 2.4 miles of 138kV
FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1	211.0	110.165	CLEVELAND - G15066_T 345.00 345KV CKT 1	
FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	104.8009	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1	Re-conductor/Rebuild 10.3 miles of 138kV
G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	104.4987	System Intact	Updated rating is sufficient for constraint mitigations
G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	789.0	109.188	PITTSBURG - SEMINOLE 345KV CKT 1	
G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	99.1	System Intact	Re-conductor/Rebuild 31 miles of 345kV
G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1195	108.8839	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	
KINZE - MCELROY 138KV CKT 1	222.0	115.5184	CLEVELAND - G15066_T 345.00 345KV CKT 1	Re-conductor/Rebuild 2 miles of 138kV
KINZE - STILLWATER KINZIE 138KV CKT 1	287.0	107.2124	CLEVELAND - G15066_T 345.00 345KV CKT 1	Replace terminal equipment
NEOSHO (N345 TX-2) 345/161/13.8KV TRANSFORMER CKT 1	494.0	104.4041	NEOSHO (NEOSHO1X) 345/138/13.8KV TRANSFORMER CKT 1	Updated rating is sufficient for constraint mitigations
OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	99.8	System Intact	Re-conductor/Rebuild 22 miles of 138kV
OSAGE - WEBB CITY TAP 138KV CKT 1	180.0	137.8406	CLEVELAND - G15066_T 345.00 345KV CKT 1	Re-conductor/Rebuild 3 miles of 138kV
WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400	100.867	System Intact	Viola 345/138 Project, Wichita 345/138/13kV transformer circuit #1 and circuit #2 replacement
WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	430.0	133.2095	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	
WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400	100.867	System Intact	
WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	430.0	141.582	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	

8.1.8 CLUSTER GROUP 9 (NEBRASKA AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

Several ERIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations. The table below summarizes constraints and associated mitigations. Potential voltage collapse is inferred from non-convergence.

NPPD and BEPC will need to perform further stability analysis for the Gentleman and Laramie area interconnect requests. This additional analysis could require additional mitigation by means of new transmission.

Table 8.20 Group 9 Cluster ERIS Non-Convergence Constraints

Contingency	Mitigation
G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1	In addition to high queued assigned upgrades the following new upgrades are required for group 9 potential voltage collapse: 1) Advance Gentleman – Thedford – Holt 345kV project 2) Build approximately 140 miles of new 345kV from Banner County - Keystone
G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1	
GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	
GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
LARAMIE RIVER - STEGALL 345KV CKT 1	
P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
PAULINE - ROSEMONT 115.00 115KV CKT 1	
SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z	
SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1	
SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1	

Table 8.21 Cluster ERIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
KEYSTONE - OGALALANPPD7115.00 115KV CKT 1	400.0	103.4092	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1	Build approximately 30 miles of second 345kV circuit from Keystone – Gentleman
KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	116.8767	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1	
FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	121.0747	PAULINE - ROSEMONT 115.00 115KV CKT 1	Re-conductor/rebuild Pauline – Rosemont 115kV circuit #1 and build approximately 10 miles of second circuit from Pauline to Rosemont
FAIRBURY - HARBINE 115KV CKT 1	99.0	111.2561	PAULINE - ROSEMONT 115.00 115KV CKT 1	
GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	127.5746	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1	
GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	175.4756	PAULINE - ROSEMONT 115.00 115KV CKT 1	
GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	167.1211	PAULINE - ROSEMONT 115.00 115KV CKT 1	
HEBRON - NORTH HEBRON 115KV CKT 1	120.0	153.1278	PAULINE - ROSEMONT 115.00 115KV CKT 1	
HEBRON - SUPERIOR 115KV CKT 1	120.0	162.5306	PAULINE - ROSEMONT 115.00 115KV CKT 1	
PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	127.9586	System Intact	
PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	168.5922	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	

In addition to the ERIS constraint mitigations, several NRIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations assignable to those requests that elect NRIS.

Table 8.22 Group 9 Cluster NRIS Non-Convergence Constraints

Contingency	Mitigation
FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	In addition to high queued assigned upgrades the following new upgrades are required for group 9 potential voltage collapse: 1) Advance Gentleman – Thedford – Holt 345kV project 2) Build approximately 140 miles of new 345kV from Banner County - Keystone
FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1	
FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1	
GAVINS POINT - YANKON JCT 115KV CKT 1	
GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	
GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1	
GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1	
GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
GRPRAR1-LNX3345.00 - GRPRAR1 345KV CKT Z	
HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1	
P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
P13:230-345:NPPD:STEGALL3:KV3A	
RAUN - SUB 3451 FT CAL 345KV CKT 1	

Table 8.23 Group 9 Cluster NRIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	313.0	110.161	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	Current study ERIS upgrades
FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	313.0	110.1857	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	
GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	109.8553	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1	
GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	158.5241	PAULINE - ROSEMONT 115.00 115KV CKT 1	
GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	154.8125	PAULINE - ROSEMONT 115.00 115KV CKT 1	
HEBRON - NORTH HEBRON 115KV CKT 1	120.0	148.5307	PAULINE - ROSEMONT 115.00 115KV CKT 1	
HEBRON - SUPERIOR 115KV CKT 1	120.0	151.5658	PAULINE - ROSEMONT 115.00 115KV CKT 1	
OGALLALA - SIDNEY 230KV CKT 1	320.0	133.6017	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	115.1365	System Intact	
PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	154.4812	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	
RASMUSN - UTICA JCT 230KV CKT 1	376.0	100.3353	FT RANDAL - SIOUX CITY 230KV CKT 1	
SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	128.3068	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	480.0	104.2976	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	
BLOOMFIELD - GAVINS POINT 115KV CKT 1	120.0	100.9542	RASMUSN - UTICA JCT 230KV CKT 1	

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
BEATRICE - HARBINE 115KV CKT 1	99.0	120.1667	KNOB HILL - STEELE CITY 115KV CKT 1	Re-conductor/rebuild approximately 14 miles of 115kV
BELDEN - HARTINGTON 115KV CKT 1	120.0	117.2618	BLOOMFIELD - CREIGHTON 115KV CKT 1	Re-conductor/rebuild approximately 12 miles of 115kV
COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	117.7326	COLUMEAST - SHELL CREEK 345KV CKT 1	Replace transformer
CRETE - FRIEND 115KV CKT 1	137.0	106.8067	MCCOOL - MOORE 345KV CKT 1	Re-conductor/rebuild approximately 16.5 miles of 115kV
DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	320.0	99.9	HOSKINS - RAUN 345KV CKT 1	Higher queued assigned upgrade to achieve at least 326MVA normal and emergency which mitigates this constraint
FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	120.7433	PAULINE - ROSEMONT 115.00 115KV CKT 1	Re-conductor/rebuild approximately 17 miles of 115kV
FAIRBURY - HARBINE 115KV CKT 1	99.0	113.789	PAULINE - ROSEMONT 115.00 115KV CKT 1	Re-conductor/rebuild approximately 10 miles of 115kV
FT RANDAL - SIOUX CITY 230KV CKT 1	320.0	101.8819	RASMUSN - UTICA JCT 230KV CKT 1	Replace terminal equipment
GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	144.5887	BLOOMFIELD - CREIGHTON 115KV CKT 1	Re-conductor/rebuild approximately 20 miles of 115kV
GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	109.2696	System Intact	Higher queued upgrade
GAVINS POINT - YANKON JCT 115KV CKT 1	153.5	124.5896	RASMUSN - UTICA JCT 230KV CKT 1	
GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	141.9419	System Intact	Increase conductor clearance and replace terminal equipment
GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	168.2827	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1	
GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	140.9576	System Intact	
GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	166.9846	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1	
GRPRAR1-LNX3345.00 - GRPRAR1 345KV CKT Z	720.0	132.9432	System Intact	
GRPRAR1-LNX3345.00 – GRPRAR1 345KV CKT Z	720.0	141.7977	KELLY - MEADOWGROVE4230.00 230KV CKT 1	
KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	111.5658	System Intact	Build Meadow Grove 115kV switchyard, 230/115/13kV transformer, Build approximately 25 miles of new 115kV from Meadow Grove – North Petersburg, and increase conductor clearance on Kelly – Meadow Grove.
KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	125.3767	FT RANDAL - SIOUX CITY 230KV CKT 1	

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
KNOLL - N HAYS3 115.00 115KV CKT 1	99.0	130.3239	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	Build second Knoll – Post Rock 230kV line
N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	99.0	139.7556	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	
SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	120.7599	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	
NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	115.5103	System Intact	Re-conductor/rebuild approximately 13 miles of 115kV. This upgrade will required updated costs from Affected System, Northwestern Energy.
NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	156.0711	RASMUSN - UTICA JCT 230KV CKT 1	
NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	115.2771	System Intact	Re-conductor/rebuild approximately 2.7 miles of 115kV. Northwestern Energy facilities. If NRIS is withdrawn, these upgrades could still be required by the Affected System
NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	155.8844	RASMUSN - UTICA JCT 230KV CKT 1	
PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	124.3474	RASMUSN - UTICA JCT 230KV CKT 1	Re-conductor/rebuild approximately 20 miles of 230kV
PLYMOUTH - SIOUX CITY 161KV CKT 1	444.0	118.5371	RAUN - SIOUX CITY 345KV CKT 1	Re-conductor/rebuild approximately 2 miles of 161kV
RASMUSN - SIOUX CITY 230KV CKT 1	352.0	102.3278	FT RANDAL - SIOUX CITY 230KV CKT 1	Conductor clearance increase and terminal equipment upgrades
RAUN - TEKAMAH 161KV CKT 1	217.0	105.846	RAUN - SUB 3451 FT CAL 345KV CKT 1	Higher queued assigned upgrade
SIOUX CITY (SC KV1A) 230/161/13.8KV TRANSFORMER CKT 1	313.0	99.8	SIOUX CITY (SC KV5A) 230/161/13.8KV TRANSFORMER CKT 1	Replace transformers
SIOUX CITY (SC KV5A) 230/161/13.8KV TRANSFORMER CKT 1	313.0	100	SIOUX CITY (SC KV1A) 230/161/13.8KV TRANSFORMER CKT 1	

8.1.9 CLUSTER GROUP 10 (SOUTHEAST OKLAHOMA/NORTHEAST TEXAS AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C. No new requests in this group

8.1.10 CLUSTER GROUP 12 (NORTHWEST ARKANSAS AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

Several NRIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations. The table below summarizes constraints and associated mitigations.

Table 8.24 Group 12 Cluster ERIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
Currently none				

In addition to the ERIS constraint mitigations, several NRIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations assignable to those requests that elect NRIS.

Table 8.25 Group 12 Cluster NRIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
CRAWFORD - NEOSHO 69KV CKT 1	48.0	116.4112	P13:138-161:WERE:NSES_TX-4OR5::	Updated rating is sufficient for constraint mitigations
LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1	223.0	113.0745	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	Re-conductor/Rebuild 6.8 miles of 161kV
NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	101.7166	System Intact	Re-conductor/Rebuild 28 miles of 161kV
NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	223.0	139.0951	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1	

8.1.11 CLUSTER GROUP 13 (NORTHEAST KANSAS/NORTHWEST MISSOURI AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C. No new constraints were observed

Table 8.26 Group 13 Cluster ERIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
Current none				

Table 8.27 Group 13 Cluster NRIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
Currently none				

8.1.12 CLUSTER GROUP 14 (SOUTH CENTRAL OKLAHOMA AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

Several ERIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations. The table below summarizes constraints and associated mitigations.

Table 8.28 Group 14 Cluster ERIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
CLAYTON - SARDIS 138KV CKT 1	98.0	105.6648	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1	Recently completed Re-conductor/rebuild approximately 3.8 miles of 138kV. Cost allocation has been updated.
ENOWILT - LONE OAK 138KV CKT 1	98.0	100.8742	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1	Recently completed re-conductor/rebuild approximately 0.3 miles of 138kV. Cost allocation has been updated.
ENOWILT - SARDIS 138KV CKT 1	98.0	102.4241	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1	Recently completed re-conductor/rebuild approximately 22.4 miles of 138kV. Cost allocation has been updated.

In addition to the ERIS constraint mitigations, several NRIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations assignable to those requests that elect NRIS.

Table 8.29 Group 14 Cluster NRIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
BETHEL - BROKEN BOW 138KV CKT 1	121.0	119.9378	PITTSBURG - VALLIANT 345KV CKT 1	Recently completed re-conductor/rebuild approximately 16.3 miles of 138kV. Cost allocation has been updated.
BETHEL - NASHOBA 138KV CKT 1	121.0	125.5449	PITTSBURG - VALLIANT 345KV CKT 1	Recently completed re-conductor/rebuild approximately 22.4 miles of 138kV. Cost allocation has been updated.
BROWN - BROWN 138KV CKT 1	143.0	102.823	RUSSETT - RUSSETT 138KV CKT 1	Re-conductor/rebuild approximately 0.1 mile of 138kV
CLAYTON - NASHOBA 138KV CKT 1	121.0	126.6003	PITTSBURG - VALLIANT 345KV CKT 1	Recently completed Re-conductor/rebuild approximately 11.6 miles of 138kV. Cost allocation has been updated.
HUGO POWER PLANT - VALLIANT 138KV CKT 1	287.0	104.323	HUGO - VALLIANT 345KV CKT 1	Upgrade terminal equipment
LYDIA - VALLIANT 345KV CKT 1	1052.0	105.8951	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1	Updated rating is sufficient for constraint mitigations

8.1.13 CLUSTER GROUP 15 (EASTERN SOUTH DAKOTA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

Several ERIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations. The table below summarizes constraints and associated mitigations.

GEN-2016-017 was also analyzed in Group 16 due to its close electrical location to other current study group 16 requests.

Table 8.30 Group 15 Cluster ERIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
SPLIT ROCK - WHITE 345KV CKT 1	720.0	122.6292	System Intact	Replace terminal equipment and increase conductor clearance

Table 8.31 Group 15 Cluster NRIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
Non-Convergence	N/A		FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	Advance Gentleman – Thedford – Holt 345kV project
			FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1	
			FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1	
			GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	
			GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
			GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1	
			GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1	
			GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
			GRPRAR2-LNX3345.00 - GRPRAR1 345KV CKT Z	
			P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH	
FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	313.0	110.161	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	313.0	110.1857	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	
FT RANDAL - FT THOMPSON 230KV CKT 1	320.0	118.2185	FT RANDAL - LAKE PLATT 230KV CKT 1	Replace terminal equipment and increase conductor clearance
FT THOMPSON - LAKE PLATT 230KV CKT 1	352.0	106.4311	FT RANDAL - FT THOMPSON 230KV CKT 1	Replace terminal equipment and increase conductor clearance
GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	141.9419	System Intact	Increase conductor clearance and replace terminal equipment
GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	148.2605	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1	
GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	140.9576	System Intact	
GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	147.1956	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1	
SPLIT ROCK - WHITE 345KV CKT 1	792.0	113.9642	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	Replace terminal equipment and increase conductor clearance

8.1.14 CLUSTER GROUP 16 (WESTERN NORTH DAKOTA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

Several ERIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations. The table below summarizes constraints and associated mitigations.

Table 8.32 Group 16 Cluster ERIS Non-Convergence Constraints

Contingency	Mitigation
2810X2	1. Build GEN-2016-044 tap to Groton 345kV circuit #2 2. Build GEN-2016-044 tap to new substation 345kV transmission circuit on AVS to Broadland 345kV 3. Build Broadland to Split Rock 345kV
488489510526345.00 - BSSOUTH3 345.00 345KV CKT 1	
ADAMS - MITCHLCO3 345.00 345KV CKT 1	
ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1	
ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1	
ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1	
ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z	
ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	
APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1	
APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1	
ARROWHEAD - ARROWHEAD 230 230KV CKT 1	
AS KING - CHISAGO COUNTY 345KV CKT 1	
AUDUBON - HUBBARD 230KV CKT 1	
AUDUBON - SHEYNNE 230KV CKT 1	
BADOURA - HUBBARD 230KV CKT 1	
BIG STONE - BLAIR 230KV CKT 1	
BIG STONE - BROWNS VALLEY 230KV CKT 1	
BISMARK - HILKEN 4 230.00 230KV CKT 1	
BISMARK - JAMES TOWN 230KV CKT 1	
BISMARK - L3 HAWDON 230KV CKT 1	
BISMARK - WASHBURN 230KV CKT 1	
BISMARK - WEBER 230KV CKT 1	
BISON - HETINGER 230KV CKT 1	
BISON - MAURINE 230KV CKT 1	
BISON 3 345.00 - BUFFALO 345KV CKT 1	
BLAIR - GRANITE FALLS 230KV CKT 1	
BOWMAN - HETINGER 230KV CKT 1	
BOWMAN - RHAME 4 230.00 230KV CKT 1	
BRDLAND-LNX3345.00 - HURON 345KV CKT Z	
BRISTOL - GROTON 115KV CKT 1	
BRISTOL - SUMMIT 115KV CKT 1	
BROADLAND - HURON 230KV CKT 1	
BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1	
BROWNS VALLEY - HANKINSON 230KV CKT 1	
BUFFALO - JAMESTOWN 345KV CKT 1	
CASS LK4 230.00 - KARLSTAD 230KV CKT 1	
CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1	
CENTER - CNTSHNT3 345.00 345KV CKT Z1	
CENTER - COYOTE 345KV CKT 1	
CENTER - JAMESTOWN 345KV CKT 1	

Contingency	Mitigation
CENTER - SQUARE BUTTE 230KV CKT 1	
CENTER (C1) 345/230/13.8KV TRANSFORMER CKT 1	
CENTER (C2) 345/230/13.8KV TRANSFORMER CKT 2	
CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1	
CHISAGO COUNTY - FORBES 500KV CKT 1	
CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1	
DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1	
DRAYTON - PRAIRIE 230KV CKT 1	
EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1	
ELLENDALE - J316_SUB 230.00 230KV CKT 1	
ELLENDALE - OAKES 230KV CKT 1	
FARGO - JAMES TOWN 230KV CKT 1	
FARGO - JAMES TOWN 230KV CKT 2	
FARGO - MOOREHEAD 230KV CKT 1	
FARGO - SHEYNNE 230KV CKT 1	
FERGSFL4 230.00 - WAHPETON 230KV CKT 1	
FORBES - ROSEAU 500KV CKT 1	
FORMAN - HANKINSON 230KV CKT 1	
FORMAN - OAKES 230KV CKT 1	
FT RANDAL - FT THOMPSON 230KV CKT 1	
FT RANDAL - LAKE PLATT 230KV CKT 1	
FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1	
FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z	
FT THOMPSON - LAKE PLATT 230KV CKT 1	
FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1	
FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1	
FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1	
G09_001IST 345.00 - GROTON 345KV CKT 1	
G09_001IST 345.00 - WATERTOWN 345KV CKT 1	
G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1	
G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	
GARRISON - JAMES TOWN 230KV CKT 1	
GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1	
GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1	
GEN-2016-044345.00 345/34.5KV TRANSFORMER CKT 1	
GEN-2016-044345.00 345/34.5KV TRANSFORMER CKT 2	
GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1	
GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1	
GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1	
GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1	
GLENHAM - L3 HAWDON 230KV CKT 1	
GLENHAM - WHITLOK 230KV CKT 1	
GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	
GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
GRAND FORKS - PICKERT 230KV CKT 1	
GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1	
GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1	
GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1	
GROTON - GROTON-LNX3 345.00 345KV CKT Z	
GROTON 115KV SWITCHED SHUNT	
GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	
GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	
GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z	

Contingency	Mitigation
H081-TAP 345.00 - LYON COUNTY 345KV CKT 1	
HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6	
HELENA - SHEAS LK3 345.00 345KV CKT 1	
HIGHLND 3 345.00 - RAUN 345KV CKT 1	
HOSKINS - RAUN 345KV CKT 1	
HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	
J290_SUB 230.00 - RUGBY 230KV CKT 1	
J316_SUB 230.00 - TATANKA 230KV CKT 1	
JAMES TOWN - PICKERT 230KV CKT 1	
JAMES TOWN - WEBER 230KV CKT 1	
KARLSTAD - WINGER 230KV CKT 1	
KELLY - MEADOWGROVE4230.00 230KV CKT 1	
KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1	
LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z	
LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z	
LELAND OLDS - LOGAN 230KV CKT 1	
LELAND OLDS - STANTON 230KV CKT 1	
LELAND OLDS - WASHBURN 230KV CKT 1	
LOGAN - MALLARD 115KV CKT 1	
LOGAN (KW1A) 230/115/13.8KV TRANSFORMER CKT 1	
MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1	
MAURINE 115KV SWITCHED SHUNT	
MONTICELLO - WAITE PARK 345KV CKT 1	
MOOREHEAD - MORRIS 230KV CKT 1	
NOBLES - SPLIT ROCK 345KV CKT 1	
NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1	
NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1	
NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z	
NUNDRWD - WAYSIDE 230KV CKT 1	
OAHE - SULLEY BUTTE 230KV CKT 1	
P12:115:UMZW:# 153 #: MA-NL-ELC IN SD. NEWELL IS A TAP WITH NON-FAULT INTERUPTING DEVICES	
P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.	
P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH	
P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH	
P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH	
P12:230:UMZB:# 171 #: WB IN ND.	
P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS	
P12:230:UMZW:# 158 #: MH IN ND.	
P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)	
P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR	
P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE	
P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT	
P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT	
P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT	
P13:115-230:TSGT:SIDNEY-KV1A	
P13:230-345:NPPD:SIDNEY 3:KV2A	
P13:230-345:NPPD:STEGALL3:KV3A	
PRAIRIE - WINGER 230KV CKT 1	
PRAIRIE3 345.00 (P2) 345/230/13.8KV TRANSFORMER CKT 2	
RIEL - ROSEAU 500KV CKT 1	
ROSEAU - ROSEAUM 2 500.00 500KV CKT 1	
SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z	

Contingency	Mitigation
SIDNEY - STEGALL 345KV CKT 1	
SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1	
SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1	
SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	
SPLIT ROCK - WHITE 345KV CKT 1	
SQUARE BUTTE - STANTON 230KV CKT 1	
STEGALL - STEGALL-LNX3230.00 230KV CKT Z	
STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1	
STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1	
STEGALL-WAYSIDE-TLINE-REACTOR-CKT1	
SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	
SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	
SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1	
WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	
WATERTN-LNX3345.00 - WHITE 345KV CKT 1	
WATERTOWN-WHITE-TLINE-REACTOR-CKT1	

Table 8.33 Group 16 Cluster ERIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	478.0	100.6065	System Intact	New 345kV upgrade
BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	102.427	System Intact	Re-conductor/rebuild approximately 21.28 miles of 138kV
BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	124.4787	GARRISON - JAMES TOWN 230KV CKT 1	
BISON - HETINGER 230KV CKT 1	215.0	115.4161	System Intact	Updated rating is sufficient for constraint mitigations
BISON - HETINGER 230KV CKT 1	236.0	102.5639	BELFIELD - CHARLIE CREEK 345KV CKT 1	
G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	108.3898	System Intact	Replace terminal equipment
G09_001IST 345.00 - GROTON 345KV CKT 1	789.0	110.1371	FORMAN - HANKINSON 230KV CKT 1	
G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	113.8693	System Intact	Replace terminal equipment
G09_001IST 345.00 - WATERTOWN 345KV CKT 1	789.0	115.3092	FORMAN - HANKINSON 230KV CKT 1	
HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	110.0846	System Intact	Install second transformer
SPLIT ROCK - WHITE 345KV CKT 1	720.0	104.9586	System Intact	Replace terminal equipment and increase conductor clearance
SPLIT ROCK - WHITE 345KV CKT 1	792.0	121.75	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1	
WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	106.4247	System Intact	Replace terminal equipment
WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	792.0	108.0675	BLAIR - GRANITE FALLS 230KV CKT 1	
WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	107.899	System Intact	
WATERTN-LNX3345.00 - WHITE 345KV CKT 1	792.0	109.3413	BLAIR - GRANITE FALLS 230KV CKT 1	
WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	500.0	115.472	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	Replace transformer

In addition to the ERIS constraint mitigations, several NRIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations assignable to those requests that elect NRIS.

Table 8.34 Group 16 Cluster NRIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1	341.8	106.0153	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	Current Study ERIS Upgrades and Advance R-Plan
BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	108.4309	LELAND OLDS - WASHBURN 230KV CKT 1	
G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	117.4791	System Intact	
G09_001IST 345.00 - WATERTOWN 345KV CKT 1	789.0	119.6725	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	
HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400..0	104.4254	System Intact	
HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	118.4068	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1	
SPLIT ROCK - WHITE 345KV CKT 1	720.0	150.2033	System Intact	
SPLIT ROCK - WHITE 345KV CKT 1	792.0	144.5185	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1	
WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	110.6627	System Intact	
WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	792.0	115.8383	BLAIR - GRANITE FALLS 230KV CKT 1	
WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	111.573	System Intact	
WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	116.6297	BLAIR - GRANITE FALLS 230KV CKT 1	
WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	500.0	114.9057	WATERTOWN-WHITE-TLINE-REACTOR-CKT1	
FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	313.0	110.478	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	
FT THOMPSON (FT2 KU1B)	313.0	110.5026	FT THOMPSON (FT2	

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
345/230/13.8KV TRANSFORMER CKT 1			KU1A) 345/230/13.8KV TRANSFORMER CKT 1	
OAHE - SULLEY BUTTE 230KV CKT 1	260.0	100.0974	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1	
BLAIR - GRANITE FALLS 230KV CKT 1	410.0	112.8014	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	
GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	259.0	108.2385	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	
SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	264.0	101.2409	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1	
SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	260.0	100.213	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1	
BISMARK - L3 HAWDON 230KV CKT 1	210.0	120.4938	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z	Updated rating is sufficient for constraint mitigations
BRISTOL - GROTON 115KV CKT 1	111.0	119.6798	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	Re-conductor/rebuild approximately 21 miles of 115kV
BRISTOL - SUMMIT 115KV CKT 1	111..0	112.3413	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	Re-conductor/rebuild approximately 32 miles of 115kV
FARGO - SHEYNNE 230KV CKT 1	342.0	138.5651	CENTER - JAMESTOWN 345KV CKT 1	Replace terminal equipment
G13_001IST 115.00 - SUMMIT 115KV CKT 1	121.0	131.7225	G09_001IST 345.00 - GROTON 345KV CKT 1	Replace terminal equipment
GLENHAM - L3 HAWDON 230KV CKT 1	210.0	105.0197	System Intact	Replace terminal equipment
GLENHAM - L3 HAWDON 230KV CKT 1	210.0	135.4445	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1	
GLENHAM - WHITLOK 230KV CKT 1	260.0	102.4597	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1	Updated rating is sufficient for constraint mitigations
GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	125.6308	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	Increase conductor clearance and replace terminal equipment
GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	124.8078	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1	
SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717.0	119.126	LAKEFIELD 3 - NOBLES 345KV CKT 1	Replace terminal equipment

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717.0	118.1598	LAKEFIELD 3 - NOBLES 345KV CKT 1	

8.1.15 CLUSTER GROUP 17 (WESTERN SOUTH DAKOTA)

New requests for this study group as well as prior-queued requests are listed in Appendix C. No new constraints were observed.

Table 8.35 Group 17 Cluster ERIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
Currently none				

Table 8.36 Group 17 Cluster NRIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
Currently none				

8.1.16 CLUSTER GROUP 18 (EASTERN NORTH DAKOTA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

Table 8.37 Group 18 Cluster ERIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
Currently none				

Several NRIS thermal and voltage constraints were observed for system-intact and single-contingency (N-1) conditions. The table below summarizes constraints and associated mitigations. The table below summarizes constraints and associated mitigations.

Table 8.38 Group 18 Cluster NRIS Constraints

Monitored Element	Limiting Rate A/B (MVA)	TC %Loading (%MVA)	Contingency	Mitigation
BIG STONE - BLAIR 230KV CKT 1	526.0	100.3919	System Intact	Higher queued assigned
BIG STONE - BLAIR 230KV CKT 1	526.0	119.9446	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1	
FARGO - SHEYNNE 230KV CKT 1	342.0	117.1047	HANKINSON - WAHPETON 230KV CKT 1	
G13_001IST 115.00 - SUMMIT 115KV CKT 1	121.0	113.4785	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	Replace terminal equipment
SPLIT ROCK - WHITE 345KV CKT 1	720.0	150.2033	System Intact	Replace terminal equipment
SPLIT ROCK - WHITE 345KV CKT 1	792.0	142.9483	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1	
WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	107.6947	System Intact	Replace terminal equipment
WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	792.0	109.8349	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1	
WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	108.7517	System Intact	

WATERTN-LNX3345.00 - WHITE 345KV CKT 1	792.0	110.718	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1	

8.2 STAND-ALONE SCENARIO

The Stand-Alone Scenario considers the Base Case as well as all generating facilities (and with respect to (3) below, any identified Network Upgrades associated with such higher-queued interconnection) that, on the date the DISIS is commenced:

1. are directly connected to the Transmission System;
2. are interconnection to Affected Systems and may have an impact on the Interconnection Request;
3. have a pending higher-queued Interconnection Request to interconnect to the Transmission System; and
4. have no Interconnection Queue Position but have executed a GIA or requested that an unexecuted GIA be filed with FERC.

Constraints and associated mitigations for each Interconnection Request are summarized in the table below. Details are contained in Appendix G1-T and Appendix G1-V. Cost allocation for the Stand-Alone Scenario is found in Appendix E1.

Limited Operation results are listed below. While these results are based on the criteria listed in GIP 8.4.3, the Interconnection Customer may request additional scenarios for Limited Operation based on higher-queued Interconnection Requests not being placed in service. All of these amounts listed are based on the assumption that the Woodward District Phase Shifting Transformer goes into service no later than June 1, 2017.

Table 8.39 Limited Operation Results

Group Number	Request	Available MW Before Mitigation	Most-Limiting Constraint	Mitigation
Group 1	GEN-2015-038	303.6	None	
	GEN-2015-095	90	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	DeGrasse 345/138kV Project
	GEN-2016-003	248.4	None	
	GEN-2016-020	ERIS – 123	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	DeGrasse 345/138kV Project
		NRIS – 123	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	DeGrasse 345/138kV Project
	GEN-2016-045	501.4	None	
	GEN-2016-047	469	None	
	GEN-2016-057	501.4	None	
Group 2	GEN-2015-082	ERIS – 143	SPSNORTH_STX	Build Beaver Co – Grapevine – Chisholm 345kV CKT 1.
		NRIS – 143	Limited by ERIS	Build Beaver Co – Grapevine – Chisholm 345kV CKT 1.
	GEN-2016-001	236	SPSNORTH_STX	Build Beaver Co – Grapevine – Chisholm 345kV CKT 1.
	GEN-2016-038	ERIS – 237	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	Replace line traps at both terminals.
		NRIS – 237	Limited by ERIS	Replace line traps at both terminals.
	GEN-2016-041	ERIS – 57	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	Replace line traps at both terminals.
		NRIS – 57	Limited by ERIS	Replace line traps at both terminals.
	GEN-2016-059	ERIS – 267	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	Replace line traps at both terminals.
		NRIS – 253	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	Rebuild Canyon East – Randall County 115kV CKT 1 as per SPP-NTC-200369.
	GEN-2016-070	0	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	Replace line traps at both terminals.
Group 3	GEN-2016-005	ERIS – 150	None	
		NRIS – 150	None	
	GEN-2016-016	ERIS – 72	CLEARWATER - MILAN TAP 138KV CKT 1	Viola HPILS Project 138kV
		NRIS – 63	CLEARWATER - MILAN TAP 138KV CKT 1	Viola HPILS Project 138kV
	GEN-2016-046	299	None	
	GEN-2016-049	310.2	None	
Group 4	GEN-2016-067	73.6	None	
Group 6	GEN-2015-018	ERIS – 0	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	Build Crawfish Draw 345/230kV transformer CKT 2.
		NRIS – 0	Limited by ERIS	Build Crawfish Draw 345/230kV

Group Number	Request	Available MW Before Mitigation	Most-Limiting Constraint	Mitigation
				transformer CKT 2.
	GEN-2015-033	ERIS – 0	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	Build Crawfish Draw 345/230kV transformer CKT 2.
		NRIS – 0	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	Build Crawfish Draw – TUCO 345kV CKT 2.
	GEN-2015-039	ERIS – 0	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	Build Crawfish Draw 345/230kV transformer CKT 2.
		NRIS – 0	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	Replace line traps.
	GEN-2015-040	ERIS – 0	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	Build Crawfish Draw 345/230kV transformer CKT 2.
		NRIS – 0	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	Replace existing Seminole 230/115kV transformer CKT 2 per SPP-NTC-200395.
	GEN-2015-041	ERIS – 5	None	
		NRIS – 0	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	Rebuild Carlisle – LP-Doud 115kV CKT 1.
	GEN-2015-078	ERIS – 0	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	Build Crawfish Draw 345/230kV transformer CKT 2.
		NRIS – 0	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	Build Mustang – Seminole 115kV CKT 1.
	GEN-2016-002	ERIS – 0	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	Build Crawfish Draw 345/230kV transformer CKT 2.
		NRIS – 0	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	Replace line traps.
	GEN-2016-015	0	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	Build Crawfish Draw 345/230kV transformer CKT 2.
	GEN-2016-039	0	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	Build Crawfish Draw 345/230kV transformer CKT 2.
	GEN-2016-056	ERIS – 0	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	Build Crawfish Draw 345/230kV transformer CKT 2.
		NRIS – 0	Limited by ERIS	Build Crawfish Draw 345/230kV transformer CKT 2.
	GEN-2016-058	0	CRAWFISH_DR 345.00 (TUCO_2 XFMR)	Build Crawfish Draw 345/230kV transformer CKT 2.

Group Number	Request	Available MW Before Mitigation	Most-Limiting Constraint	Mitigation
			345/230/13.2KV TRANSFORMER CKT 1	
	GEN-2016-062	0	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	Build Crawfish Draw 345/230kV transformer CKT 2.
	GEN-2016-069	ERIS – 0	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	Build Crawfish Draw 345/230kV transformer CKT 2.
		NRIS – 0	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	Build Crawfish Draw 345/230kV transformer CKT 2.
Group 7	GEN-2016-008	40	None	
	GEN-2016-037	300	None	
	GEN-2016-051	9.8	None	
Group 8	GEN-2016-009	29	None	
	GEN-2016-012	ERIS – 176	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	Rebuild GEN-2016-012 Tap – LaCygne 345kV CKT 1
		NRIS – 176	Limited by ERIS	Rebuild GEN-2016-012 Tap – LaCygne 345kV CKT 1
	GEN-2016-022	86	G15052_T 345.00 - ROSE HILL 345KV CKT 1	Replace terminal equipment
	GEN-2016-024	ERIS – 50.73	None	
		NRIS – 50.73	None	
	GEN-2016-031	1.5	None	
	GEN-2016-032	ERIS – 200	None	
		NRIS – 200	None	
	GEN-2016-048	ERIS – 65	KINZE - MCELROY 138KV CKT 1	Rebuild Kinze – McElroy 138kV CKT 1
		NRIS – 65	Limited by ERIS	Rebuild Kinze – McElroy 138kV CKT 1
	GEN-2016-060	17	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	Rebuild Farber – Belle Plains 138kV CKT 1
	GEN-2016-061	0	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	Replace terminal equipment
	GEN-2016-068	ERIS – 0	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	Replace terminal equipment
		NRIS – 0	Limited by ERIS	Replace terminal equipment
	GEN-2016-071	73	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	Rebuild Farber – Belle Plains 138kV CKT 1
	GEN-2016-072	0	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	Rebuild Renfrow – Renfrow Tap 138kV CKT 1
	GEN-2016-073	ERIS – 220	None	
		NRIS – 220	None	
Group 9	GEN-2015-089	ERIS – 0	Several ERIS constraints	R- Plan (Gentleman – Thedford – Holt 345kV).
		NRIS – 0	Limited by ERIS	R- Plan (Gentleman – Thedford – Holt 345kV).
	GEN-2016-021	ERIS – 300	None	

Group Number	Request	Available MW Before Mitigation	Most-Limiting Constraint	Mitigation
		NRIS – 0	Several NRIS constraints	R- Plan (Gentleman – Thedford – Holt 345kV).
	GEN-2016-023	0	OGALLALA - SIDNEY 230KV CKT 1	Build Banner Co – Keystone 345kV CKT 1
	GEN-2016-029	43	OGALLALA - SIDNEY 230KV CKT 1	Build Banner Co – Keystone 345kV CKT 1
	GEN-2016-034	56	OGALLALA - SIDNEY 230KV CKT 1	Build Banner Co – Keystone 345kV CKT 1
	GEN-2016-043	230	None	
	GEN-2016-050	ERIS – 250.7	None	
		NRIS – 0	Several NRIS constraints	Replace Terminal Equipment and Increase Conductor Clearance on Grand Island – Holt 345kV
	GEN-2016-055	ERIS – 126.6	None	
		NRIS – 126.6	None	
	GEN-2016-064	ERIS – 0	PAULINE - ROSEMONT 115.00 115KV CKT 1	Rebuild Pauline – Rosemont 115kV CKT 1
		NRIS – 0	Limited by ERIS	Rebuild Pauline – Rosemont 115kV CKT 1
	GEN-2016-075	ERIS – 0	Several ERIS constraints	R- Plan (Gentleman – Thedford – Holt 345kV).
		NRIS – 0	Several NRIS constraints	R- Plan (Gentleman – Thedford – Holt 345kV).
Group 12	GEN-2016-013	ERIS – 10	None	
		NRIS – 0	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	Rebuild Neosho – Riverton 161kV CKT 1
	GEN-2016-014	ERIS – 10	None	
		NRIS – 0	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	Rebuild Neosho – Riverton 161kV CKT 1
Group 13	GEN-2016-040	18.4	None	
Group 14	GEN-2015-036	303.6	None	
	GEN-2016-028	100	None	
	GEN-2016-030	100	None	
	GEN-2016-042	22	None	
	GEN-2016-063	200	None	
Group 15	GEN-2016-017	ERIS – 61	SPLIT ROCK - WHITE 345KV CKT 1	Replace terminal equipment and increase clearance on Split Rock – White 345kV CKT 1
		NRIS – 0	Several NRIS constraints	Build GEN-2016-044 Tap – Emmons 345kV CKT 1 and Build Broadland – Split Rock 345kV.
Group 16	GEN-2016-004	ERIS – 0	Several ERIS constraints	Build GEN-2016-044 Tap – Emmons 345kV CKT 1, Build GEN-2016-044 Tap – Groton 345kV CKT 1 and Build Broadland – Split Rock 345kV.
		NRIS – 0	Several NRIS constraints	Build GEN-2016-044 Tap – Emmons 345kV CKT 1, Build GEN-2016-044 Tap – Groton 345kV CKT 1 and Build Broadland – Split Rock 345kV.
	GEN-2016-044	ERIS – 0	Several ERIS constraints	Build GEN-2016-044 Tap – Emmons 345kV CKT 1, Build GEN-2016-044 Tap – Groton 345kV CKT 1 and Build Broadland – Split Rock 345kV.
		NRIS – 0	Several NRIS constraints	Build GEN-2016-044 Tap – Emmons 345kV CKT 1, Build GEN-2016-044 Tap – Groton 345kV CKT 1 and Build

Group Number	Request	Available MW Before Mitigation	Most-Limiting Constraint	Mitigation
				Broadland – Split Rock 345kV.
	GEN-2016-052	0	Several ERIS constraints	Build GEN-2016-044 Tap – Emmons 345kV CKT 1.
	GEN-2016-053	0	Several ERIS constraints	Build GEN-2016-044 Tap – Emmons 345kV CKT 1.
	GEN-2016-065	0	Several ERIS constraints	Build GEN-2016-044 Tap – Emmons 345kV CKT 1.
	GEN-2016-066	0	Several ERIS constraints	Build GEN-2016-044 Tap – Emmons 345kV CKT 1.
Group 17	GEN-2016-054	3.4	None	
Group 18	GEN-2016-007	100.05	None	

8.3 CURTAILMENT AND SYSTEM RELIABILITY

In no way does this study guarantee operation for all periods of time. It should be noted that although this study analyzed many of the most probable contingencies, it is not an all-inclusive list and cannot account for every operational situation. Because of this, it is likely that the Customer(s) may be required to reduce their generation output to 0 MW, also known as curtailment, under certain system conditions to allow system operators to maintain the reliability of the transmission network.

9 STABILITY & SHORT CIRCUIT ANALYSIS

A stability and short-circuit analysis was conducted for each Interconnection Request using modified versions of the 2015 MDWG Models 2016 winter, 2017 summer, and 2025 summer peak dynamic cases[2]. The stability analysis assumes that all upgrades identified in the power flow analysis are in-service unless otherwise noted in the individual group stability study.

For each group, the interconnection requests are studied at 100% nameplate output while the other groups are dispatched at 20% output for Variable Energy Resource (VER) requests and 100% output for other requests. The output of the Interconnection Customer's facility is offset in each model by a reduction in output of existing online SPP generation. Each Interconnection Request is studied in a Stand Alone scenario in addition to the cluster scenario.

A synopsis is included for each group. The detailed stability study for each group can be found in the Appendices.

A preliminary short-circuit analysis was performed for this study and mitigations were identified below. The short-circuit analysis will be refined in the Interconnection Facilities Study and any additional required upgrades and cost assignment will be identified at that time.

9.1 POWER FACTOR REQUIREMENTS SUMMARY

Power factor requirements are listed in the table below by cluster group. In addition, some Interconnection Requests may have requirements for reactors under low-wind conditions as identified in the detailed reports found in the Appendices.

Group	Request	Size (MW)	Generator Model	Point of Interconnection	Minimum Lagging Power Factor at POI (pu)	Minimum Leading Power Factor at POI (pu)
1	GEN-2015-038	303.6	Siemens 2.3MW	Cimarron 345 kV	0.95	0.95
1	GEN-2015-095	176	Vestas V110	Tap on Mooreland to Noel Switch 138kV (G15-095T)	0.95	0.95
1	GEN-2016-003	248.4	Vestas GS V126 3.45MW	Tap on Hitchland to Woodward 345kV (G16-003-TAP)	0.95	0.95
1	GEN-2016-020	150	Vestas V110 VCSS 2.0MW	Mooreland 138 kV (520999)	0.95	0.95
1	GEN-2016-045	500	GE 2.3MW	Mathewson 345 kV (515497)	0.95	0.95
1	GEN-2016-057	500	GE 2.3MW	Mathewson 345 kV (515497)	0.95	0.95
2	GEN-2015-082	200.0	GE 2.0MW	Tap on Woodward (515375) to Beaver (515554) 345kV (G11-14-TAP, 560000)	0.95	0.95

[2]Short Circuit analysis performed only on the 2017 and 2025 Summer Peak seasonal model. Group 6 and Group 15 Stability Analyses also include 2020 Summer and Winter Peak seasons.

Group	Request	Size (MW)	Generator Model	Point of Interconnection	Minimum Lagging Power Factor at POI (pu)	Minimum Leading Power Factor at POI (pu)
2	GEN-2016-001	300.3	Vestas GS V126 3.3MW	Tap on Badger (G11-14-TAP, 560000) to Woodward (515375) 345kV (560070)	0.95	0.95
2	GEN-2016-038	299	GE 2.3MW	Harrington 230kV (523978)	0.95	0.95
2	GEN-2016-041	100	Advanced Energy 500NX 0.5MW PV inverters	Hitchland 345kV (523097)	0.95	0.95
2	GEN-2016-059	299	GE 2.3MW	Harrington 230kV (523978)	0.95	0.95
2	GEN-2016-070	5.3MW Uprate (Total 84.8MW)	GE 1.6MW	Martin Switching Station 115kV (523928)	0.95	0.95
3	GEN-2016-005	150	Vestas V110 2.0MW wind	GEN-2016-005-TAP 345 kV (Tap on Clark County – Thistle 345 kV line)	0.95	0.95
3	GEN-2016-016	78.2	GE 2.3MW wind	North Kinsley 115 kV	0.95	0.95
3	GEN-2016-046	299	GE 2.3MW wind	GEN-2016-046-TAP 345 kV (Tap on Clark County – Ironwood 345 kV line)	0.95	0.95
3	GEN-2016-049	310.2	Vestas V117 GS 3.3MW wind	GEN-2016-049-TAP 345 kV (Tap on GEN-2013-010 Tap/Post Rock – Spearville 345 kV line)	0.95	0.95
4	GEN-2016-001	73.6	Siemens 2.3MW	Mingo 345kV (531451)	0.95	0.95
6	GEN-2015-018	80.0	GE 2.0MW (wind; 584603)	Tap on Curry County (524822) to Bailey County (525028) 115kV (G15-018T, 560032)	0.95	0.95
6	GEN-2015-033	152	Vestes V110 2.0 MW (wind; 584763)	Tap on Tuco (525832) – OKU (511456) 345kV (G14-074-TAP, 560027)	0.95	0.95
6	GEN-2015-039	50	Eaton Power Xpert Solar 1.67 MW (solar; 584803)	Deaf Smith (524623) to Plant X (525481) 230kV (G15-039-TAP, 560051)	0.95	0.95
6	GEN-2015-040	50	Eaton Power Xpert Solar 1.67 MW (solar; 584813)	Mustang 230kV (527151)	0.95	0.95
6	GEN-2015-078	50	Eaton Power Xpert Solar 1.67 MW (solar; 585153)	Mustang 115kV (527146)	0.95	0.95
6	ASGI-2016-001	2.5	Envision E110 2.5MW (wind)	Wolfforth 115kV (526524)	0.95	0.95
6	ASGI-2016-002	0.35 uprate to ASGI-2015-002; total power = 2.53MW)	GE 2.53MW (584723)(wind)	Hurlwood Substation 69/12/74lV) [Yuma Interchange 115/69kV (526469)]	0.95	0.95
6	GEN-2016-002	74	Gamesa 2.0MW (wind)	Happy 115 kV substation (525154)	0.95	0.95

Group	Request	Size (MW)	Generator Model	Point of Interconnection	Minimum Lagging Power Factor at POI (pu)	Minimum Leading Power Factor at POI (pu)
6	ASGI-2016-004	10	3 x Alstom 3.2MW/4 x Renewtech 100kW	Palo Duro 115kV (524530)	0.95	0.95
6	GEN-2016-015	100	TMEIC 1.667NW PV inverters (solar)	Andrews 230kV (528604)	0.95	0.95
6	GEN-2016-039	112	GE 4.0MW PV inverters (solar)	Swisher 230kV (525212)	0.95	0.95
6	GEN-2016-056	200	GE 2.0MW (wind)	Carlisle 230 kV (526161)	0.95	0.95
6	GEN-2016-058	200	GE 4.0MW PV inverters (solar)	Yoakum 345kV (526936)	0.95	0.95
6	GEN-2016-062	250.7	GE 2.3MW (wind)	Andrews 230kV (528604)	0.95	0.95
6	GEN-2016-069	31.35	Hanwha 3.8MW & Hanwha 0.95MW	Chaves County 115kV (527482)	0.95	0.95
7	GEN-2016-008	40	Advanced Energy 500NX 0.5MW solar inverters (587063)	Granite 69kV (520927)	0.95	0.95
7	GEN-2016-037	300	Vestas V110 2.0MW (587233)	Tap Chisholm (511553) – Gracemont (515800) 345kV, (G16-037-TAP, 560078)	0.95	0.95
7	GEN-2016-051	9.8MW uprate to GEN-2003-022/GEN-2004-020 (total = 156.8MW)	G.E. 1.6MW (579363)	Tap Clinton Junction (511534) – Weatherford Southeast (511536) 138kV, (WTH WF 138kV, 511506)	0.95	0.95
8	GEN-2016-012	200	Vestas V110 2.0MW (wind; 587084)	Tap Waverly (532799) - La Cygne (542981) 345kV, (G16-012-TAP,560073)	0.95	0.95
8	GEN-2016-022	151.8	Vestas V126 3.45MW (wind; 587163)	Ranch Road 345kV (515576)	0.95	0.95
8	GEN -2016-024	50	Sunny Central 2940 2.67/2.94MW (solar; 5878103)	Midian 138kV (532990)	0.95	0.95
8	GEN-2016-031	1.5MW uprate of GEN-2015-001(total = 201.3MW)	Vestas V126 3.3MW (wind; 584453)	Ranch Road 345kV (515576)	0.95	0.95
8	GEN-2016-032	200	Vestas V110 2MW (wind; 587213)	Tap Marshall (514733)-Cottonwood Creek (514827) 138kV, (G16-032-TAP, 560077)	0.95	0.95

Group	Request	Size (MW)	Generator Model	Point of Interconnection	Minimum Lagging Power Factor at POI (pu)	Minimum Leading Power Factor at POI (pu)
8	GEN -2016-048	74	Sunny Central 2940 2.94MW (solar; 587333)	Sooner 138kV (514802)	0.95	0.95
8	GEN-2016-060	25.3	G.E. 2.3MW (wind)	Belle Plain 138kV (533063)	0.95	0.95
8	GEN-2016-061	250.7	GE 2.3 MW (wind; 587413)	Tap Woodring (514715) – Sooner (514803) 345kV (G16-061-TAP, 560084)	0.95	0.95
8	GEN-2016-068	250	GE 2.0MW (wind; 587463)	Woodring 345kV (514715)	0.95	0.95
8	GEN-2016-071	200.1	GE 2.3MW (wind; 587483)	Chilocco 138kV (521198)	0.95	0.95
8	GEN-2016-072	300	Vestas V110 VCSS 2.0MW (wind; 587493)	Renfrow (515543) 345 kV	0.95	0.95
8	GEN-2016-073	220	GE 2.0MW (wind; 587503)	Tap on Thistle (539801) to Wichita (532796) 345kV, ckt1&2 (Buffalo Flats 345kV; 560033)	0.95	0.95
9	GEN-2015-089	200	GE 2.0MW	Utica 230kV (652526)	0.95	0.95
9	GEN-2016-021	300	Vestas V110 VCSS 2.0MW (wind)	Hoskins 345kV (640266)	0.95	0.95
9	GEN-2016-023	150.5	GE 2.0MW and 1.79MW wind (587093, 587095)	Tap Sidney (659426) - Laramie River (659131) 345kV (587090)	0.95	0.95
9	GEN-2016-029	150.5	GE 2.3MW and 1.79MW wind	Tap Sidney (659426) - Laramie River (659131) 345kV (587090)	0.95	0.95
9	GEN-2016-034	90	GE 2.3MW wind (587223)	Tap Sidney (659426) - Laramie River (659131) 345kV (587090)	0.95	0.95
9	GEN-2016-043	230	GE 2.3MW wind (587283)	Hoskins 345kV (640226)	0.95	0.95
9	GEN-2016-050	250.7	GE 2.3MW wind (587353)	Axtell (640065)-Post Rock (530583) 345 kV (560082)	0.95	0.95
9	GEN-2016-055	126.5	GE 2.3MW wind (587363)	Tap Pauline (640313) -Hildreth (640222) 115 kV (560083)	0.95	0.95
9	GEN-2016-064	116	GE 2.0MW wind (587443)	Tap Pauline (640313) – Guide (640206) POI (Rosemont 115 kV, 560134)	0.95	0.95
9	GEN-2016-075	50	Vestas V110 VCSS 2.0MW wind	Tap Ft. Thompson-Hope County 345 kV (Grand Prarie, 652532)	0.95	0.95
13	GEN-2016-040	18.4 uprate to GEN-2015-005 (total 218.5MW)	GE 2.3MW & 1.79MW	Nebraska City-Sibley 345kV, (G15051640TAP, 560028)	0.95	0.95
14	GEN-2015-036	303.6	Siemens 2.3 MW (wind)	PSO Johnston County 345 kV	0.95	0.95
14	GEN-2016-028	100	Vestas V110 VCSS 2.0 MW (wind)	Clayton 138 kV	0.95	0.95
14	GEN-2016-030	100	AE 500NX 0.5MW (solar)	Brown 138 kV	0.95	0.95

Group	Request	Size (MW)	Generator Model	Point of Interconnection	Minimum Lagging Power Factor at POI (pu)	Minimum Leading Power Factor at POI (pu)
14	GEN-2016-042	22 uprate to GEN-2014-057 (total = 270.9MW)	GE 2.3MW & 1.79MW (wind)	Tap on LES to Sunnyside 345kV	0.95	0.95
14	GEN-2016-063	200	Vestas V110 VCSS 2.0MW	Tap on Hugo to Sunnyside 345kV	0.95	0.95
15	GEN-2016-017	250.7	109 x G.E. 2.3 MW wind	Tap Fort Thompson (652806) – Leland Olds (659105) 345 kV, (G16-017-TAP, 560074)	0.95	0.95
17	GEN-2015-089	200	GE 2.0MW wind	WAPA Utica Junction 230kV (652526)	0.95	0.95
17	GEN-2016-054	3.4 uprate (total = 54.4MW)	GE 1.6MW wind	Wessington Springs 230kV (652607)	0.95	0.95
18	GEN-2016-007	100.0	VESTAS V126 GS 3.45MW WIND	WAPA Valley City 115 kV (652454)	0.95	0.95

9.2 CLUSTER STABILITY AND SHORT-CIRCUIT SUMMARY

9.2.1 CLUSTER GROUP 1 (WOODWARD AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

The Group 1 stability analysis for this area was performed by S&C Electric (S&C). With the new requests modeled, violations of stability damping criteria and voltage recovery criteria were observed. Upgrades identified in the power flow analysis were also tested in the stability analysis.

The consultant observed that GEN-2016-045 and GEN-2016-057 would trip off-line for low voltages during certain contingencies. The transmission lead from each of these generation interconnection requests to the POI is almost 300 miles long. It was demonstrated that for the contingencies tested that a second circuit from each of the interconnection request will mitigate the low voltage and tripping off-line.

With all previously-assigned and currently-assigned Network Upgrades placed in service, no violations were observed, including violations of low-voltage ride-through requirements, for the probable contingencies studied.

9.2.2 CLUSTER GROUP 2 (HITCHLAND AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

The Group 2 stability analysis for this area was performed by PSC Consulting (PSC). With the new requests modeled, violations of stability damping criteria and voltage recovery criteria were observed. Upgrades identified in the power flow analysis were also tested in the stability analysis.

The consultant has identified the following needed upgrades:

- Certain prior outage contingencies will require curtailment of generation
- Potter County to Grapevine to Chisholm 345 kV circuit #1
- Grapevine to Beaver County 345 kV circuit #1
- Beaver County to Clark County 345 kV circuit #1
- Accelerate Woodward to Mathewson 345kV circuit #2
- Modify over-frequency protection parameters on GEN-2016-041
- SVC (+40/-10 Mvar) on GEN-2016-038 34.5kV side of substation transformer
- SVC (+60/-15 Mvar) on GEN-2016-059 34.5kV side of substation transformer

With all previously-assigned and currently-assigned Network Upgrades placed in service, no violations were observed, including violations of low-voltage ride-through requirements, for the probable contingencies studied.

9.2.3 CLUSTER GROUP 3 (SPEARVILLE AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

The Group 3 stability analysis for this area was performed by S&C. With the new requests modeled, violations of stability damping criteria and voltage recovery criteria were observed. Upgrades identified in the power flow analysis were also tested in the stability analysis.

The consultant's report noted one issue that warrants further investigation in the Facilities Study:

- Relay SLNOS #1 protecting line 523853-531449 (Finney – Hitchland 345 kV) was causing tripping for the GEN-2016-046 Tap to Clark County 345 fault and for the GEN-2016 Tap to Ironwood 345kV faults in 2017SP
    - To resolve the issue, this relay was removed from service
    - The Transmission Owner(s) should review the relay settings on this line during the facility study for Group 3.

With all previously-assigned and currently-assigned Network Upgrades placed in service, no violations were observed, including violations of low-voltage ride-through requirements, for the probable contingencies studied.

9.2.4 CLUSTER GROUP 4 (NORTHWEST KANSAS AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

The Group 4 stability analysis for this area was performed by ABB Inc (ABB). With the new requests modeled, violations of stability damping criteria and voltage recovery criteria were observed. Upgrades identified in the power flow analysis were also tested in the stability analysis.

Prior outage conditions did determine a need for curtailment of studied generation in the case of certain transmission outages as discussed further in the detailed report.

With all previously-assigned and currently-assigned Network Upgrades placed in service, no violations were observed, including violations of low-voltage ride-through requirements, for the probable contingencies studied.

9.2.5 CLUSTER GROUP 6 (SOUTH TEXAS PANHANDLE/NEW MEXICO AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

The Group 6 stability analysis for this area was performed by MEPPI. With the new requests modeled, violations of stability damping criteria and voltage recovery criteria were observed. Upgrades identified in the power flow analysis were also tested in the stability analysis.

The consultant has determined the following needed upgrades:

- Crawfish Draw to Seminole 765 kV circuit #1
- Crawfish Draw 765/345 kV transformer 1 & 2
- Seminole 765/345 kV transformer 1 & 2
- Potter County to Grapevine to Chisholm 345 kV circuit #1
- Potter County to Tolk 345 kV circuit #1
- Tolk to Crawfish Draw 345 kV circuit #1
- OKU SVC +300/-100 Mvar (add +200 Mvar)
- Add 200 Mvar Capacitor Bank at OKU 345 kV (550 Mvar capacitor bank total)
- Chaves County – Price – CV Pine – Capitan 115 kV circuit #1
    - Required to be implemented in 16WP and 17SP
    - Line exists in 20WP, 20SP, and 25SP
- Grapevine to Beaver County 345 kV circuit #1
- Beaver County to Clark County 345 kV circuit #1
- Re-terminate the Yoakum to TUCO 345 kV line from TUCO to Crawfish Draw
- TUCO to Crawfish Draw 345 kV circuit #2
- Rio Blanco +300/-100 Mvar SVC
- Andrews to NA Enrich 115 kV circuit #2
- Seminole to Mustang 115 kV circuit #1
- Hereford 115 kV capacitor bank

In the 16WP and 20WP seasons, under normal system dispatch, system instability exists for a fault at Crawfish Draw 765 kV that results in the loss of the Crawfish Draw to Seminole 765 kV line. For this reason, it is necessary to limit the flow along the Crawfish Draw to Seminole 765 kV line.

With all previously-assigned and currently-assigned Network Upgrades placed in service, no violations were observed, including violations of low-voltage ride-through requirements, for the probable contingencies studied.

9.2.6 CLUSTER GROUP 7 (SOUTHWESTERN OKLAHOMA AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

The Group 7 stability analysis for this area was performed SPP Staff (SPP). With the new requests modeled, violations of stability damping criteria and voltage recovery criteria were observed. Upgrades identified in the power flow analysis were also tested in the stability analysis.

The study has determined the following upgrades or adjustments are necessary:

- Reroute the Woodward to Border 345 kV line to tie into the proposed Chisholm 345 kV substation.
- GEN-2016-008 installing the extended frequency protection option.
- Reset the protective relays on the Wheeler to Sweetwater 230kV line.
- Certain prior outage conditions required curtailment of generation.

With all previously-assigned and currently-assigned Network Upgrades placed in service, no violations were observed, including violations of low-voltage ride-through requirements, for the probable contingencies studied.

9.2.7 CLUSTER GROUP 8 (NORTH OKLAHOMA/SOUTH CENTRAL KANSAS AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

- **Note for GEN-2016-012** – Additional analysis of impacts to Wolf Creek will be required in the Facilities Study phase. The scope of this analysis is described in more detail in Appendix K. The analysis will require significant additional study costs and may require additional time for completion beyond the normal Facilities Study timeframe.

The Group 8 stability analysis for this area was performed by MEPPI. With the new requests modeled, violations of stability damping criteria and voltage recovery criteria were observed. Upgrades identified in the power flow analysis were also tested in the stability analysis.

The consultant has determined the following:

- Addition of Wolf Creek to Neosho 345 kV line circuit #1 to improve voltage stability in the vicinity of Waverly and to mitigate tripping of project generators GEN-2016-012 and GEN-2016-024.
- Reduction of generation at GEN-2016-071 and GEN-2011-057 following prior outage of Middleton Tap to Peckham Tap 345 kV line to mitigate instability and generator tripping.

With all previously-assigned and currently-assigned Network Upgrades placed in service, no violations were observed, including violations of low-voltage ride-through requirements, for the probable contingencies studied.

9.2.8 CLUSTER GROUP 9 (NEBRASKA AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

The Group 9 stability analysis for this area was performed by MEPPI. With the new requests modeled, violations of stability damping criteria and voltage recovery criteria were observed. Upgrades identified in the power flow analysis were also tested in the stability analysis.

The consultant has identified the following needed upgrades:

- Keystone to Banner County 345kV
- Gentleman to Cherry County (Thedford) 345kV circuit 1
- Cherry County (Thedford) to Holt 345kV circuit 1
- Cherry County (Thedford) 345/115kV transformer circuit 1
- Rosemont to Pauline 115kV circuit 2

- Gentleman to Keystone 345kV circuit 2

NPPD and BEPC will need to perform further stability analysis for the Gentleman and Laramie area interconnect requests. This additional analysis could require additional mitigation by means of new transmission.

9.2.9 CLUSTER GROUP 12 (NORTHWEST ARKANSAS AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

The Group 12 stability analysis for this area was performed by Powertek Global (Powertek). With the new requests modeled, violations of stability damping criteria and voltage recovery criteria were observed. Upgrades identified in the power flow analysis were also tested in the stability analysis.

Certain faults and subsequent clearing action at LaRussell 161kV will cause instability. The consultant has shown that certain relay settings will allow for a stable tripping. Further investigation by the Transmission Owner should be done.

With all previously-assigned and currently-assigned Network Upgrades placed in service, no violations were observed, including violations of low-voltage ride-through requirements, for the probable contingencies studied.

9.2.10 CLUSTER GROUP 13 (NORTHEAST KANSAS/NORTHWEST MISSOURI AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

The Group 13 stability analysis for this area was performed by Powertek. With the new requests modeled, violations of stability damping criteria and voltage recovery criteria were not observed. Upgrades identified in the power flow analysis were also tested in the stability analysis.

With all previously-assigned and currently-assigned Network Upgrades placed in service, no violations were observed, including violations of low-voltage ride-through requirements, for the probable contingencies studied.

9.2.11 CLUSTER GROUP 14 (SOUTH CENTRAL OKLAHOMA AREA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

The Group 14 stability analysis for this area was performed by S&C. New requests for this study group as well as prior-queued requests are listed in Appendix C.

With the new requests modeled, violations of stability damping criteria and voltage recovery criteria were observed. Upgrades identified in the power flow analysis were also tested in the stability analysis.

The consultant's report noted issues that warrant further investigation in the Facilities Study:

- Generation Interconnection Request GEN-2016-030 (involving AE solar inverters) was tripping offline due to overfrequency during faults at and near the POI. This issue was also encountered and discussed with SPP in the previous DISIS-2015-002 GR7 study. In this previous study, SPP provided an IDV file titled "GEN-2015-055_AEINX_OverFreq_extended.idv" to change the over-frequency parameters. The same IDV file was also applied during this study.

With all previously-assigned and currently-assigned Network Upgrades placed in service, no violations were observed, including violations of low-voltage ride-through requirements, for the probable contingencies studied.

9.2.12 CLUSTER GROUP 15 (EASTERN SOUTH DAKOTA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

The Group 15 stability analysis for this area was performed by Burns and McDonnell Engineering Company (Burns and McDonnell). With the new requests modeled, violations of stability damping criteria and voltage recovery criteria were observed. Upgrades identified in the power flow analysis were also tested in the stability analysis.

The stability analysis identified two faults resulting in a prior queued project tripping off-line due to over voltage relay. These faults were re-run with the prior queued project's voltage and frequency tripping disabled.

With all previously-assigned and currently-assigned Network Upgrades placed in service, no violations were observed, including violations of low-voltage ride-through requirements, for the probable contingencies studied.

9.2.13 CLUSTER GROUP 16 (WESTERN NORTH DAKOTA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

The Group 16 stability analysis for this area was performed by MEPPI. With the new requests modeled, violations of stability damping criteria and voltage recovery criteria were observed. Upgrades identified in the power flow analysis were also tested in the stability analysis.

The consultant has identified the following needed upgrades:

- Daglum to Dickson 230kV
- GEN-2016-044-Tap to Groton 345kV ckt2
- GEN-2016-044-Tap to Emmons 345kV
- Broadland to Split Rock 345 kV circuit #1
- MISO MVP Project

With all previously-assigned and currently-assigned Network Upgrades placed in service, no violations were observed, including violations of low-voltage ride-through requirements, for the probable contingencies studied.

9.2.14 CLUSTER GROUP 17 (WESTERN SOUTH DAKOTA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

The Group 17 stability analysis for this area was performed by ABB. With the new requests modeled, violations of stability damping criteria and voltage recovery criteria were not observed. Upgrades identified in the power flow analysis were also tested in the stability analysis.

A distance relay on (circuit 1) bus 603009 to bus 603008 (GRANT 7 – CHERRYC7 115 kV) operated for certain faults on Zone 1. Relay tripping problem was observed for both cluster and standalone cases. Pre-project cases were created for all three study seasons to simulate the faults, and same results were observed.

With all previously-assigned and currently-assigned Network Upgrades placed in service, no violations were observed, including violations of low-voltage ride-through requirements, for the probable contingencies studied.

9.2.15 CLUSTER GROUP 18 (EASTERN NORTH DAKOTA)

New requests for this study group as well as prior-queued requests are listed in Appendix C.

The Group 18 stability analysis for this area was performed by ABB. With the new requests modeled, violations of stability damping criteria and voltage recovery criteria were not observed. Upgrades identified in the power flow analysis were also tested in the stability analysis.

With all previously-assigned and currently-assigned Network Upgrades placed in service, no violations were observed, including violations of low-voltage ride-through requirements, for the probable contingencies studied.

9.3 STAND-ALONE SCENARIO STABILITY SUMMARY

The Stand-Alone Scenario considers the Base Case as well as all generating facilities (and with respect to (3) below, any identified Network Upgrades associated with such higher-queued interconnection) that, on the date the DISIS is commenced:

1. are directly connected to the Transmission System;
2. are interconnection to Affected Systems and may have an impact on the Interconnection Request;
3. have a pending higher-queued Interconnection Request to interconnect to the Transmission System; and
4. have no Interconnection Queue Position but have executed a GIA or requested that an unexecuted GIA be filed with FERC.

Constraints and associated mitigations for each Interconnection Request are summarized in the table below. Details are contained in Appendix J. Cost allocation for the Stand-Alone Scenario is found in Appendix E1.

While these results are based on the criteria listed in GIP 8.4.3, the Interconnection Customer may request additional scenarios for Limited Operation based on higher-queued Interconnection Requests not being placed in service. All of these amounts listed are based on the assumption that the Woodward District Phase Shifting Transformer goes into service no later than June 1, 2017.

Stand Alone Stability Analysis Results

Group Number	Request	Required Mitigations
Group 1	GEN-2015-038	
	GEN-2015-095	
	GEN-2016-003	
	GEN-2016-020	
	GEN-2016-045	Install Second generator transmission line to POI
	GEN-2016-047	
	GEN-2016-057	Install Second generator transmission line to POI
Group 2	GEN-2015-082	
	GEN-2016-001	
	GEN-2016-038	SVC (+90/-10 Mvar) at interconnection customer substation
	GEN-2016-041	Install extended frequency protection
	GEN-2016-059	SVC (+105/-40 Mvar) at interconnection customer substation
	GEN2-106-070	
Group 3	GEN-2016-005	Reset SLNOS1 relay on Finney-Holcomb 345 kV to prevent tripping of circuit
	GEN-2016-016	Reset SLNOS1 relay on Finney-Holcomb 345 kV to prevent tripping of circuit
	GEN-2016-046	Reset SLNOS1 relay on Finney-Holcomb 345 kV to prevent tripping of circuit
	GEN-2016-049	Reset SLNOS1 relay on Finney-Holcomb 345 kV to prevent tripping of circuit
Group 4	GEN-2016-067	
Group 6	ASGI-2016-001	
	ASGI-2016-002	
	ASGI-2016-004	
	GEN-2015-018	
	GEN-2015-033	Potter to Grapevine to Chisholm 345 kV circuit #1 Potter to Tolk 345 kV circuit #1 Tolk to Crawfish Draw 345 kV circuit #1 OKU SVC +300/-100 Mvar (add +200 Mvar) Add 200 Mvar Capacitor Bank at OKU 345 kV (550 Mvar capacitor bank total)
	GEN-2015-039	25 Mvar capacitor bank at Hereford 115 kV
	GEN-2015-040	Seminole to Mustang 115 kV circuit #1
	GEN-2015-041	Potter to Grapevine to Chisholm 345 kV circuit #1 Potter to Tolk 345 kV circuit #1 Tolk to Crawfish Draw 345 kV circuit #1 OKU SVC +300/-100 Mvar (add +200 Mvar) Add 200 Mvar Capacitor Bank at OKU 345 kV (550 Mvar capacitor bank total)
	GEN-2015-078	Seminole to Mustang 115 kV circuit #1
	GEN-2016-002	Studied with alternate Gamesa model
	GEN-2016-015	Install extended voltage and frequency protection
	GEN-2016-039	
	GEN-2016-056	
	GEN-2016-058	Potter to Grapevine to Chisholm 345 kV circuit #1 Potter to Tolk 345 kV circuit #1 Tolk to Crawfish Draw 345 kV circuit #1 OKU SVC +300/-100 Mvar (add +200 Mvar) Add 200 Mvar Capacitor Bank at OKU 345 kV (550 Mvar capacitor bank total)
	GEN-2016-062	
	GEN-2016-069	Potter to Grapevine to Chisholm 345 kV circuit #1 Potter to Tolk 345 kV circuit #1 Tolk to Crawfish Draw 345 kV circuit #1 Chaves County – Price – CV Pine – Capitan 115 kV circuit #1
Group 7	GEN-2016-008	Install extended frequency protection
	GEN-2016-037	Rerouting the Woodward to Border 345 kV line to tie into the proposed Chisholm 345 kV substation Reset SLNOS1 relay on Wheeler-Sweetwater(State-line demarcation) 230 kV to prevent tripping of circuit
	GEN-2016-051	

Group Number	Request	Required Mitigations
Group 8	GEN-2016-009	
	GEN-2016-012	Wolf Creek to Neosho 345 kV line circuit #1
	GEN-2016-022	
	GEN-2016-024	
	GEN-2016-031	
	GEN-2016-032	
	GEN-2016-048	
	GEN-2016-060	
	GEN-2016-061	
	GEN-2016-068	
	GEN-2016-071	
	GEN-2016-072	
	GEN-2016-073	
Group 9	GEN-2015-089	
	GEN-2016-021	
	GEN-2016-023	Keystone to Banner County 345kV circuit 1 Cherry County/Thedford 345/115/13.8kV transformer Gentleman to Cherry County (Thedford) 345kV circuit 1 Holt County to Cherry County (Theford) 345kV circuit 1 Gentleman to Keystone 345kV circuit 2
	GEN-2016-029	Keystone to Banner County 345kV circuit 1 Cherry County/Thedford 345/115/13.8kV transformer Gentleman to Cherry County (Thedford) 345kV circuit 1 Holt County to Cherry County (Theford) 345kV circuit 1 Gentleman to Keystone 345kV circuit 2
	GEN-2016-034	Keystone to Banner County 345kV circuit 1 Cherry County/Thedford 345/115/13.8kV transformer Gentleman to Cherry County (Thedford) 345kV circuit 1 Holt County to Cherry County (Theford) 345kV circuit 1 Gentleman to Keystone 345kV circuit 2
	GEN-2016-043	
	GEN-2016-050	
	GEN-2016-055	
	GEN-2016-064	Rosemont to Pauline 115kV circuit 2
	GEN-2016-075	
Group 12	GEN-2016-013	Reset relays at La Russell 161kV
	GEN-2016-014	Reset relays at La Russell 161kV
Group 13	ASGI-2016-003	
	GEN-2016-040	
Group 14	GEN-2015-036	
	GEN-2016-028	
	GEN-2016-030	Install extended frequency protection
	GEN-2016-042	
	GEN-2016-063	
Group 15	GEN-2016-017	
Group 16	GEN-2016-004	
	GEN-2016-044	Daglum to Dickinson 230kV GEN-2016-044-Tap to Groton 345kV ckt2 GEN-2016-044-Tap to Emmons 345kV Broadland to Split Rock 345 kV circuit #1 MISO MVP Project
	GEN-2016-052	
	GEN-2016-053	
	GEN-2016-065	Daglum to Dickinson 230kV
	GEN-2016-066	Daglum to Dickinson 230kV
Group 17	GEN-2016-054	Reset SLNOS1 relays on Cherry County – Grant 115kV Circuit 1

Group Number	Request	Required Mitigations
Group 18	GEN-2016-007	

9.4 CURTAILMENT AND SYSTEM RELIABILITY

In no way does this study guarantee operation for all periods of time. It should be noted that although this study analyzed many of the most probable contingencies, it is not an all-inclusive list and cannot account for every operational situation. Because of this, it is likely that the Customer(s) may be required to reduce their generation output to 0 MW, also known as curtailment, under certain system conditions to allow system operators to maintain the reliability of the transmission network.

10 CONCLUSION

The minimum cost of interconnecting all new generation interconnection requests included in this Definitive Interconnection System Impact Study is estimated at $3.4 Billion, not including the exceptions noted in Section 5.

Allocated costs for Network Upgrades and Transmission Owner Interconnection Facilities are listed in Appendix E and F. For Interconnection Requests that result in an interconnection to, or modification of, the transmission facilities of the Western-UGP (WAPA), a National Environmental Policy Act (NEPA) Environmental Review will be required. The Interconnection Customer will be required to execute an Environmental Review Agreement per Section 8.6.1 of the GIP.

These costs do not include the cost of upgrades of other transmission facilities listed in Appendix H which are Network Constraints. These interconnection costs do not include any cost of any Network Upgrades that are identified as required through the short circuit analysis. Potential over-duty circuit breakers capability will be identified by the Transmission Owner in the Interconnection Facilities Study.

Further refinement of total estimated interconnection costs will be provided, should the Interconnection Customer meet the requirements for acceptance and choose to move into the Interconnection Facilities Study following the posting of this DISIS. The Interconnection Facilities Study may include additional study analysis, additional facility upgrades not yet identified by this DISIS, such as circuit breaker replacements and affected system facilities, and further refinement of existing cost estimates.

The required interconnection costs listed in Appendices E, and F, and other upgrades associated with Network Constraints do not include all costs associated with the deliverability of the energy to final customers. These costs are determined by separate studies if the Customer submits a Transmission Service Request (TSR) through SPP's Open Access Same Time Information System (OASIS) as required by Attachment Z1 of the SPP Open Access Transmission Tariff (OATT).

11 APPENDICES

11.1 A: GENERATION INTERCONNECTION REQUESTS CONSIDERED FOR IMPACT STUDY

A: Generation Interconnection Requests Considered for Study

Request	Amount	Service	Area	Requested Point of Interconnection	Proposed Point of Interconnection	Requested In-Service Date	In Service Date Delayed Until no earlier than*
ASGI-2016-001	2.50	ER	SPS	Wolfforth 115kV	Wolfforth 115kV		TBD
ASGI-2016-002	0.35	ER	SPS	Hurlwood 115kV	SP-Yuma 115kV		TBD
ASGI-2016-003	6.00	ER	KCPL	Paola 161kV	Paola 161kV		TBD
ASGI-2016-004	9.60	ER	SPS	Palo Duro 115kV	Palo Duro 115kV		TBD
GEN-2015-018	80.00	ER/NR	SPS	Tap Curry County - Bailey 115kV	Tap Curry County - Bailey 115kV	12/31/2016	TBD
GEN-2015-033	152.00	ER/NR	SPS	Tap TUCO Interchange - Oklaunion (GEN-2014-074 Tap) 345kV	Tap TUCO Interchange - Oklaunion (GEN-2014-074 Tap) 345kV	12/31/2017	TBD
GEN-2015-036	303.60	ER	OKGE	Johnston County 345kV	Johnston County 345kV	12/31/2017	TBD
GEN-2015-038	303.60	ER	OKGE	Cimarron 345kV	Cimarron 345kV	12/31/2017	TBD
GEN-2015-039	50.10	ER/NR	SPS	Tap Deaf Smith - Plant X 230kV	Tap Deaf Smith - Plant X 230kV	12/31/2016	TBD
GEN-2015-040	50.10	ER/NR	SPS	Mustang 230kV	Mustang 230kV	12/31/2016	TBD
GEN-2015-041	5.00	ER/NR	SPS	TUCO Interchange 345kV	TUCO Interchange 345kV	7/1/2015	TBD
GEN-2015-078	50.10	ER/NR	SPS	Mustang 115kV	Mustang 115kV	12/31/2016	TBD
GEN-2015-082	200.00	ER/NR	OKGE	Tap Hitchland - Woodward Dbl Ckt (GEN-2011-014 Tap) 345kV	Tap Hitchland - Woodward Dbl Ckt (GEN-2011-014 Tap) 345kV	12/1/2017	TBD
GEN-2015-089	200.00	ER/NR	WAPA	Utica 230kV	Utica 230kV	6/30/2017	TBD
GEN-2015-095	176.00	ER	OKGE	Tap Rose Valley - Mooreland 138kV	Tap Rose Valley - Mooreland 138kV	12/1/2017	TBD
GEN-2016-001	300.30	ER	OKGE	Tap Badger - Woodward 345kV	Tap Badger - Woodward 345kV	1/12/2018	TBD
GEN-2016-002	74.00	ER/NR	SPS	Happy Interchange 115kV	Happy Interchange 115kV	12/31/2018	TBD
GEN-2016-003	248.40	ER/NR	OKGE	Tap Badger - Woodward 345kV	Tap Badger - Woodward 345kV	12/31/2017	TBD
GEN-2016-004	202.00	ER/NR	WAPA	Leland Olds 230kV	Leland Olds 230kV	12/1/2018	TBD
GEN-2016-005	150.00	ER/NR	SUNCMKEC	Tap Clark County - Thistle 345kV	Tap Clark County - Thistle 345kV	12/31/2018	TBD
GEN-2016-007	100.00	ER/NR	WAPA	Valley City 115kV	Valley City 115kV	12/31/2018	TBD
GEN-2016-008	40.00	ER/NR	WFEC	Granite 69kV	Granite 69kV	6/30/2019	TBD
GEN-2016-009	29.00	ER	OKGE	Osage 69kV	Osage 69kV	9/30/2018	TBD
GEN-2016-012	200.00	ER/NR	WERE	Tap Wolf Creek - LaCygne 345kV	Tap Wolf Creek - LaCygne 345kV	10/1/2018	TBD
GEN-2016-013	10.00	ER/NR	EMDE	La Russell 161kV	La Russell 161kV		TBD
GEN-2016-014	10.00	ER/NR	EMDE	La Russell 161kV	La Russell 161kV		TBD
GEN-2016-015	100.00	ER	SPS	Andrews 230kV	Andrews 230kV	10/1/2018	TBD
GEN-2016-016	78.20	ER/NR	MIDW	North Kinsley 115kV	North Kinsley 115kV	12/1/2017	TBD
GEN-2016-017	250.70	ER/NR	WAPA	Tap Fort Thompson - Leland Olds 345kV	Tap Fort Thompson - Leland Olds 345kV	12/1/2017	TBD
GEN-2016-020	150.00	ER/NR	WFEC	Mooreland 138kV	Mooreland 138kV	12/31/2018	TBD
GEN-2016-021	300.00	ER/NR	NPPD	Hoskins 345kV	Hoskins 345kV	12/1/2018	TBD
GEN-2016-022	151.80	ER	OKGE	Ranch Road 345kV	Ranch Road 345kV	12/31/2017	TBD
GEN-2016-023	150.50	ER	WAPA	Tap Laramie River – Sidney 345kV	Tap Laramie River – Sidney 345kV	12/31/2017	TBD
GEN-2016-024	55.90	ER/NR	WERE	Midian 138kV	Midian 138kV	12/31/2018	TBD
GEN-2016-028	100.00	ER/NR	AEPW	Clayton 138kV	Clayton 138kV	12/31/2018	TBD
GEN-2016-029	150.00	ER	WAPA	Tap Laramie River – Sidney 345kV	Tap Laramie River – Sidney 345kV	12/31/2017	TBD
GEN-2016-030	100.00	ER/NR	OKGE	Brown 138kV	Brown 138kV	1/1/2019	TBD
GEN-2016-031	1.50	ER	OKGE	Ranch Road 345kV	Ranch Road 345kV		TBD
GEN-2016-032	200.00	ER/NR	OKGE	Tap Marshall - Cottonwood Creek 138kV	Tap Marshall - Cottonwood Creek 138kV	10/1/2018	TBD
GEN-2016-034	90.00	ER	WAPA	Tap Laramie River – Sidney 345kV	Tap Laramie River – Sidney 345kV	6/1/2018	TBD
GEN-2016-037	300.00	ER/NR	AEPW	Tap Chisholm - Gracemont 345kV	Tap Chisholm - Gracemont 345kV	12/1/2018	TBD

Request	Amount	Service	Area	Requested Point of Interconnection	Proposed Point of Interconnection	Requested In-Service Date	In Service Date Delayed Until no earlier than*
GEN-2016-038	300.00	ER/NR	SPS	Harrington 230kV	Harrington 230kV	8/31/2018	TBD
GEN-2016-039	112.00	ER	SPS	Swisher 115kV	Swisher 115kV	12/31/2017	TBD
GEN-2016-040	18.40	ER	KCPL	Tap Nebraska City – Sibley 345kV	Tap Nebraska City – Sibley 345kV	12/31/2016	TBD
GEN-2016-041	100.00	ER/NR	SPS	Hitchland 345kV	Hitchland 345kV	1/1/2019	TBD
GEN-2016-042	22.00	ER	AEPW	Tap Lawton - Sunnyside 345kV	Tap Lawton - Sunnyside 345kV	12/31/2016	TBD
GEN-2016-043	230.00	ER	NPPD	Hoskins 345kV	Hoskins 345kV	9/1/2018	TBD
GEN-2016-044	400.00	ER/NR	WAPA	Tap Groton - Leland Olds 345kV	Tap Groton - Leland Olds 345kV	12/1/2018	TBD
GEN-2016-045	499.10	ER/NR	OKGE	Mathewson 345kV	Mathewson 345kV	8/31/2018	TBD
GEN-2016-046	299.00	ER	SUNCMKEC	Tap Clark County - Ironwood 345kV	Tap Clark County - Ironwood 345kV	12/1/2018	TBD
GEN-2016-047	24.00	ER/NR	OKGE	Mustang 69kV	Mustang 69kV	12/31/2017	TBD
GEN-2016-048	82.30	ER/NR	OKGE	Sooner 138kV	Sooner 138kV	6/30/2019	TBD
GEN-2016-049	310.20	ER	SUNCMKEC	Tap Spearville - Post Rock 345kV	Tap Spearville - Post Rock 345kV	7/31/2018	TBD
GEN-2016-050	250.70	ER/NR	NPPD	Tap Axtell - Post Rock 345kV	Tap Axtell - Post Rock 345kV	12/1/2018	TBD
GEN-2016-051	9.80	ER	AEPW	Tap Clinton Junction - Weatherford Southeast 138kV	Tap Clinton Junction - Weatherford Southeast 138kV		TBD
GEN-2016-052	3.30	ER	WAPA	Hilken 230kV	Hilken 230kV		TBD
GEN-2016-053	3.30	ER	WAPA	Hilken 230kV	Hilken 230kV		TBD
GEN-2016-054	3.40	ER	WAPA	Wessington Springs 230kV	Wessington Springs 230kV		TBD
GEN-2016-055	126.50	ER/NR	NPPD	Tap Pauline - Hildreth (Rosemont) 115kV	Tap Pauline - Hildreth 115kV	12/1/2018	TBD
GEN-2016-056	200.00	ER/NR	SPS	Carlisle 230kV	Carlisle 230kV	12/15/2018	TBD
GEN-2016-057	499.10	ER/NR	OKGE	Mathewson 345kV	Mathewson 345kV	8/31/2018	TBD
GEN-2016-058	212.00	ER	SPS	Yoakum 345kV	Yoakum 345kV	9/1/2018	TBD
GEN-2016-059	300.00	ER/NR	SPS	Harrington 230kV	Harrington 230kV	8/31/2018	TBD
GEN-2016-060	25.30	ER	WERE	Belle Plain 138kV	Belle Plain 138kV	12/31/2017	TBD
GEN-2016-061	250.70	ER	OKGE	Tap Woodring - Sooner 345kV	Tap Woodring - Sooner 345kV	12/1/2017	TBD
GEN-2016-062	250.70	ER	SPS	Andrews 230kV	Andrews 230kV	12/1/2018	TBD
GEN-2016-063	200.00	ER/NR	OKGE	Tap Sunnyside – Hugo 345kV	Tap Sunnyside – Hugo 345kV	12/31/2018	TBD
GEN-2016-064	116.00	ER/NR	NPPD	Tap Pauline - Hildreth (Rosemont) 115kV	Tap Pauline - Guide Rock (Rosemont) 115kV	12/1/2017	TBD
GEN-2016-065	6.80	ER	WAPA	Tap Belfield - Rhame (Daglum) 230kV	Tap Belfield - Rhame (Daglum) 230kV	10/1/2016	TBD
GEN-2016-066	13.00	ER	WAPA	Tap Belfield - Rhame (Daglum) 230kV	Tap Belfield - Rhame (Daglum) 230kV	10/1/2016	TBD
GEN-2016-067	73.60	ER	SUNCMKEC	Mingo 345kV	Mingo 345kV	11/1/2017	TBD
GEN-2016-068	250.00	ER/NR	OKGE	Woodring 345kV	Woodring 345kV	12/1/2017	TBD
GEN-2016-069	31.40	ER/NR	SPS	Chaves County 115kV	Chaves County 115kV	6/1/2018	TBD
GEN-2016-070	5.30	ER	SPS	Martin 115kV	Martin 115kV	11/1/2016	TBD
GEN-2016-071	200.10	ER	WFEC	Chilocco 138kV	Chilocco 138kV	9/30/2018	TBD
GEN-2016-072	300.00	ER	OKGE	Tap Hunter - Renfrow 345kV	Tap Hunter - Renfrow 345kV	7/31/2018	TBD
GEN-2016-073	220.00	ER/NR	WERE	Tap Thistle – Wichita 345kV Dbl CKT	Tap Thistle – Wichita 345kV Dbl CKT	12/31/2017	TBD
GEN-2016-075	50.00	ER/NR	WAPA	Tap Fort Thompson - Grand Island 345kV	Grand Prairie 345kV	12/31/2017	TBD
Total:	**11,129.25**						

*In-Service Date for each request is to be determined after the Interconnection Facility Study is completed.

11.2 B: PRIOR-QUEUED INTERCONNECTION REQUESTS

B: Prior Queued Interconnection Requests

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
ASGI-2010-006	150.00	AECI	Remington 138kV	AECI queue Affected Study
ASGI-2010-010	42.20	SPS	Lovington 115kV	Lea County Affected Study
ASGI-2010-020	30.00	SPS	Tap LE-Tatum - LE-Crossroads 69kV	Lea County Affected Study
ASGI-2010-021	15.00	SPS	Tap LE-Saunders Tap - LE-Anderson 69kV	Lea County Affected Study
ASGI-2011-001	27.30	SPS	Lovington 115kV	On-Line
ASGI-2011-002	20.00	SPS	Herring 115kV	On-Line
ASGI-2011-003	10.00	SPS	Hendricks 69kV	On-Line
ASGI-2011-004	20.00	SPS	Pleasant Hill 69kV	Under Study (DISIS-2011-002)
ASGI-2012-002	18.15	SPS	FE-Clovis Interchange 115kV	Under Study (DISIS-2012-002)
ASGI-2012-006	22.50	SUNCMKEC	Tap Hugoton - Rolla 69kV	Under Study (DISIS-2012-001)
ASGI-2013-001	11.50	SPS	PanTex South 115kV	Under Study (DISIS-2013-001)
ASGI-2013-002	18.40	SPS	FE Tucumcari 115kV	Under Study (DISIS-2013-001)
ASGI-2013-003	18.40	SPS	FE Clovis 115kV	Under Study (DISIS-2013-001)
ASGI-2013-004	36.60	SUNCMKEC	Morris 115kV	Under Study (DISIS-2013-002)
ASGI-2013-005	1.65	SPS	FE Clovis 115kV	Under Study (DISIS-2013-002)
ASGI-2013-006	2.00	SPS	SP-Erskine 115kV	
ASGI-2014-001	2.50	SPS	SP-Erskine 115kV	Under Study (DISIS-2014-001)
ASGI-2014-014	56.40	GRDA	Ferguson 69kV	Under Study (DISIS-2014-002)
ASGI-2015-001	6.13	SUNCMKEC	Ninnescah 115kV	Under Study (DISIS-2015-001)
ASGI-2015-002	2.00	SPS	SP-Yuma 69kV	Under Study (DISIS-2015-001)
ASGI-2015-004	56.36	GRDA	Coffeyville City 69kV	Under Study (DISIS-2015-001)
ASGI-2015-006	9.00	SWPA	Tupelo 138kV	Under Study (DISIS-2015-002)
ASGI-2016-005	20.00	WAPA	Tap White Lake - Stickeny 69kV	DISIS STAGE
ASGI-2016-006	20.00	WAPA	Mitchall	DISIS STAGE
ASGI-2016-007	20.00	WAPA	Kimball 69kV	DISIS STAGE
G176	100.00	XEL	Yankee 115kV	
G255	100.00	XEL	Yankee 115kV	MISO Queued Request
G359	150.00	MDU	MDU 230 kV system near Ellendale	MISO Queued Request
G380	150.00	OTP	Rugby 115kV	MISO Queued Request
G408	12.00	XEL	Tap McHenry - Souris 115kV	MISO Queued Request
G502	50.60	MP	Milton Young 230kV	MISO Queued Request
G586	30.00	XEL	Yankee 115kV	
G645	50.00	GRE	Ladish 115kV	MISO Queued Request
G723	10.00	MDU	Haskett 115kV	MISO Queued Request
G736	200.00	OTP	Big Stone South 230kV	
G752	150.00	MDU	Tap Bison - Hettinger 230kV	MISO Queued Request
G788	49.00	GRE	Ladish 115kV	MISO Queued Request
G830	99.00	GRE	GRE McHenry 115kV	MISO Queued Request
GEN-2001-014	96.00	WFEC	Ft Supply 138kV	On-Line
GEN-2001-026	74.30	WFEC	Washita 138kV	On-Line
GEN-2001-033	180.00	SPS	San Juan Tap 230kV	On-Line at 120MW
GEN-2001-036	80.00	SPS	Norton 115kV	On-Line
GEN-2001-037	100.00	OKGE	FPL Moreland Tap 138kV	On-Line
GEN-2001-039A	105.00	SUNCMKEC	Shooting Star Tap 115kV	On-Line
GEN-2001-039M	100.00	SUNCMKEC	Central Plains Tap 115kV	On-Line
GEN-2002-004	200.00	WERE	Latham 345kV	On-Line at 150MW

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
GEN-2002-005	120.00	WFEC	Red Hills Tap 138kV	On-Line
GEN-2002-008	240.00	SPS	Hitchland 345kV	On-Line at 120MW
GEN-2002-008IS	40.50	WAPA	Edgeley 115kV [Pomona 115kV]	Commercial Operation
GEN-2002-009	80.00	SPS	Hansford 115kV	On-Line
GEN-2002-009IS	40.00	WAPA	Ft Thompson 69kV [Hyde 69kV]	Commercial Operation
GEN-2002-022	240.00	SPS	Bushland 230kV	On-Line
GEN-2002-023N	0.80	NPPD	Harmony 115kV	On-Line
GEN-2002-025A	150.00	SUNCMKEC	Spearville 230kV	On-Line
GEN-2003-004	100.00	WFEC	Washita 138kV	On-Line
GEN-2003-005	100.00	WFEC	Anadarko - Paradise (Blue Canyon) 138kV	On-Line
GEN-2003-006A	200.00	SUNCMKEC	Elm Creek 230kV	On-Line
GEN-2003-019	250.00	MIDW	Smoky Hills Tap 230kV	On-Line
GEN-2003-020	160.00	SPS	Martin 115kV	On-Line
GEN-2003-021N	75.00	NPPD	Ainsworth Wind Tap 115kV	On-Line
GEN-2003-022	120.00	AEPW	Weatherford 138kV	On-Line
GEN-2004-014	154.50	SUNCMKEC	Spearville 230kV	On-Line at 100MW
GEN-2004-020	27.00	AEPW	Weatherford 138kV	On-Line
GEN-2004-023	20.60	WFEC	Washita 138kV	On-Line
GEN-2004-023N	75.00	NPPD	Columbus Co 115kV	On-Line
GEN-2005-003	30.60	WFEC	Washita 138kV	On-Line
GEN-2005-003IS	100.00	WAPA	Nelson 115kV	Commercial Operation
GEN-2005-008	120.00	OKGE	Woodward 138kV	On-Line
GEN-2005-008IS	50.00	WAPA	Hilken 230kV [Ecklund 230kV]	Commercial Operation
GEN-2005-012	250.00	SUNCMKEC	Ironwood 345kV	On-Line at 160MW
GEN-2005-013	201.00	WERE	Caney River 345kV	On-Line
GEN-2006-001IS	10.00	XEL	Marshall 115kV	Commercial Operation
GEN-2006-002	101.00	AEPW	Sweetwater 230kV	On-Line
GEN-2006-002IS	51.00	WAPA	Wessington Springs 230kV	Commercial Operation
GEN-2006-006IS	10.00	XEL	Marshall 115kV	Commercial Operation
GEN-2006-015IS	50.00	WAPA	Hilken 230kV [Ecklund 230kV]	Commercial Operation
GEN-2006-018	170.00	SPS	TUCO Interchange 230kV	On-Line
GEN-2006-020N	42.00	NPPD	Bloomfield 115kV	On-Line
GEN-2006-020S	18.90	SPS	DWS Frisco 115kV	On-Line
GEN-2006-021	101.00	SUNCMKEC	Flat Ridge Tap 138kV	On-Line
GEN-2006-024S	19.80	WFEC	Buffalo Bear Tap 69kV	On-Line
GEN-2006-026	502.00	SPS	Hobbs 230kV & Hobbs 115kV	On-Line
GEN-2006-031	75.00	MIDW	Knoll 115kV	On-Line
GEN-2006-035	225.00	AEPW	Sweetwater 230kV	On-Line at 132MW
GEN-2006-037N1	75.00	NPPD	Broken Bow 115kV	On-Line
GEN-2006-038N005	80.00	NPPD	Broken Bow 115kV	On-Line
GEN-2006-038N019	80.00	NPPD	Petersburg North 115kV	On-Line
GEN-2006-043	99.00	AEPW	Sweetwater 230kV	On-Line
GEN-2006-044	370.00	SPS	Hitchland 345kV	On-Line at 120MW
GEN-2006-044N	40.50	NPPD	North Petersburg 115kV	On-Line
GEN-2006-046	131.00	OKGE	Dewey 138kV	On-Line
GEN-2007-011N08	81.00	NPPD	Bloomfield 115kV	On-Line
GEN-2007-013IS	50.00	WAPA	Wessington Springs 230kV	Commercial Operation
GEN-2007-014IS	100.00	WAPA	Wessington Springs 230kV	Commercial Operation
GEN-2007-015IS	100.00	WAPA	Hilken 230kV [Ecklund 230kV]	Commercial Operation
GEN-2007-017IS	166.00	WAPA	Ft Thompson-Grand Island 345kV	On Schedule

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GEN-2007-018IS	234.00	WAPA	Ft Thompson-Grand Island 345kV	On Schedule
GEN-2007-020IS	16.00	WAPA	Nelson 115kV	Commercial Operation
GEN-2007-021	201.00	OKGE	Tatonga 345kV	On-Line
GEN-2007-023IS	50.00	WAPA	Formit-Summit 115kV	On Suspension
GEN-2007-025	300.00	WERE	Viola 345kV	On-Line
GEN-2007-027IS	99.00	WAPA	Bismarck-Garrison 230kV #1	On Suspension
GEN-2007-040	200.00	SUNCMKEC	Buckner 345kV	On-Line at 132MW
GEN-2007-043	200.00	OKGE	Minco 345kV	On-Line
GEN-2007-044	300.00	OKGE	Tatonga 345kV	On-Line at 199MW
GEN-2007-046	200.00	SPS	Hitchland 115kV	On-Line
GEN-2007-050	170.00	OKGE	Woodward EHV 138kV	On-Line at 150MW
GEN-2007-052	150.00	WFEC	Anadarko 138kV	On-Line
GEN-2007-062	765.00	OKGE	Woodward EHV 345kV	On Schedule for 2016 and 2017
GEN-2008-003	101.00	OKGE	Woodward EHV 138kV	On-Line
GEN-2008-008IS	5.00	WAPA	Nelson 115kV	Commercial Operation
GEN-2008-013	300.00	OKGE	Hunter 345kV	On-Line at 235MW
GEN-2008-018	250.00	SPS	Finney 345kV	On-Line
GEN-2008-021	42.00	WERE	Wolf Creek 345kV	On-Line
GEN-2008-022	300.00	SPS	Crossroads 345kV	On-Line
GEN-2008-023	150.00	AEPW	Hobart Junction 138kV	On-Line
GEN-2008-037	101.00	WFEC	Slick Hills 138kV	On-Line
GEN-2008-044	197.80	OKGE	Tatonga 345kV	On-Line
GEN-2008-047	300.00	OKGE	Beaver County 345kV	On-Line
GEN-2008-051	322.00	SPS	Potter County 345kV	On-Line at 161MW
GEN-2008-079	99.20	SUNCMKEC	Crooked Creek 115kV	On-Line
GEN-2008-086N02	201.00	NPPD	Meadow Grove 230kV	On-Line
GEN-2008-092	200.60	MIDW	Post Rock 230kV	On-Line
GEN-2008-098	100.80	WERE	Waverly 345kV	On-Line
GEN-2008-119O	60.00	OPPD	S1399 161kV	On-Line
GEN-2008-123N	89.70	NPPD	Tap Pauline - Hildreth (Rosemont) 115kV	On Schedule for 2016
GEN-2008-124	200.10	SUNCMKEC	Ironwood 345kV	On Schedule for 2016
GEN-2008-129	80.00	KCPL	Pleasant Hill 161kV	On-Line
GEN-2009-001IS	200.00	WAPA	Groton-Watertown 345kV	On Schedule
GEN-2009-006IS	90.00	WAPA	Mission 115kV	On Suspension
GEN-2009-007IS	100.00	WAPA	Mission 115kV	On Suspension
GEN-2009-008	199.50	MIDW	South Hays 230kV	On-Line
GEN-2009-018IS	100.00	WAPA	Groton 115kV	Commercial Operation
GEN-2009-020	48.30	MIDW	Walnut Creek 69kV	On-Line
GEN-2009-020AIS	130.50	WAPA	Tripp Junction 115kV	Commercial Operation
GEN-2009-025	59.80	OKGE	Nardins 69kV	On-Line
GEN-2009-026IS	110.00	WAPA	Dickenson-Heskett 230kV	On Schedule
GEN-2009-040	73.80	WERE	Marshall 115kV	On Schedule for 2016
GEN-2010-001	300.00	OKGE	Beaver County 345kV	On-Line
GEN-2010-001IS	99.00	WAPA	Bismarck-Glenham 230kV	On Schedule
GEN-2010-003	100.80	WERE	Waverly 345kV	On-Line
GEN-2010-003IS	34.00	WAPA	Wessington Springs 230kV	Commercial Operation
GEN-2010-005	299.20	WERE	Viola 345kV	On-Line at 170MW
GEN-2010-006	205.00	SPS	Jones 230kV	On-Line
GEN-2010-007IS	172.50	WAPA	Antelope Valley 345kV	On Suspension
GEN-2010-009	165.60	SUNCMKEC	Buckner 345kV	On-Line

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GEN-2010-011	29.70	OKGE	Tatonga 345kV	On-Line
GEN-2010-014	358.80	SPS	Hitchland 345kV	On Schedule for 2018
GEN-2010-036	4.60	WERE	6th Street 115kV	On-Line
GEN-2010-040	300.00	OKGE	Cimarron 345kV	On-Line
GEN-2010-041	10.50	OPPD	S1399 161kV	On Schedule for 2015
GEN-2010-045	197.80	SUNCMKEC	Buckner 345kV	On Schedule for 2017
GEN-2010-046	56.00	SPS	TUCO Interchange 230kV	On Schedule for 2016
GEN-2010-048	70.00	MIDW	Tap Beach Station - Redline 115kV	FACILITY STUDY STAGE
GEN-2010-051	200.00	NPPD	Tap Hoskins - Twin Church (Dixon County) 230kV	On Suspension
GEN-2010-055	4.50	AEPW	Wekiwa 138kV	On-Line
GEN-2010-057	201.00	MIDW	Rice County 230kV	On-Line
GEN-2011-008	600.00	SUNCMKEC	Clark County 345kV	On Schedule for 2016
GEN-2011-010	100.80	OKGE	Minco 345kV	On-Line
GEN-2011-011	50.00	KCPL	Iatan 345kV	On-Line
GEN-2011-014	201.00	OKGE	Tap Hitchland - Woodward Dbl Ckt (GEN-2011-014 Tap) 345kV	On Schedule for 2016
GEN-2011-016	200.10	SUNCMKEC	Ironwood 345kV	On Suspension
GEN-2011-018	73.60	NPPD	Steele City 115kV	On-Line
GEN-2011-019	299.00	OKGE	Woodward 345kV	On Schedule for 2017
GEN-2011-020	299.00	OKGE	Woodward 345kV	On Schedule for 2017
GEN-2011-022	299.00	SPS	Hitchland 345kV	On Schedule for 2016 (150MW) and 2017 (149MW)
GEN-2011-025	80.00	SPS	Tap Floyd County - Crosby County 115kV	On Schedule for 2016
GEN-2011-027	120.00	NPPD	Tap Hoskins - Twin Church (Dixon County) 230kV	On Suspension
GEN-2011-037	7.00	WFEC	Blue Canyon 5 138kV	On-Line
GEN-2011-040	111.00	OKGE	Carter County 138kV	On-Line
GEN-2011-045	205.00	SPS	Jones 230kV	On-Line
GEN-2011-046	27.00	SPS	Lopez 115kV	On-Line
GEN-2011-048	175.00	SPS	Mustang 230kV	On-Line
GEN-2011-049	250.70	OKGE	Border 345kV	On Schedule for 2016
GEN-2011-050	109.80	AEPW	Santa Fe Tap 138kV	On Schedule for 2016
GEN-2011-051	104.40	OKGE	Tap Woodward - Tatonga 345kV (GEN-2011-051 Tap)	On Schedule for 2017
GEN-2011-054	300.00	OKGE	Cimarron 345kV	On-Line
GEN-2011-056	3.60	NPPD	Jeffrey 115kV	On-Line
GEN-2011-056A	3.60	NPPD	John 1 115kV	On-Line
GEN-2011-056B	4.50	NPPD	John 2 115kV	On-Line
GEN-2011-057	150.40	WERE	Creswell 138kV	On-Line
GEN-2012-001	61.20	SPS	Cirrus Tap 230kV	On-Line
GEN-2012-004	41.40	OKGE	Carter County 138kV	On-Line
GEN-2012-006IS	125.01	WAPA	Williston-Ch. Creek 230kV	On Schedule
GEN-2012-007	120.00	SUNCMKEC	Rubart 115kV	On-Line
GEN-2012-009IS	99.00	WAPA	Fort Randall 115kV	On Suspension
GEN-2012-012IS	75.00	WAPA	Wolf Point-Circle 115kV	On Suspension
GEN-2012-014IS	99.50	WAPA	Groton 115kV	On Schedule
GEN-2012-020	478.00	SPS	TUCO 230kV	On Schedule for 2016
GEN-2012-021	4.80	LES	Terry Bundy Generating Station 115kV	On-Line
GEN-2012-024	180.00	SUNCMKEC	Clark County 345kV	On Schedule for 2016
GEN-2012-028	74.80	WFEC	Gotebo 69kV	On-Line
GEN-2012-032	300.00	OKGE	Open Sky 345kV	On-Line
GEN-2012-033	98.10	OKGE	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV	On-Line

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GEN-2012-034	7.00	SPS	Mustang 230kV	On-Line
GEN-2012-035	7.00	SPS	Mustang 230kV	On-Line
GEN-2012-036	7.00	SPS	Mustang 230kV	On-Line
GEN-2012-037	203.00	SPS	TUCO 345kV	On-Line
GEN-2012-041	121.50	OKGE	Ranch Road 345kV	On-Line
GEN-2013-001IS	90.00	WAPA	Summit-Watertown 115kV	On Suspension
GEN-2013-002	50.60	LES	Tap Sheldon - Folsom & Pleasant Hill (GEN-2013-002 Tap) 115kV CKT 2	On Schedule for 2016
GEN-2013-007	100.30	OKGE	Tap Prices Falls - Carter 138kV	On-Line
GEN-2013-008	1.20	NPPD	Steele City 115kV	On-Line
GEN-2013-009IS	19.50	WAPA	Redfield NW 115kV	Commercial Operation
GEN-2013-010	99.00	SUNCMKEC	Tap Spearville - Post Rock (North of GEN-2011-017 Tap) 345kV	On Schedule for 2018
GEN-2013-011	30.00	AEPW	Turk 138kV	On-Line
GEN-2013-012	147.00	OKGE	Redbud 345kV	On-Line
GEN-2013-016	203.00	SPS	TUCO 345kV	On Schedule for 2017
GEN-2013-019	73.60	LES	Tap Sheldon - Folsom & Pleasant Hill (GEN-2013-002 Tap) 115kV CKT 2	On Schedule for 2016
GEN-2013-022	25.00	SPS	Norton 115kV	On Schedule for 2016
GEN-2013-027	150.00	SPS	Tap Tolk - Yoakum 230kV	IA Pending
GEN-2013-028	559.50	GRDA	Tap N Tulsa - GRDA 1 345kV	On Schedule for 2017
GEN-2013-029	300.00	OKGE	Renfrow 345kV	On-Line for 151.6MW
GEN-2013-030	300.00	OKGE	Beaver County 345kV	On Schedule for 2016 (200MW) and 2017 (100MW)
GEN-2013-032	204.00	NPPD	Antelope 115kV	On Schedule for 2017
GEN-2013-033	28.00	MIDW	Knoll 115kV	On Schedule for 2016
GEN-2014-001	200.60	WERE	Tap Wichita - Emporia Energy Center (GEN-2014-001 Tap) 345kV	On Suspension
GEN-2014-001IS	103.70	WAPA	Newell-Maurine 115kV	FACILITY STUDY STAGE
GEN-2014-002	10.50	OKGE	Tatonga 345kV (GEN-2007-021 POI)	On Schedule for 2015
GEN-2014-003	15.80	OKGE	Tatonga 345kV (GEN-2007-044 POI)	On Schedule for 2015
GEN-2014-003IS	91.00	WAPA	Culbertson 115kV	On Schedule
GEN-2014-004	4.00	NPPD	Steele City 115kV (GEN-2011-018 POI)	On-Line
GEN-2014-004IS	384.20	WAPA	Charlie Creek 345kV	FACILITY STUDY STAGE
GEN-2014-005	5.70	OKGE	Minco 345kV (GEN-2011-010 POI)	On-Line
GEN-2014-006IS	125.00	WAPA	Williston 115kV	On Schedule
GEN-2014-010IS	150.00	WAPA	Neset 115kV	On Schedule
GEN-2014-012	225.00	SPS	Tap Hobbs Interchange - Andrews 230kV	On Schedule for 2018
GEN-2014-013	73.50	NPPD	Meadow Grove (GEN-2008-086N2 Sub) 230kV	On-Line
GEN-2014-014IS	151.50	WAPA	Belfield-Rhame 230kV	On Schedule
GEN-2014-020	100.00	AEPW	Tuttle 138kV	On Schedule for 2017
GEN-2014-021	300.00	KCPL	Tap Nebraska City - Mullin Creek 345kV	On Schedule for 2016
GEN-2014-025	2.40	MIDW	Walnut Creek 69kV	On-Line
GEN-2014-028	35.00	EMDE	Riverton 161kV	On Schedule for 2016
GEN-2014-031	35.80	NPPD	Meadow Grove 230kV	On-Line
GEN-2014-032	10.20	NPPD	Meadow Grove 230kV	On Schedule for 2016
GEN-2014-033	70.00	SPS	Chaves County 115kV	On Schedule for 2016
GEN-2014-034	70.00	SPS	Chaves County 115kV	On Schedule for 2016
GEN-2014-035	30.00	SPS	Chaves County 115kV	On Schedule for 2018
GEN-2014-037	200.00	SPS	Tap Hitchland - Beaver County Dbl Ckt (Optima) 345kV	FACILITY STUDY STAGE
GEN-2014-039	73.40	NPPD	Friend 115kV	On Schedule for 2017

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GEN-2014-040	320.40	SPS	Castro 115kV	On Schedule for 2016
GEN-2014-041	120.80	SUNCMKEC	Arnold 115kV	On Suspension
GEN-2014-047	40.00	SPS	Crossroads 345kV	IA Pending
GEN-2014-056	250.00	OKGE	Minco 345kV	On Schedule for 2016
GEN-2014-057	250.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV	On Schedule for 2016
GEN-2014-064	248.40	OKGE	Otter 138kV	On Suspension
GEN-2014-074	152.00	SPS	Tap TUCO Interchange - Oklaunion (GEN-2014-074 Tap) 345kV	FACILITY STUDY STAGE
GEN-2015-001	200.00	OKGE	Ranch Road 345kV	On Schedule for 2016
GEN-2015-004	52.90	OKGE	Border 345kV	IA Pending
GEN-2015-005	200.10	KCPL	Tap Nebraska City - Sibley 345kV	FACILITY STUDY STAGE
GEN-2015-007	160.00	NPPD	Hoskins 345kV	FACILITY STUDY STAGE
GEN-2015-013	120.00	WFEC	Synder 138kV	FACILITY STUDY STAGE
GEN-2015-014	150.00	SPS	Tap Cochran - Lehman 115kV	FACILITY STUDY STAGE
GEN-2015-015	154.60	OKGE	Tap Medford Tap - Coyote 138kV	FACILITY STUDY STAGE
GEN-2015-016	200.00	KCPL	Tap Marmaton - Centerville 161kV	FACILITY STUDY STAGE
GEN-2015-020	100.00	SPS	Oasis 115kV	FACILITY STUDY STAGE
GEN-2015-021	20.00	SUNCMKEC	Johnson Corner 115kV	FACILITY STUDY STAGE
GEN-2015-022	112.00	SPS	Swisher 115kV	FACILITY STUDY STAGE
GEN-2015-023	300.70	NPPD	Holt County 345kV	FACILITY STUDY STAGE
GEN-2015-024	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT	On Schedule for 2016
GEN-2015-025	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT	FACILITY STUDY STAGE
GEN-2015-027	4.90	SUNCMKEC	Crooked Creek 115kV	FACILITY STUDY STAGE
GEN-2015-029	161.00	OKGE	Tatonga 345kV	IA Pending
GEN-2015-030	200.10	OKGE	Sooner 345kV	IA Pending
GEN-2015-031	150.50	SPS	Tap Amarillo South - Swisher 230kV	DISIS STAGE
GEN-2015-034	200.00	OKGE	Ranch Road 345kV	DISIS STAGE
GEN-2015-045	20.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV	DISIS STAGE
GEN-2015-046	300.00	WAPA	Tande 345kV	DISIS STAGE
GEN-2015-047	300.00	OKGE	Sooner 345kV	DISIS STAGE
GEN-2015-048	200.00	OKGE	Cleo Corner 138kV	DISIS STAGE
GEN-2015-052	300.00	WERE	Tap Open Sky - Rose Hill 345kV	DISIS STAGE
GEN-2015-053	50.00	NPPD	Antelope 115kV	DISIS STAGE
GEN-2015-055	40.00	WFEC	Erick 138kV	DISIS STAGE
GEN-2015-056	101.20	SPS	Crossroads 345kV	DISIS STAGE
GEN-2015-057	100.00	OKGE	Minco 345kV	DISIS STAGE
GEN-2015-058	50.00	SPS	Atoka 115kV	DISIS STAGE
GEN-2015-059	6.30	OKGE	Minco 345kV	DISIS STAGE
GEN-2015-060	250.50	OKGE	Woodward EHV 138kV	DISIS STAGE
GEN-2015-061	200.00	SUNCMKEC	Mingo 345kV	DISIS STAGE
GEN-2015-062	4.50	OKGE	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV	DISIS STAGE
GEN-2015-063	300.00	OKGE	Tap Woodring - Mathewson 345kV	DISIS STAGE
GEN-2015-064	197.80	SUNCMKEC	Mingo 115kV	DISIS STAGE
GEN-2015-065	202.40	SUNCMKEC	Mingo 345kV	DISIS STAGE
GEN-2015-066	248.40	OKGE	Tap Cleveland - Sooner 345kV	DISIS STAGE
GEN-2015-067	150.00	OKGE	Sooner 138kV	DISIS STAGE
GEN-2015-068	300.00	SPS	TUCO Interchange 345kV	DISIS STAGE
GEN-2015-069	300.00	WERE	Union Ridge 230kV	DISIS STAGE
GEN-2015-071	200.00	AEPW	Chisholm 345kV	DISIS STAGE

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GEN-2015-073	200.10	WERE	Emporia Energy Center 345kV	DISIS STAGE
GEN-2015-075	51.50	SPS	Carlisle 69kV	DISIS STAGE
GEN-2015-076	158.40	NPPD	Belden 115kV	DISIS STAGE
GEN-2015-079	129.20	SPS	Tap Yoakum - Hobbs Interchange 230kV	DISIS STAGE
GEN-2015-080	129.20	SPS	Tap Yoakum - Hobbs Interchange 230kV	DISIS STAGE
GEN-2015-081	180.00	OKGE	Tap Woodward - Tatonga (GEN-2011-051 Tap) 345kV	DISIS STAGE
GEN-2015-083	125.00	WERE	Belle Plain 138kV	DISIS STAGE
GEN-2015-084	51.30	AEPW	Hollis 138kV	DISIS STAGE
GEN-2015-085	122.40	AEPW	Altus Junction 138kV	DISIS STAGE
GEN-2015-087	66.00	NPPD	Tap Fairbury - Hebron 115kV	DISIS STAGE
GEN-2015-088	300.00	NPPD	Tap Moore - Pauline 345kV	DISIS STAGE
GEN-2015-090	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT	DISIS STAGE
GEN-2015-091	101.20	WAPA	Daglum 230kV	DISIS STAGE
GEN-2015-092	250.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV	DISIS STAGE
GEN-2015-093	250.00	OKGE	Gracemont 345kV	DISIS STAGE
GEN-2015-095	176.00	WFEC	Tap Rose Valley - Mooreland 138kV	DISIS STAGE
GEN-2015-096	150.00	WAPA	Tap Belfied - Rhame 230kV	DISIS STAGE
GEN-2015-097	100.00	WAPA	Groton 115kV	DISIS STAGE
GEN-2015-098	100.00	WAPA	Mingusville 230kV	DISIS STAGE
Gray County Wind (Montezuma)	110.00	SUNCMKEC	Gray County Tap 115kV	On-Line
J003	20.00	MDU	Baker 115kV	MISO Queued Request
J249	180.00	MDU	MDU Tatanka 230kV	MISO Queued Request
J262	100.00	OTP	Jamestown 345	MISO Queued Request
J263	100.00	OTP	Jamestown 345	MISO Queued Request
J290	150.00	XEL	Tap Glenboro South - Rugby 230kV	MISO Queued Request
J316	150.00	MDU	MDU 230 kV Tatanka-Ellendale line	MISO Queued Request
J436	150.00	OTP	Big Stone South 345kV	MISO Queued Request
J437	150.00	OTP	Big Stone South 345kV	MISO Queued Request
J442	200.00	OTP	Big Stone 230 kV	MISO Queued Request
Llano Estacado (White Deer)	80.00	SPS	Llano Wind 115kV	On-Line
MPC01200	98.9	OTP	Maple River 230kV	IA Pending
MPC02100	100.00	OTP	Tap Center - Mandan 230kV	On-Line
NPPD Distributed (Broken Bow)	8.30	NPPD	Broken Bow 115kV	On-Line
NPPD Distributed (Buffalo County Solar)	10.00	NPPD	Kearney Northeast	On-Line
NPPD Distributed (Burt County Wind)	12.00	NPPD	Tekamah & Oakland 115kV	On-Line
NPPD Distributed (Burwell)	3.00	NPPD	Ord 115kV	On-Line
NPPD Distributed (Columbus Hydro)	45.00	NPPD	Columbus 115kV	On-Line
NPPD Distributed (North Platte - Lexington)	54.00	NPPD	Multiple: Jeffrey 115kV, John_1 115kV, John_2 115kV	On-Line
NPPD Distributed (Ord)	11.90	NPPD	Ord 115kV	On-Line
NPPD Distributed (Stuart)	2.10	NPPD	Ainsworth 115kV	On-Line
SPS Distributed (Dumas 19th St)	20.00	SPS	Dumas 19th Street 115kV	On-Line
SPS Distributed (Etter)	20.00	SPS	Etter 115kV	On-Line
SPS Distributed (Hopi)	10.00	SPS	Hopi 115kV	On-Line
SPS Distributed (Jal)	10.00	SPS	S Jal 115kV	On-Line
SPS Distributed (Lea Road)	10.00	SPS	Lea Road 115kV	On-Line
SPS Distributed (Monument)	10.00	SPS	Monument 115kV	On-Line
SPS Distributed (Moore E)	25.00	SPS	Moore East 115kV	On-Line
SPS Distributed (Ocotillo)	10.00	SPS	S_Jal 115kV	On-Line

Request	Amount	Area	Requested/Proposed Point of Interconnection	Status or In-Service Date
SPS Distributed (Sherman)	20.00	SPS	Sherman 115kV	On-Line
SPS Distributed (Spearman)	10.00	SPS	Spearman 69kV	On-Line
SPS Distributed (TC-Texas County)	20.00	SPS	Texas County 115kV	On-Line
SPS Distributed (Yuma)	2.57	SPS	SP-Yuma 69kV	On-Line
Total:	**41,938.7**			

11.3 C: STUDY GROUPINGS

C. Study Groups

GROUP 1: WOODWARD AREA			
Request	**Capacity**	**Area**	**Proposed Point of Interconnection**
GEN-2001-014	96.00	WFEC	Ft Supply 138kV
GEN-2001-037	100.00	OKGE	FPL Moreland Tap 138kV
GEN-2005-008	120.00	OKGE	Woodward 138kV
GEN-2006-024S	19.80	WFEC	Buffalo Bear Tap 69kV
GEN-2006-046	131.00	OKGE	Dewey 138kV
GEN-2007-021	201.00	OKGE	Tatonga 345kV
GEN-2007-043	200.00	OKGE	Minco 345kV
GEN-2007-044	300.00	OKGE	Tatonga 345kV
GEN-2007-050	170.00	OKGE	Woodward EHV 138kV
GEN-2007-062	765.00	OKGE	Woodward EHV 345kV
GEN-2008-003	101.00	OKGE	Woodward EHV 138kV
GEN-2008-044	197.80	OKGE	Tatonga 345kV
GEN-2010-011	29.70	OKGE	Tatonga 345kV
GEN-2010-040	300.00	OKGE	Cimarron 345kV
GEN-2011-010	100.80	OKGE	Minco 345kV
GEN-2011-019	299.00	OKGE	Woodward 345kV
GEN-2011-020	299.00	OKGE	Woodward 345kV
GEN-2011-051	104.40	OKGE	Tap Woodward - Tatonga 345kV (GEN-2011-051 Tap)
GEN-2011-054	300.00	OKGE	Cimarron 345kV
GEN-2014-002	10.50	OKGE	Tatonga 345kV (GEN-2007-021 POI)
GEN-2014-003	15.80	OKGE	Tatonga 345kV (GEN-2007-044 POI)
GEN-2014-005	5.70	OKGE	Minco 345kV (GEN-2011-010 POI)
GEN-2014-020	100.00	AEPW	Tuttle 138kV
GEN-2014-056	250.00	OKGE	Minco 345kV
GEN-2015-029	161.00	OKGE	Tatonga 345kV
GEN-2015-048	200.00	OKGE	Cleo Corner 138kV
GEN-2015-057	100.00	OKGE	Minco 345kV
GEN-2015-059	6.30	OKGE	Minco 345kV
GEN-2015-060	250.50	OKGE	Woodward EHV 138kV
GEN-2015-081	180.00	OKGE	Tap Woodward - Tatonga (GEN-2011-051 Tap) 345kV
GEN-2015-093	250.00	OKGE	Gracemont 345kV
PRIOR QUEUED SUBTOTAL	**5,364.30**		
GEN-2015-038	303.60	OKGE	Cimarron 345kV
GEN-2015-095	176.00	OKGE	Tap Rose Valley - Mooreland 138kV
GEN-2016-003	248.40	OKGE	Tap Badger - Woodward 345kV
GEN-2016-020	150.00	WFEC	Mooreland 138kV
GEN-2016-045	499.10	OKGE	Mathewson 345kV
GEN-2016-047	24.00	OKGE	Mustang 69kV
GEN-2016-057	499.10	OKGE	Mathewson 345kV
CURRENT CLUSTER SUBTOTAL	**1,900.20**		
AREA TOTAL	**7,264.50**		

GROUP 2: HITCHLAND AREA			
Request	**Capacity**	**Area**	**Proposed Point of Interconnection**
ASGI-2011-002	20.00	SPS	Herring 115kV
ASGI-2013-001	11.50	SPS	PanTex South 115kV
GEN-2002-008	240.00	SPS	Hitchland 345kV
GEN-2002-009	80.00	SPS	Hansford 115kV
GEN-2002-022	240.00	SPS	Bushland 230kV
GEN-2003-020	160.00	SPS	Martin 115kV
GEN-2006-020S	18.90	SPS	DWS Frisco 115kV
GEN-2006-044	370.00	SPS	Hitchland 345kV
GEN-2007-046	200.00	SPS	Hitchland 115kV
GEN-2008-047	300.00	OKGE	Beaver County 345kV
GEN-2008-051	322.00	SPS	Potter County 345kV
GEN-2010-001	300.00	OKGE	Beaver County 345kV
GEN-2010-014	358.80	SPS	Hitchland 345kV
GEN-2011-014	201.00	OKGE	Tap Hitchland - Woodward Dbl Ckt (GEN-2011-014 Tap) 345kV
GEN-2011-022	299.00	SPS	Hitchland 345kV
GEN-2013-030	300.00	OKGE	Beaver County 345kV
GEN-2014-037	200.00	SPS	Tap Hitchland - Beaver County Dbl Ckt (Optima) 345kV
Llano Estacado (White Deer)	80.00	SPS	Llano Wind 115kV
SPS Distributed (Dumas 19th St)	20.00	SPS	Dumas 19th Street 115kV
SPS Distributed (Etter)	20.00	SPS	Etter 115kV
SPS Distributed (Moore E)	25.00	SPS	Moore East 115kV
SPS Distributed (Sherman)	20.00	SPS	Sherman 115kV
SPS Distributed (Spearman)	10.00	SPS	Spearman 69kV
SPS Distributed (TC-Texas County)	20.00	SPS	Texas County 115kV
PRIOR QUEUED SUBTOTAL	**3,816.20**		
GEN-2015-082	200.00	OKGE	Tap Hitchland - Woodward Dbl Ckt (GEN-2011-014 Tap) 345kV
GEN-2016-001	300.30	OKGE	Tap Badger - Woodward 345kV
GEN-2016-038	300.00	SPS	Harrington 230kV
GEN-2016-041	100.00	SPS	Hitchland 345kV
GEN-2016-059	300.00	SPS	Harrington 230kV
GEN-2016-070	5.30	SPS	Martin 115kV
CURRENT CLUSTER SUBTOTAL	**1,205.60**		
AREA TOTAL	**5,021.80**		

GROUP 3: SPEARVILLE AREA			
Request	**Capacity**	**Area**	**Proposed Point of Interconnection**
ASGI-2012-006	22.50	SUNCMKEC	Tap Hugoton - Rolla 69kV
ASGI-2015-001	6.13	SUNCMKEC	Ninnescah 115kV
GEN-2001-039A	105.00	SUNCMKEC	Shooting Star Tap 115kV
GEN-2002-025A	150.00	SUNCMKEC	Spearville 230kV
GEN-2004-014	154.50	SUNCMKEC	Spearville 230kV
GEN-2005-012	250.00	SUNCMKEC	Ironwood 345kV
GEN-2006-021	101.00	SUNCMKEC	Flat Ridge Tap 138kV
GEN-2007-040	200.00	SUNCMKEC	Buckner 345kV
GEN-2008-018	250.00	SPS	Finney 345kV
GEN-2008-079	99.20	SUNCMKEC	Crooked Creek 115kV
GEN-2008-124	200.10	SUNCMKEC	Ironwood 345kV
GEN-2010-009	165.60	SUNCMKEC	Buckner 345kV
GEN-2010-045	197.80	SUNCMKEC	Buckner 345kV
GEN-2011-008	600.00	SUNCMKEC	Clark County 345kV
GEN-2011-016	200.10	SUNCMKEC	Ironwood 345kV
GEN-2012-007	120.00	SUNCMKEC	Rubart 115kV
GEN-2012-024	180.00	SUNCMKEC	Clark County 345kV
GEN-2013-010	99.00	SUNCMKEC	Tap Spearville - Post Rock (North of GEN-2011-017 Tap) 345kV
GEN-2015-021	20.00	SUNCMKEC	Johnson Corner 115kV
GEN-2015-027	4.90	SUNCMKEC	Crooked Creek 115kV
Gray County Wind (Montezuma)	110.00	SUNCMKEC	Gray County Tap 115kV
PRIOR QUEUED SUBTOTAL	**3,235.83**		
GEN-2016-005	150.00	SUNCMKEC	Tap Clark County - Thistle 345kV
GEN-2016-016	78.20	MIDW	North Kinsley 115kV
GEN-2016-046	299.00	SUNCMKEC	Tap Clark County - Ironwood 345kV
GEN-2016-049	310.20	SUNCMKEC	Tap Spearville - Post Rock 345kV
CURRENT CLUSTER SUBTOTAL	**837.40**		
AREA TOTAL	**4,073.23**		

GROUP 4: NORTHWEST KANSAS AREA			
Request	**Capacity**	**Area**	**Proposed Point of Interconnection**
ASGI-2013-004	36.60	SUNCMKEC	Morris 115kV
GEN-2001-039M	100.00	SUNCMKEC	Central Plains Tap 115kV
GEN-2003-006A	200.00	SUNCMKEC	Elm Creek 230kV
GEN-2003-019	250.00	MIDW	Smoky Hills Tap 230kV
GEN-2006-031	75.00	MIDW	Knoll 115kV
GEN-2008-092	200.60	MIDW	Post Rock 230kV
GEN-2009-008	199.50	MIDW	South Hays 230kV
GEN-2009-020	48.30	MIDW	Walnut Creek 69kV
GEN-2010-048	70.00	MIDW	Tap Beach Station - Redline 115kV
GEN-2010-057	201.00	MIDW	Rice County 230kV
GEN-2013-033	28.00	MIDW	Knoll 115kV
GEN-2014-025	2.40	MIDW	Walnut Creek 69kV
GEN-2014-041	120.80	SUNCMKEC	Arnold 115kV
GEN-2015-061	200.00	SUNCMKEC	Mingo 345kV
GEN-2015-064	197.80	SUNCMKEC	Mingo 115kV
GEN-2015-065	202.40	SUNCMKEC	Mingo 345kV
PRIOR QUEUED SUBTOTAL	**2,132.40**		
GEN-2016-067	73.60	SUNCMKEC	Mingo 345kV
CURRENT CLUSTER SUBTOTAL	**73.60**		
AREA TOTAL	**2,206.00**		

GROUP 6: SOUTH TEXAS PANHANDLE/NEW MEXICO AREA			
Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2010-010	42.20	SPS	Lovington 115kV
ASGI-2010-020	30.00	SPS	Tap LE-Tatum - LE-Crossroads 69kV
ASGI-2010-021	15.00	SPS	Tap LE-Saunders Tap - LE-Anderson 69kV
ASGI-2011-001	27.30	SPS	Lovington 115kV
ASGI-2011-003	10.00	SPS	Hendricks 69kV
ASGI-2011-004	20.00	SPS	Pleasant Hill 69kV
ASGI-2012-002	18.15	SPS	FE-Clovis Interchange 115kV
ASGI-2013-002	18.40	SPS	FE Tucumcari 115kV
ASGI-2013-003	18.40	SPS	FE Clovis 115kV
ASGI-2013-005	1.65	SPS	FE Clovis 115kV
ASGI-2013-006	2.00	SPS	SP-Erskine 115kV
ASGI-2014-001	2.50	SPS	SP-Erskine 115kV
ASGI-2015-002	2.00	SPS	SP-Yuma 69kV
GEN-2001-033	180.00	SPS	San Juan Tap 230kV
GEN-2001-036	80.00	SPS	Norton 115kV
GEN-2006-018	170.00	SPS	TUCO Interchange 230kV
GEN-2006-026	502.00	SPS	Hobbs 230kV & Hobbs 115kV
GEN-2008-022	300.00	SPS	Crossroads 345kV
GEN-2010-006	205.00	SPS	Jones 230kV
GEN-2010-046	56.00	SPS	TUCO Interchange 230kV
GEN-2011-025	80.00	SPS	Tap Floyd County - Crosby County 115kV
GEN-2011-045	205.00	SPS	Jones 230kV
GEN-2011-046	27.00	SPS	Lopez 115kV
GEN-2011-048	175.00	SPS	Mustang 230kV
GEN-2012-001	61.20	SPS	Cirrus Tap 230kV
GEN-2012-020	478.00	SPS	TUCO 230kV
GEN-2012-034	7.00	SPS	Mustang 230kV
GEN-2012-035	7.00	SPS	Mustang 230kV
GEN-2012-036	7.00	SPS	Mustang 230kV
GEN-2012-037	203.00	SPS	TUCO 345kV
GEN-2013-016	203.00	SPS	TUCO 345kV
GEN-2013-022	25.00	SPS	Norton 115kV
GEN-2013-027	150.00	SPS	Tap Tolk - Yoakum 230kV
GEN-2014-012	225.00	SPS	Tap Hobbs Interchange - Andrews 230kV
GEN-2014-033	70.00	SPS	Chaves County 115kV
GEN-2014-034	70.00	SPS	Chaves County 115kV
GEN-2014-035	30.00	SPS	Chaves County 115kV
GEN-2014-040	320.40	SPS	Castro 115kV
GEN-2014-047	40.00	SPS	Crossroads 345kV
GEN-2014-074	152.00	SPS	Tap TUCO Interchange - Oklaunion (GEN-2014-074 Tap) 345kV
GEN-2015-014	150.00	SPS	Tap Cochran - Lehman 115kV
GEN-2015-020	100.00	SPS	Oasis 115kV
GEN-2015-022	112.00	SPS	Swisher 115kV
GEN-2015-031	150.50	SPS	Tap Amarillo South - Swisher 230kV
GEN-2015-056	101.20	SPS	Crossroads 345kV
GEN-2015-058	50.00	SPS	Atoka 115kV
GEN-2015-068	300.00	SPS	TUCO Interchange 345kV
GEN-2015-075	51.50	SPS	Carlisle 69kV
GEN-2015-079	129.20	SPS	Tap Yoakum - Hobbs Interchange 230kV

GEN-2015-080	129.20	SPS	Tap Yoakum - Hobbs Interchange 230kV
SPS Distributed (Hopi)	10.00	SPS	Hopi 115kV
SPS Distributed (Jal)	10.00	SPS	S Jal 115kV
SPS Distributed (Lea Road)	10.00	SPS	Lea Road 115kV
SPS Distributed (Monument)	10.00	SPS	Monument 115kV
SPS Distributed (Ocotillo)	10.00	SPS	S_Jal 115kV
SPS Distributed (Yuma)	2.57	SPS	SP-Yuma 69kV
PRIOR QUEUED SUBTOTAL	**5,562.37**		
ASGI-2016-001	2.50	SPS	Wolfforth 115kV
ASGI-2016-002	0.35	SPS	SP-Yuma 115kV
ASGI-2016-004	9.60	SPS	Palo Duro 115kV
GEN-2015-018	80.00	SPS	Tap Curry County - Bailey 115kV
GEN-2015-033	152.00	SPS	Tap TUCO Interchange - Oklaunion (GEN-2014-074 Tap) 345kV
GEN-2015-039	50.10	SPS	Tap Deaf Smith - Plant X 230kV
GEN-2015-040	50.10	SPS	Mustang 230kV
GEN-2015-041	5.00	SPS	TUCO Interchange 345kV
GEN-2015-078	50.10	SPS	Mustang 115kV
GEN-2016-002	74.00	SPS	Happy Interchange 115kV
GEN-2016-015	100.00	SPS	Andrews 230kV
GEN-2016-039	112.00	SPS	Swisher 115kV
GEN-2016-056	200.00	SPS	Carlisle 230kV
GEN-2016-058	212.00	SPS	Yoakum 345kV
GEN-2016-062	250.70	SPS	Andrews 230kV
GEN-2016-069	31.40	SPS	Chaves County 115kV
CURRENT CLUSTER SUBTOTAL	**1,379.85**		
AREA TOTAL	**6,942.22**		

GROUP 7: SOUTHWEST OKLAHOMA AREA

Request	Capacity	Area	Proposed Point of Interconnection
GEN-2001-026	74.30	WFEC	Washita 138kV
GEN-2002-005	120.00	WFEC	Red Hills Tap 138kV
GEN-2003-004	100.00	WFEC	Washita 138kV
GEN-2003-005	100.00	WFEC	Anadarko - Paradise (Blue Canyon) 138kV
GEN-2003-022	120.00	AEPW	Weatherford 138kV
GEN-2004-020	27.00	AEPW	Weatherford 138kV
GEN-2004-023	20.60	WFEC	Washita 138kV
GEN-2005-003	30.60	WFEC	Washita 138kV
GEN-2006-002	101.00	AEPW	Sweetwater 230kV
GEN-2006-035	225.00	AEPW	Sweetwater 230kV
GEN-2006-043	99.00	AEPW	Sweetwater 230kV
GEN-2007-052	150.00	WFEC	Anadarko 138kV
GEN-2008-023	150.00	AEPW	Hobart Junction 138kV
GEN-2008-037	101.00	WFEC	Slick Hills 138kV
GEN-2011-037	7.00	WFEC	Blue Canyon 5 138kV
GEN-2011-049	250.70	OKGE	Border 345kV
GEN-2012-028	74.80	WFEC	Gotebo 69kV
GEN-2015-004	52.90	OKGE	Border 345kV
GEN-2015-013	120.00	WFEC	Synder 138kV
GEN-2015-055	40.00	WFEC	Erick 138kV
GEN-2015-071	200.00	AEPW	Chisholm 345kV
GEN-2015-084	51.30	AEPW	Hollis 138kV
GEN-2015-085	122.40	AEPW	Altus Junction 138kV
PRIOR QUEUED SUBTOTAL	**2,337.60**		
GEN-2016-008	40.00	WFEC	Granite 69kV
GEN-2016-037	300.00	AEPW	Tap Chisholm - Gracemont 345kV
GEN-2016-051	9.80	AEPW	Tap Clinton Junction - Weatherford Southeast 138kV
CURRENT CLUSTER SUBTOTAL	**349.80**		
AREA TOTAL	**2,687.40**		

GROUP 8: NORTH OKLAHOMA/SOUTH CENTRAL KANSAS AREA

Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2010-006	150.00	AECI	Remington 138kV
ASGI-2014-014	56.40	GRDA	Ferguson 69kV
ASGI-2015-004	56.36	GRDA	Coffeyville City 69kV
GEN-2002-004	200.00	WERE	Latham 345kV
GEN-2005-013	201.00	WERE	Caney River 345kV
GEN-2007-025	300.00	WERE	Viola 345kV
GEN-2008-013	300.00	OKGE	Hunter 345kV
GEN-2008-021	42.00	WERE	Wolf Creek 345kV
GEN-2008-098	100.80	WERE	Waverly 345kV
GEN-2009-025	59.80	OKGE	Nardins 69kV
GEN-2010-003	100.80	WERE	Waverly 345kV
GEN-2010-005	299.20	WERE	Viola 345kV
GEN-2010-055	4.50	AEPW	Wekiwa 138kV
GEN-2011-057	150.40	WERE	Creswell 138kV
GEN-2012-032	300.00	OKGE	Open Sky 345kV
GEN-2012-033	98.10	OKGE	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV
GEN-2012-041	121.50	OKGE	Ranch Road 345kV
GEN-2013-012	147.00	OKGE	Redbud 345kV

GEN-2013-028	559.50	GRDA	Tap N Tulsa - GRDA 1 345kV
GEN-2013-029	300.00	OKGE	Renfrow 345kV
GEN-2014-001	200.60	WERE	Tap Wichita - Emporia Energy Center (GEN-2014-001 Tap) 345kV
GEN-2014-028	35.00	EMDE	Riverton 161kV
GEN-2014-064	248.40	OKGE	Otter 138kV
GEN-2015-001	200.00	OKGE	Ranch Road 345kV
GEN-2015-015	154.60	OKGE	Tap Medford Tap - Coyote 138kV
GEN-2015-016	200.00	KCPL	Tap Marmaton - Centerville 161kV
GEN-2015-024	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT
GEN-2015-025	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT
GEN-2015-030	200.10	OKGE	Sooner 345kV
GEN-2015-034	200.00	OKGE	Ranch Road 345kV
GEN-2015-047	300.00	OKGE	Sooner 345kV
GEN-2015-052	300.00	WERE	Tap Open Sky - Rose Hill 345kV
GEN-2015-062	4.50	OKGE	Tap and Tie South 4th - Bunch Creek & Enid Tap - Fairmont (GEN-2012-033T) 138kV
GEN-2015-063	300.00	OKGE	Tap Woodring - Mathewson 345kV
GEN-2015-066	248.40	OKGE	Tap Cleveland - Sooner 345kV
GEN-2015-067	150.00	OKGE	Sooner 138kV
GEN-2015-069	300.00	WERE	Union Ridge 230kV
GEN-2015-073	200.10	WERE	Emporia Energy Center 345kV
GEN-2015-083	125.00	WERE	Belle Plain 138kV
GEN-2015-090	220.00	WERE	Tap Thistle - Wichita 345kV Dbl CKT
PRIOR QUEUED SUBTOTAL	**7,574.06**		
GEN-2016-009	29.00	OKGE	Osage 69kV
GEN-2016-012	200.00	WERE	Tap Wolf Creek - LaCygne 345kV
GEN-2016-022	151.80	OKGE	Ranch Road 345kV
GEN-2016-024	55.90	WERE	Midian 138kV
GEN-2016-031	1.50	OKGE	Ranch Road 345kV
GEN-2016-032	200.00	OKGE	Tap Marshall - Cottonwood Creek 138kV
GEN-2016-048	82.30	OKGE	Sooner 138kV
GEN-2016-060	25.30	WERE	Belle Plain 138kV
GEN-2016-061	250.70	OKGE	Tap Woodring - Sooner 345kV
GEN-2016-068	250.00	OKGE	Woodring 345kV
GEN-2016-071	200.10	WFEC	Chilocco 138kV
GEN-2016-072	300.00	OKGE	Tap Hunter - Renfrow 345kV
GEN-2016-073	220.00	WERE	Tap Thistle – Wichita 345kV Dbl CKT
CURRENT CLUSTER SUBTOTAL	**1,966.60**		
AREA TOTAL	**9,540.66**		

GROUP 9: NEBRASKA AREA

Request	Capacity	Area	Proposed Point of Interconnection
GEN-2002-023N	0.80	NPPD	Harmony 115kV
GEN-2003-021N	75.00	NPPD	Ainsworth Wind Tap 115kV
GEN-2004-023N	75.00	NPPD	Columbus Co 115kV
GEN-2006-020N	42.00	NPPD	Bloomfield 115kV
GEN-2006-037N1	75.00	NPPD	Broken Bow 115kV
GEN-2006-038N005	80.00	NPPD	Broken Bow 115kV
GEN-2006-038N019	80.00	NPPD	Petersburg North 115kV
GEN-2006-044N	40.50	NPPD	North Petersburg 115kV
GEN-2007-011N08	81.00	NPPD	Bloomfield 115kV
GEN-2007-017IS	166.00	WAPA	Ft Thompson-Grand Island 345kV
GEN-2007-018IS	234.00	WAPA	Ft Thompson-Grand Island 345kV
GEN-2008-086N02	201.00	NPPD	Meadow Grove 230kV

GEN-2008-119O	60.00	OPPD	S1399 161kV
GEN-2008-123N	89.70	NPPD	Tap Pauline - Hildreth (Rosemont) 115kV
GEN-2009-040	73.80	WERE	Marshall 115kV
GEN-2010-041	10.50	OPPD	S1399 161kV
GEN-2010-051	200.00	NPPD	Tap Hoskins - Twin Church (Dixon County) 230kV
GEN-2011-018	73.60	NPPD	Steele City 115kV
GEN-2011-027	120.00	NPPD	Tap Hoskins - Twin Church (Dixon County) 230kV
GEN-2011-056	3.60	NPPD	Jeffrey 115kV
GEN-2011-056A	3.60	NPPD	John 1 115kV
GEN-2011-056B	4.50	NPPD	John 2 115kV
GEN-2012-021	4.80	LES	Terry Bundy Generating Station 115kV
GEN-2013-002	50.60	LES	Tap Sheldon - Folsom & Pleasant Hill (GEN-2013-002 Tap) 115kV CKT 2
GEN-2013-008	1.20	NPPD	Steele City 115kV
GEN-2013-019	73.60	LES	Tap Sheldon - Folsom & Pleasant Hill (GEN-2013-002 Tap) 115kV CKT 2
GEN-2013-032	204.00	NPPD	Antelope 115kV
GEN-2014-004	4.00	NPPD	Steele City 115kV (GEN-2011-018 POI)
GEN-2014-013	73.50	NPPD	Meadow Grove (GEN-2008-086N2 Sub) 230kV
GEN-2014-031	35.80	NPPD	Meadow Grove 230kV
GEN-2014-032	10.20	NPPD	Meadow Grove 230kV
GEN-2014-039	73.40	NPPD	Friend 115kV
GEN-2015-007	160.00	NPPD	Hoskins 345kV
GEN-2015-023	300.70	NPPD	Holt County 345kV
GEN-2015-053	50.00	NPPD	Antelope 115kV
GEN-2015-076	158.40	NPPD	Belden 115kV
GEN-2015-087	66.00	NPPD	Tap Fairbury - Hebron 115kV
GEN-2015-088	300.00	NPPD	Tap Moore - Pauline 345kV
NPPD Distributed (Broken Bow)	8.30	NPPD	Broken Bow 115kV
NPPD Distributed (Buffalo County Solar)	10.00	NPPD	Kearney Northeast
NPPD Distributed (Burt County Wind)	12.00	NPPD	Tekamah & Oakland 115kV
NPPD Distributed (Burwell)	3.00	NPPD	Ord 115kV
NPPD Distributed (Columbus Hydro)	45.00	NPPD	Columbus 115kV
NPPD Distributed (North Platte - Lexington)	54.00	NPPD	Multiple: Jeffrey 115kV, John_1 115kV, John_2 115kV
NPPD Distributed (Ord)	11.90	NPPD	Ord 115kV
NPPD Distributed (Stuart)	2.10	NPPD	Ainsworth 115kV
PRIOR QUEUED SUBTOTAL	**3,502.10**		
GEN-2015-089	200.00	WAPA	Utica 230kV
GEN-2016-021	300.00	NPPD	Hoskins 345kV
GEN-2016-023	150.50	WAPA	Tap Laramie River – Sidney 345kV
GEN-2016-029	150.00	WAPA	Tap Laramie River – Sidney 345kV
GEN-2016-034	90.00	WAPA	Tap Laramie River – Sidney 345kV
GEN-2016-043	230.00	NPPD	Hoskins 345kV
GEN-2016-050	250.70	NPPD	Tap Axtell - Post Rock 345kV
GEN-2016-055	126.50	NPPD	Tap Pauline - Hildreth 115kV
GEN-2016-064	116.00	NPPD	Tap Pauline - Guide Rock (Rosemont) 115kV
GEN-2016-075	50.00	WAPA	Grand Prairie 345kV
CURRENT CLUSTER SUBTOTAL	**1,663.70**		
AREA TOTAL	**5,165.80**		

GROUP 10: SOUTHEAST OKLAHOMA/NORTHEAST TEXAS AREA

Request	Capacity	Area	Proposed Point of Interconnection
AREA TOTAL	**0.00**		

GROUP 12: NORTHWEST ARKANSAS AREA

Request	Capacity	Area	Proposed Point of Interconnection
GEN-2013-011	30.00	AEPW	Turk 138kV
PRIOR QUEUED SUBTOTAL	**30.00**		
GEN-2016-013	10.00	EMDE	La Russell 161kV
GEN-2016-014	10.00	EMDE	La Russell 161kV
CURRENT CLUSTER SUBTOTAL	**20.00**		
AREA TOTAL	**50.00**		

GROUP 13: NORTHWEST MISSOURI AREA

Request	Capacity	Area	Proposed Point of Interconnection
GEN-2008-129	80.00	KCPL	Pleasant Hill 161kV
GEN-2010-036	4.60	WERE	6th Street 115kV
GEN-2011-011	50.00	KCPL	Iatan 345kV
GEN-2014-021	300.00	KCPL	Tap Nebraska City - Mullin Creek 345kV
GEN-2015-005	200.10	KCPL	Tap Nebraska City - Sibley 345kV
PRIOR QUEUED SUBTOTAL	**634.70**		
ASGI-2016-003	6.00	KCPL	Paola 161kV
GEN-2016-040	18.40	KCPL	Tap Nebraska City – Sibley 345kV
CURRENT CLUSTER SUBTOTAL	**24.40**		
AREA TOTAL	**659.10**		

GROUP 14: SOUTH CENTRAL OKLAHOMA AREA

Request	Capacity	Area	Proposed Point of Interconnection
ASGI-2015-006	9.00	SWPA	Tupelo 138kV
GEN-2011-040	111.00	OKGE	Carter County 138kV
GEN-2011-050	109.80	AEPW	Santa Fe Tap 138kV
GEN-2012-004	41.40	OKGE	Carter County 138kV
GEN-2013-007	100.30	OKGE	Tap Prices Falls - Carter 138kV
GEN-2014-057	250.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV
GEN-2015-045	20.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV
GEN-2015-092	250.00	AEPW	Tap Lawton - Sunnyside (Terry Road) 345kV
PRIOR QUEUED SUBTOTAL	**891.50**		
GEN-2015-036	303.60	OKGE	Johnston County 345kV
GEN-2016-028	100.00	AEPW	Clayton 138kV
GEN-2016-030	100.00	OKGE	Brown 138kV
GEN-2016-042	22.00	AEPW	Tap Lawton - Sunnyside 345kV
GEN-2016-063	200.00	OKGE	Tap Sunnyside – Hugo 345kV
CURRENT CLUSTER SUBTOTAL	**725.60**		
AREA TOTAL	**1,617.10**		

GROUP 15: E-SOUTH DAKOTA AREA			
Request	**Capacity**	**Area**	**Proposed Point of Interconnection**
ASGI-2016-005	20.00	WAPA	Tap White Lake - Stickeny 69kV
ASGI-2016-006	20.00	WAPA	Mitchall
ASGI-2016-007	20.00	WAPA	Kimball 69kV
G176	100.00	XEL	Yankee 115kV
G255	100.00	XEL	Yankee 115kV
G586	30.00	XEL	Yankee 115kV
G736	200.00	OTP	Big Stone South 230kV
GEN-2002-009IS	40.00	WAPA	Ft Thompson 69kV [Hyde 69kV]
GEN-2007-013IS	50.00	WAPA	Wessington Springs 230kV
GEN-2007-014IS	100.00	WAPA	Wessington Springs 230kV
GEN-2007-023IS	50.00	WAPA	Formit-Summit 115kV
GEN-2009-001IS	200.00	WAPA	Groton-Watertown 345kV
GEN-2009-018IS	100.00	WAPA	Groton 115kV
GEN-2010-001IS	99.00	WAPA	Bismarck-Glenham 230kV
GEN-2010-003IS	34.00	WAPA	Wessington Springs 230kV
GEN-2012-014IS	99.50	WAPA	Groton 115kV
GEN-2013-001IS	90.00	WAPA	Summit-Watertown 115kV
GEN-2013-009IS	19.50	WAPA	Redfield NW 115kV
GEN-2014-001IS	103.70	WAPA	Newell-Maurine 115kV
GEN-2015-097	100.00	WAPA	Groton 115kV
J436	150.00	OTP	Big Stone South 345kV
J437	150.00	OTP	Big Stone South 345kV
J442	200.00	OTP	Big Stone 230 kV
PRIOR QUEUED SUBTOTAL	**2,075.70**		
GEN-2016-017	250.70	WAPA	Tap Fort Thompson - Leland Olds 345kV
CURRENT CLUSTER SUBTOTAL	**250.70**		
AREA TOTAL	**2,326.40**		

GROUP 16: W-NORTH DAKOTA AREA			
Request	**Capacity**	**Area**	**Proposed Point of Interconnection**
G359	150.00	MDU	MDU 230 kV system near Ellendale
G380	150.00	OTP	Rugby 115kV
G408	12.00	XEL	Tap McHenry - Souris 115kV
G502	50.60	MP	Milton Young 230kV
G645	50.00	GRE	Ladish 115kV
G723	10.00	MDU	Haskett 115kV
G752	150.00	MDU	Tap Bison - Hettinger 230kV
G788	49.00	GRE	Ladish 115kV
G830	99.00	GRE	GRE McHenry 115kV
GEN-2005-008IS	50.00	WAPA	Hilken 230kV [Ecklund 230kV]
GEN-2006-015IS	50.00	WAPA	Hilken 230kV [Ecklund 230kV]
GEN-2007-015IS	100.00	WAPA	Hilken 230kV [Ecklund 230kV]
GEN-2007-027IS	99.00	WAPA	Bismarck-Garrison 230kV #1
GEN-2009-026IS	110.00	WAPA	Dickenson-Heskett 230kV
GEN-2010-007IS	172.50	WAPA	Antelope Valley 345kV
GEN-2012-006IS	125.01	WAPA	Williston-Ch. Creek 230kV
GEN-2012-012IS	75.00	WAPA	Wolf Point-Circle 115kV
GEN-2014-003IS	91.00	WAPA	Culbertson 115kV
GEN-2014-004IS	384.20	WAPA	Charlie Creek 345kV
GEN-2014-006IS	125.00	WAPA	Williston 115kV
GEN-2014-010IS	150.00	WAPA	Neset 115kV
GEN-2014-014IS	151.50	WAPA	Belfield-Rhame 230kV
GEN-2015-046	300.00	WAPA	Tande 345kV
GEN-2015-091	101.20	WAPA	Daglum 230kV
GEN-2015-096	150.00	WAPA	Tap Belfied - Rhame 230kV
GEN-2015-098	100.00	WAPA	Mingusville 230kV
J003	20.00	MDU	Baker 115kV
J249	180.00	MDU	MDU Tatanka 230kV
J262	100.00	OTP	Jamestown 345
J263	100.00	OTP	Jamestown 345
J290	150.00	XEL	Tap Glenboro South - Rugby 230kV
J316	150.00	MDU	MDU 230 kV Tatanka-Ellendale line
MPC01200	98.90	OTP	Maple River 230kV
MPC02100	100.00	OTP	Tap Center - Mandan 230kV
PRIOR QUEUED SUBTOTAL	**3,953.91**		
GEN-2016-004	202.00	WAPA	Leland Olds 230kV
GEN-2016-044	400.00	WAPA	Tap Groton - Leland Olds 345kV
GEN-2016-052	3.30	WAPA	Hilken 230kV
GEN-2016-053	3.30	WAPA	Hilken 230kV
GEN-2016-065	6.80	WAPA	Tap Belfield - Rhame (Daglum) 230kV
GEN-2016-066	13.00	WAPA	Tap Belfield - Rhame (Daglum) 230kV
CURRENT CLUSTER SUBTOTAL	**628.40**		
AREA TOTAL	**4,582.31**		

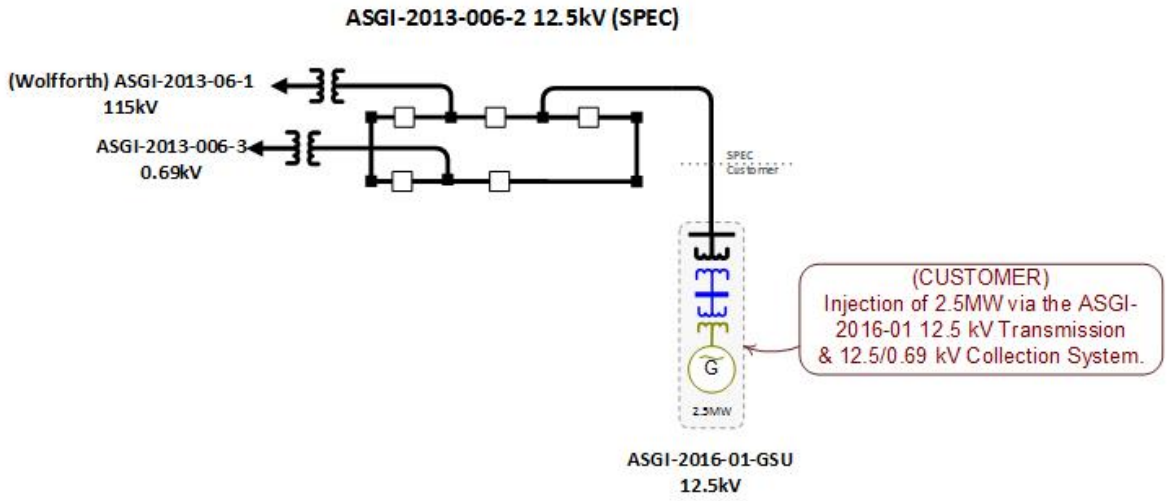
GROUP 17: W-SOUTH DAKOTA AREA			
Request	**Capacity**	**Area**	**Proposed Point of Interconnection**
GEN-2006-002IS	51.00	WAPA	Wessington Springs 230kV
GEN-2009-006IS	90.00	WAPA	Mission 115kV
GEN-2009-007IS	100.00	WAPA	Mission 115kV
GEN-2009-020AIS	130.50	WAPA	Tripp Junction 115kV
GEN-2012-009IS	99.00	WAPA	Fort Randall 115kV
PRIOR QUEUED SUBTOTAL	**470.50**		
GEN-2016-054	3.40	WAPA	Wessington Springs 230kV
CURRENT CLUSTER SUBTOTAL	**3.40**		
AREA TOTAL	**0.00**		

GROUP 18: E-NORTH DAKOTA AREA			
Request	**Capacity**	**Area**	**Proposed Point of Interconnection**
GEN-2002-008IS	40.50	WAPA	Edgeley 115kV [Pomona 115kV]
GEN-2005-003IS	100.00	WAPA	Nelson 115kV
GEN-2007-020IS	16.00	WAPA	Nelson 115kV
GEN-2008-008IS	5.00	WAPA	Nelson 115kV
PRIOR QUEUED SUBTOTAL	**161.50**		
GEN-2016-007	100.00	WAPA	Valley City 115kV
CURRENT CLUSTER SUBTOTAL	**100.00**		
AREA TOTAL	**0.00**		

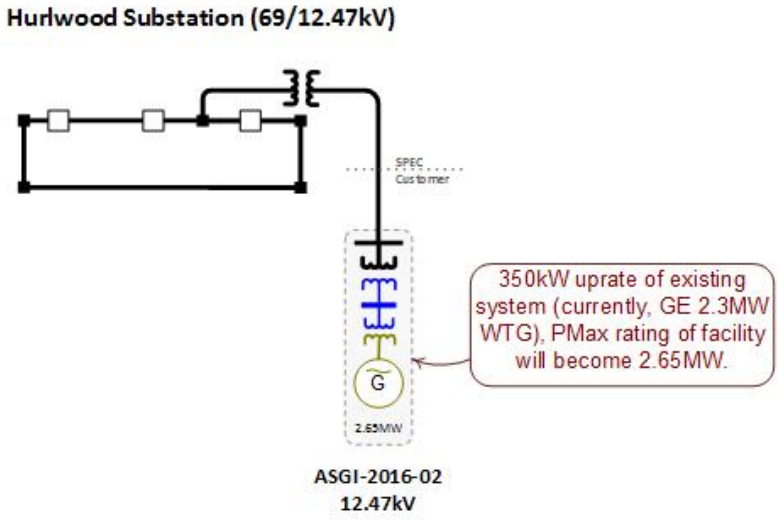
CLUSTER TOTAL (CURRENT STUDY)	**11,129.3**	**MW**
PQ TOTAL (PRIOR QUEUED)	**41,938.7**	**MW**
	53,068.0	**MW**

11.4 D: PROPOSED POINT OF INTERCONNECTION ONE-LINE DIAGRAMS

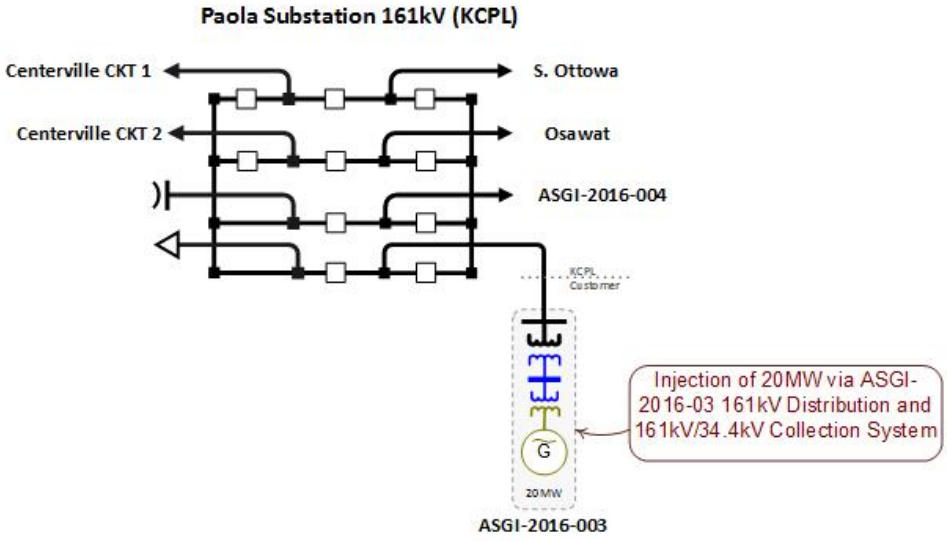
Interconnection Request: ASGI-2016-001
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



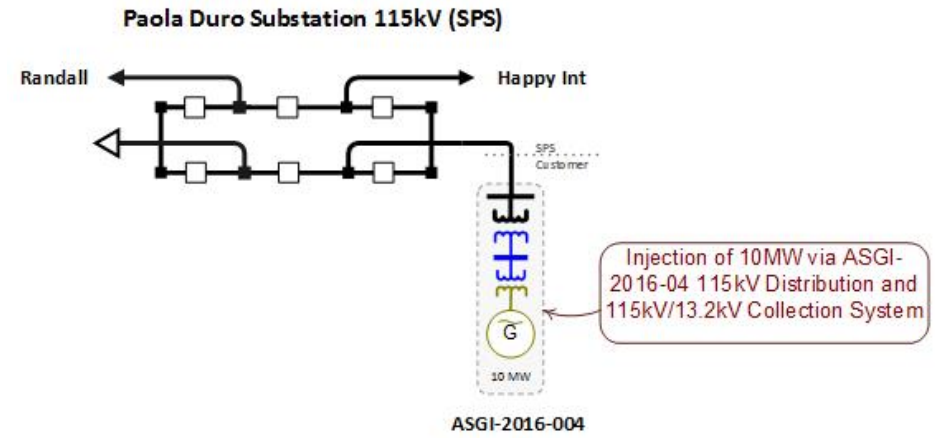
Interconnection Request: ASGI-2016-002
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



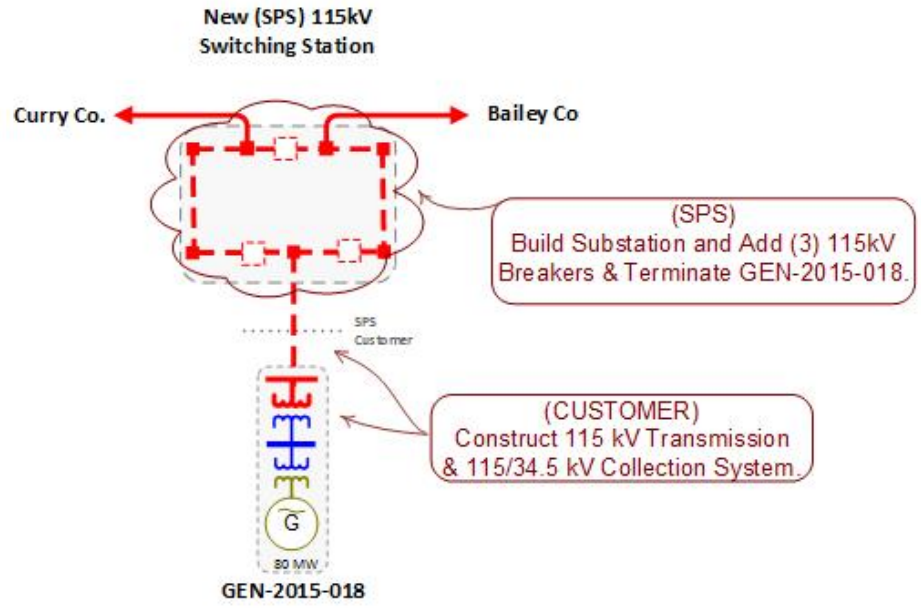
Interconnection Request: ASGI-2016-003
Cluster Interconnection Costs: $10,000
Stand Alone Interconnection Costs: $10,000



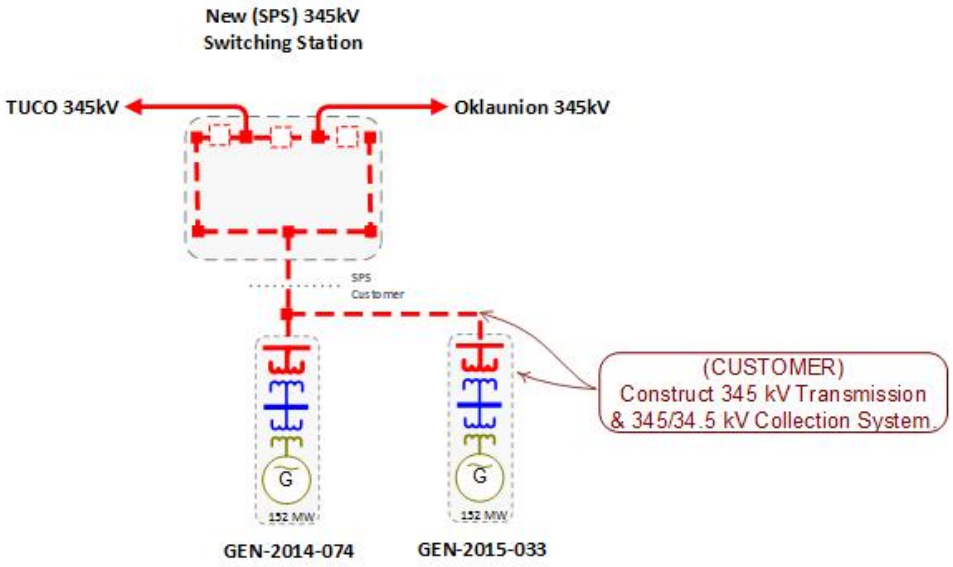
Interconnection Request: ASGI-2016-004
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



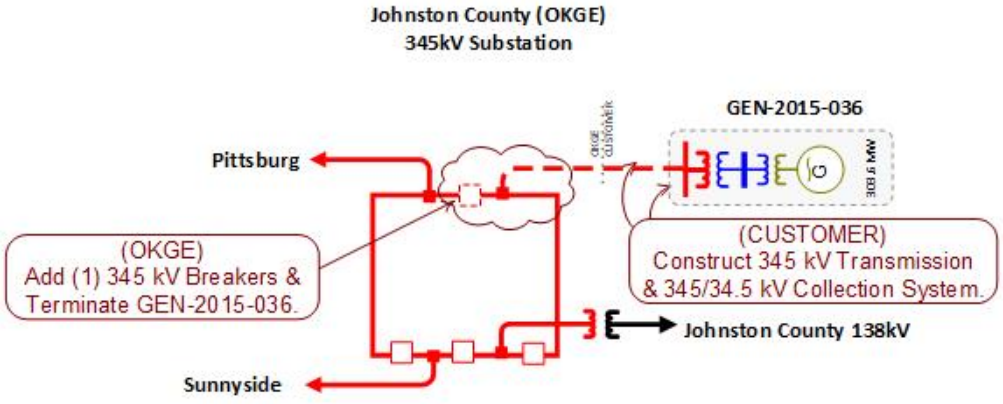
Interconnection Request: GEN-2015-018
Cluster Interconnection Costs: $5,148,927
Stand Alone Interconnection Costs: $5,148,927



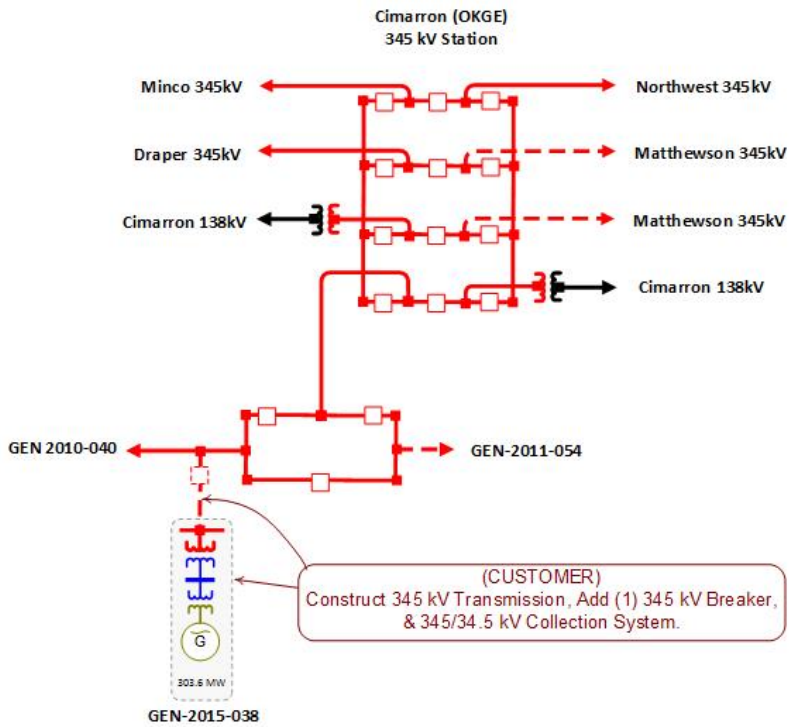
Interconnection Request: GEN-2015-033
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs:$0



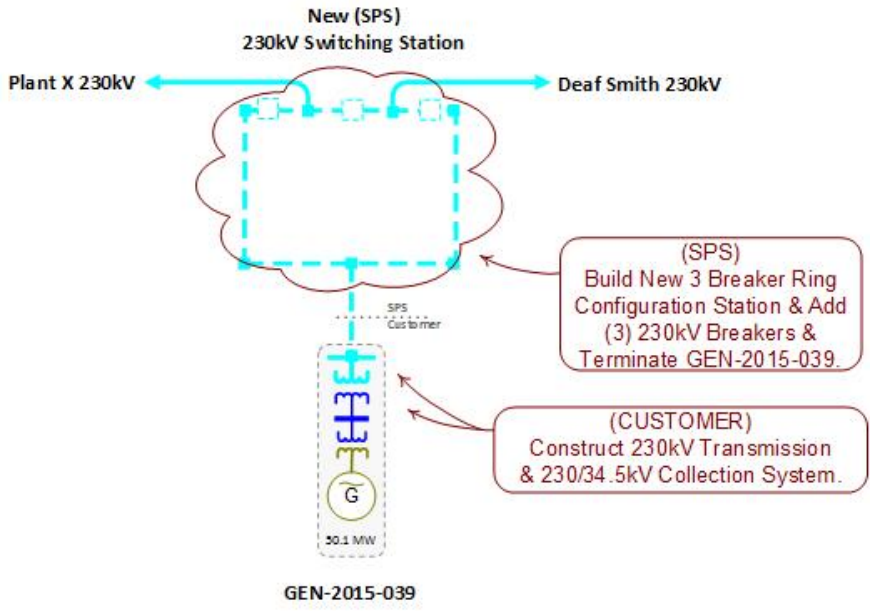
Interconnection Request: GEN-2015-036
Cluster Interconnection Costs: $2,025,000
Stand Alone Interconnection Costs: $2,025,000



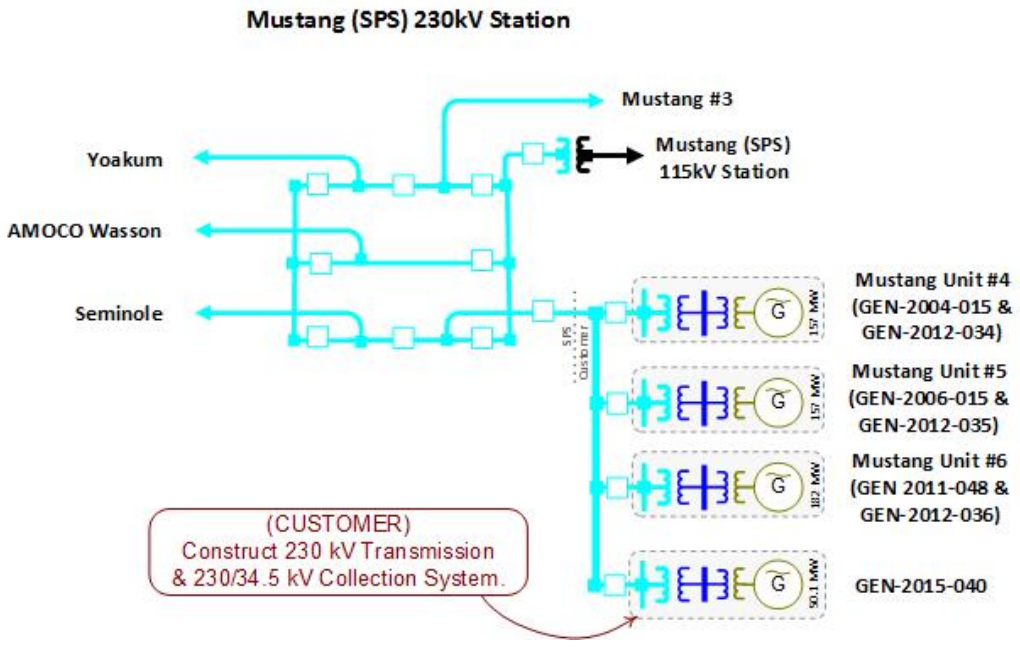
Interconnection Request: GEN-2015-038
Cluster Interconnection Costs: $20,000
Stand Alone Interconnection Costs: $20,000



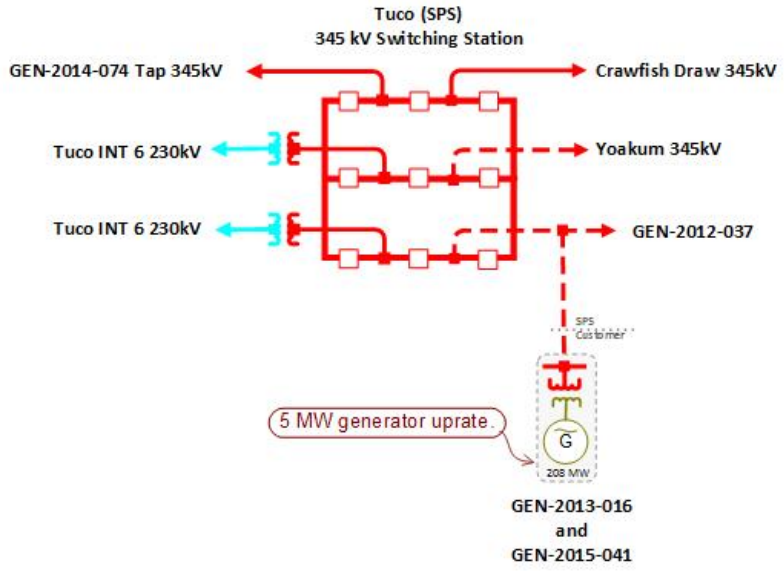
Interconnection Request: GEN-2015-039
Cluster Interconnection Costs: $9,114,879
Stand Alone Interconnection Costs: $9,114,879



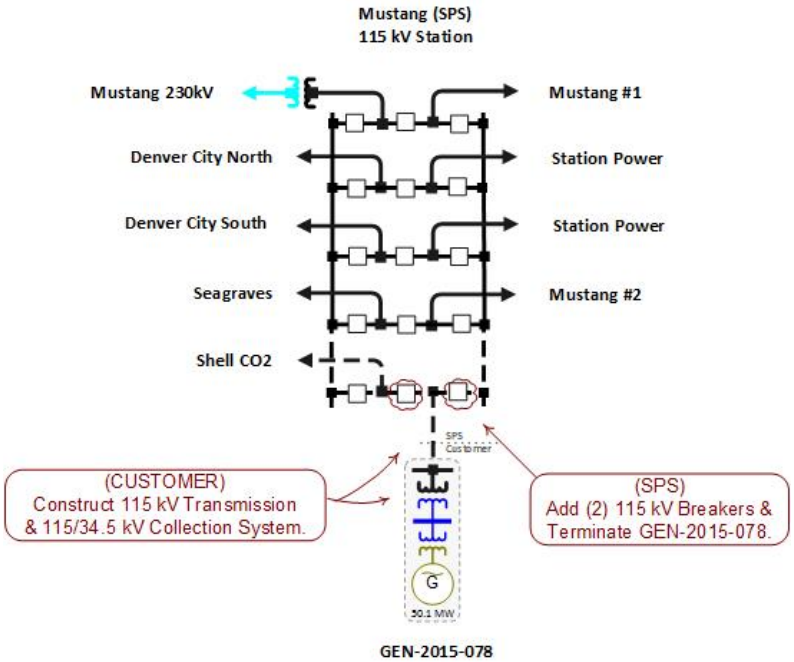
Interconnection Request: GEN-2015-040
Cluster Interconnection Costs: $1,112, 116
Stand Alone Interconnection Costs: $1,112, 116



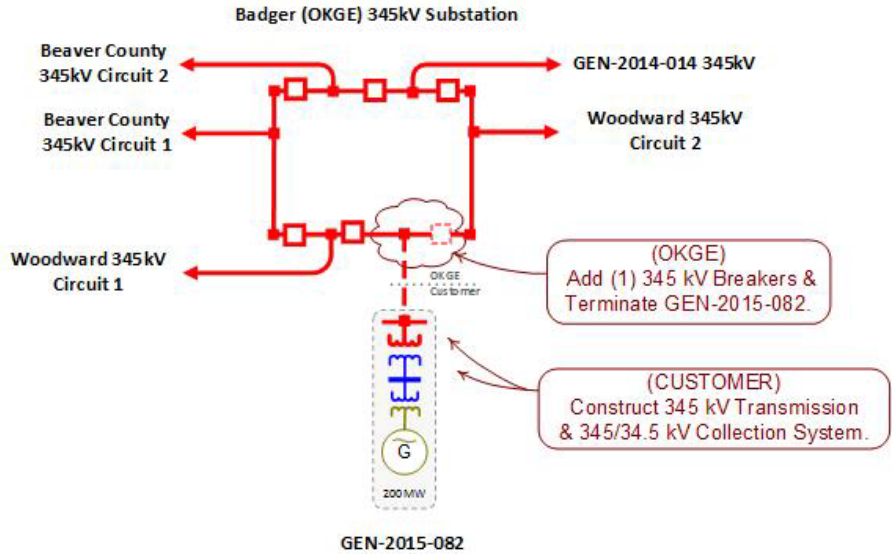
Interconnection Request: GEN-2015-041
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



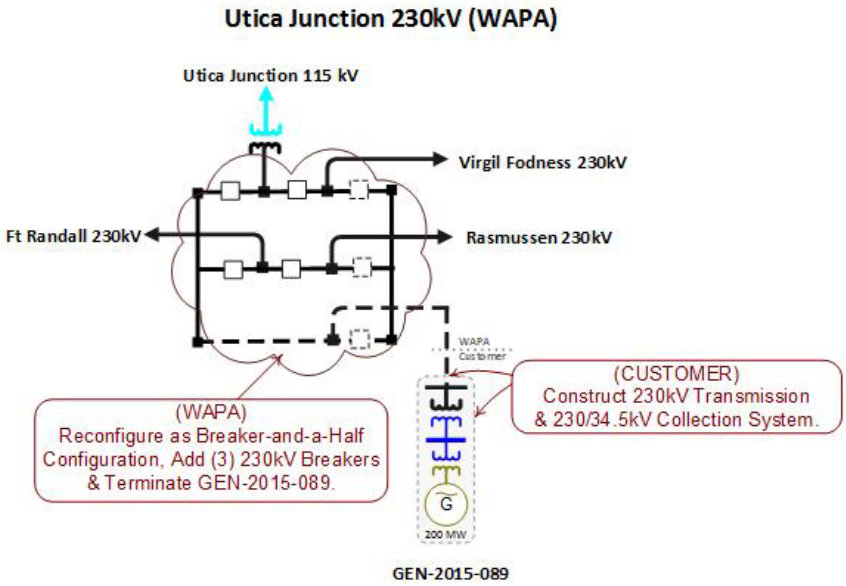
Interconnection Request: GEN-2015-078
Cluster Interconnection Costs: $3,107,988
Stand Alone Interconnection Costs: $3,107,988



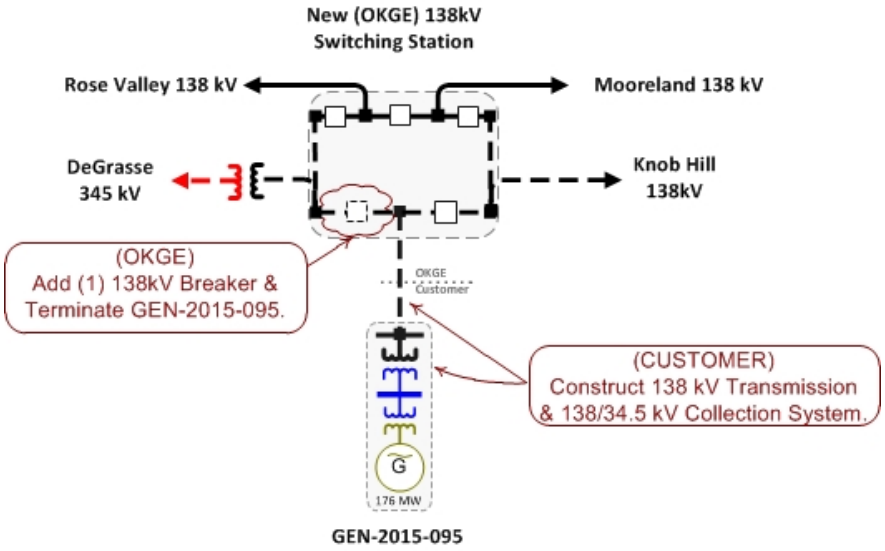
Interconnection Request: GEN-2015-082
Cluster Interconnection Costs: $1,930,000
Stand Alone Interconnection Costs: $1,930,000



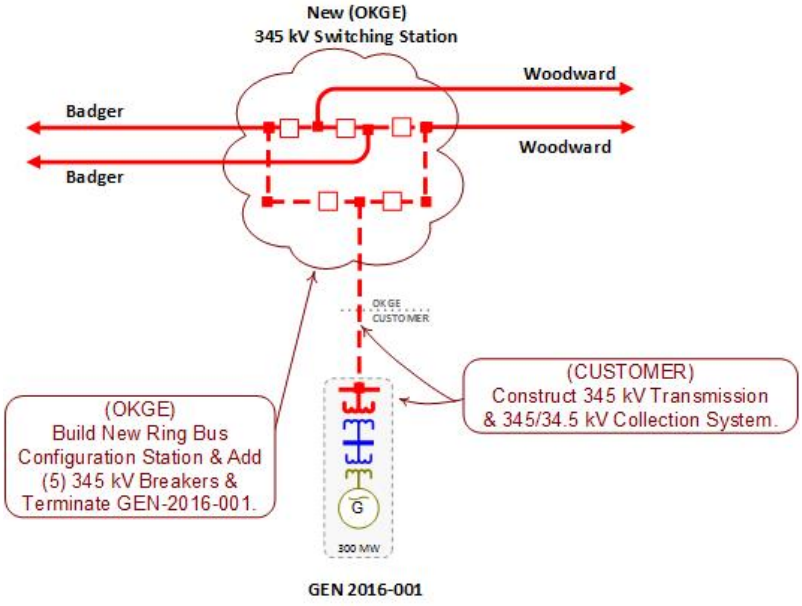
Interconnection Request: GEN-2015-089
Cluster Interconnection Costs: $2,000,000
Stand Alone Interconnection Costs: $2,000,000



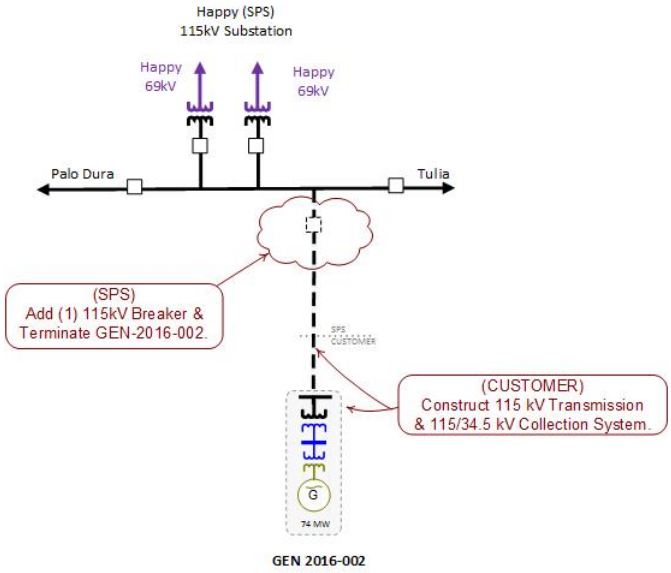
Interconnection Request: GEN-2015-095
Cluster Interconnection Costs: $942,900
Stand Alone Interconnection Costs: $942,900



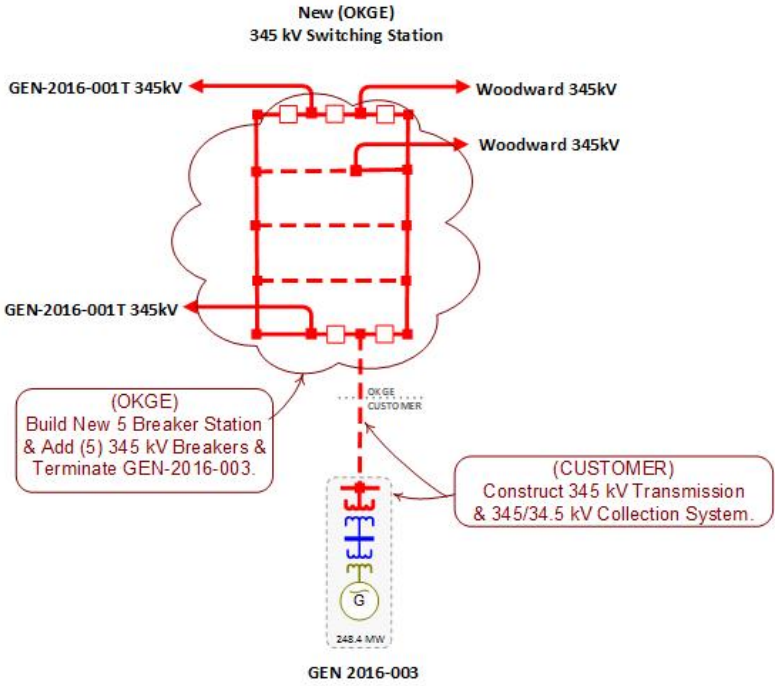
Interconnection Request: GEN-2016-001
Cluster Interconnection Costs: $15,975,000
Stand Alone Interconnection Costs: $15,975,000



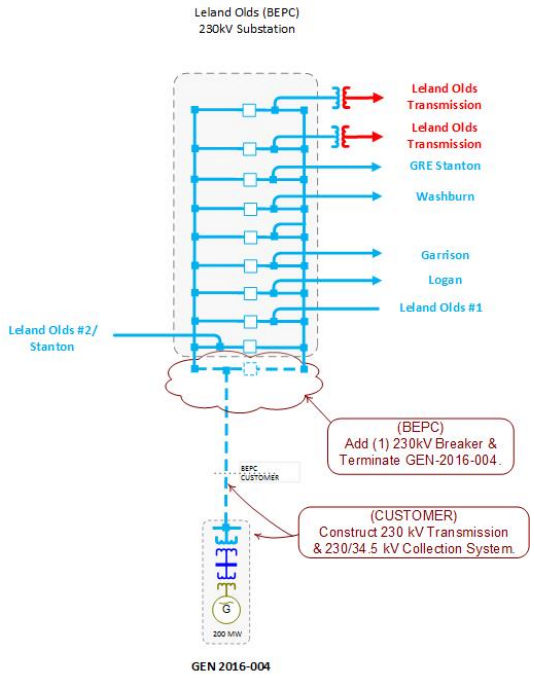
Interconnection Request: GEN-2016-002
Cluster Interconnection Costs: $7,557,984
Stand Alone Interconnection Costs: $7,557,984



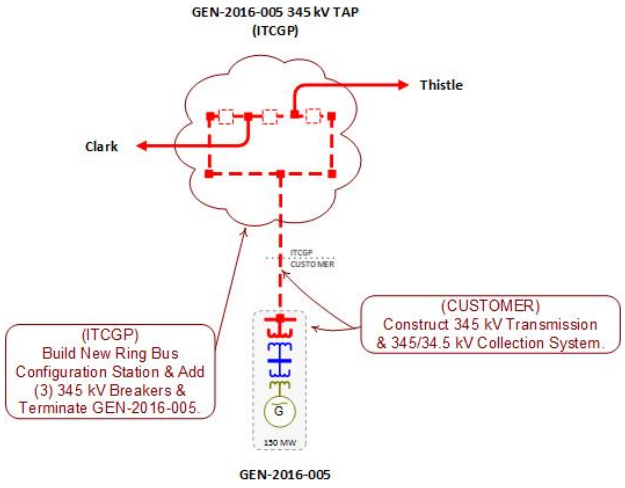
Interconnection Request: GEN-2016-003
Cluster Interconnection Costs: $15,925,000
Stand Alone Interconnection Costs: $15,925,000



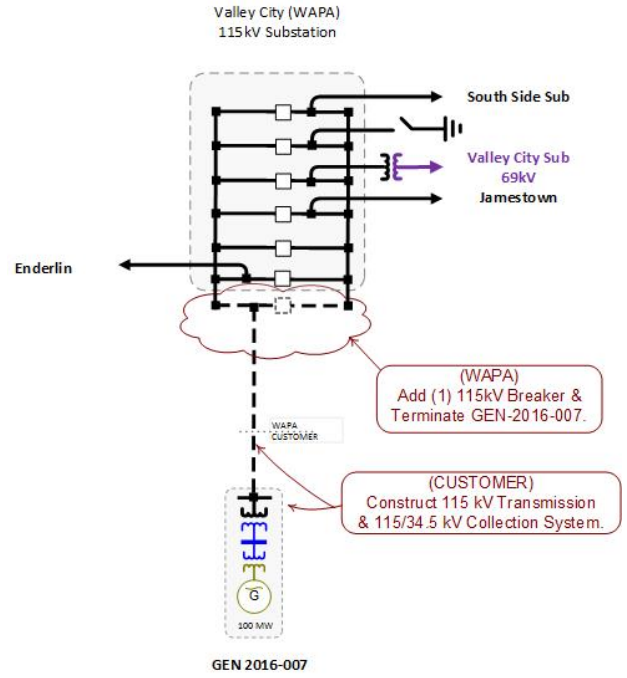
Interconnection Request: GEN-2016-004
Cluster Interconnection Costs: $2,871,212
Stand Alone Interconnection Costs: $2,871,212



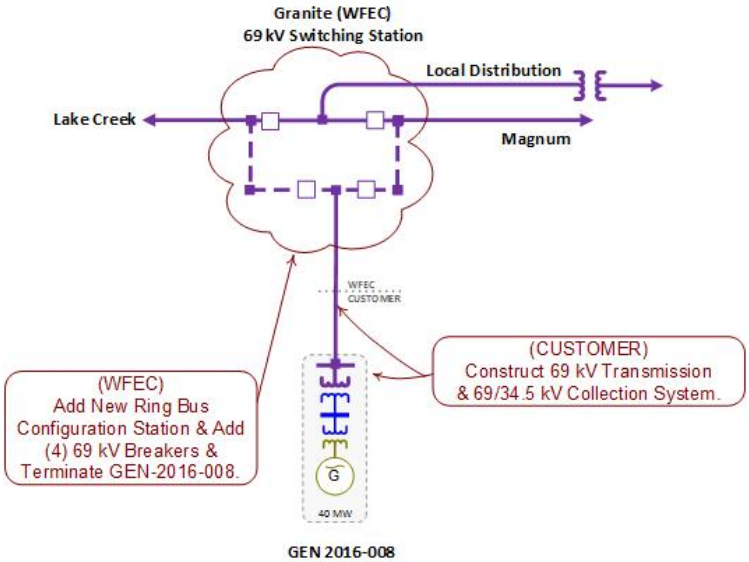
Interconnection Request: GEN-2016-005
Cluster Interconnection Costs: $8,614,897
Stand Alone Interconnection Costs: $8,614,897



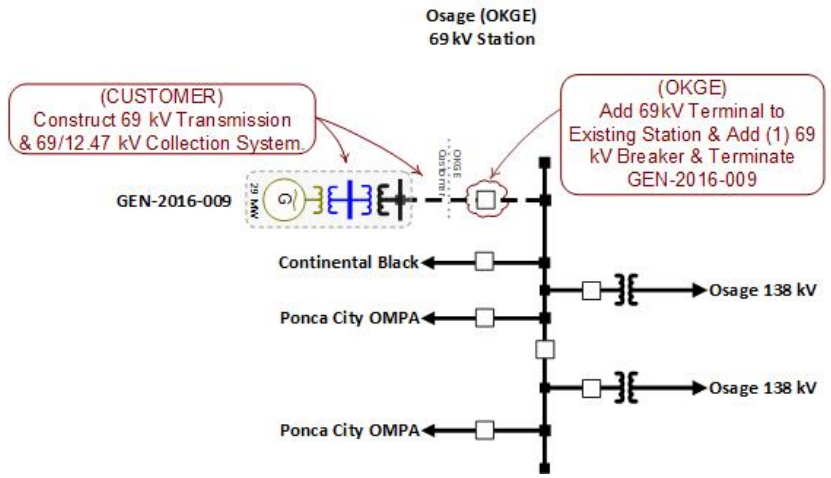
Interconnection Request: GEN-2016-007
Cluster Interconnection Costs: $1,100,000
Stand Alone Interconnection Costs: $1,100,000



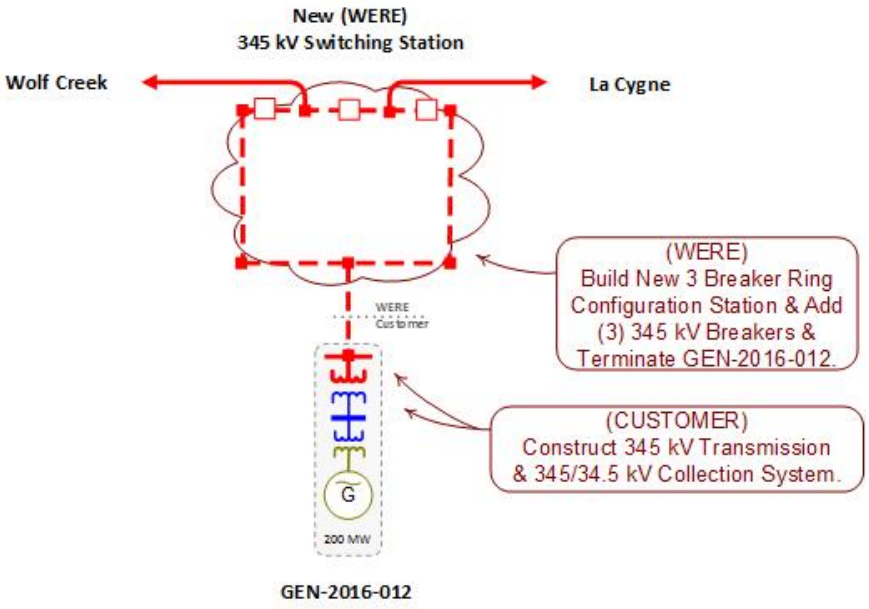
Interconnection Request: GEN-2016-008
Cluster Interconnection Costs: $4,850,000
Stand Alone Interconnection Costs: $4,850,000



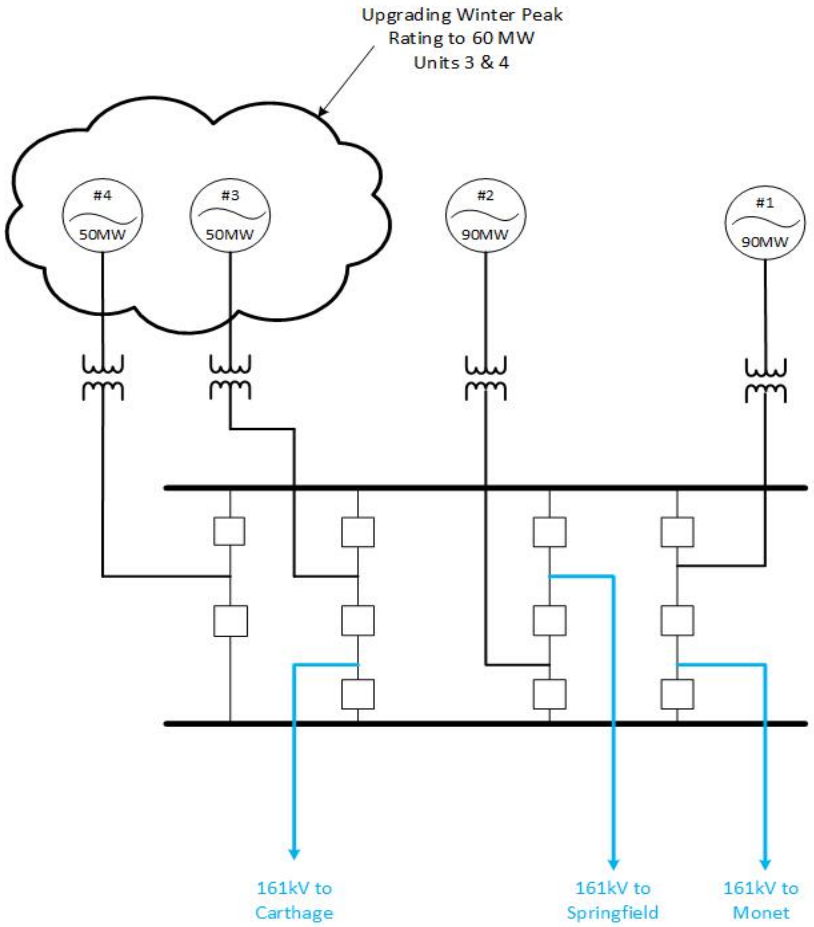
Interconnection Request: GEN-2016-009
Cluster Interconnection Costs: $956,218
Stand Alone Interconnection Costs: $956,218



Interconnection Request: GEN-2016-012
Cluster Interconnection Costs: $11,823,344
Stand Alone Interconnection Costs: $11,823,344

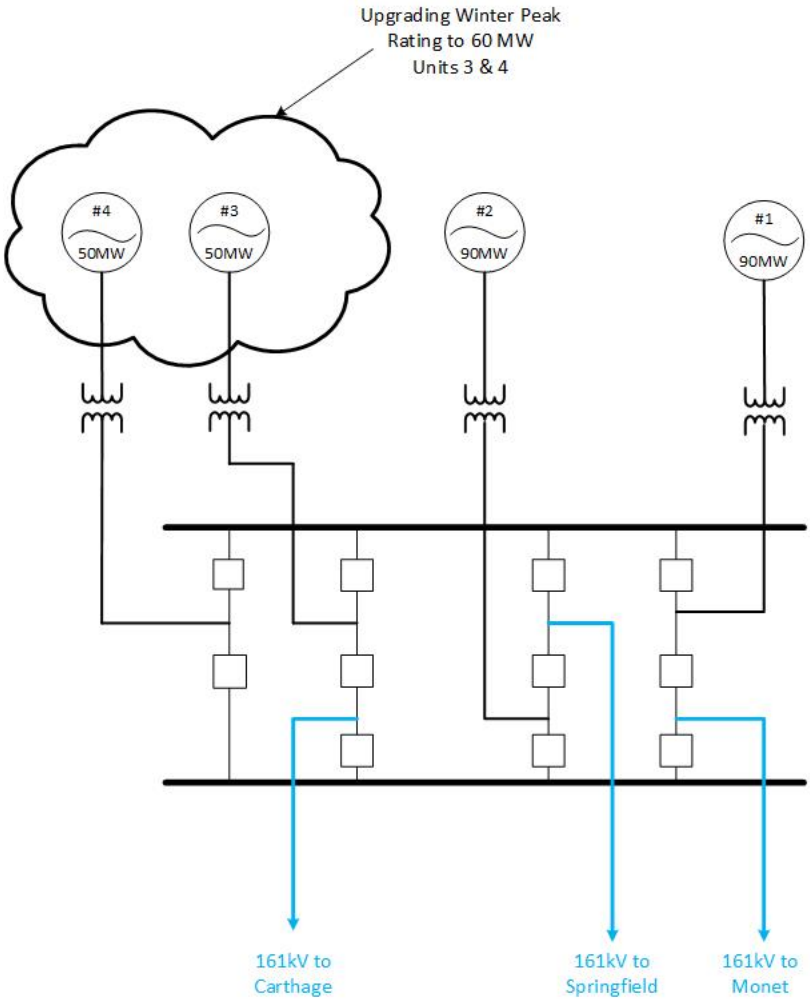


Interconnection Request: GEN-2016-013
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



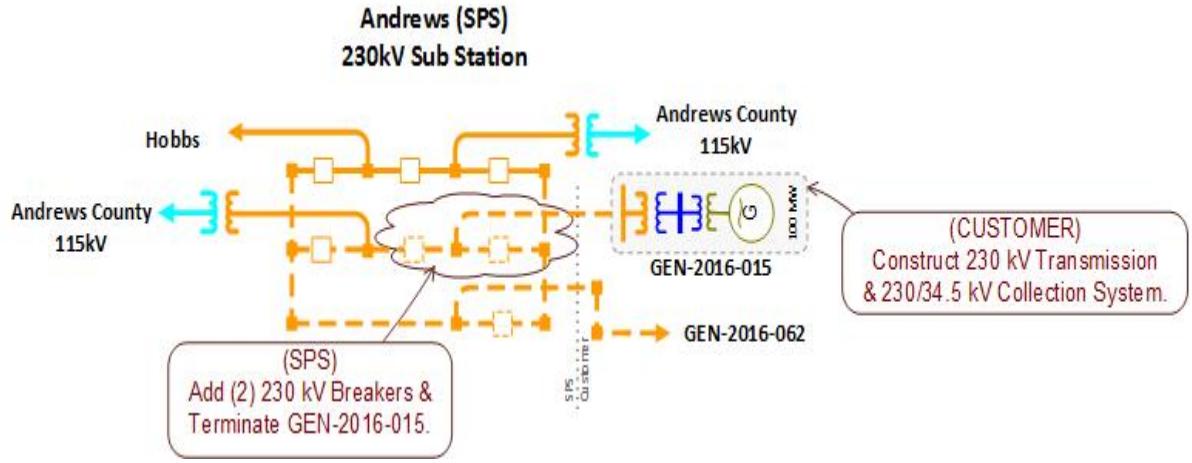
GEN_2016-013
LaRussel Energy Center

Interconnection Request: GEN-2016-014
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0

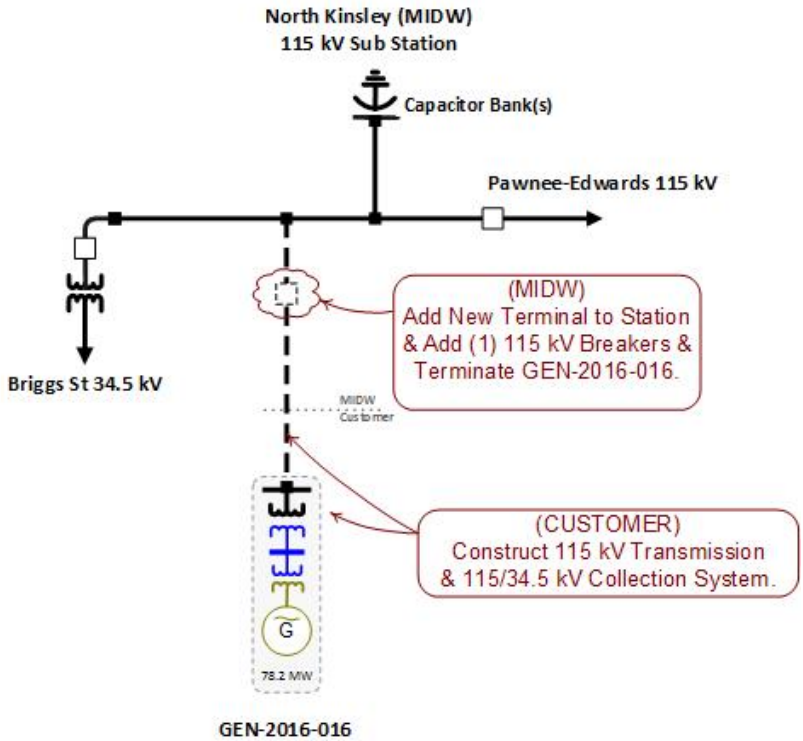


GEN_2016-013
LaRussel Energy Center

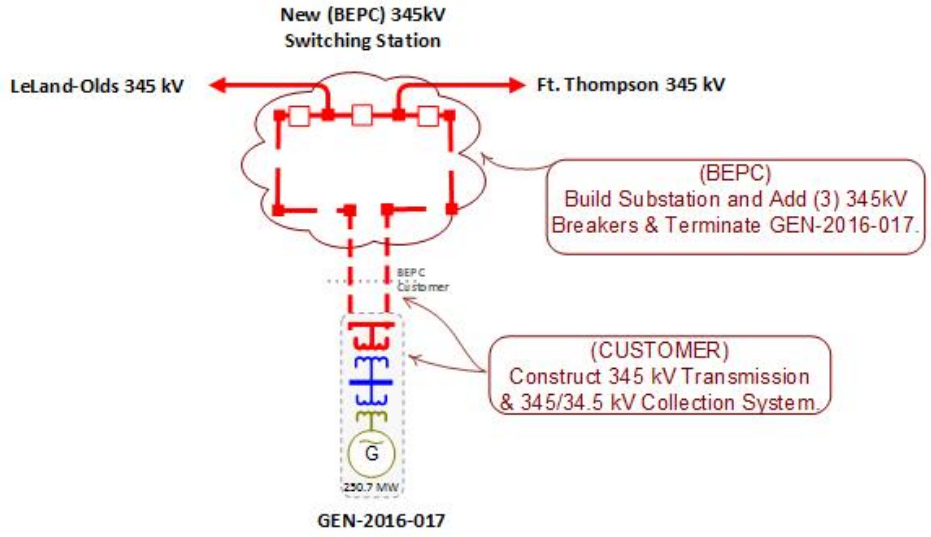
Interconnection Request: GEN-2016-015
Cluster Interconnection Costs: $6,454,408
Stand Alone Interconnection Costs: $6,454,408



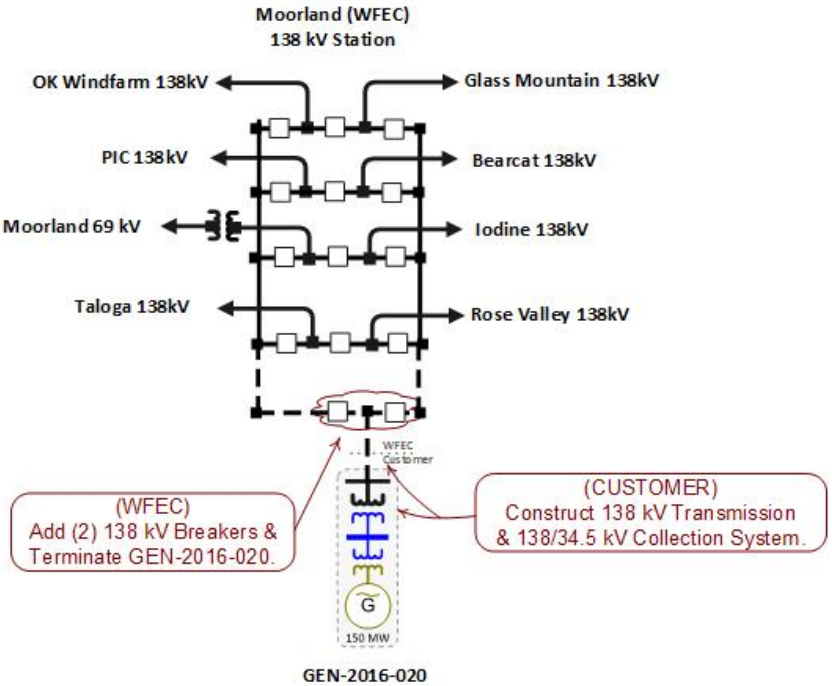
Interconnection Request: GEN-2016-016
Cluster Interconnection Costs: $4,000,000
Stand Alone Interconnection Costs: $4,000,000



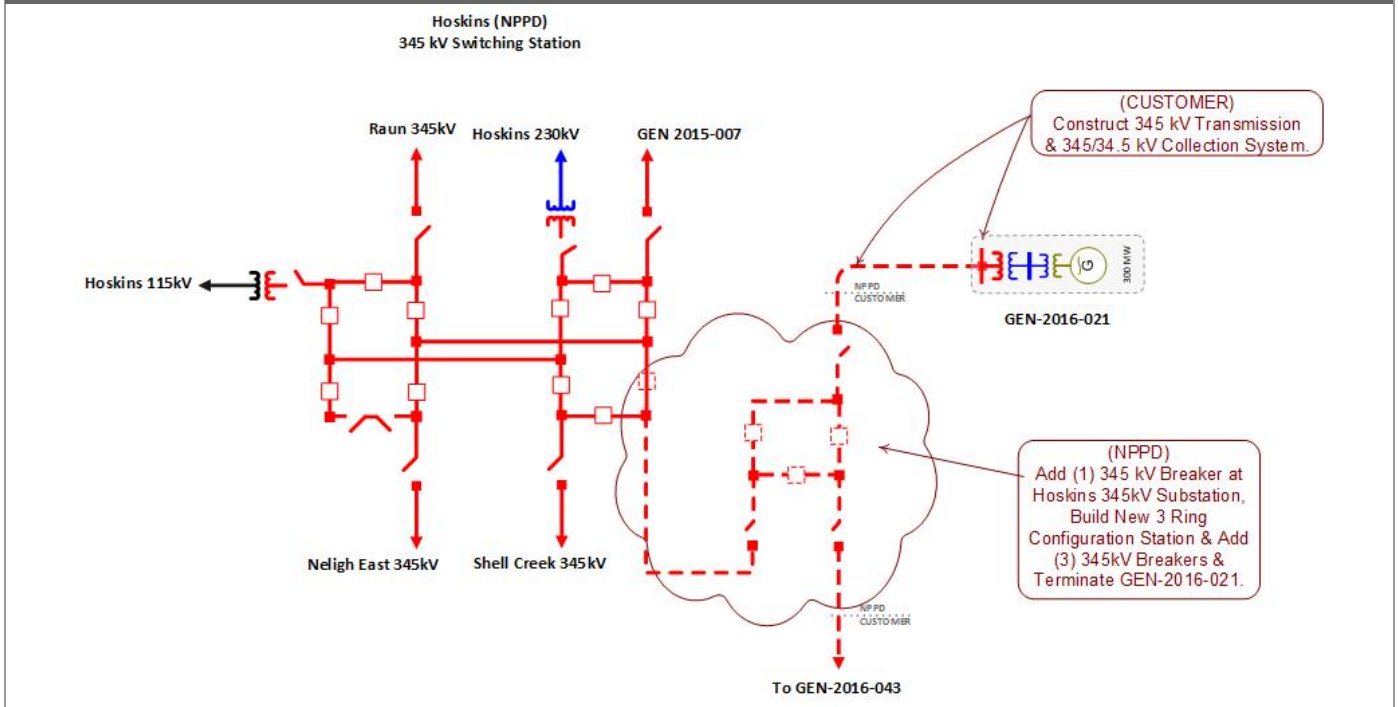
Interconnection Request: GEN-2016-017
Cluster Interconnection Costs: $19,264,793
Stand Alone Interconnection Costs: $19,264,793



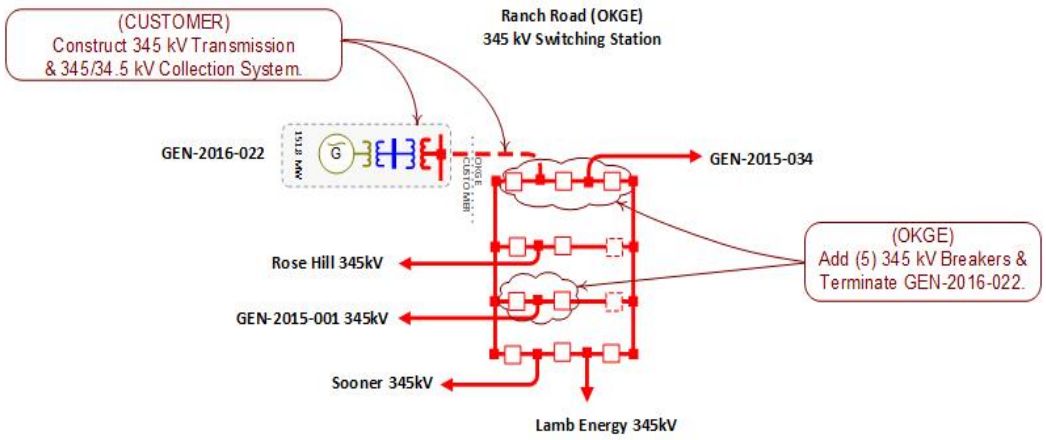
Interconnection Request: GEN-2016-020
Cluster Interconnection Costs: $2,000,000
Stand Alone Interconnection Costs: $2,000,000



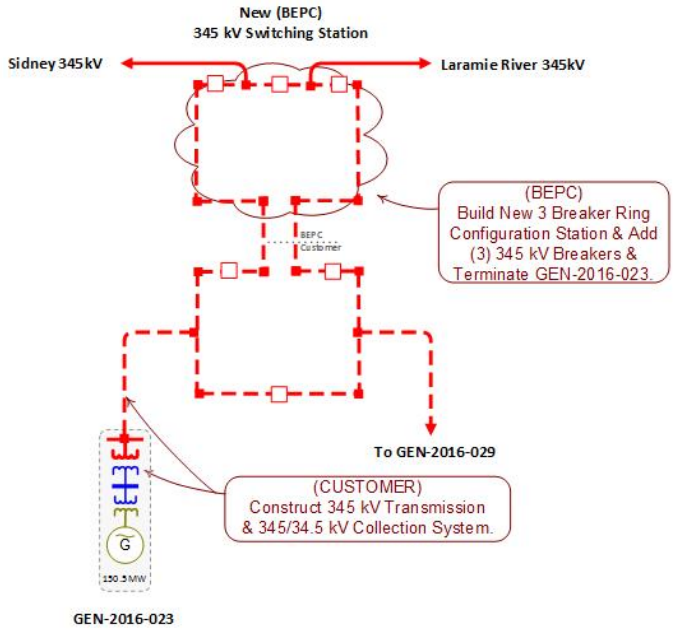
Interconnection Request: GEN-2016-021
Cluster Interconnection Costs: $1,000,000
Stand Alone Interconnection Costs: $2,000,000



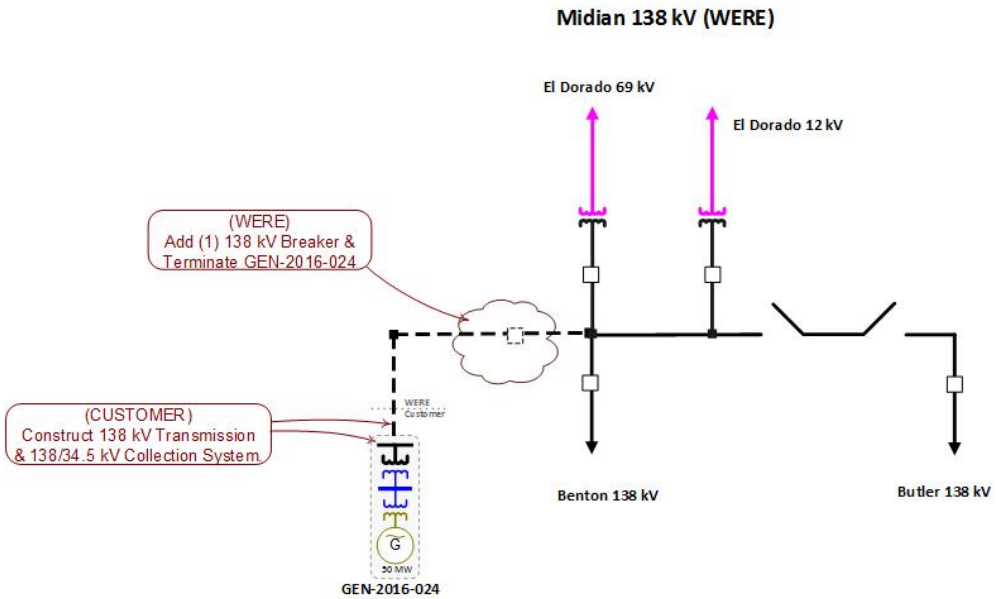
Interconnection Request: GEN-2016-022
Cluster Interconnection Costs: $4,450,650
Stand Alone Interconnection Costs: $4,450,650



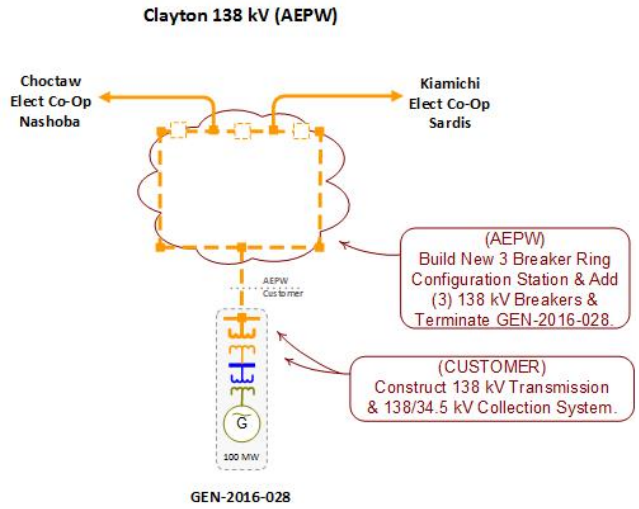
Interconnection Request: GEN-2016-023
Cluster Interconnection Costs: $9,632,397
Stand Alone Interconnection Costs: $19,264,793



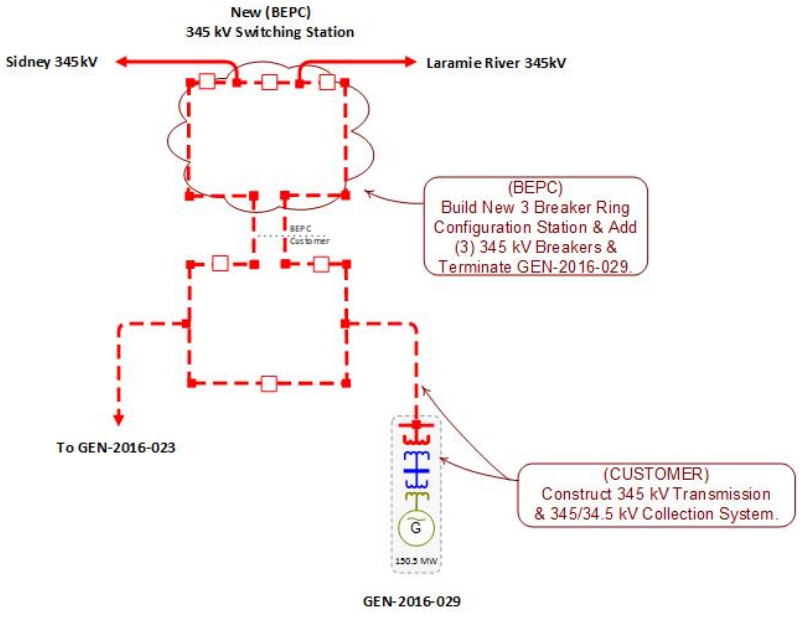
Interconnection Request: GEN-2016-024
Cluster Interconnection Costs: $1,784,502
Stand Alone Interconnection Costs: $1,784,502



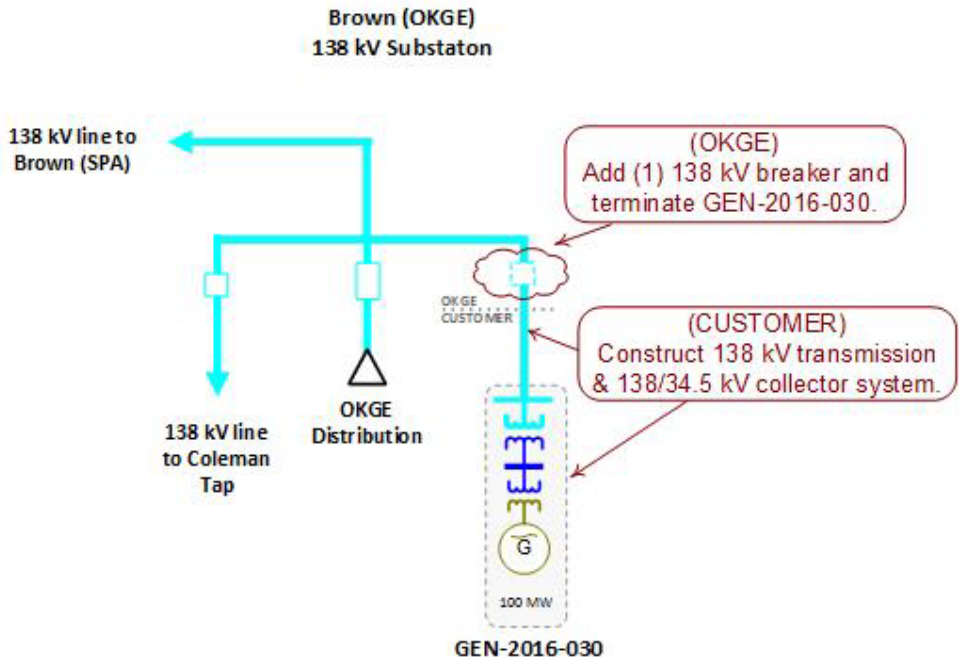
Interconnection Request: GEN-2016-028
Cluster Interconnection Costs: $4,000,000
Stand Alone Interconnection Costs: $4,000,000



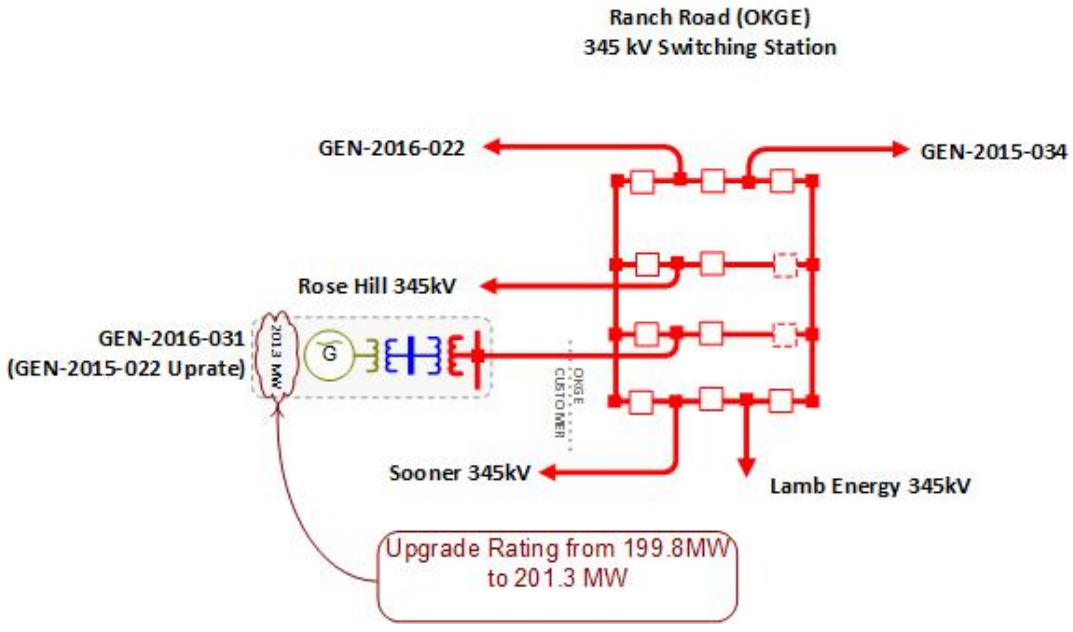
Interconnection Request: GEN-2016-029
Cluster Interconnection Costs: $9,632,397
Stand Alone Interconnection Costs: $19,264,793



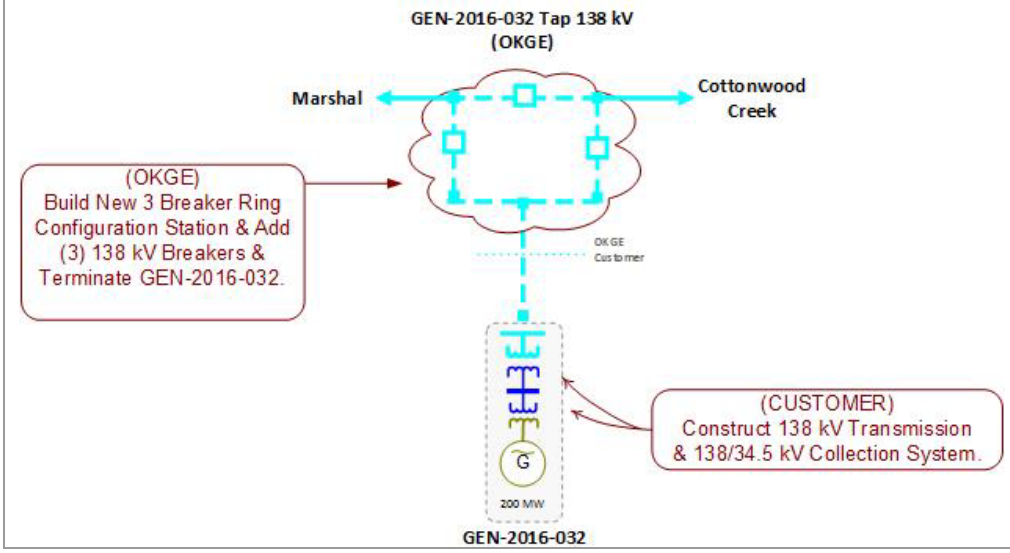
Interconnection Request: GEN-2016-030
Cluster Interconnection Costs: $2,183,000
Stand Alone Interconnection Costs: $2,183,000



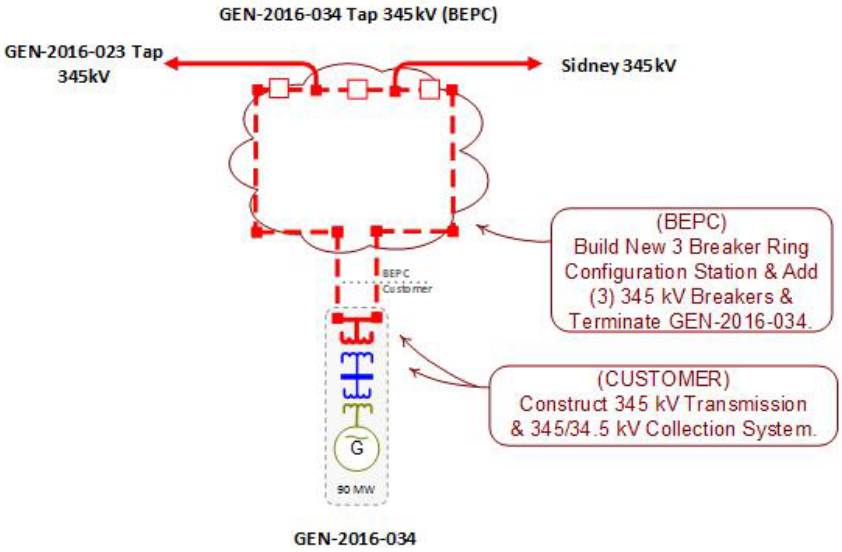
Interconnection Request: GEN-2016-031
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



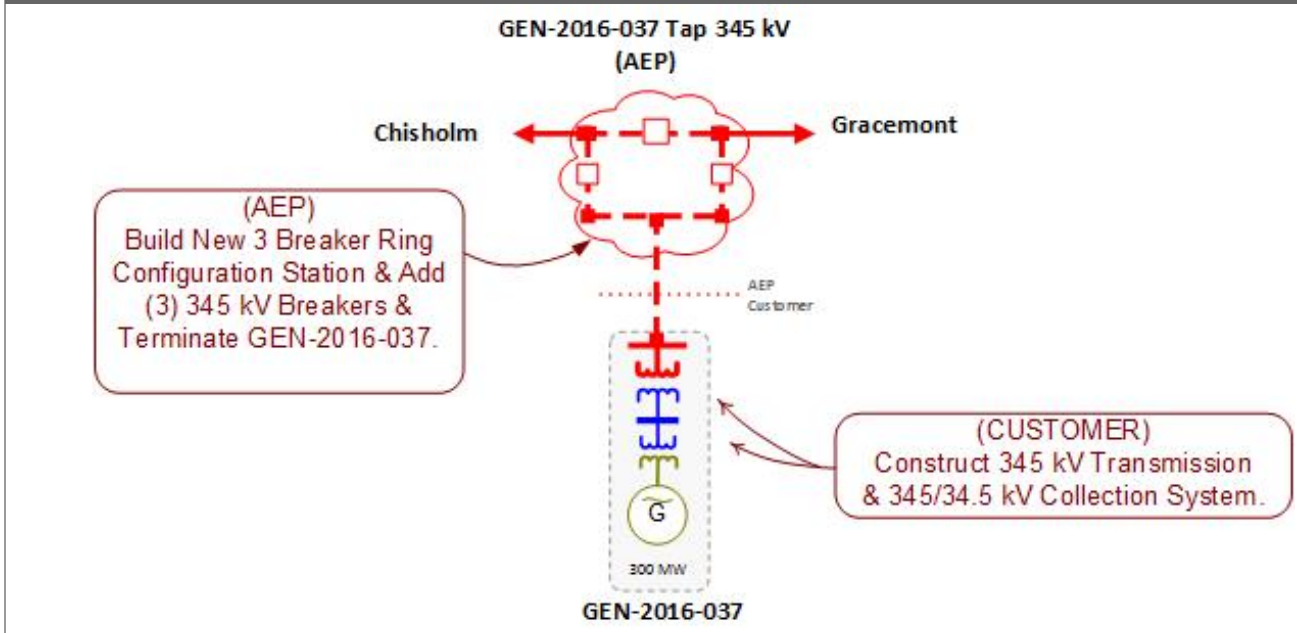
Interconnection Request: GEN-2016-032
Cluster Interconnection Costs: $3,288,799
Stand Alone Interconnection Costs: $3,288,799



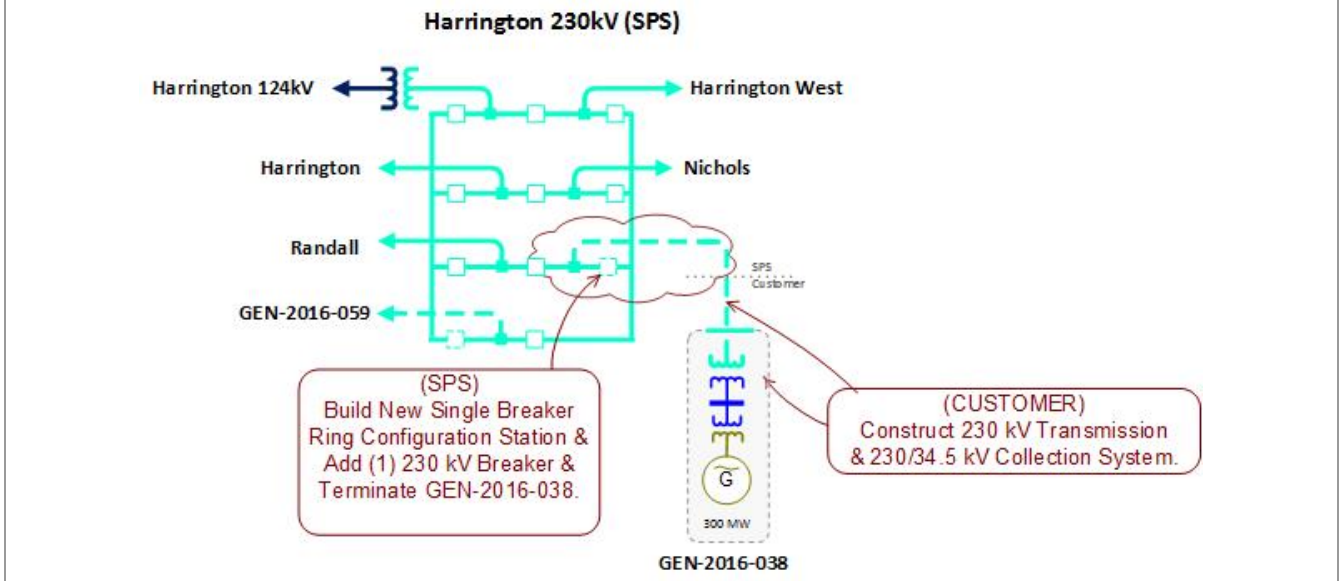
Interconnection Request: GEN-2016-034
Cluster Interconnection Costs: $19,264,793
Stand Alone Interconnection Costs: $19,264,793



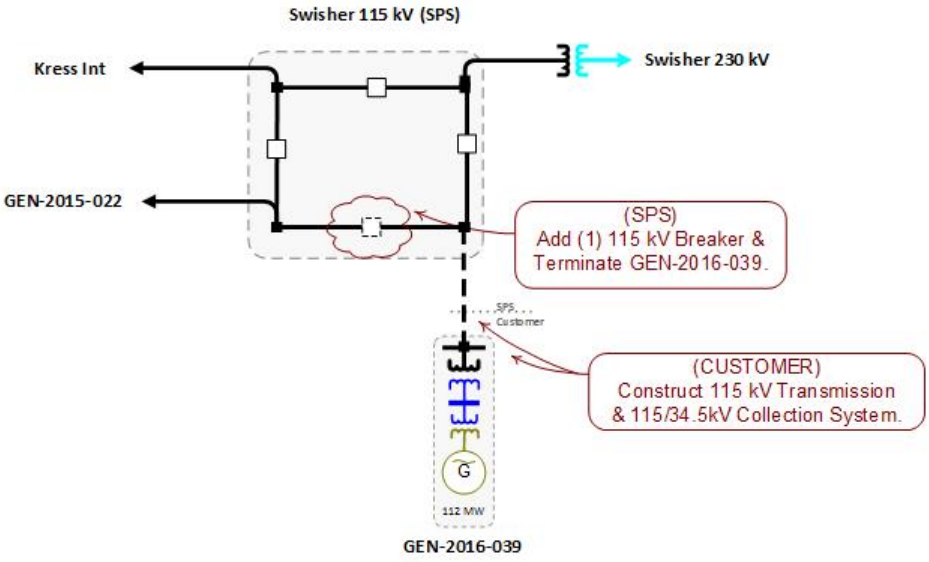
Interconnection Request: GEN-2016-037
Cluster Interconnection Costs: $18,000,000
Stand Alone Interconnection Costs: $18,000,000



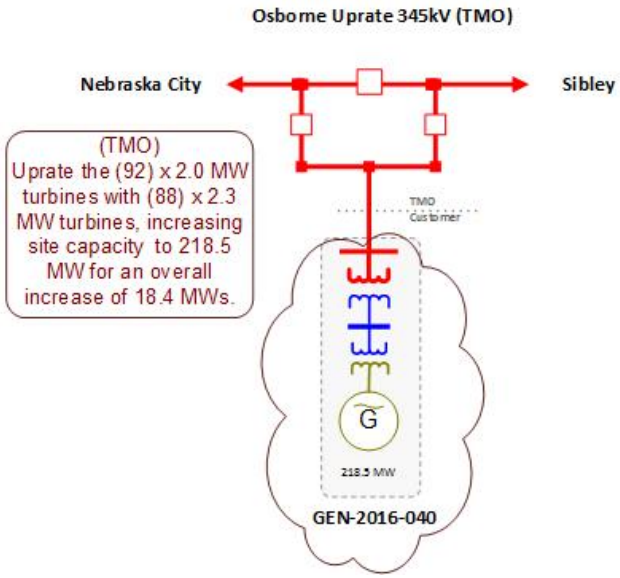
Interconnection Request: GEN-2016-038
Cluster Interconnection Costs: $1,154,068
Stand Alone Interconnection Costs: $1,154,068



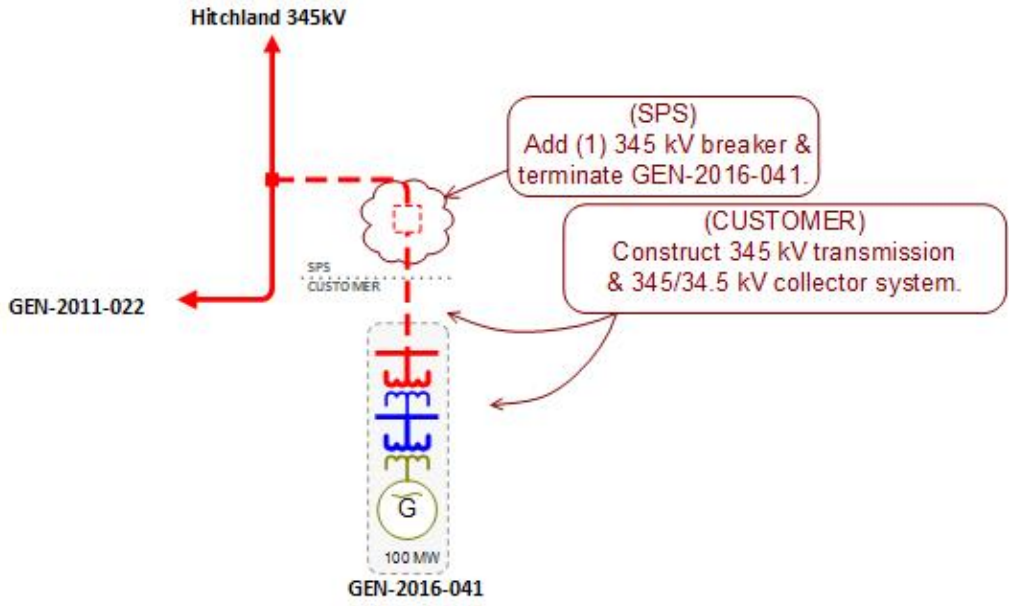
Interconnection Request: GEN-2016-039
Cluster Interconnection Costs: $3,991,014
Stand Alone Interconnection Costs: $3,991,014



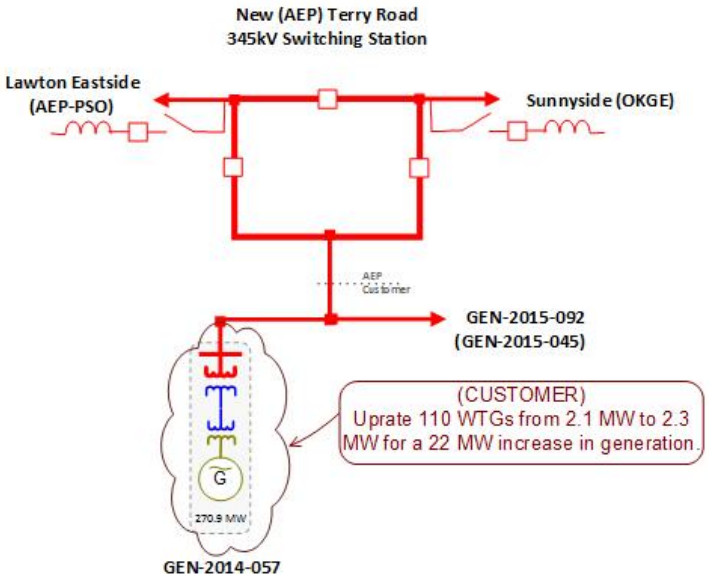
Interconnection Request: GEN-2016-040
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



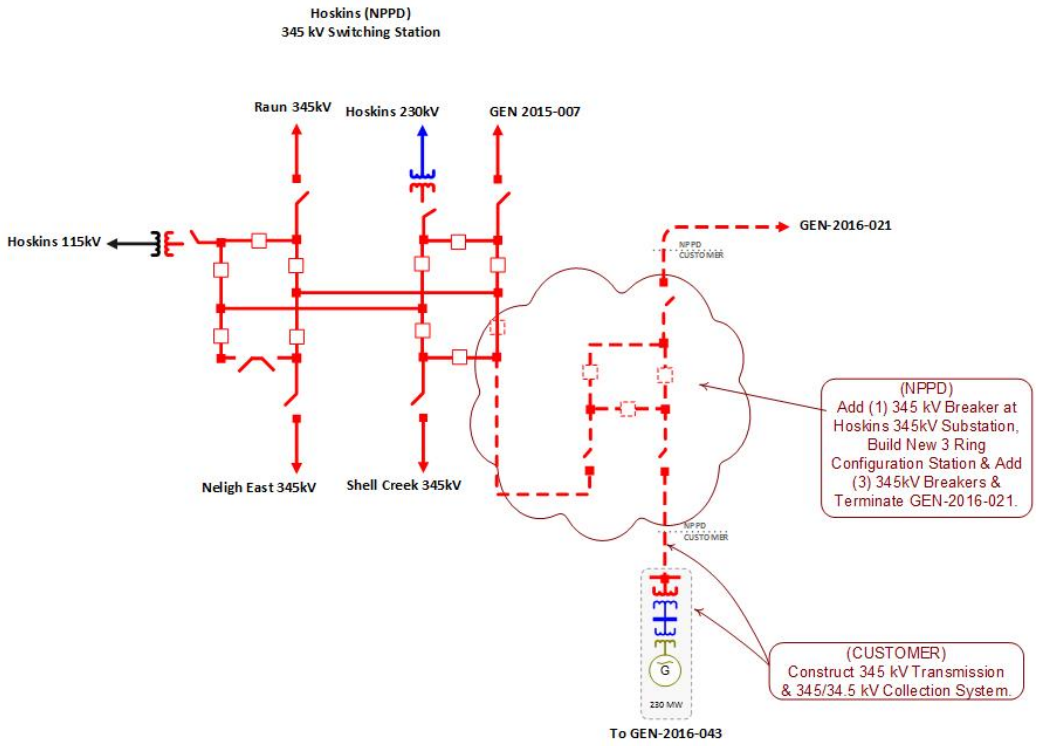
Interconnection Request: GEN-2016-041
Cluster Interconnection Costs: $317,991
Stand Alone Interconnection Costs: $317,991



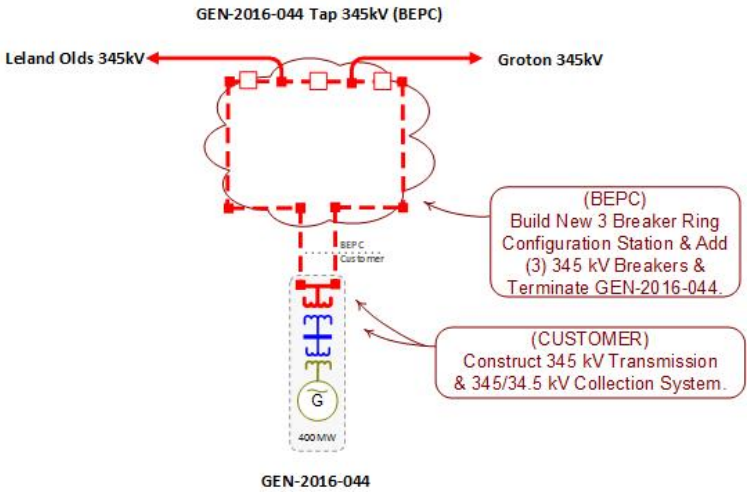
Interconnection Request: GEN-2016-042
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



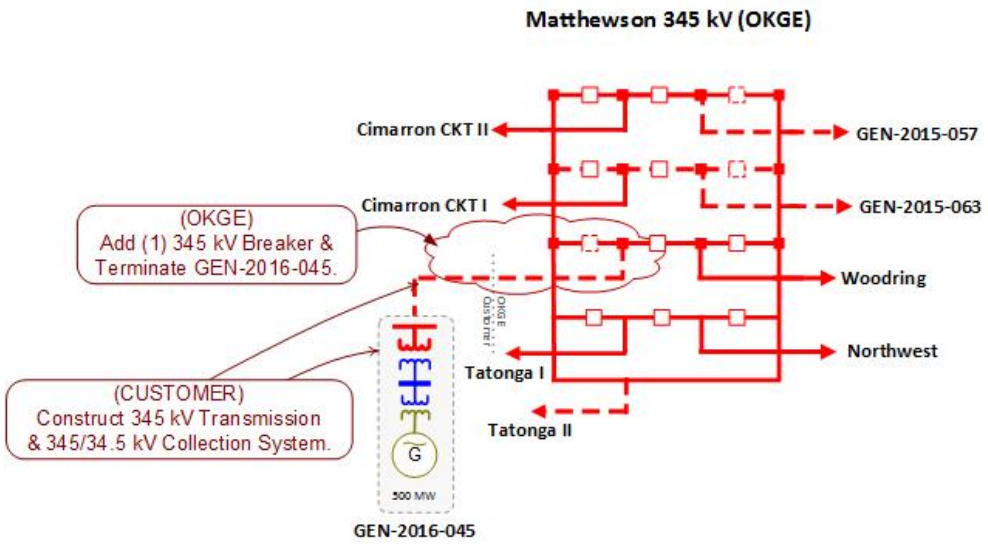
Interconnection Request: GEN-2016-043
Cluster Interconnection Costs: $1,000,000
Stand Alone Interconnection Costs: $2,000,000



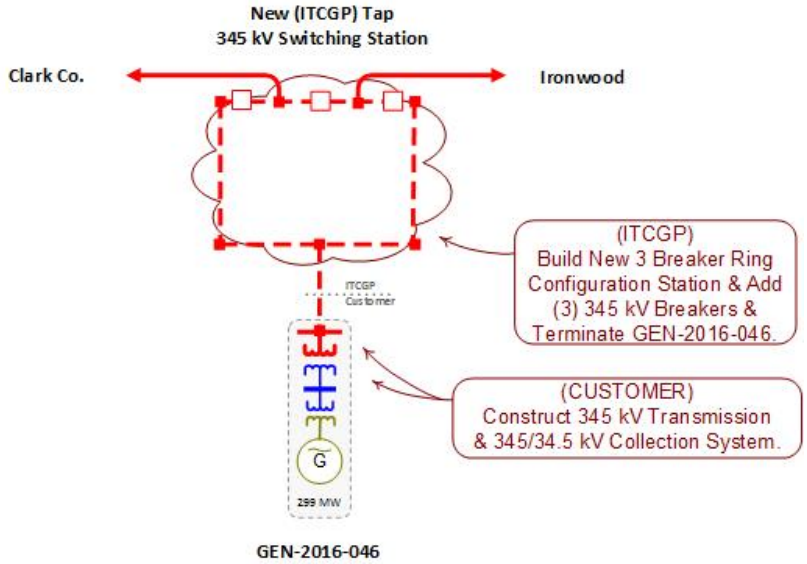
Interconnection Request: GEN-2016-044
Cluster Interconnection Costs: $19,264,793
Stand Alone Interconnection Costs: $19,264,793



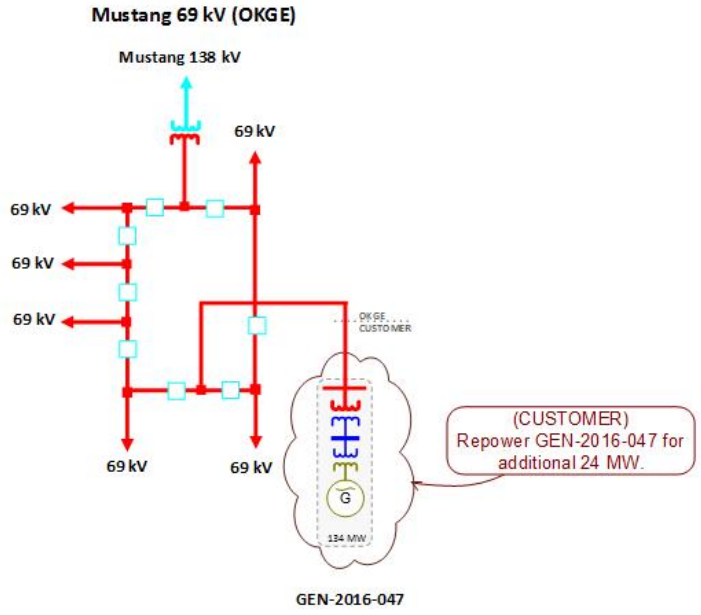
Interconnection Request: GEN-2016-045
Cluster Interconnection Costs: $8,629,014
Stand Alone Interconnection Costs: $8,629,014



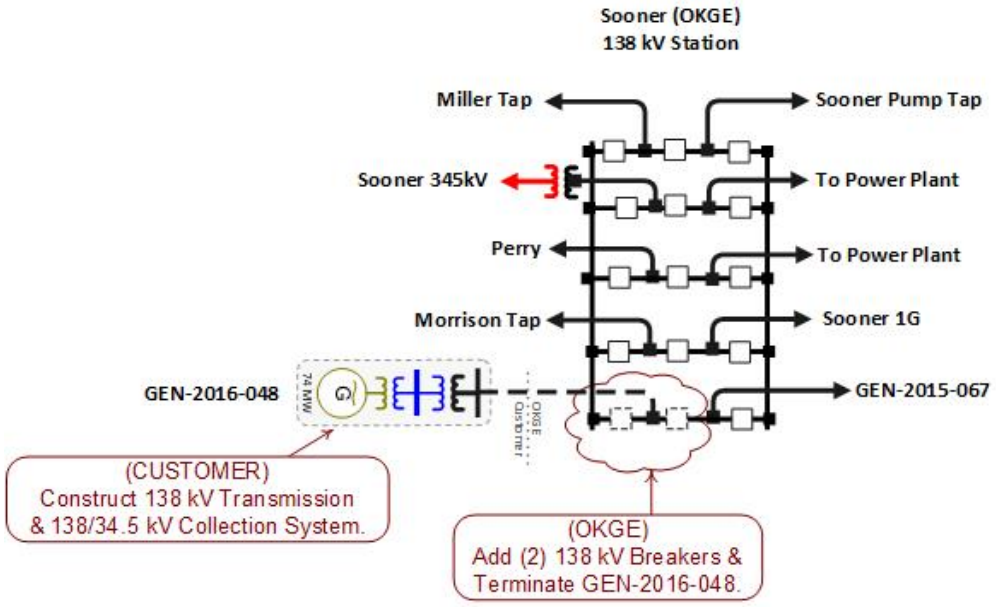
Interconnection Request: GEN-2016-046
Cluster Interconnection Costs: $10,000,000
Stand Alone Interconnection Costs: $10,000,000



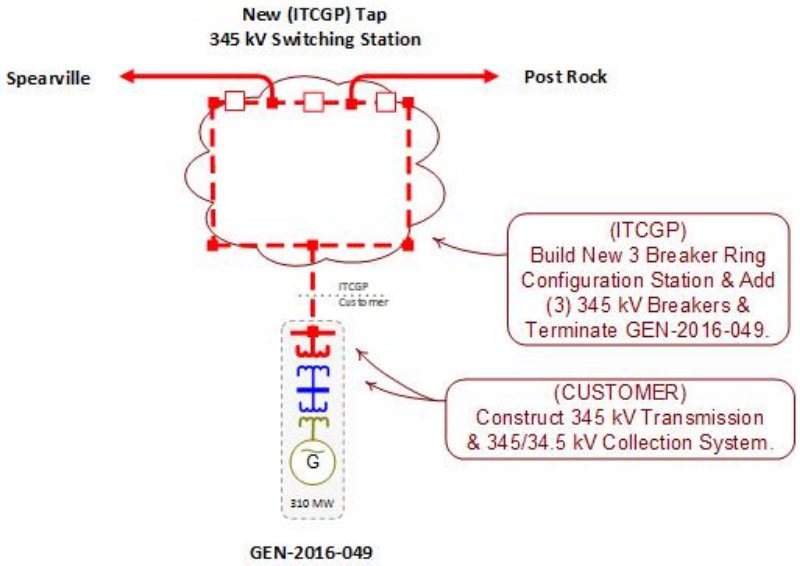
Interconnection Request: GEN-2016-047
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



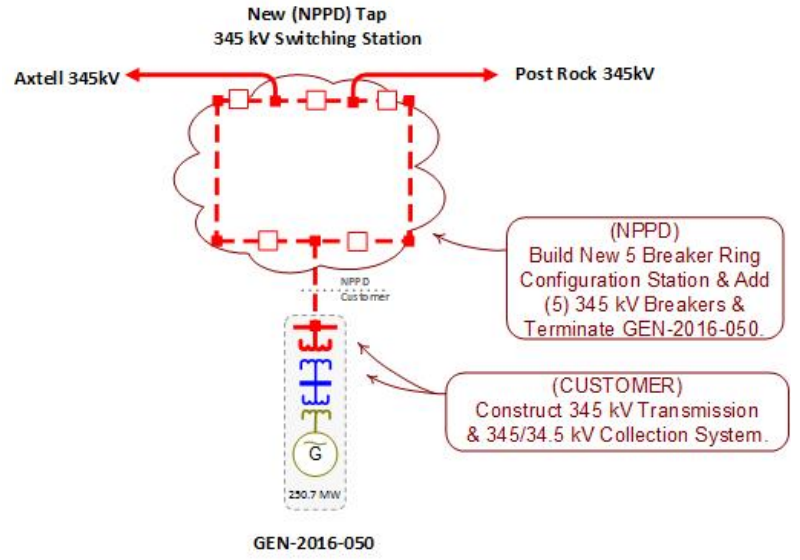
Interconnection Request: GEN-2016-048
Cluster Interconnection Costs: $3,521,000
Stand Alone Interconnection Costs: $3,521,000



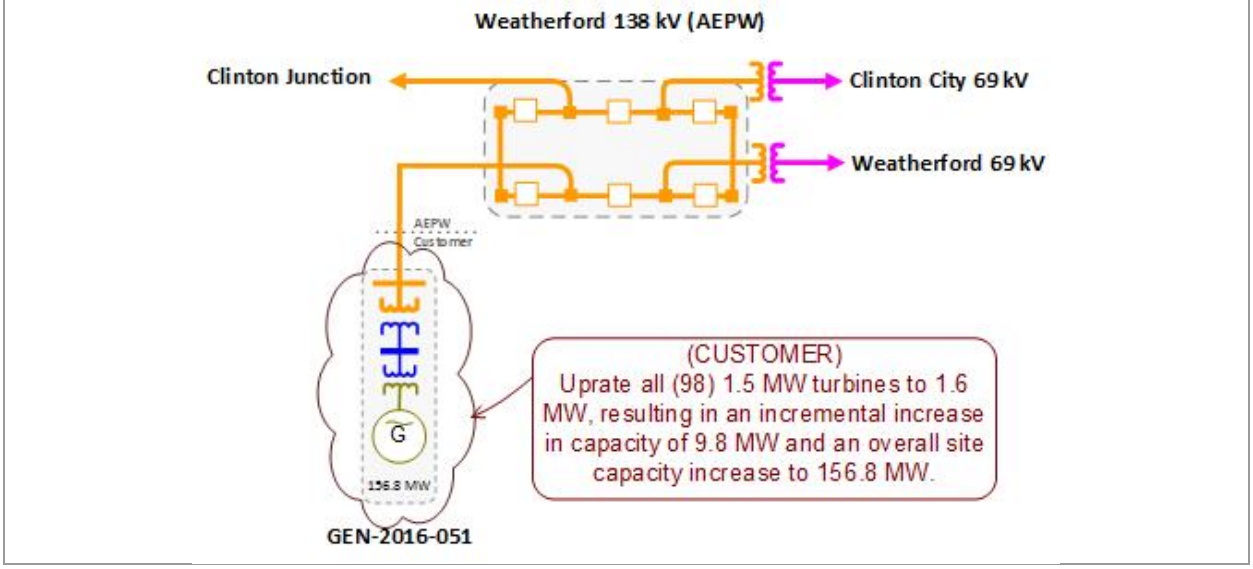
Interconnection Request: GEN-2016-049
Cluster Interconnection Costs: $10,000,000
Stand Alone Interconnection Costs: $10,000,000



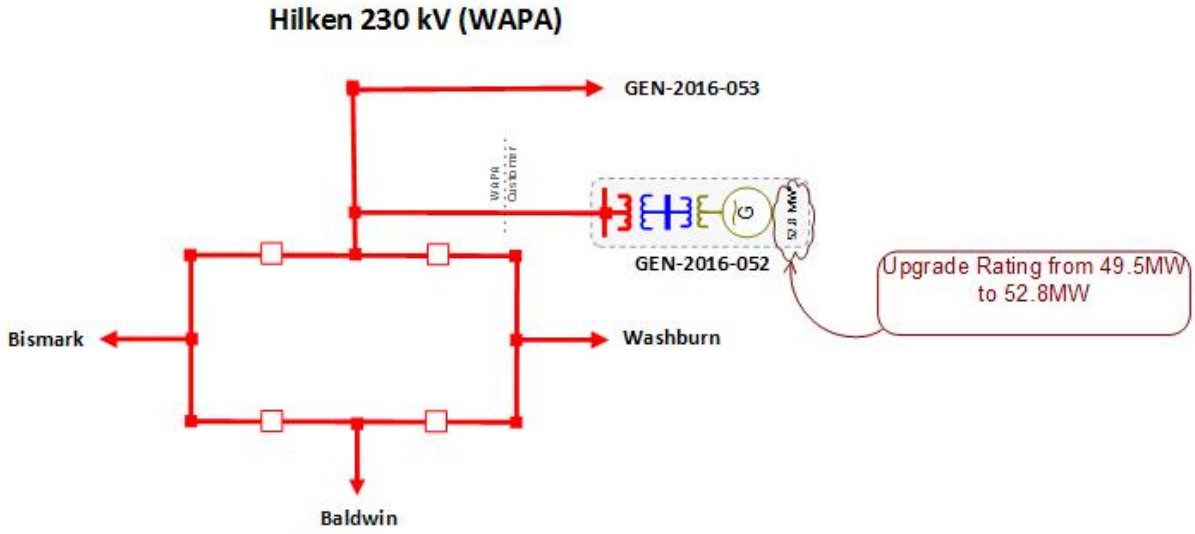
Interconnection Request: GEN-2016-050
Cluster Interconnection Costs: $12,500,000
Stand Alone Interconnection Costs: $12,500,000



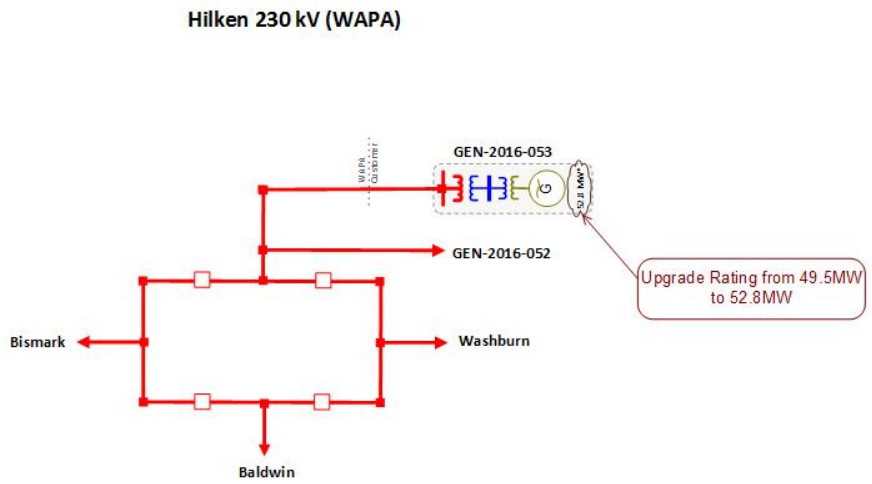
Interconnection Request: GEN-2016-051
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



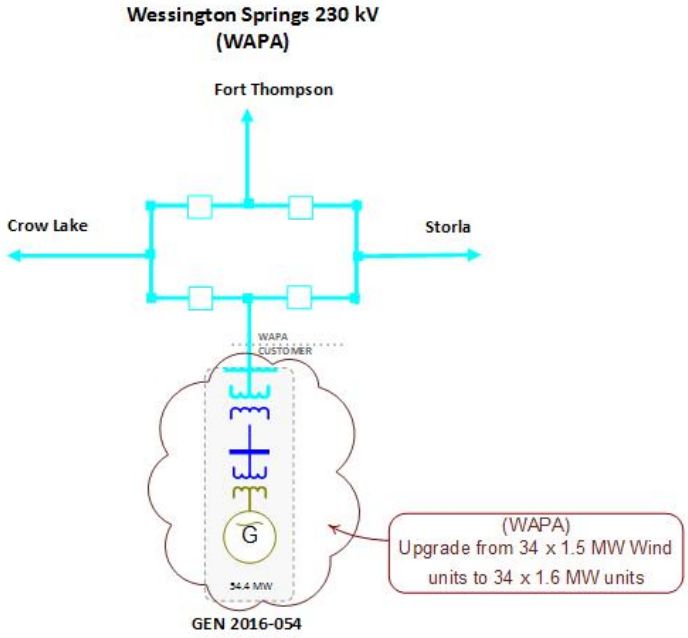
Interconnection Request: GEN-2016-052
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



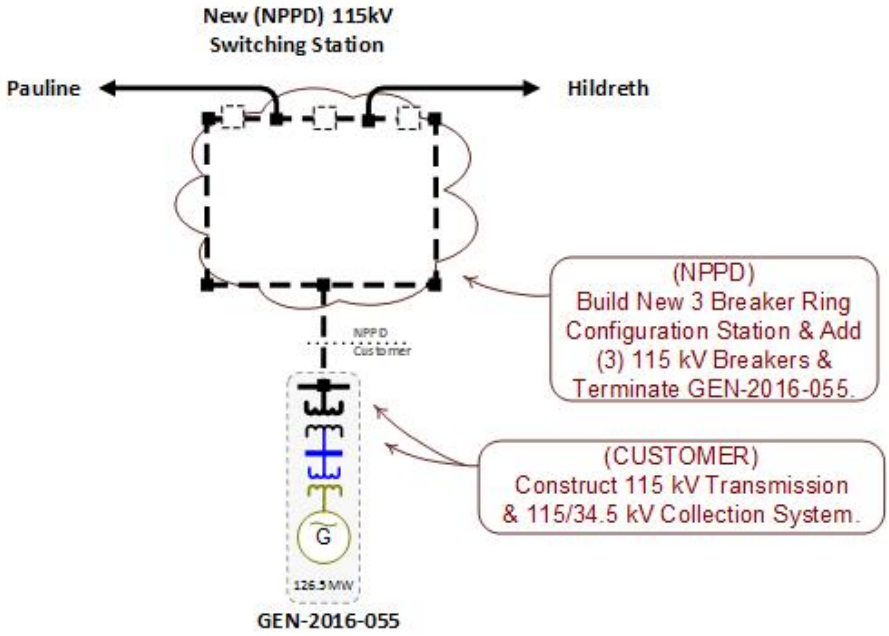
Interconnection Request: GEN-2016-053
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



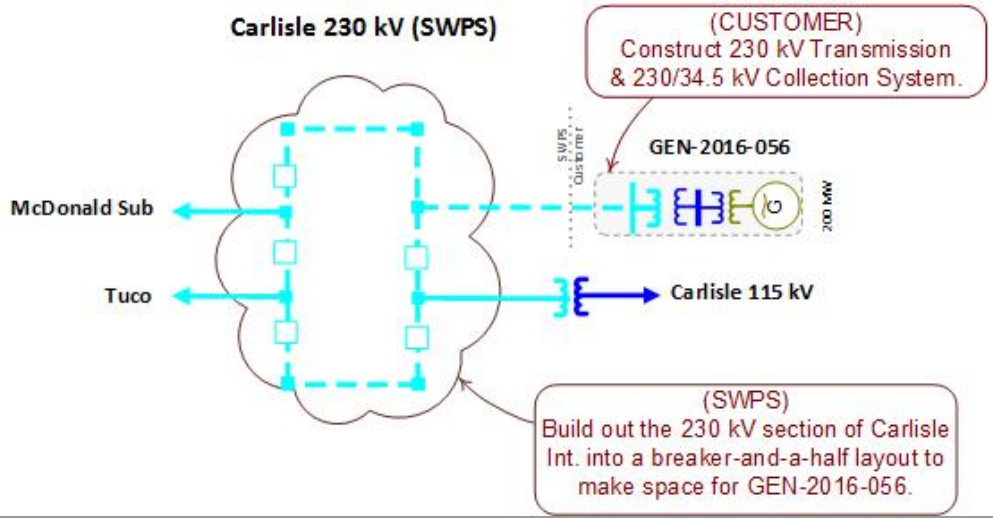
Interconnection Request: GEN-2016-054
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



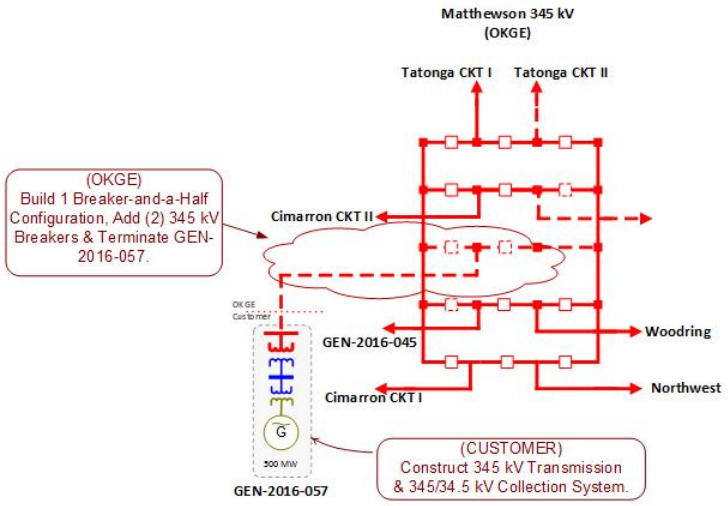
Interconnection Request: GEN-2016-055
Cluster Interconnection Costs: $6,300,000
Stand Alone Interconnection Costs: $6,300,000



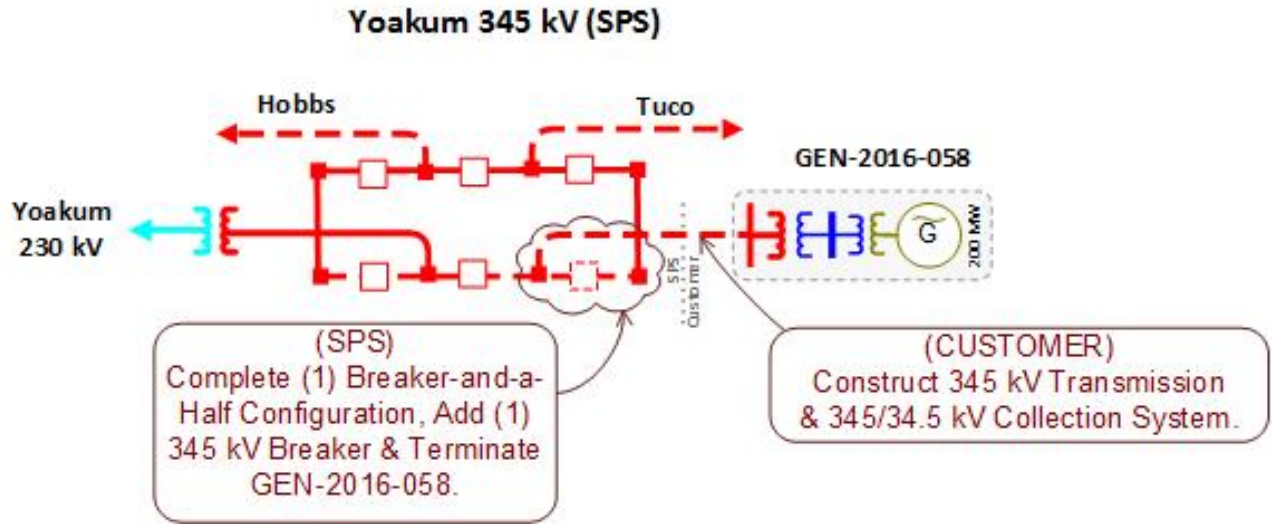
Interconnection Request: GEN-2016-056
Cluster Interconnection Costs: $4,237,857
Stand Alone Interconnection Costs: $4,237,857



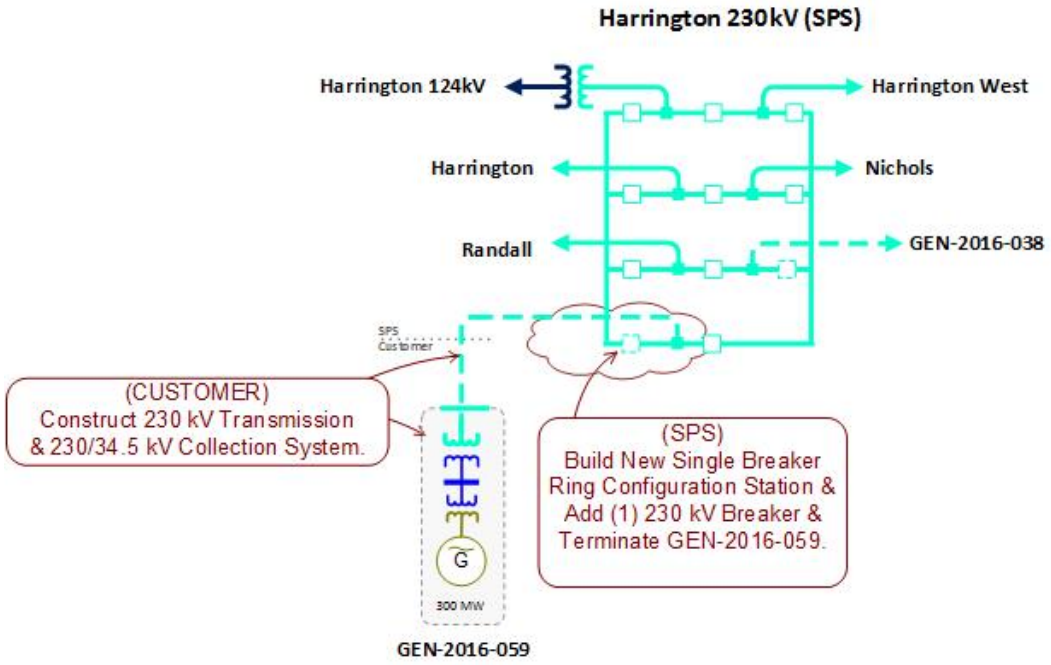
Interconnection Request: GEN-2016-057
Cluster Interconnection Costs: $8,629,014
Stand Alone Interconnection Costs: $8,629,014



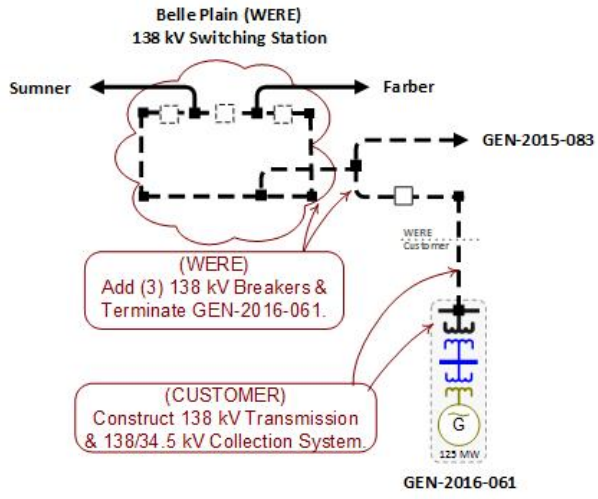
Interconnection Request: GEN-2016-058
Cluster Interconnection Costs: $2,781,836
Stand Alone Interconnection Costs: $2,781,836



Interconnection Request: GEN-2016-059
Cluster Interconnection Costs: $1,272,967
Stand Alone Interconnection Costs: $1,272,967

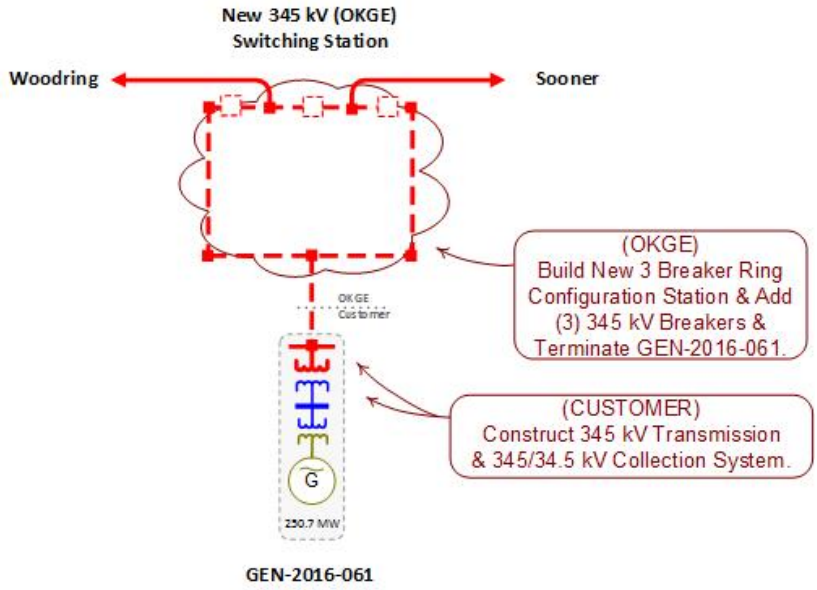


Interconnection Request: GEN-2016-060
Cluster Interconnection Costs: $0*
Stand Alone Interconnection Costs: $0*

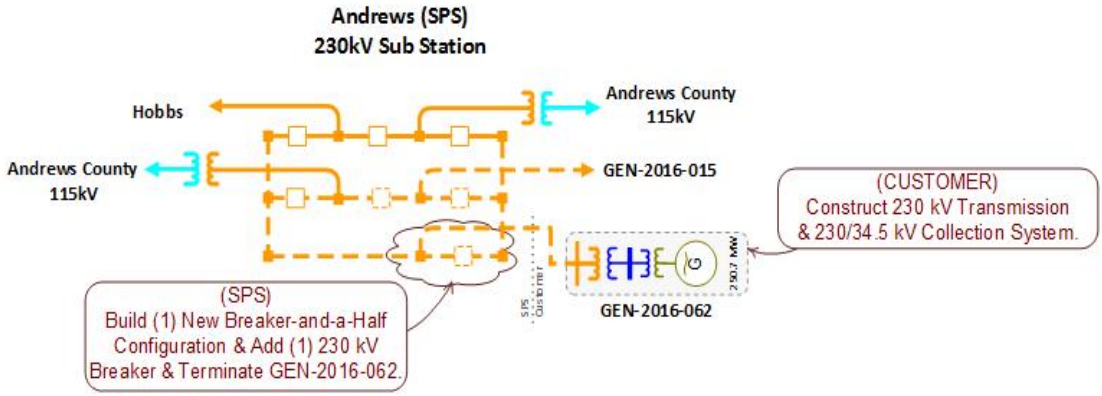


* If GEN-2015-083 withdraws, then GEN-2016-061 would be assigned $7,603,433

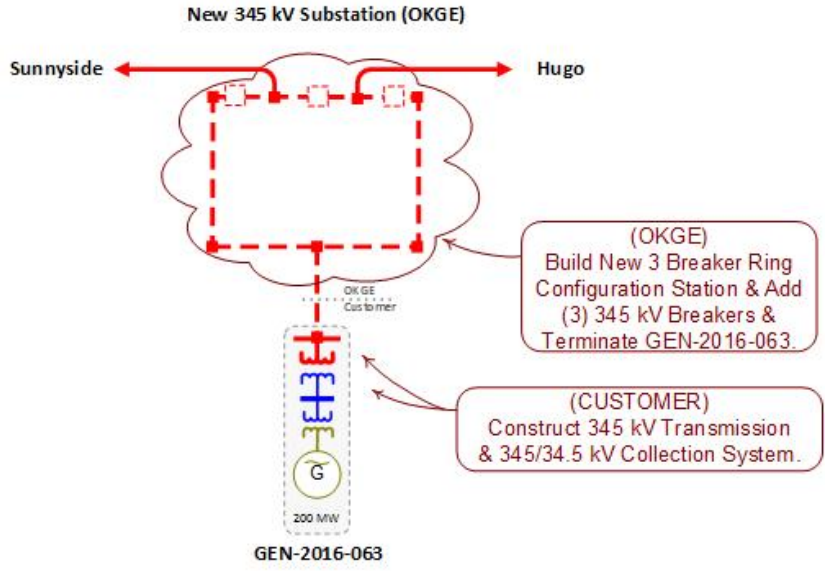
Interconnection Request: GEN-2016-061
Cluster Interconnection Costs: $11,737,557
Stand Alone Interconnection Costs: $11,737,557



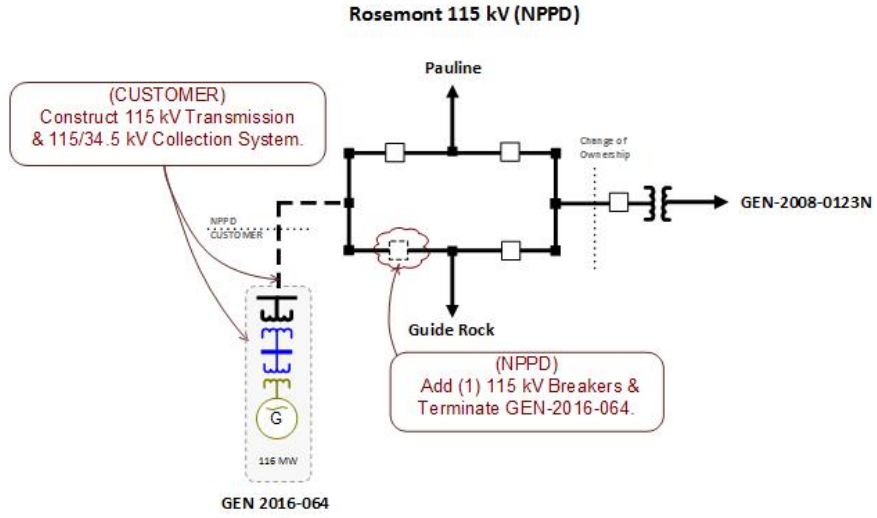
Interconnection Request: GEN-2016-062
Cluster Interconnection Costs: $1,884,283
Stand Alone Interconnection Costs: $1,884,283



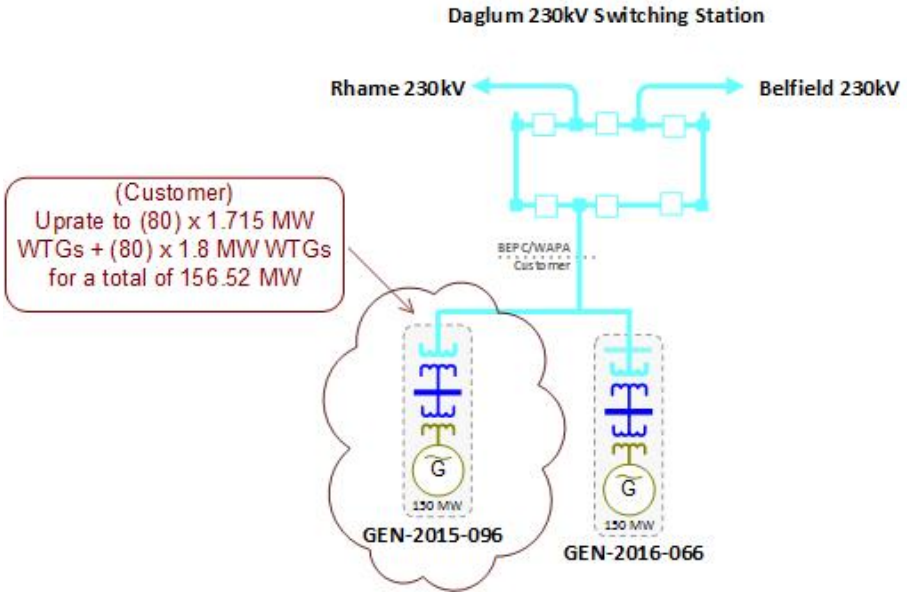
Interconnection Request: GEN-2016-063
Cluster Interconnection Costs: $11,737,557
Stand Alone Interconnection Costs: $11,737,557



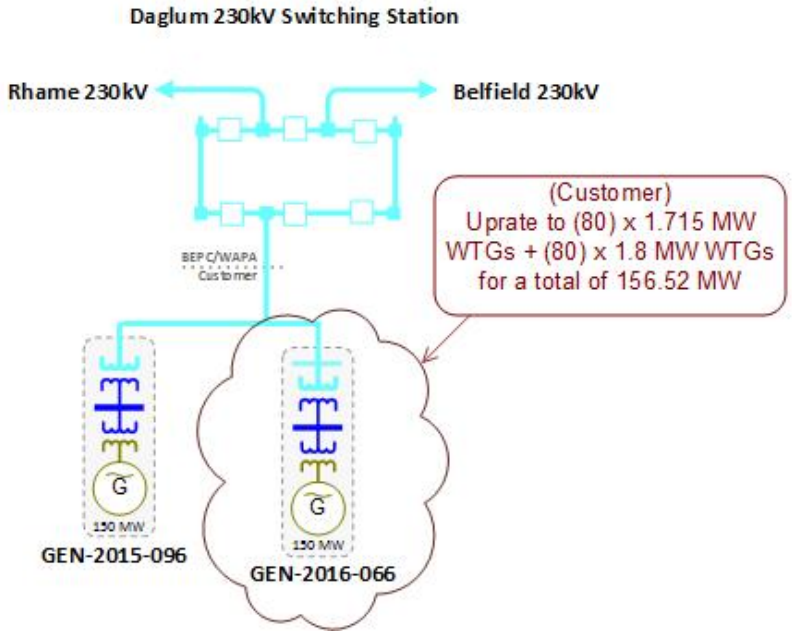
Interconnection Request: GEN-2016-064
Cluster Interconnection Costs: $500,000
Stand Alone Interconnection Costs: $500,000



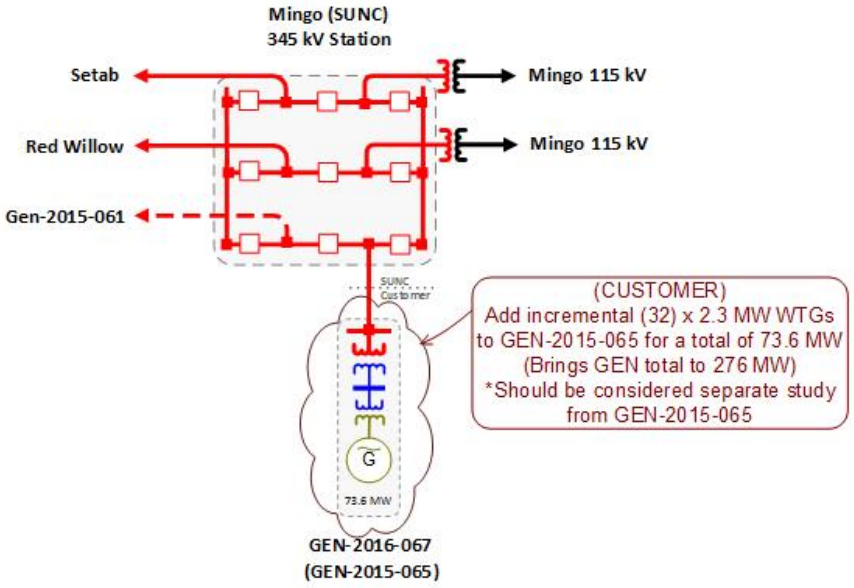
Interconnection Request: GEN-2016-065
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



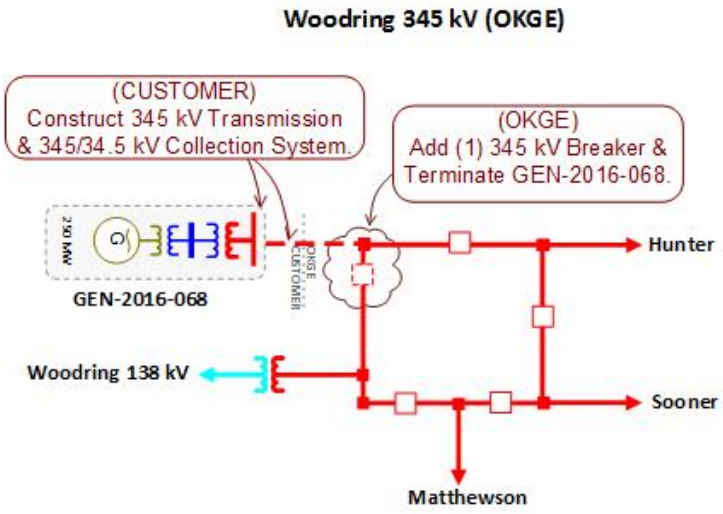
Interconnection Request: GEN-2016-066
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



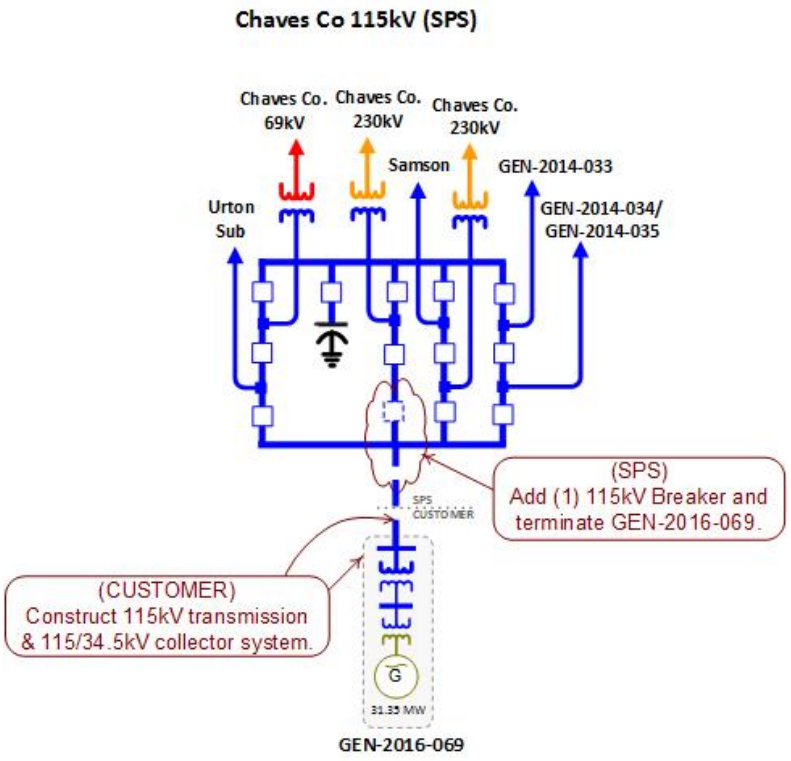
Interconnection Request: GEN-2016-067
Cluster Interconnection Costs: $55,000
Stand Alone Interconnection Costs: $55,000



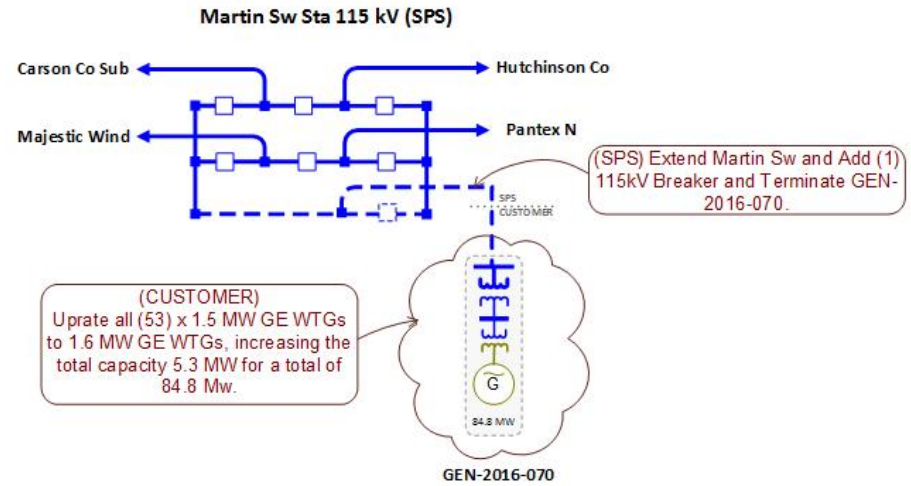
Interconnection Request: GEN-2016-068
Cluster Interconnection Costs: $1,900,000
Stand Alone Interconnection Costs: $1,900,000



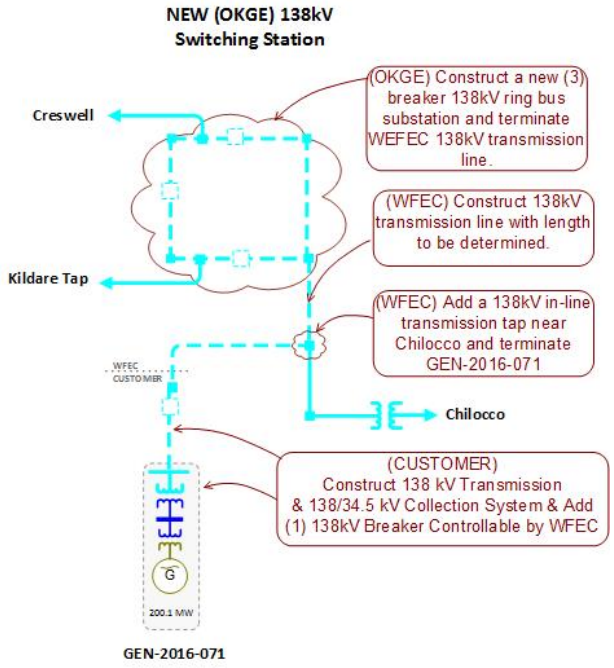
Interconnection Request: GEN-2016-069
Cluster Interconnection Costs: $2,309,814
Stand Alone Interconnection Costs: $2,309,814



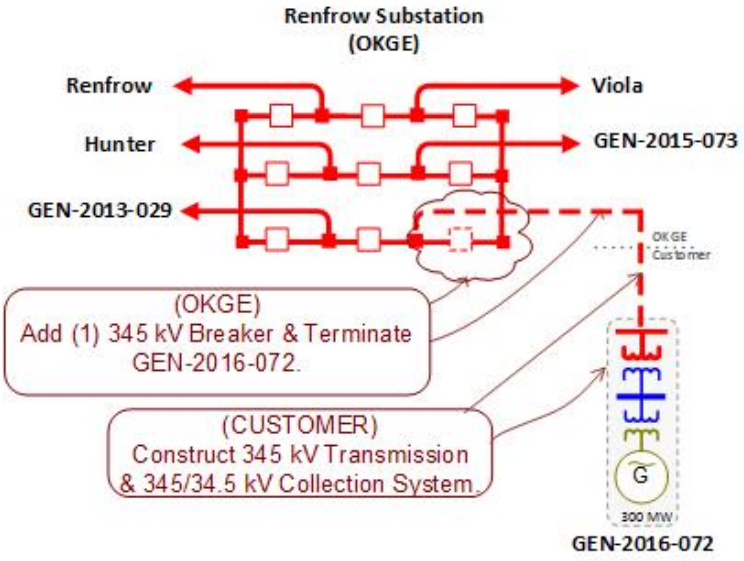
Interconnection Request: GEN-2016-070
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



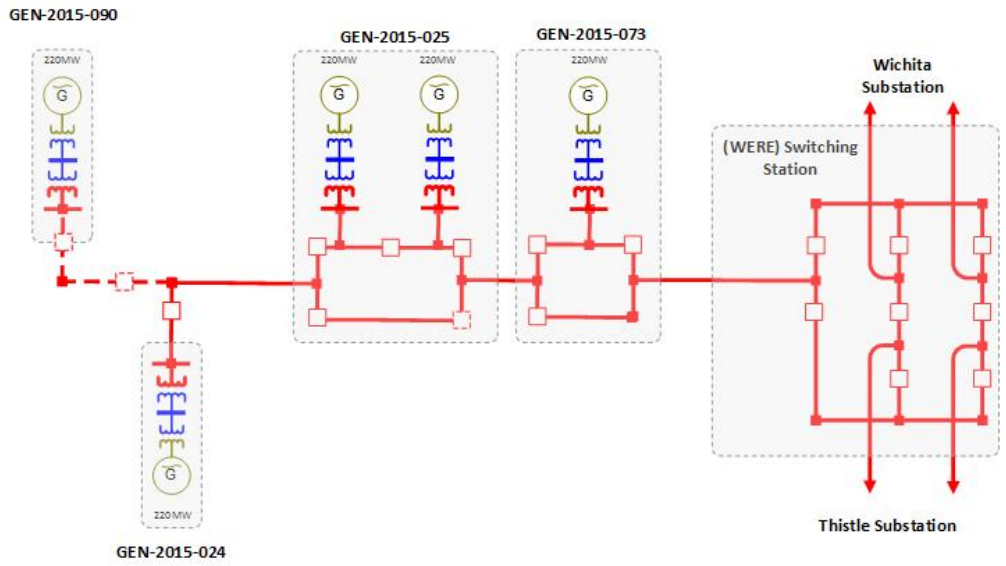
Interconnection Request: GEN-2016-071
Cluster Interconnection Costs: $4,612,190
Stand Alone Interconnection Costs: $4,612,190



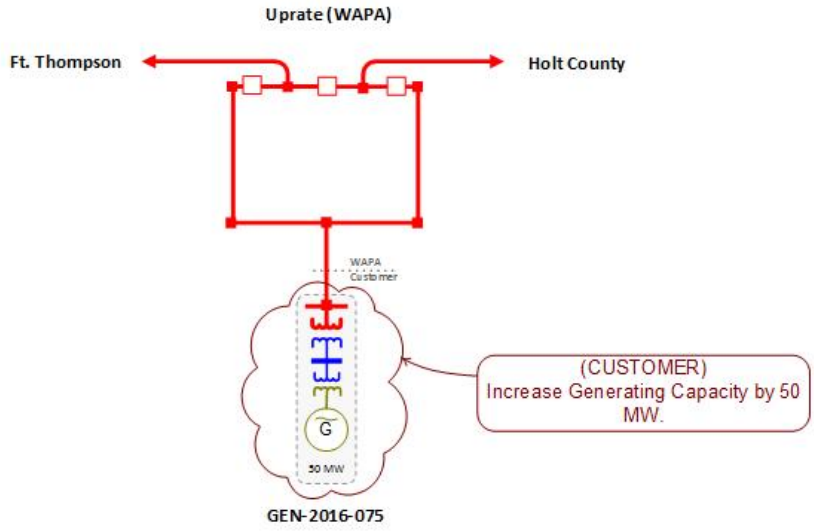
Interconnection Request: GEN-2016-072
Cluster Interconnection Costs: $1,925,000
Stand Alone Interconnection Costs: $1,925,000



Interconnection Request: GEN-2016-073
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



Interconnection Request: GEN-2016-075
Cluster Interconnection Costs: $0
Stand Alone Interconnection Costs: $0



11.5 E: COST ALLOCATION PER INTERCONNECTION REQUEST (INCLUDING PRIOR QUEUED UPGRADES)

Appendix E. Cost Allocation Per Request

(Including Previously Allocated Network Upgrades*)

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
ASGI-2016-001			
ASGI-2016-001 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$72,496	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$85,812	$95,000,000
Crawfish Draw - Seminole 765kV CKT 1 Build approixamately 325 miles of 765kV from Crawfish Draw to Seminole	Current Study	$1,879,021	$975,000,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$7,143	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$5,176	$5,000,000
Crawfish Draw 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Crawfish Draw	Current Study	$57,816	$30,000,000
Crawfish Draw 765kV Substation Expansion Expand the planned Crawfish Draw 345kV Substation for new 765kV switchyard	Current Study	$77,088	$40,000,000
GEN-2014-074 Tap 345kV Reactive Power Support Intall +300Mvar SVC at GEN-2014-074 Tap	Current Study	$50,936	$25,000,000
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$39,068	$106,737,500
Hereford Capacitor Bank 25Mvar capacitor bank required for stability anlaysis	Current Study	$2,037	$1,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$81,498	$40,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$92,429	$88,172,500
Seminole 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Seminole	Current Study	$57,816	$30,000,000

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Seminole 765kV Substation Expansion Expand the existing Seminole Substation for new 765kV switchyard	Current Study	$77,088	$40,000,000
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.	Current Study	$64,969	$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$295,976	$156,000,000
Tolk 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Tolk	Current Study	$26,787	$15,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Crawfish Draw Substation Upgrade 345/230kV Tap Border-TUCO approximately 2 miles from TUCO and build Crawfish Draw 345kV substation and add 345/230/13.2kV transformer and tie on TUCO-Swisher 230kV.	Previously Allocated		$24,764,205
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Oklaunion 345kV Reactive Power Install (2)-130Mvar Capacitor Bank(s) at Oklaunion	Previously Allocated		$10,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$2,973,159	

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
ASGI-2016-002			
ASGI-2016-002 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$10,067	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$11,933	$95,000,000
Crawfish Draw - Seminole 765kV CKT 1 Build approixamately 325 miles of 765kV from Crawfish Draw to Seminole	Current Study	$264,678	$975,000,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$1,142	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$541	$5,000,000
Crawfish Draw 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Crawfish Draw	Current Study	$8,144	$30,000,000
Crawfish Draw 765kV Substation Expansion Expand the planned Crawfish Draw 345kV Substation for new 765kV switchyard	Current Study	$10,859	$40,000,000
GEN-2014-074 Tap 345kV Reactive Power Support Intall +300Mvar SVC at GEN-2014-074 Tap	Current Study	$7,232	$25,000,000
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$4,909	$106,737,500
Hereford Capacitor Bank 25Mvar capacitor bank required for stability anlaysis	Current Study	$289	$1,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$11,571	$40,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$12,573	$88,172,500
Seminole 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Seminole	Current Study	$8,144	$30,000,000
Seminole 765kV Substation Expansion Expand the existing Seminole Substation for new 765kV switchyard	Current Study	$10,859	$40,000,000
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.	Current Study	$4,873	$88,170,000

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$39,996	$156,000,000
Tolk 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Tolk	Current Study	$3,353	$15,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Crawfish Draw Substation Upgrade 345/230kV Tap Border-TUCO approximately 2 miles from TUCO and build Crawfish Draw 345kV substation and add 345/230/13.2kV transformer and tie on TUCO-Swisher 230kV.	Previously Allocated		$24,764,205
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Oklaunion 345kV Reactive Power Install (2)-130Mvar Capacitor Bank(s) at Oklaunion	Previously Allocated		$10,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$411,162	
ASGI-2016-003			
ASGI-2016-003 Interconnection Costs See One-Line Diagram.	Current Study	$10,000	$10,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
	Current Study Total	$10,000	
ASGI-2016-004			
ASGI-2016-004 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$377,629	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$363,745	$95,000,000
Crawfish Draw - Seminole 765kV CKT 1 Build approixamately 325 miles of 765kV from Crawfish Draw to Seminole	Current Study	$5,031,463	$975,000,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$9,913	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$4,076	$5,000,000
Crawfish Draw 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Crawfish Draw	Current Study	$154,815	$30,000,000
Crawfish Draw 765kV Substation Expansion Expand the planned Crawfish Draw 345kV Substation for new 765kV switchyard	Current Study	$206,420	$40,000,000
GEN-2014-074 Tap 345kV Reactive Power Support Intall +300Mvar SVC at GEN-2014-074 Tap	Current Study	$59,268	$25,000,000
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$713,298	$106,737,500
Harrington West - Potter County 230kV CKT 1 Rebuild approximately 11 miles of 230kV	Current Study	$96,199	$8,800,000
Hereford Capacitor Bank 25Mvar capacitor bank required for stability anlaysis	Current Study	$2,371	$1,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$94,828	$40,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$683,270	$88,172,500
Seminole 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Seminole	Current Study	$154,815	$30,000,000

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Seminole 765kV Substation Expansion Expand the existing Seminole Substation for new 765kV switchyard	Current Study	$206,420	$40,000,000
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.	Current Study	$779,049	$88,170,000
Tolk 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Tolk	Current Study	$64,493	$15,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Crawfish Draw Substation Upgrade 345/230kV Tap Border-TUCO approximately 2 miles from TUCO and build Crawfish Draw 345kV substation and add 345/230/13.2kV transformer and tie on TUCO-Swisher 230kV.	Previously Allocated		$24,764,205
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Harrington East - Potter County 230kV CKT 1 Upgrade terminal equipment per SPP-NTC-200395	Previously Allocated		$914,347
Mustang - Seminole 115kV CKT 1 Build new 115kV from Mustang - Seminole 115kV per SPP-NTC-200407	Previously Allocated		$20,136,042
Oklaunion 345kV Reactive Power Install (2)-130Mvar Capacitor Bank(s) at Oklaunion	Previously Allocated		$10,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$9,002,071	
GEN-2015-018			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$2,627,895	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$3,005,278	$95,000,000
Crawfish Draw - Seminole 765kV CKT 1 Build approixamately 325 miles of 765kV from Crawfish Draw to Seminole	Current Study	$53,822,511	$975,000,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$70,199	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$119,938	$5,000,000
Crawfish Draw 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Crawfish Draw	Current Study	$1,656,084	$30,000,000
Crawfish Draw 765kV Substation Expansion Expand the planned Crawfish Draw 345kV Substation for new 765kV switchyard	Current Study	$2,208,112	$40,000,000
Eddy County 230/115/13kV CKT 3 NRIS only required upgrade: Build third 230/115/13kV 300MVA Transformer	Current Study	$262,409	$6,000,000
GEN-2014-074 Tap 345kV Reactive Power Support Intall +300Mvar SVC at GEN-2014-074 Tap	Current Study	$1,237,117	$25,000,000
GEN-2015-018 Interconnection Costs See One-Line Diagram.	Current Study	$5,148,927	$5,148,927
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$3,285,305	$106,737,500
Hereford Capacitor Bank 25Mvar capacitor bank required for stability anlaysis	Current Study	$49,485	$1,000,000
Jones - Lubbock Holly 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$52,407	$500,000
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$308,882	$4,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$1,979,387	$40,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$4,257,416	$88,172,500
Seminole 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Seminole	Current Study	$1,656,084	$30,000,000
Seminole 765kV Substation Expansion Expand the existing Seminole Substation for new 765kV switchyard	Current Study	$2,208,112	$40,000,000
Sundown 230/115/13.2KV Transformer CKT 2 NRIS only required upgrade: Build second Sundown 230/115 Transformer	Current Study	$19,889	$6,000,000
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.	Current Study	$13,692,336	$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$11,748,639	$156,000,000
Tolk 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Tolk	Current Study	$2,543,412	$15,000,000
Wadsworth 230/69/13kV CKT 2 NRIS only required upgrade: Install second Wadsworth 230/69/13kV Transformer	Current Study	$322,823	$4,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Crawfish Draw Substation Upgrade 345/230kV Tap Border-TUCO approximately 2 miles from TUCO and build Crawfish Draw 345kV substation and add 345/230/13.2kV transformer and tie on TUCO-Swisher 230kV.	Previously Allocated		$24,764,205
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Oklaunion 345kV Reactive Power Install (2)-130Mvar Capacitor Bank(s) at Oklaunion	Previously Allocated		$10,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$112,282,646	
GEN-2015-033			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$3,617,630	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$4,414,040	$95,000,000
Carlisle - LP-Doud 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 3 miles of 115kV from Carlisle - LP Doud	Current Study	$156,736	$2,100,000
Crawfish Draw - Seminole 765kV CKT 1 Build approixamately 325 miles of 765kV from Crawfish Draw to Seminole	Current Study	$101,290,948	$975,000,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$1,205,245	$3,000,000
Crawfish Draw 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Crawfish Draw	Current Study	$3,116,657	$30,000,000
Crawfish Draw 765kV Substation Expansion Expand the planned Crawfish Draw 345kV Substation for new 765kV switchyard	Current Study	$4,155,542	$40,000,000
Eddy County 230/115/13kV CKT 3 NRIS only required upgrade: Build third 230/115/13kV 300MVA Transformer	Current Study	$637,932	$6,000,000
GEN-2014-074 Tap 345kV Reactive Power Support Intall +300Mvar SVC at GEN-2014-074 Tap	Current Study	$2,919,444	$25,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2015-033 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
Hereford Capacitor Bank 25Mvar capacitor bank required for stability anlaysis	Current Study	$116,778	$1,000,000
Jones - Lubbock Holly 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$98,056	$500,000
LP-Doud - SP-Wolf 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 1.4 miles of 115kV	Current Study	$74,636	$1,000,000
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$577,928	$4,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$4,671,110	$40,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$2,815,081	$88,172,500
Seminole 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Seminole	Current Study	$3,116,657	$30,000,000
Seminole 765kV Substation Expansion Expand the existing Seminole Substation for new 765kV switchyard	Current Study	$4,155,542	$40,000,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$12,655,419	$156,000,000
Wadsworth 230/69/13kV CKT 2 NRIS only required upgrade: Install second Wadsworth 230/69/13kV Transformer	Current Study	$594,648	$4,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Carlisle 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace transformer assigned in SPP-2014-AG1-AFS-6 per SPP-NTC-200359	Previously Allocated		$3,853,326
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Kress Interchange - Swisher 115kV CKT 1 Replace terminal equipment	Previously Allocated		$500,000
Mustang - Seminole 115kV CKT 1 Build new 115kV from Mustang - Seminole 115kV per SPP-NTC-200407	Previously Allocated		$20,136,042
Oklaunion 345kV Reactive Power Install (2)-130Mvar Capacitor Bank(s) at Oklaunion	Previously Allocated		$10,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$150,390,028	
GEN-2015-036			
GEN-2015-036 Interconnection Costs See One-Line Diagram.	Current Study	$2,025,000	$2,025,000
	Current Study Total	$2,025,000	
GEN-2015-038			
GEN-2015-038 Interconnection Costs See One-Line Diagram.	Current Study	$20,000	$20,000
Mathewson - Northwest 345kV CKT 1 Replace wave trap and line switch	Current Study	$16,623	$250,000
DeGrasse 345/138kV Project Per 2016 ITPNT: NTC 200391. DeGrasse 345kV Substation and 345/138kV transformer. (Total Project E&C Cost Shown)	Previously Allocated		$30,500,000
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
	Current Study Total	$36,623	
GEN-2015-039			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$1,847,119	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$1,960,979	$95,000,000
Carlisle - LP-Doud 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 3 miles of 115kV from Carlisle - LP Doud	Current Study	$24,878	$2,100,000
Crawfish Draw - Seminole 765kV CKT 1 Build approixamately 325 miles of 765kV from Crawfish Draw to Seminole	Current Study	$29,293,062	$975,000,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$41,396	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$47,498	$5,000,000
Crawfish Draw 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Crawfish Draw	Current Study	$901,329	$30,000,000
Crawfish Draw 765kV Substation Expansion Expand the planned Crawfish Draw 345kV Substation for new 765kV switchyard	Current Study	$1,201,771	$40,000,000
Eddy County 230/115/13kV CKT 3 NRIS only required upgrade: Build third 230/115/13kV 300MVA Transformer	Current Study	$230,219	$6,000,000
GEN-2014-074 Tap 345kV Reactive Power Support Intall +300Mvar SVC at GEN-2014-074 Tap	Current Study	$503,694	$25,000,000
GEN-2015-039 Interconnection Costs See One-Line Diagram.	Current Study	$9,114,879	$9,114,879
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$3,264,113	$106,737,500
Hereford Capacitor Bank 25Mvar capacitor bank required for stability anlaysis	Current Study	$20,148	$1,000,000
Jones - Lubbock Holly 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$32,681	$500,000
LP-Doud - SP-Wolf 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 1.4 miles of 115kV	Current Study	$11,846	$1,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$192,705	$4,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$805,910	$40,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$3,374,138	$88,172,500
Seminole 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Seminole	Current Study	$901,329	$30,000,000
Seminole 765kV Substation Expansion Expand the existing Seminole Substation for new 765kV switchyard	Current Study	$1,201,771	$40,000,000
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.	Current Study	$6,617,936	$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$1,853,051	$156,000,000
Tolk 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Tolk	Current Study	$1,000,441	$15,000,000
Wadsworth 230/69/13kV CKT 2 NRIS only required upgrade: Install second Wadsworth 230/69/13kV Transformer	Current Study	$201,485	$4,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Crawfish Draw Substation Upgrade 345/230kV Tap Border-TUCO approximately 2 miles from TUCO and build Crawfish Draw 345kV substation and add 345/230/13.2kV transformer and tie on TUCO-Swisher 230kV.	Previously Allocated		$24,764,205
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Oklaunion 345kV Reactive Power Install (2)-130Mvar Capacitor Bank(s) at Oklaunion	Previously Allocated		$10,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$64,644,375	
GEN-2015-040			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$1,478,572	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$1,755,723	$95,000,000
Crawfish Draw - Seminole 765kV CKT 1 Build approixamately 325 miles of 765kV from Crawfish Draw to Seminole	Current Study	$37,193,351	$975,000,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$11,556	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$334,590	$5,000,000
Crawfish Draw 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Crawfish Draw	Current Study	$1,144,415	$30,000,000
Crawfish Draw 765kV Substation Expansion Expand the planned Crawfish Draw 345kV Substation for new 765kV switchyard	Current Study	$1,525,887	$40,000,000
GEN-2014-074 Tap 345kV Reactive Power Support Intall +300Mvar SVC at GEN-2014-074 Tap	Current Study	$991,193	$25,000,000
GEN-2015-040 Interconnection Costs See One-Line Diagram.	Current Study	$1,112,116	$1,112,116

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$975,841	$106,737,500
Hereford Capacitor Bank 25Mvar capacitor bank required for stability anlaysis	Current Study	$39,648	$1,000,000
Jones - Lubbock Holly 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$33,511	$500,000
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$197,601	$4,000,000
Mustang 230/115/13.2KV Transformer CKT 2 NRIS only required upgrade: Build second Mustang 230/115 Transformer	Current Study	$6,000,000	$6,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$1,585,908	$40,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$1,984,838	$88,172,500
Seminole 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Seminole	Current Study	$1,144,415	$30,000,000
Seminole 765kV Substation Expansion Expand the existing Seminole Substation for new 765kV switchyard	Current Study	$1,525,887	$40,000,000
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.	Current Study	$3,542,491	$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$7,046,701	$156,000,000
Tolk 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Tolk	Current Study	$580,311	$15,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Crawfish Draw Substation Upgrade 345/230kV Tap Border-TUCO approximately 2 miles from TUCO and build Crawfish Draw 345kV substation and add 345/230/13.2kV transformer and tie on TUCO-Swisher 230kV.	Previously Allocated		$24,764,205
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Mustang - Seminole 115kV CKT 1 Build new 115kV from Mustang - Seminole 115kV per SPP-NTC-200407	Previously Allocated		$20,136,042
Oklaunion 345kV Reactive Power Install (2)-130Mvar Capacitor Bank(s) at Oklaunion	Previously Allocated		$10,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Seminole 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace existing Seminole Interchange Transformer CKT 1 per SPP-NTC-200395	Previously Allocated		$3,621,405
Seminole 230/115/13kV Transformer CKT 2 NRIS only required upgrade: Replace existing Seminole Interchange Transformer CKT 2 per SPP-NTC-200395	Previously Allocated		$3,621,405
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
Yoakum County 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace existing Yoakum Interchange 230/115kV Transformer CKT 1 per SPP-NTC-200262	Previously Allocated		$3,632,101
Yoakum County 230/115/13kV Transformer CKT 2 NRIS only required upgrade: Replace existing Yoakum Interchange 230/115kV Transformer CKT 2 per SPP-NTC-200262	Previously Allocated		$3,432,506
	Current Study Total	$70,204,554	
GEN-2015-041			
Carlisle - LP-Doud 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 3 miles of 115kV from Carlisle - LP Doud	Current Study	$5,262	$2,100,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Eddy County 230/115/13kV CKT 3 NRIS only required upgrade: Build third 230/115/13kV 300MVA Transformer	Current Study	$20,679	$6,000,000
GEN-2015-041 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
Jones - Lubbock Holly 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$3,224	$500,000
LP-Doud - SP-Wolf 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 1.4 miles of 115kV	Current Study	$2,506	$1,000,000
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$19,011	$4,000,000
Carlisle 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace transformer assigned in SPP-2014-AG1-AFS-6 per SPP-NTC-200359	Previously Allocated		$3,853,326
	Current Study Total	$50,682	
GEN-2015-078			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$1,483,090	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$1,759,025	$95,000,000
Crawfish Draw - Seminole 765kV CKT 1 Build approixamately 325 miles of 765kV from Crawfish Draw to Seminole	Current Study	$37,097,053	$975,000,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$21,846	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$306,247	$5,000,000
Crawfish Draw 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Crawfish Draw	Current Study	$1,141,421	$30,000,000
Crawfish Draw 765kV Substation Expansion Expand the planned Crawfish Draw 345kV Substation for new 765kV switchyard	Current Study	$1,521,895	$40,000,000
Denver - ShellC2 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 3.3 miles of 115kV	Current Study	$2,225,000	$2,225,000
Denver South - San Andres Tap 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 1.5 miles of 115kV	Current Study	$1,125,000	$1,125,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2014-074 Tap 345kV Reactive Power Support Intall +300Mvar SVC at GEN-2014-074 Tap	Current Study	$985,252	$25,000,000
GEN-2015-078 Interconnection Costs See One-Line Diagram.	Current Study	$3,107,988	$3,107,988
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$1,004,758	$106,737,500
Hereford Capacitor Bank 25Mvar capacitor bank required for stability anlaysis	Current Study	$39,410	$1,000,000
Jones - Lubbock Holly 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$33,467	$500,000
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$197,254	$4,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$1,576,403	$40,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$2,003,216	$88,172,500
San Andres Tap - Seminole 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 17.5 miles of 115kV	Current Study	$13,125,000	$13,125,000
Seminole 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Seminole	Current Study	$1,141,421	$30,000,000
Seminole 765kV Substation Expansion Expand the existing Seminole Substation for new 765kV switchyard	Current Study	$1,521,895	$40,000,000
ShellC2 - ShellC2 Tap 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 2.1 miles of 115kV	Current Study	$1,575,000	$1,575,000
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.	Current Study	$3,681,606	$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$7,069,670	$156,000,000
Tolk 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Tolk	Current Study	$566,610	$15,000,000
Wadsworth 230/69/13kV CKT 2 NRIS only required upgrade: Install second Wadsworth 230/69/13kV Transformer	Current Study	$195,719	$4,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Crawfish Draw Substation Upgrade 345/230kV Tap Border-TUCO approximately 2 miles from TUCO and build Crawfish Draw 345kV substation and add 345/230/13.2kV transformer and tie on TUCO-Swisher 230kV.	Previously Allocated		$24,764,205
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Oklaunion 345kV Reactive Power Install (2)-130Mvar Capacitor Bank(s) at Oklaunion	Previously Allocated		$10,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$84,505,245	
GEN-2015-082			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$12,832,899	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$12,244,376	$95,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Bushland - Potter County 230kV CKT 1 Replace line traps at both terminals	Current Study	$27,221	$250,000
Clinton Junction - Elk City 138kV CKT 1 NRIS only rquired upgrade: Rebuild or Reconductor approximately 24 miles of 138kV	Current Study	$4,906,952	$29,200,000
GEN-2015-082 Interconnection Costs See One-Line Diagram.	Current Study	$1,930,000	$1,930,000
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$19,200,461	$106,737,500
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$9,302,780	$88,172,500
Wichita 345/138/13kV Transformer CKT 1 NRIS only required upgrade: Replace existing Wichita transformer CKT 1 to 560/616 MVA	Current Study	$1,790,924	$9,048,819
Wichita 345/138/13kV Transformer CKT 2 NRIS only required upgrade: Replace existing Wichita transformer CKT 2 to 560/616 MVA	Current Study	$1,790,997	$9,048,819
Beaver County 345kV Reactive Power Support Install +100Mvar SVC at Beaver County Substation.	Previously Allocated		$26,264,770
Cleo Corner - Cleo Plant Tap 138kV CKT 1 Replace terminal equipment to at least 1200 amps	Previously Allocated		$61,890
Potter County Interchange 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Potter County	Previously Allocated		$15,000,000
Stevens Co. 345 kV Substation Per SPP-NTC-200343 (Total Project E&C Cost Shown).	Previously Allocated		$13,831,957
Tatonga - Mathewson 345kV CKT 2 Build second 345kV circuit from Tatonga - Matthewson @ 3000 amps per ITP10.	Previously Allocated		$104,260,473
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
Woodward - GEN-2011-051 Tap - Tatonga 345kV CKT 2 Build second 345kV circuit from Woodward - Tatonga @ 3000 amps per ITP10.	Previously Allocated		$71,876,622
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$64,026,610	

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2015-089			
Belden - Hartington 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 12 miles of 115kV	Current Study	$8,400,000	$8,400,000
Eagle - Pahoja 230kV CKT 1 NRIS only required upgrade: Rebuild terminal equipment	Current Study	$500,000	$500,000
Fort Randall - Sioux City 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$200,000	$200,000
Gavins Point - Hartington 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 20 miles of 115kV	Current Study	$14,000,000	$14,000,000
GEN-2015-089 Interconnection Costs See One-Line Diagram.	Current Study	$2,000,000	$2,000,000
Meadow Grove - Kelly 230kV CKT 1 Upgrade conductor clearance to 100°C for 478MVA rating	Current Study	$2,462,476	$3,600,000
Meadow Grove 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Build 230/115/13kV transformer and 115kV yard	Current Study	$7,729,437	$11,300,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Napa Junction - Utica 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 13 miles of 115kV	Current Study	$4,322,500	$4,322,500
Napa Junction - Yankton Junction 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 2.7 miles of 115kV	Current Study	$832,000	$832,000
Northwestern Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Pahoja - Sioux Falls 230kV CKT 1 NRIS only required upgrade: Rebuild approximately 20 miles of 230kV	Current Study	$14,000,000	$14,000,000
Plymouth - Sioux City 161kV CKT 1 NRIS only required upgrade: Rebuild approximately 2 miles of 115kV	Current Study	$2,000,000	$2,000,000
Rasmussen - Sioux City 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment and increase conductor clearance	Current Study	$5,000,000	$5,000,000
Sioux City 230/161/13kV Transformer CKT 1 NRIS only required upgrade: Replace existing Sioux City Interchange 230/161kV Transformer CKT 1	Current Study	$3,000,000	$3,000,000
Sioux City 230/161/13kV Transformer CKT 2 NRIS only required upgrade: Replace existing Sioux City Interchange 230/161kV Transformer CKT 2	Current Study	$3,000,000	$3,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Albion - Petersburg - North Petersburg 115kV CKT 1 Reconductor 115kV lines and replace all terminal equipment for at least a 193MVA rate.	Previously Allocated		$3,500,000
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000
Hoskins - Dixon County - Twin Church 230kV Rerate per NPPD Facility Study	Previously Allocated		$500,000
Thedford 345/115kV Transformer CKT 1 Install Thedford 345/115kV transformer per SPP-NTC-200277 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
	Current Study Total	$67,446,413	
GEN-2015-095			
GEN-2015-095 Interconnection Costs See One-Line Diagram.	Current Study	$942,900	$942,900
Mathewson - Northwest 345kV CKT 1 Replace wave trap and line switch	Current Study	$9,843	$250,000
Cleo Corner - Cleo Plant Tap 138kV CKT 1 Replace terminal equipment to at least 1200 amps	Previously Allocated		$61,890
DeGrasse 345/138kV Project Per 2016 ITPNT: NTC 200391. DeGrasse 345kV Substation and 345/138kV transformer. (Total Project E&C Cost Shown)	Previously Allocated		$30,500,000
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$952,743	
GEN-2016-001			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$14,593,607	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$12,442,493	$95,000,000
Bushland - Potter County 230kV CKT 1 Replace line traps at both terminals	Current Study	$33,571	$250,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-001 Interconnection Costs See One-Line Diagram.	Current Study	$15,975,000	$15,975,000
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$19,511,130	$106,737,500
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$10,385,212	$88,172,500
Beaver County 345kV Reactive Power Support Install +100Mvar SVC at Beaver County Substation.	Previously Allocated		$26,264,770
Cleo Corner - Cleo Plant Tap 138kV CKT 1 Replace terminal equipment to at least 1200 amps	Previously Allocated		$61,890
Potter County Interchange 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Potter County	Previously Allocated		$15,000,000
Stevens Co. 345 kV Substation Per SPP-NTC-200343 (Total Project E&C Cost Shown).	Previously Allocated		$13,831,957
Tatonga - Mathewson 345kV CKT 2 Build second 345kV circuit from Tatonga - Matthewson @ 3000 amps per ITP10.	Previously Allocated		$104,260,473
Woodward - GEN-2011-051 Tap - Tatonga 345kV CKT 2 Build second 345kV circuit from Woodward - Tatonga @ 3000 amps per ITP10.	Previously Allocated		$71,876,622
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$72,941,014	
GEN-2016-002			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$2,685,026	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$2,751,425	$95,000,000
Carlisle - LP-Doud 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 3 miles of 115kV from Carlisle - LP Doud	Current Study	$64,659	$2,100,000
Cox Interchange - Hale County 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 20 miles of 115kV from Hale Co to Cox Co	Current Study	$15,000,000	$15,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Crawfish Draw - Seminole 765kV CKT 1 Build approixamately 325 miles of 765kV from Crawfish Draw to Seminole	Current Study	$43,856,800	$975,000,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$114,251	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$35,703	$5,000,000
Crawfish Draw 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Crawfish Draw	Current Study	$1,349,445	$30,000,000
Crawfish Draw 765kV Substation Expansion Expand the planned Crawfish Draw 345kV Substation for new 765kV switchyard	Current Study	$1,799,260	$40,000,000
Eddy County 230/115/13kV CKT 3 NRIS only required upgrade: Build third 230/115/13kV 300MVA Transformer	Current Study	$333,186	$6,000,000
GEN-2014-074 Tap 345kV Reactive Power Support Intall +300Mvar SVC at GEN-2014-074 Tap	Current Study	$773,889	$25,000,000
GEN-2016-002 Interconnection Costs See One-Line Diagram.	Current Study	$7,557,984	$7,557,984
GEN-2016-002 Interconnection Facilities Upgrade Unstable results identified in the transient stability analysis	Current Study	$TBD	$TBD
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$4,271,172	$106,737,500
Harrington West - Potter County 230kV CKT 1 Rebuild approximately 11 miles of 230kV	Current Study	$408,176	$8,800,000
Hereford Capacitor Bank 25Mvar capacitor bank required for stability anlaysis	Current Study	$30,956	$1,000,000
Jones - Lubbock Holly 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$47,477	$500,000
LP-Doud - SP-Wolf 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 1.4 miles of 115kV	Current Study	$30,790	$1,000,000
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$279,822	$4,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$1,238,222	$40,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$4,569,917	$88,172,500
Seminole 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Seminole	Current Study	$1,349,445	$30,000,000
Seminole 765kV Substation Expansion Expand the existing Seminole Substation for new 765kV switchyard	Current Study	$1,799,260	$40,000,000
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.	Current Study	$5,372,335	$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$656,436	$156,000,000
Tolk 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Tolk	Current Study	$749,737	$15,000,000
Wadsworth 230/69/13kV CKT 2 NRIS only required upgrade: Install second Wadsworth 230/69/13kV Transformer	Current Study	$314,349	$4,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Carlisle 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace transformer assigned in SPP-2014-AG1-AFS-6 per SPP-NTC-200359	Previously Allocated		$3,853,326
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Crawfish Draw Substation Upgrade 345/230kV Tap Border-TUCO approximately 2 miles from TUCO and build Crawfish Draw 345kV substation and add 345/230/13.2kV transformer and tie on TUCO-Swisher 230kV.	Previously Allocated		$24,764,205
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Harrington East - Potter County 230kV CKT 1 Upgrade terminal equipment per SPP-NTC-200395	Previously Allocated		$914,347

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Mustang - Seminole 115kV CKT 1 Build new 115kV from Mustang - Seminole 115kV per SPP-NTC-200407	Previously Allocated		$20,136,042
Oklaunion 345kV Reactive Power Install (2)-130Mvar Capacitor Bank(s) at Oklaunion	Previously Allocated		$10,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$97,439,726	
GEN-2016-003			
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$8,149,612	$95,000,000
Clinton Junction - Elk City 138kV CKT 1 NRIS only rquired upgrade: Rebuild or Reconductor approximately 24 miles of 138kV	Current Study	$6,801,571	$29,200,000
DeGrasse - Rose Valley 138kV CKT 1 NRIS only required upgrade: Replace terminal equipment and reconductor 1.3 miles of 138kV	Current Study	$1,800,000	$1,800,000
GEN-2016-003 Interconnection Costs See One-Line Diagram.	Current Study	$15,925,000	$15,925,000
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$12,779,444	$106,737,500
Mathewson - Northwest 345kV CKT 1 Replace wave trap and line switch	Current Study	$17,615	$250,000
Wichita 345/138/13kV Transformer CKT 1 NRIS only required upgrade: Replace existing Wichita transformer CKT 1 to 560/616 MVA	Current Study	$2,397,244	$9,048,819
Wichita 345/138/13kV Transformer CKT 2 NRIS only required upgrade: Replace existing Wichita transformer CKT 2 to 560/616 MVA	Current Study	$2,396,840	$9,048,819
Bucker - Spearville 345V CKT 1 Replace Terminal equipment	Previously Allocated		$1,480,238

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Cleo Corner - Cleo Plant Tap 138kV CKT 1 Replace terminal equipment to at least 1200 amps	Previously Allocated		$61,890
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$50,267,326	
GEN-2016-004			
Bismark - Hilken 230kV CKT 1 Rebuild approximately 22 miles of second 230kV	Current Study	$2,361,896	$3,600,000
Broadland - Split Rock 345kV CKT 1 Build approximately 110 miles of second 345kV	Current Study	$33,111,605	$150,000,000
Fargo - Sheynne 230kV CKT 1 NRIS only required upgrade: Rebuild approximately 4 miles of 230kV	Current Study	$1,065,211	$3,000,000
GEN-2009-001IS - Groton 345kV CKT 1 Replace terminal equipment	Current Study	$96,903	$500,000
GEN-2009-001IS - Watertown 345kV CKT 1 Replace terminal equipment	Current Study	$96,903	$500,000
GEN-2013-001 - Summit 115kV CKT 1 Replace terminal equipment	Current Study	$3,894	$50,000
GEN-2016-004 Interconnection Costs See One-Line Diagram.	Current Study	$2,871,212	$2,871,212
GEN-2016-044 Tap - Groton 345kV CKT 2 Build approximately 110 miles of second 345kV	Current Study	$17,324,918	$100,000,000
Glenham - Mound City 230kV CKT 1 Uprate CT	Current Study	$50,000	$50,000
Grand Island - Grand Praire 345kV CKT 1 NRIS only required upgrade: terminal equipment and conductor clearance increase	Current Study	$49,864	$1,000,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Split Rock - White 345kV CKT 1 Replace terminal equipment and increaes conductor clearance	Current Study	$156,488	$750,000
Watertown - White 345kV CKT 1 Uprate CT	Current Study	$11,032	$50,000
Watertown 345/230/13kV Transformer CKT 1 Replace transformer	Current Study	$548,772	$5,600,000
Dickinson 230/115/13.8kV CKT 2 Build new 230/115/13.8kV Transformer circuit #2 at Dickinson.	Previously Allocated		$3,500,000
Neset 230kV Terminal Upgrade(s) Install necessary terminal equInstall necessary terminal upgrades at Neset 230kV to accommodate new 230kV line from new Tande substation	Previously Allocated		$4,000,000
Tande 345/230 Substation Construct new 345kV Tande Substation & Tande 345/230/13kV transformer Construct new 345kV Tande Substation adjacent to the existing 230kV Neset Substation and	Previously Allocated		$18,000,000
	Current Study Total	$57,748,698	
GEN-2016-005			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$9,613,854	$150,000,000
GEN-2016-005 Interconnection Costs See One-Line Diagram.	Current Study	$8,614,897	$8,614,897
Knoll - Post Rock 230kV CKT 2 Build second 230kV circuit between Knoll - Post Rock	Current Study	$193,221	$3,306,000
	Current Study Total	$18,421,971	
GEN-2016-007			
Fargo - Sheynne 230kV CKT 1 NRIS only required upgrade: Rebuild approximately 4 miles of 230kV	Current Study	$1,934,789	$3,000,000
GEN-2013-001 - Summit 115kV CKT 1 Replace terminal equipment	Current Study	$1,853	$50,000
GEN-2016-007 Interconnection Costs See One-Line Diagram.	Current Study	$1,100,000	$1,100,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Split Rock - White 345kV CKT 1 Replace terminal equipment and increaes conductor clearance	Current Study	$57,342	$750,000
Watertown - White 345kV CKT 1 Uprate CT	Current Study	$1,852	$50,000
	Current Study Total	$3,095,836	
GEN-2016-008			
Cleveland - Cleveland 138kV CKT Z1 NRIS only rquired upgrade: Replace bus tie breaker with a three breaker ring	Current Study	$43,386	$1,200,000
Clinton Junction - Elk City 138kV CKT 1 NRIS only rquired upgrade: Rebuild or Reconductor approximately 24 miles of 138kV	Current Study	$3,123,895	$29,200,000
GEN-2016-008 Interconnection Costs See One-Line Diagram.	Current Study	$4,850,000	$4,850,000
GEN-2016-008 Interconnection Facilities Upgrade Frequence protection to mitigate unstable results identified in the transient stability analysis	Current Study	$TBD	$TBD
Tupelo - Tupleo Tap 138kV CKT 1 NRIS only required upgrade: Build approximately 1.3 miles of circuit 138kV from Tupelo to Tupelo Tap and replace CT	Current Study	$59,952	$757,500
Chisholm - Gracemont 345kV CKT 1 Per SPP-NTC-200255 and 200240 (Total Project E&C Cost Shown)	Previously Allocated		$162,952,357
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Cornville Tap - Naples Tap 138kV CKT 1 Rebuild approximately 11 miles of 138kV from Cornville Tap to Naples Tap	Previously Allocated		$7,700,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Harrington East - Potter County 230kV CKT 1 Upgrade terminal equipment per SPP-NTC-200395	Previously Allocated		$914,347
Naples Tap - Payne 138kV CKT 1 Rebuild approximately 8 miles of 138kV from Naples Tap to Payne	Previously Allocated		$5,600,000
Norge - Southwest Station 138kV CKT 1 Rebuild approximately 23 miles of 138kV from Norge to Southwest Station	Previously Allocated		$23,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$8,077,232	
GEN-2016-009			
GEN-2016-009 Interconnection Costs See One-Line Diagram.	Current Study	$956,218	$956,218
	Current Study Total	$956,218	
GEN-2016-012			
Cleveland - Tulsa 345kV CKT 1 Replace terminal equipment	Current Study	$2,701	$500,000
GEN-2016-012 Interconnection Costs See One-Line Diagram.	Current Study	$11,823,344	$11,823,344
GEN-2016-012 Tap - LaCygne 345kV CKT 1 Rebuild approximately 31 miles of 345kV from GEN-2016-012 Tap - LaCyne	Current Study	$15,746,430	$31,600,000
GEN-2016-012 Tap - Waverly Tap 345kV CKT 1 Replace terminal equipment	Current Study	$249,152	$500,000
Neosho - Riverton 161kV CKT 1 Rebuild approximately 28 miles of 161kV	Current Study	$4,867,001	$23,000,000
Wolf Creek - Neosho 345kV CKT 1 Build approximately 95 miles of new 345kV	Current Study	$50,458,207	$117,126,900
Wolf Creek Generation Plant Studies and Agreements Please refer to Appendix K	Current Study	$TBD	$TBD
Cleveland - Silver City 138kV CKT 1 AECI Affected System Study is required	Previously Allocated		$790,900
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
	Current Study Total	$83,146,835	
GEN-2016-013			
GEN-2016-013 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-013 Interconnection Facilities Upgrade Reset relay settings at La Russell 161kV	Current Study	$0	$0
Litchfield - Asbury 161kV CKT 1 NRIS only required upgrade:Rebuild approximately 6.8 miles of 161kV	Current Study	$2,750,000	$5,500,000
Neosho - Riverton 161kV CKT 1 Rebuild approximately 28 miles of 161kV	Current Study	$944,351	$23,000,000
	Current Study Total	$3,694,351	
GEN-2016-014			
GEN-2016-014 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
GEN-2016-014 Interconnection Facilities Upgrade Reset relay settings at La Russell 161kV	Current Study	$0	$0
Litchfield - Asbury 161kV CKT 1 NRIS only required upgrade:Rebuild approximately 6.8 miles of 161kV	Current Study	$2,750,000	$5,500,000
Neosho - Riverton 161kV CKT 1 Rebuild approximately 28 miles of 161kV	Current Study	$944,351	$23,000,000
	Current Study Total	$3,694,351	
GEN-2016-015			
Andrews - National Enrichment Plant 115 kV CKT 2 Build 2 miles of second 115kV circuit	Current Study	$427,716	$1,500,000
Andrews 345/115/13kV Transformer CKT 1 Replace 230/115kV transformer CKT 1 with 345/115kV transformer	Current Study	$2,281,152	$8,000,000
Andrews 345/115/13kV Transformer CKT 2 Replace 230/115kV transformer CKT 2 with 345/115kV transformer	Current Study	$2,281,152	$8,000,000
Andrews Substation Voltage Conversion Convert Andrews 230kV to 345kV	Current Study	$2,851,440	$10,000,000
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$2,987,310	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$3,546,738	$95,000,000
Crawfish Draw - Seminole 765kV CKT 1 Build approixamately 325 miles of 765kV from Crawfish Draw to Seminole	Current Study	$73,515,914	$975,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$16,637	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$608,589	$5,000,000
Crawfish Draw 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Crawfish Draw	Current Study	$2,261,975	$30,000,000
Crawfish Draw 765kV Substation Expansion Expand the planned Crawfish Draw 345kV Substation for new 765kV switchyard	Current Study	$3,015,966	$40,000,000
Drinkard - Drinkard Tap 115kV CKT 1 Rebuild approximately 2 miles from Drinkard to Drinkard Tap	Current Study	$427,716	$1,500,000
Drinkard Tap - Weest Hobbs 115kV CKT 1 Rebuild approximately 12.5 miles from Drinkard Tap to West Hobbs	Current Study	$2,673,225	$9,375,000
GEN-2014-074 Tap 345kV Reactive Power Support Intall +300Mvar SVC at GEN-2014-074 Tap	Current Study	$1,933,575	$25,000,000
GEN-2016-015 Interconnection Costs See One-Line Diagram.	Current Study	$6,454,408	$6,454,408
GEN-2016-015 Interconnection Facilities Upgrade Over frequence and voltage protection to mitigate unstable results identified in the transient stability analysis	Current Study	$TBD	$TBD
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$2,206,227	$106,737,500
Hereford Capacitor Bank 25Mvar capacitor bank required for stability anlaysis	Current Study	$77,343	$1,000,000
National Enrichment Plant - Drinkard 115kV CKT 1 Rebuild approximately 7.5 miles from NEF Plant to Drinkard	Current Study	$1,603,935	$5,625,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$3,093,721	$40,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$4,134,620	$88,172,500
Seminole 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Seminole	Current Study	$2,261,975	$30,000,000
Seminole 765kV Substation Expansion Expand the existing Seminole Substation for new 765kV switchyard	Current Study	$3,015,966	$40,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.	Current Study	$8,240,875	$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$15,207,169	$156,000,000
Tolk 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Tolk	Current Study	$768,570	$15,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Crawfish Draw Substation Upgrade 345/230kV Tap Border-TUCO approximately 2 miles from TUCO and build Crawfish Draw 345kV substation and add 345/230/13.2kV transformer and tie on TUCO-Swisher 230kV.	Previously Allocated		$24,764,205
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
National Enrichment Plant-Targa 115kV CKT 1 Rebuild approximately 4 miles of 115kV from National Enrichment Plant to Targa per 2015 ITPNT.	Previously Allocated		$2,909,669
Oklaunion 345kV Reactive Power Install (2)-130Mvar Capacitor Bank(s) at Oklaunion	Previously Allocated		$10,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
South Jal - Teague 115kV CKT 1 Rebuild approximately 10 miles from Jal to Teague assigned in SPP-2014-AG1-AFS-6 per SPP-NTC-200365	Previously Allocated		$6,640,592
Targa-Cardinal 115kV CKT 1 Rebuild approximately 3 miles of 115kV from Targa to Cardinal per 2015 ITPNT.	Previously Allocated		$2,049,062

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Teague - National Enrichment Plant 115kV CKT 1 Rebuild approximately 7 miles from Teague to NEF assigned in SPP-2014-AG1-AFS-6 per SPP-NTC-200365	Previously Allocated		$4,915,370
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$145,893,912	
GEN-2016-016			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$2,109,731	$150,000,000
GEN-2016-016 Interconnection Costs See One-Line Diagram.	Current Study	$4,000,000	$4,000,000
Kinsley - Pawnee 115kV CKT 1 Increase conductor clearance	Current Study	$125,000	$125,000
Knoll - Post Rock 230kV CKT 2 Build second 230kV circuit between Knoll - Post Rock	Current Study	$26,409	$3,306,000
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$6,261,140	
GEN-2016-017			
Broadland - Split Rock 345kV CKT 1 Build approximately 110 miles of second 345kV	Current Study	$31,590,223	$150,000,000
Broadland 345/230/13kV Transformer CKT 2 Install second Broadland 345/230/13kV transformer	Current Study	$14,943,351	$15,000,000
GEN-2016-017 Interconnection Costs See One-Line Diagram.	Current Study	$19,264,793	$19,264,793
Grand Island - Grand Praire 345kV CKT 1 NRIS only required upgrade: terminal equipment and conductor clearance increase	Current Study	$480,812	$1,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Split Rock - White 345kV CKT 1 Replace terminal equipment and increaes conductor clearance	Current Study	$98,727	$750,000
Daglum - Dickinson 230kV CKT 1 Build new 230kV line from Daglum - Dickinson.	Previously Allocated		$28,000,000
Dickinson 230/115/13.8kV CKT 2 Build new 230/115/13.8kV Transformer circuit #2 at Dickinson.	Previously Allocated		$3,500,000
	Current Study Total	$66,377,907	
GEN-2016-020			
Bearcat - Mooreland 138kV CKT 1 Replace Mooreland switch to at least 1200A	Current Study	$25,000	$25,000
Clinton Junction - Elk City 138kV CKT 1 NRIS only rquired upgrade: Rebuild or Reconductor approximately 24 miles of 138kV	Current Study	$5,796,423	$29,200,000
GEN-2016-020 Interconnection Costs See One-Line Diagram.	Current Study	$2,000,000	$2,000,000
Mathewson - Northwest 345kV CKT 1 Replace wave trap and line switch	Current Study	$7,869	$250,000
Tupelo - Tupleo Tap 138kV CKT 1 NRIS only required upgrade: Build approximately 1.3 miles of circuit 138kV from Tupelo to Tupelo Tap and replace CT	Current Study	$303,389	$757,500
Cleo Corner - Cleo Plant Tap 138kV CKT 1 Replace terminal equipment to at least 1200 amps	Previously Allocated		$61,890
DeGrasse 345/138kV Project Per 2016 ITPNT: NTC 200391. DeGrasse 345kV Substation and 345/138kV transformer. (Total Project E&C Cost Shown)	Previously Allocated		$30,500,000
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$8,132,681	

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-021			
Columbus East 230/115/13kV CKT 1 NRIS only required upgrade: Replace existing Columbus Transformer CKT 1	Current Study	$10,000,000	$10,000,000
GEN-2016-021 Interconnection Costs See One-Line Diagram.	Current Study	$1,000,000	$1,000,000
Grand Island - Grand Praire 345kV CKT 1 NRIS only required upgrade: terminal equipment and conductor clearance increase	Current Study	$35,555	$1,000,000
Meadow Grove - Kelly 230kV CKT 1 Upgrade conductor clearance to 100°C for 478MVA rating	Current Study	$1,137,524	$3,600,000
Meadow Grove 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Build 230/115/13kV transformer and 115kV yard	Current Study	$3,570,563	$11,300,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Albion - Petersburg - North Petersburg 115kV CKT 1 Reconductor 115kV lines and replace all terminal equipment for at least a 193MVA rate.	Previously Allocated		$3,500,000
Gavins Point - Yankton Junction 115kV CKT 1 Rebuild approximately 5 miles of 115kV from Gavins to Yankton	Previously Allocated		$5,000,000
Thedford 345/115kV Transformer CKT 1 Install Thedford 345/115kV transformer per SPP-NTC-200277 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$15,743,643	
GEN-2016-022			
Cleveland - Tulsa 345kV CKT 1 Replace terminal equipment	Current Study	$63,247	$500,000
GEN-2016-012 Tap - LaCygne 345kV CKT 1 Rebuild approximately 31 miles of 345kV from GEN-2016-012 Tap - LaCyne	Current Study	$1,729,241	$31,600,000
GEN-2016-012 Tap - Waverly Tap 345kV CKT 1 Replace terminal equipment	Current Study	$27,361	$500,000
GEN-2016-022 Interconnection Costs See One-Line Diagram.	Current Study	$4,450,650	$4,450,650
Neosho - Riverton 161kV CKT 1 Rebuild approximately 28 miles of 161kV	Current Study	$1,624,518	$23,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Wolf Creek - Neosho 345kV CKT 1 Build approximately 95 miles of new 345kV	Current Study	$6,556,740	$117,126,900
Cleveland - Silver City 138kV CKT 1 AECI Affected System Study is required	Previously Allocated		$790,900
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
	Current Study Total	$14,451,758	
GEN-2016-023			
Banner County - Keystone 345kV CKT 1 Build approximately 140 of new 345kV from Banner County to Keystone	Current Study	$66,888,285	$175,000,000
BEPC Laramie Stability Limit Potential mitigation for BEPC Laramie Stability Limit	Current Study	$TBD	$TBD
GEN-2016-023 Interconnection Costs See One-Line Diagram.	Current Study	$9,632,397	$9,632,397
Gerald Gentleman Station Flowgate Stability Limit Mitigation Potential Mitigation for GGS Flowgate Stability Limit. TBD in the Facilities Study with NPPD.	Current Study	$TBD	$TBD
Keystone - Gentleman 345kV CKT 2 Build approximately 30 miles of new 345kV	Current Study	$14,333,204	$37,500,000
Pauline - Rosemont 115kV CKT 1 Rebuild approximately 10.6 miles of 115kV	Current Study	$80,949	$7,000,000
Pauline - Rosemont 115kV CKT 2 Build approximately 10.6 miles of second circuit 115kV	Current Study	$80,949	$7,000,000
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Thedford - Holt County 345kV CKT 1 Build approximately 146 Miles of 345kV from Thedford to Holt County per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Thedford 345/115kV Transformer CKT 1 Install Thedford 345/115kV transformer per SPP-NTC-200277 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$91,015,785	
GEN-2016-024			
Altoona - Bulter 138kV CKT 1 NRIS only required upgrade: Rebuild approximately 70.6 miles of 138kV	Current Study	$74,810,342	$74,810,342
Cleveland - Tulsa 345kV CKT 1 Replace terminal equipment	Current Study	$6,962	$500,000
GEN-2016-012 Tap - LaCygne 345kV CKT 1 Rebuild approximately 31 miles of 345kV from GEN-2016-012 Tap - LaCyne	Current Study	$800,693	$31,600,000
GEN-2016-012 Tap - Waverly Tap 345kV CKT 1 Replace terminal equipment	Current Study	$12,669	$500,000
GEN-2016-024 Interconnection Costs See One-Line Diagram.	Current Study	$1,784,502	$1,784,502
Neosho - Riverton 161kV CKT 1 Rebuild approximately 28 miles of 161kV	Current Study	$1,269,173	$23,000,000
Wolf Creek - Neosho 345kV CKT 1 Build approximately 95 miles of new 345kV	Current Study	$4,767,170	$117,126,900
Cleveland - Silver City 138kV CKT 1 AECI Affected System Study is required	Previously Allocated		$790,900
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
	Current Study Total	$83,451,511	
GEN-2016-028			
GEN-2016-028 Interconnection Costs See One-Line Diagram.	Current Study	$4,000,000	$4,000,000
Hugo - Valliant 138kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$32,312	$150,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
	Current Study Total	$4,032,312	
GEN-2016-029			
Banner County - Keystone 345kV CKT 1 Build approximately 140 of new 345kV from Banner County to Keystone	Current Study	$66,666,065	$175,000,000
BEPC Laramie Stability Limit Potential mitigation for BEPC Laramie Stability Limit	Current Study	$TBD	$TBD
GEN-2016-029 Interconnection Costs See One-Line Diagram.	Current Study	$9,632,397	$9,632,397
Gerald Gentleman Station Flowgate Stability Limit Mitigation Potential Mitigation for GGS Flowgate Stability Limit. TBD in the Facilities Study with NPPD.	Current Study	$TBD	$TBD
Keystone - Gentleman 345kV CKT 2 Build approximately 30 miles of new 345kV	Current Study	$14,285,585	$37,500,000
Pauline - Rosemont 115kV CKT 1 Rebuild approximately 10.6 miles of 115kV	Current Study	$80,680	$7,000,000
Pauline - Rosemont 115kV CKT 2 Build approximately 10.6 miles of second circuit 115kV	Current Study	$80,680	$7,000,000
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Thedford - Holt County 345kV CKT 1 Build approximately 146 Miles of 345kV from Thedford to Holt County per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Thedford 345/115kV Transformer CKT 1 Install Thedford 345/115kV transformer per SPP-NTC-200277 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$90,745,408	
GEN-2016-030			
GEN-2016-030 Interconnection Costs See One-Line Diagram.	Current Study	$2,183,000	$2,183,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-030 Interconnection Facilities Upgrade Over frequence protection to mitigate unstable results identified in the transient stability analysis	Current Study	$TBD	$TBD
	Current Study Total	$2,183,000	
GEN-2016-031			
Cleveland - Tulsa 345kV CKT 1 Replace terminal equipment	Current Study	$625	$500,000
GEN-2016-012 Tap - LaCygne 345kV CKT 1 Rebuild approximately 31 miles of 345kV from GEN-2016-012 Tap - LaCyne	Current Study	$17,087	$31,600,000
GEN-2016-012 Tap - Waverly Tap 345kV CKT 1 Replace terminal equipment	Current Study	$270	$500,000
GEN-2016-031 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
Neosho - Riverton 161kV CKT 1 Rebuild approximately 28 miles of 161kV	Current Study	$16,053	$23,000,000
Wolf Creek - Neosho 345kV CKT 1 Build approximately 95 miles of new 345kV	Current Study	$64,790	$117,126,900
Cleveland - Silver City 138kV CKT 1 AECI Affected System Study is required	Previously Allocated		$790,900
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$98,825	
GEN-2016-032			
Cleveland - Tulsa 345kV CKT 1 Replace terminal equipment	Current Study	$42,773	$500,000
GEN-2016-012 Tap - LaCygne 345kV CKT 1 Rebuild approximately 31 miles of 345kV from GEN-2016-012 Tap - LaCyne	Current Study	$1,412,447	$31,600,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-012 Tap - Waverly Tap 345kV CKT 1 Replace terminal equipment	Current Study	$22,349	$500,000
GEN-2016-032 Interconnection Costs See One-Line Diagram.	Current Study	$3,288,799	$3,288,799
Kinze - Stillwater 138kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$55,049	$100,000
Neosho - Riverton 161kV CKT 1 Rebuild approximately 28 miles of 161kV	Current Study	$746,713	$23,000,000
Wolf Creek - Neosho 345kV CKT 1 Build approximately 95 miles of new 345kV	Current Study	$987,369	$117,126,900
Clearwater - Viola 138kV CKT 1 SPP 2013 ITP NT assigneg upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$35,992,903
Cleveland - Silver City 138kV CKT 1 AECI Affected System Study is required	Previously Allocated		$790,900
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$6,555,499	
GEN-2016-034			
Banner County - Keystone 345kV CKT 1 Build approximately 140 of new 345kV from Banner County to Keystone	Current Study	$41,445,649	$175,000,000
BEPC Laramie Stability Limit Potential mitigation for BEPC Laramie Stability Limit	Current Study	$TBD	$TBD
GEN-2016-034 Interconnection Costs See One-Line Diagram.	Current Study	$19,264,793	$19,264,793
Gerald Gentleman Station Flowgate Stability Limit Mitigation Potential Mitigation for GGS Flowgate Stability Limit. TBD in the Facilities Study with NPPD.	Current Study	$TBD	$TBD

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Keystone - Gentleman 345kV CKT 2 Build approximately 30 miles of new 345kV	Current Study	$8,881,211	$37,500,000
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Thedford - Holt County 345kV CKT 1 Build approximately 146 Miles of 345kV from Thedford to Holt County per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Thedford 345/115kV Transformer CKT 1 Install Thedford 345/115kV transformer per SPP-NTC-200277 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$69,591,653	
GEN-2016-037			
Cleveland - Cleveland 138kV CKT Z1 NRIS only rquired upgrade: Replace bus tie breaker with a three breaker ring	Current Study	$1,156,614	$1,200,000
Clinton Junction - Elk City 138kV CKT 1 NRIS only rquired upgrade: Rebuild or Reconductor approximately 24 miles of 138kV	Current Study	$8,571,160	$29,200,000
GEN-2016-037 Interconnection Costs See One-Line Diagram.	Current Study	$18,000,000	$18,000,000
Hugo - Valliant 138kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$117,688	$150,000
Kinze - Stillwater 138kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$25,431	$100,000
Tupelo - Tupleo Tap 138kV CKT 1 NRIS only required upgrade: Build approximately 1.3 miles of circuit 138kV from Tupelo to Tupelo Tap and replace CT	Current Study	$394,159	$757,500
Chisholm - Gracemont 345kV CKT 1 Per SPP-NTC-200255 and 200240 (Total Project E&C Cost Shown)	Previously Allocated		$162,952,357
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Cornville Tap - Naples Tap 138kV CKT 1 Rebuild approximately 11 miles of 138kV from Cornville Tap to Naples Tap	Previously Allocated		$7,700,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Naples Tap - Payne 138kV CKT 1 Rebuild approximately 8 miles of 138kV from Naples Tap to Payne	Previously Allocated		$5,600,000
Norge - Southwest Station 138kV CKT 1 Rebuild approximately 23 miles of 138kV from Norge to Southwest Station	Previously Allocated		$23,000,000
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$28,265,053	
GEN-2016-038			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$14,438,364	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$3,952,173	$95,000,000
Bushland - Potter County 230kV CKT 1 Replace line traps at both terminals	Current Study	$84,236	$250,000
Carlisle - LP-Doud 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 3 miles of 115kV from Carlisle - LP Doud	Current Study	$444,881	$2,100,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$178,809	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$102,841	$5,000,000
East Plant Transformer 230/115/13kV CKT 2 NRIS only required upgrade: Build second 230/115/13kV 250MVA Transformer	Current Study	$3,000,000	$6,000,000
Eddy County 230/115/13kV CKT 3 NRIS only required upgrade: Build third 230/115/13kV 300MVA Transformer	Current Study	$1,491,332	$6,000,000
GEN-2015-079 Tap - Hobbs 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$213,218	$500,000
GEN-2016-038 Interconnection Costs See One-Line Diagram.	Current Study	$1,154,068	$1,154,068

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-038 Interconnection Facilities Upgrade Build second 150 miles of 230kV generator lead or other means to mitigate unstable results identified in the transient stability analysis	Current Study	$TBD	$TBD
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$6,197,421	$106,737,500
Harrington West - Harrington Mid Bus 230kV CKT 1 Upgrade bus ties to soft jumper	Current Study	$75,000	$150,000
Harrington West - Potter County 230kV CKT 1 Rebuild approximately 11 miles of 230kV	Current Study	$3,996,683	$8,800,000
Jones - Lubbock Holly 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$89,234	$500,000
LP-Doud - SP-Wolf 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 1.4 miles of 115kV	Current Study	$211,848	$1,000,000
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$1,052,346	$4,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$3,298,709	$88,172,500
SP-Wolf - Yuma 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 1 mile of 115kV from Wolf - Yuma	Current Study	$313,282	$750,000
Sundown 230/115/13.2KV Transformer CKT 2 NRIS only required upgrade: Build second Sundown 230/115 Transformer	Current Study	$2,475,107	$6,000,000
Tolk 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Tolk	Current Study	$820,968	$15,000,000
Wadsworth 230/69/13kV CKT 2 NRIS only required upgrade: Install second Wadsworth 230/69/13kV Transformer	Current Study	$1,123,276	$4,000,000
Beaver County 345kV Reactive Power Support Install +100Mvar SVC at Beaver County Substation.	Previously Allocated		$26,264,770
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Canyon East - Randall 115kV CKT 1 NRIS only required upgrade: Assigned in SPP-2011-AG3-AFS-11 per SPP-NTC-200369	Previously Allocated		$12,806,065

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Canyon East - Randall 115kV CKT 1 NRIS only required upgrade: Assigned in SPP-2011-AG3-AFS-11 per SPP-NTC-200369	Previously Allocated		$12,806,065
Canyon East Tap - Randall 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$4,804,292
Canyon East Tap - Randall 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$4,804,292
Canyon West - Dawn 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$9,756,809
Carlisle 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace transformer assigned in SPP-2014-AG1-AFS-6 per SPP-NTC-200359	Previously Allocated		$3,853,326
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Cleo Corner - Cleo Plant Tap 138kV CKT 1 Replace terminal equipment to at least 1200 amps	Previously Allocated		$61,890
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Crawfish Draw Substation Upgrade 345/230kV Tap Border-TUCO approximately 2 miles from TUCO and build Crawfish Draw 345kV substation and add 345/230/13.2kV transformer and tie on TUCO-Swisher 230kV.	Previously Allocated		$24,764,205
Dawn - Panda 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$5,901,274
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Harrington East - Potter County 230kV CKT 1 Upgrade terminal equipment per SPP-NTC-200395	Previously Allocated		$914,347
Kress Interchange - Swisher 115kV CKT 1 Replace terminal equipment	Previously Allocated		$500,000
Panda - Deaf Smith 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$3,501,534
Potter County Interchange 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Potter County	Previously Allocated		$15,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Stevens Co. 345 kV Substation Per SPP-NTC-200343 (Total Project E&C Cost Shown).	Previously Allocated		$13,831,957
Tatonga - Mathewson 345kV CKT 2 Build second 345kV circuit from Tatonga - Matthewson @ 3000 amps per ITP10.	Previously Allocated		$104,260,473
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
TUCO Interchange - Yoakum - Hobbs 345/230kV Project Per HPILs SPP-NTC-200283 (Total Project E&C Cost Shown)	Previously Allocated		$241,826,483
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
Wolfforth - Terry County 115kV CKT 1 NRIS only required upgrade: Replace terminal equipment per SPP-NTC-200395	Previously Allocated		$1,461,643
Woodward - GEN-2011-051 Tap - Tatonga 345kV CKT 2 Build second 345kV circuit from Woodward - Tatonga @ 3000 amps per ITP10.	Previously Allocated		$71,876,622
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$44,713,795	
GEN-2016-039			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$3,807,310	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$4,102,174	$95,000,000
Crawfish Draw - Seminole 765kV CKT 1 Build approixamately 325 miles of 765kV from Crawfish Draw to Seminole	Current Study	$72,138,221	$975,000,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$214,475	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$54,845	$5,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Crawfish Draw 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Crawfish Draw	Current Study	$2,219,646	$30,000,000
Crawfish Draw 765kV Substation Expansion Expand the planned Crawfish Draw 345kV Substation for new 765kV switchyard	Current Study	$2,959,528	$40,000,000
GEN-2014-074 Tap 345kV Reactive Power Support Intall +300Mvar SVC at GEN-2014-074 Tap	Current Study	$1,531,600	$25,000,000
GEN-2016-039 Interconnection Costs See One-Line Diagram.	Current Study	$3,991,014	$3,991,014
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$5,063,519	$106,737,500
Harrington West - Potter County 230kV CKT 1 Rebuild approximately 11 miles of 230kV	Current Study	$242,548	$8,800,000
Hereford Capacitor Bank 25Mvar capacitor bank required for stability anlaysis	Current Study	$61,264	$1,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$2,450,560	$40,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$6,119,586	$88,172,500
Seminole 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Seminole	Current Study	$2,219,646	$30,000,000
Seminole 765kV Substation Expansion Expand the existing Seminole Substation for new 765kV switchyard	Current Study	$2,959,528	$40,000,000
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.	Current Study	$7,137,862	$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$5,258,996	$156,000,000
Tolk 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Tolk	Current Study	$1,374,192	$15,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Crawfish Draw Substation Upgrade 345/230kV Tap Border-TUCO approximately 2 miles from TUCO and build Crawfish Draw 345kV substation and add 345/230/13.2kV transformer and tie on TUCO-Swisher 230kV.	Previously Allocated		$24,764,205
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Harrington East - Potter County 230kV CKT 1 Upgrade terminal equipment per SPP-NTC-200395	Previously Allocated		$914,347
Kress Interchange - Swisher 115kV CKT 1 Replace terminal equipment	Previously Allocated		$500,000
Mustang - Seminole 115kV CKT 1 Build new 115kV from Mustang - Seminole 115kV per SPP-NTC-200407	Previously Allocated		$20,136,042
Oklaunion 345kV Reactive Power Install (2)-130Mvar Capacitor Bank(s) at Oklaunion	Previously Allocated		$10,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$123,906,515	
GEN-2016-040			
GEN-2016-040 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
	Current Study Total	$0	

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-041			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$6,229,348	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$6,318,863	$95,000,000
Bushland - Potter County 230kV CKT 1 Replace line traps at both terminals	Current Study	$19,694	$250,000
Carlisle - LP-Doud 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 3 miles of 115kV from Carlisle - LP Doud	Current Study	$175,287	$2,100,000
GEN-2015-079 Tap - Hobbs 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$73,564	$500,000
GEN-2016-041 Interconnection Costs See One-Line Diagram.	Current Study	$317,991	$317,991
GEN-2016-041 Interconnection Facilities Upgrade Over frequence protection to mitigate unstable results identified in the transient stability analysis	Current Study	$TBD	$TBD
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$9,908,637	$106,737,500
LP-Doud - SP-Wolf 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 1.4 miles of 115kV	Current Study	$83,470	$1,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$5,274,082	$88,172,500
SP-Wolf - Yuma 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 1 mile of 115kV from Wolf - Yuma	Current Study	$123,436	$750,000
Sundown 230/115/13.2KV Transformer CKT 2 NRIS only required upgrade: Build second Sundown 230/115 Transformer	Current Study	$860,837	$6,000,000
Beaver County 345kV Reactive Power Support Install +100Mvar SVC at Beaver County Substation.	Previously Allocated		$26,264,770
Canyon East - Randall 115kV CKT 1 NRIS only required upgrade: Assigned in SPP-2011-AG3-AFS-11 per SPP-NTC-200369	Previously Allocated		$12,806,065
Canyon East - Randall 115kV CKT 1 NRIS only required upgrade: Assigned in SPP-2011-AG3-AFS-11 per SPP-NTC-200369	Previously Allocated		$12,806,065
Canyon East Tap - Randall 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$4,804,292

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Canyon East Tap - Randall 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$4,804,292
Canyon West - Dawn 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$9,756,809
Carlisle 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace transformer assigned in SPP-2014-AG1-AFS-6 per SPP-NTC-200359	Previously Allocated		$3,853,326
Cleo Corner - Cleo Plant Tap 138kV CKT 1 Replace terminal equipment to at least 1200 amps	Previously Allocated		$61,890
Crawfish Draw 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Build 115kV yard, re-terminate Hale County - TUCO 115kV, build 230/115/13kV transformer 1	Previously Allocated		$12,000,000
Dawn - Panda 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$5,901,274
Panda - Deaf Smith 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$3,501,534
Potter County Interchange 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Potter County	Previously Allocated		$15,000,000
Stevens Co. 345 kV Substation Per SPP-NTC-200343 (Total Project E&C Cost Shown).	Previously Allocated		$13,831,957
Tatonga - Mathewson 345kV CKT 2 Build second 345kV circuit from Tatonga - Matthewson @ 3000 amps per ITP10.	Previously Allocated		$104,260,473
TUCO Interchange - Yoakum - Hobbs 345/230kV Project Per HPILs SPP-NTC-200283 (Total Project E&C Cost Shown)	Previously Allocated		$241,826,483
Wolfforth - Terry County 115kV CKT 1 NRIS only required upgrade: Replace terminal equipment per SPP-NTC-200395	Previously Allocated		$1,461,643
Woodward - GEN-2011-051 Tap - Tatonga 345kV CKT 2 Build second 345kV circuit from Woodward - Tatonga @ 3000 amps per ITP10.	Previously Allocated		$71,876,622
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$29,385,210	

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-042			
GEN-2016-042 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
	Current Study Total	$0	
GEN-2016-043			
GEN-2016-043 Interconnection Costs See One-Line Diagram.	Current Study	$1,000,000	$1,000,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Albion - Petersburg - North Petersburg 115kV CKT 1 Reconductor 115kV lines and replace all terminal equipment for at least a 193MVA rate.	Previously Allocated		$3,500,000
Gavins Point - Yankton Junction 115kV CKT 1 Rebuild approximately 5 miles of 115kV from Gavins to Yankton	Previously Allocated		$5,000,000
Thedford 345/115kV Transformer CKT 1 Install Thedford 345/115kV transformer per SPP-NTC-200277 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$1,000,000	
GEN-2016-044			
Broadland - Split Rock 345kV CKT 1 Build approximately 110 miles of second 345kV	Current Study	$81,294,338	$150,000,000
GEN-2009-001IS - Groton 345kV CKT 1 Replace terminal equipment	Current Study	$392,506	$500,000
GEN-2009-001IS - Watertown 345kV CKT 1 Replace terminal equipment	Current Study	$392,506	$500,000
GEN-2013-001 - Summit 115kV CKT 1 Replace terminal equipment	Current Study	$44,253	$50,000
GEN-2016-044 Interconnection Costs See One-Line Diagram.	Current Study	$19,264,793	$19,264,793
GEN-2016-044 Interconnection Facilities Upgrade Over frequence protection to mitigate unstable results identified in the transient stability analysis	Current Study	$TBD	$TBD

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-044 Tap - Emmons 345kV CKT 1 Build approximately 45 miles of new 345kV, tap AVS - Broadland 345kV, and build new Emmons Substation	Current Study	$65,000,000	$65,000,000
GEN-2016-044 Tap - Groton 345kV CKT 2 Build approximately 110 miles of second 345kV	Current Study	$80,909,270	$100,000,000
Grand Island - Grand Praire 345kV CKT 1 NRIS only required upgrade: terminal equipment and conductor clearance increase	Current Study	$44,938	$1,000,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Sioux City - Split Rock 345kV CKT 1 Replace terminal equipment	Current Study	$360,000	$360,000
Split Rock - White 345kV CKT 1 Replace terminal equipment and increaes conductor clearance	Current Study	$418,256	$750,000
Watertown - White 345kV CKT 1 Uprate CT	Current Study	$35,822	$50,000
Watertown 345/230/13kV Transformer CKT 1 Replace transformer	Current Study	$5,019,056	$5,600,000
Daglum - Dickinson 230kV CKT 1 Build new 230kV line from Daglum - Dickinson.	Previously Allocated		$28,000,000
Dickinson 230/115/13.8kV CKT 2 Build new 230/115/13.8kV Transformer circuit #2 at Dickinson.	Previously Allocated		$3,500,000
Neset - Tande 230kV CKT 1 Build new 230kV line from Neset - Tande	Previously Allocated		$3,000,000
Neset 230kV Terminal Upgrade(s) Install necessary terminal equInstall necessary terminal upgrades at Neset 230kV to accommodate new 230kV line from new Tande substation	Previously Allocated		$4,000,000
Tande 345/230 Substation Construct new 345kV Tande Substation & Tande 345/230/13kV transformer Construct new 345kV Tande Substation adjacent to the existing 230kV Neset Substation and	Previously Allocated		$18,000,000
	Current Study Total	$253,175,739	
GEN-2016-045			
GEN-2016-045 Interconnection Costs See One-Line Diagram.	Current Study	$8,629,014	$8,629,014

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-045 Interconnection Facilities Upgrade Build second 300 miles of 345kV generator lead or other means to mitigate unstable results identified in the transient stability analysis	Current Study	$TBD	$TBD
Mathewson - Northwest 345kV CKT 1 Replace wave trap and line switch	Current Study	$99,025	$250,000
DeGrasse 345/138kV Project Per 2016 ITPNT: NTC 200391. DeGrasse 345kV Substation and 345/138kV transformer. (Total Project E&C Cost Shown)	Previously Allocated		$30,500,000
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
	Current Study Total	$8,728,039	
GEN-2016-046			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$20,663,974	$150,000,000
GEN-2016-046 Interconnection Costs See One-Line Diagram.	Current Study	$10,000,000	$10,000,000
Knoll - Post Rock 230kV CKT 2 Build second 230kV circuit between Knoll - Post Rock	Current Study	$520,638	$3,306,000
	Current Study Total	$31,184,612	
GEN-2016-047			
GEN-2016-047 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
	Current Study Total	$0	
GEN-2016-048			
Cleveland - Tulsa 345kV CKT 1 Replace terminal equipment	Current Study	$34,042	$500,000
Cleveland 345/138/13kV Transformer CKT 2 NRIS only required upgrade: Install second 345/138kV Transformer	Current Study	$106,376	$5,100,000
Fairfax Tap - Shidler 138kV CKT 1 NRIS only required upgrade: Rebuild approximately 2.4 miles of 138kV	Current Study	$3,250,000	$3,250,000
Farber - Belle Plains 138kV CKT 1 Rebuild approximately 10.3 miles of 138kV from Farber to Belle Plains	Current Study	$349,221	$9,000,000
GEN-2016-012 Tap - LaCygne 345kV CKT 1 Rebuild approximately 31 miles of 345kV from GEN-2016-012 Tap - LaCyne	Current Study	$680,765	$31,600,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-012 Tap - Waverly Tap 345kV CKT 1 Replace terminal equipment	Current Study	$10,772	$500,000
GEN-2016-048 Interconnection Costs See One-Line Diagram.	Current Study	$3,521,000	$3,521,000
Kinze - McElroy 138kV CKT 1 Rebuild approximately 2 miles of 138kV from Kinze to McElroy	Current Study	$329,523	$600,000
Kinze - Stillwater 138kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$19,520	$100,000
Neosho - Riverton 161kV CKT 1 Rebuild approximately 28 miles of 161kV	Current Study	$460,542	$23,000,000
Osage - Webb Tap 138kV CKT 1 Rebuild approximately 22 miles of 138kV from Osage to Webb City	Current Study	$2,517,130	$10,545,000
Osage - White Eagle 138kV CKT 1 Rebuild approximately 3 miles of 138kV from Osage to White Eagle	Current Study	$1,008	$50,000
Webb City Tap - Fairfax Tap 138kV CKT 1 NRIS only required upgrade: Rebuild approximately 0.3 miles of 138kV. Costs included in Fairfax Tap - Shilder Upgrade	Current Study	$0	$0
Wolf Creek - Neosho 345kV CKT 1 Build approximately 95 miles of new 345kV	Current Study	$887,343	$117,126,900
Clearwater - Viola 138kV CKT 1 SPP 2013 ITP NT assigneg upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$35,992,903
Cleveland - Silver City 138kV CKT 1 AECI Affected System Study is required	Previously Allocated		$790,900
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$12,167,241	

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-049			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$13,568,681	$150,000,000
GEN-2016-049 Interconnection Costs See One-Line Diagram.	Current Study	$10,000,000	$10,000,000
Knoll - Post Rock 230kV CKT 2 Build second 230kV circuit between Knoll - Post Rock	Current Study	$1,390,803	$3,306,000
	Current Study Total	$24,959,484	
GEN-2016-050			
GEN-2016-050 Interconnection Costs See One-Line Diagram.	Current Study	$12,500,000	$12,500,000
Grand Island - Grand Praire 345kV CKT 1 NRIS only required upgrade: terminal equipment and conductor clearance increase	Current Study	$143,463	$1,000,000
Knoll - Post Rock 230kV CKT 2 Build second 230kV circuit between Knoll - Post Rock	Current Study	$1,174,929	$3,306,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000
Gavins Point - Yankton Junction 115kV CKT 1 Rebuild approximately 5 miles of 115kV from Gavins to Yankton	Previously Allocated		$5,000,000
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Thedford - Holt County 345kV CKT 1 Build approximately 146 Miles of 345kV from Thedford to Holt County per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$13,818,393	

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-051			
GEN-2016-051 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
Chisholm - Gracemont 345kV CKT 1 Per SPP-NTC-200255 and 200240 (Total Project E&C Cost Shown)	Previously Allocated		$162,952,357
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Cornville Tap - Naples Tap 138kV CKT 1 Rebuild approximately 11 miles of 138kV from Cornville Tap to Naples Tap	Previously Allocated		$7,700,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Naples Tap - Payne 138kV CKT 1 Rebuild approximately 8 miles of 138kV from Naples Tap to Payne	Previously Allocated		$5,600,000
Norge - Southwest Station 138kV CKT 1 Rebuild approximately 23 miles of 138kV from Norge to Southwest Station	Previously Allocated		$23,000,000
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$0	
GEN-2016-052			
Bismark - Hilken 230kV CKT 1 Rebuild approximately 22 miles of second 230kV	Current Study	$619,052	$3,600,000
Broadland - Split Rock 345kV CKT 1 Build approximately 110 miles of second 345kV	Current Study	$468,242	$150,000,000
Broadland 345/230/13kV Transformer CKT 2 Install second Broadland 345/230/13kV transformer	Current Study	$23,287	$15,000,000
GEN-2009-001IS - Groton 345kV CKT 1 Replace terminal equipment	Current Study	$1,196	$500,000
GEN-2009-001IS - Watertown 345kV CKT 1 Replace terminal equipment	Current Study	$1,196	$500,000
GEN-2016-044 Tap - Groton 345kV CKT 2 Build approximately 110 miles of second 345kV	Current Study	$179,659	$100,000,000
GEN-2016-052 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Split Rock - White 345kV CKT 1 Replace terminal equipment and increaes conductor clearance	Current Study	$2,536	$750,000
Watertown - White 345kV CKT 1 Uprate CT	Current Study	$154	$50,000
Watertown 345/230/13kV Transformer CKT 1 Replace transformer	Current Study	$1,067	$5,600,000
Dickinson 230/115/13.8kV CKT 2 Build new 230/115/13.8kV Transformer circuit #2 at Dickinson.	Previously Allocated		$3,500,000
Patent Gate - Kummer Ridge - Roundup Project	Previously Allocated		$122,736,877
	Current Study Total	$1,296,390	
GEN-2016-053			
Bismark - Hilken 230kV CKT 1 Rebuild approximately 22 miles of second 230kV	Current Study	$619,052	$3,600,000
Broadland - Split Rock 345kV CKT 1 Build approximately 110 miles of second 345kV	Current Study	$468,242	$150,000,000
Broadland 345/230/13kV Transformer CKT 2 Install second Broadland 345/230/13kV transformer	Current Study	$23,287	$15,000,000
GEN-2009-001IS - Groton 345kV CKT 1 Replace terminal equipment	Current Study	$1,196	$500,000
GEN-2009-001IS - Watertown 345kV CKT 1 Replace terminal equipment	Current Study	$1,196	$500,000
GEN-2016-044 Tap - Groton 345kV CKT 2 Build approximately 110 miles of second 345kV	Current Study	$179,659	$100,000,000
GEN-2016-053 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Split Rock - White 345kV CKT 1 Replace terminal equipment and increaes conductor clearance	Current Study	$2,536	$750,000
Watertown - White 345kV CKT 1 Uprate CT	Current Study	$154	$50,000
Watertown 345/230/13kV Transformer CKT 1 Replace transformer	Current Study	$1,067	$5,600,000
Dickinson 230/115/13.8kV CKT 2 Build new 230/115/13.8kV Transformer circuit #2 at Dickinson.	Previously Allocated		$3,500,000
Patent Gate - Kummer Ridge - Roundup Project	Previously Allocated		$122,736,877
	Current Study Total	$1,296,390	
GEN-2016-054			
GEN-2016-054 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
	Current Study Total	$0	
GEN-2016-055			
Fairbury - GEN-2015-087 Tap 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 17 miles of 115kV	Current Study	$4,688,342	$12,250,000
Fairbury - Harbine 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 10 miles of 115kV	Current Study	$2,351,199	$7,000,000
GEN-2016-055 Interconnection Costs See One-Line Diagram.	Current Study	$6,300,000	$6,300,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000
Gavins Point - Yankton Junction 115kV CKT 1 Rebuild approximately 5 miles of 115kV from Gavins to Yankton	Previously Allocated		$5,000,000
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Thedford - Holt County 345kV CKT 1 Build approximately 146 Miles of 345kV from Thedford to Holt County per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$13,339,541	
GEN-2016-056			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$5,579,678	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$6,667,164	$95,000,000
Carlisle - LP-Doud 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 3 miles of 115kV from Carlisle - LP Doud	Current Study	$783,416	$2,100,000
Crawfish Draw - Seminole 765kV CKT 1 Build approixamately 325 miles of 765kV from Crawfish Draw to Seminole	Current Study	$154,724,342	$975,000,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$876,501	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$50,949	$5,000,000
Crawfish Draw 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Crawfish Draw	Current Study	$4,760,768	$30,000,000
Crawfish Draw 765kV Substation Expansion Expand the planned Crawfish Draw 345kV Substation for new 765kV switchyard	Current Study	$6,347,690	$40,000,000
Eddy County 230/115/13kV CKT 3 NRIS only required upgrade: Build third 230/115/13kV 300MVA Transformer	Current Study	$719,181	$6,000,000
GEN-2014-074 Tap 345kV Reactive Power Support Intall +300Mvar SVC at GEN-2014-074 Tap	Current Study	$4,350,738	$25,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-056 Interconnection Costs See One-Line Diagram.	Current Study	$4,237,857	$4,237,857
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$1,657,470	$106,737,500
Hereford Capacitor Bank 25Mvar capacitor bank required for stability anlaysis	Current Study	$174,030	$1,000,000
LP-Doud - SP-Wolf 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 1.4 miles of 115kV	Current Study	$373,055	$1,000,000
Lubbock Milwaukee 230/69/13kV CKT 2 NRIS only required upgrade: Install second Milwaukee 230/69/13kV Transformer	Current Study	$4,000,000	$4,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$6,961,181	$40,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$6,447,017	$88,172,500
Seminole 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Seminole	Current Study	$4,760,768	$30,000,000
Seminole 765kV Substation Expansion Expand the existing Seminole Substation for new 765kV switchyard	Current Study	$6,347,690	$40,000,000
Sundown 230/115/13.2KV Transformer CKT 2 NRIS only required upgrade: Build second Sundown 230/115 Transformer	Current Study	$169,060	$6,000,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$21,123,497	$156,000,000
Tolk 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Tolk	Current Study	$1,215,866	$15,000,000
Wolfforth Interchange 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace existing Wolfforth Interchange Transformer	Current Study	$6,000,000	$6,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Carlisle 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace transformer assigned in SPP-2014-AG1-AFS-6 per SPP-NTC-200359	Previously Allocated		$3,853,326

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Crawfish Draw Substation Upgrade 345/230kV Tap Border-TUCO approximately 2 miles from TUCO and build Crawfish Draw 345kV substation and add 345/230/13.2kV transformer and tie on TUCO-Swisher 230kV.	Previously Allocated		$24,764,205
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Oklaunion 345kV Reactive Power Install (2)-130Mvar Capacitor Bank(s) at Oklaunion	Previously Allocated		$10,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$248,327,916	
GEN-2016-057			
GEN-2016-057 Interconnection Costs See One-Line Diagram.	Current Study	$8,629,014	$8,629,014
GEN-2016-057 Interconnection Facilities Upgrade Build second 300 miles of 345kV generator lead or other means to mitigate unstable results identified in the transient stability analysis	Current Study	$TBD	$TBD
Mathewson - Northwest 345kV CKT 1 Replace wave trap and line switch	Current Study	$99,025	$250,000
DeGrasse 345/138kV Project Per 2016 ITPNT: NTC 200391. DeGrasse 345kV Substation and 345/138kV transformer. (Total Project E&C Cost Shown)	Previously Allocated		$30,500,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
	Current Study Total	$8,728,039	
GEN-2016-058			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$6,206,932	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$7,386,312	$95,000,000
Crawfish Draw - Seminole 765kV CKT 1 Build approixamately 325 miles of 765kV from Crawfish Draw to Seminole	Current Study	$158,427,351	$975,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$1,592,474	$5,000,000
Crawfish Draw 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Crawfish Draw	Current Study	$4,874,839	$30,000,000
Crawfish Draw 765kV Substation Expansion Expand the planned Crawfish Draw 345kV Substation for new 765kV switchyard	Current Study	$6,499,785	$40,000,000
GEN-2014-074 Tap 345kV Reactive Power Support Intall +300Mvar SVC at GEN-2014-074 Tap	Current Study	$4,258,753	$25,000,000
GEN-2016-058 Interconnection Costs See One-Line Diagram.	Current Study	$2,781,836	$2,781,836
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$3,798,742	$106,737,500
Hereford Capacitor Bank 25Mvar capacitor bank required for stability anlaysis	Current Study	$170,350	$1,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$6,814,005	$40,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$8,186,997	$88,172,500
Seminole 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Seminole	Current Study	$4,874,839	$30,000,000
Seminole 765kV Substation Expansion Expand the existing Seminole Substation for new 765kV switchyard	Current Study	$6,499,785	$40,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.	Current Study	$13,056,451	$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$29,375,351	$156,000,000
Tolk 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Tolk	Current Study	$2,240,735	$15,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Crawfish Draw Substation Upgrade 345/230kV Tap Border-TUCO approximately 2 miles from TUCO and build Crawfish Draw 345kV substation and add 345/230/13.2kV transformer and tie on TUCO-Swisher 230kV.	Previously Allocated		$24,764,205
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Mustang - Seminole 115kV CKT 1 Build new 115kV from Mustang - Seminole 115kV per SPP-NTC-200407	Previously Allocated		$20,136,042
Oklaunion 345kV Reactive Power Install (2)-130Mvar Capacitor Bank(s) at Oklaunion	Previously Allocated		$10,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$267,045,536	
GEN-2016-059			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$14,438,364	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$3,952,173	$95,000,000
Bushland - Potter County 230kV CKT 1 Replace line traps at both terminals	Current Study	$84,236	$250,000
Carlisle - LP-Doud 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 3 miles of 115kV from Carlisle - LP Doud	Current Study	$444,881	$2,100,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$178,809	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$102,841	$5,000,000
East Plant Transformer 230/115/13kV CKT 2 NRIS only required upgrade: Build second 230/115/13kV 250MVA Transformer	Current Study	$3,000,000	$6,000,000
Eddy County 230/115/13kV CKT 3 NRIS only required upgrade: Build third 230/115/13kV 300MVA Transformer	Current Study	$1,491,332	$6,000,000
GEN-2015-079 Tap - Hobbs 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$213,218	$500,000
GEN-2016-059 Interconnection Costs See One-Line Diagram.	Current Study	$1,272,967	$1,272,967
GEN-2016-059 Interconnection Facilities Upgrade Build second 150 miles of 230kV generator lead or other means to mitigate unstable results identified in the transient stability analysis	Current Study	$TBD	$TBD
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$6,197,421	$106,737,500
Harrington West - Harrington Mid Bus 230kV CKT 1 Upgrade bus ties to soft jumper	Current Study	$75,000	$150,000
Harrington West - Potter County 230kV CKT 1 Rebuild approximately 11 miles of 230kV	Current Study	$3,996,683	$8,800,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Jones - Lubbock Holly 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$89,234	$500,000
LP-Doud - SP-Wolf 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 1.4 miles of 115kV	Current Study	$211,848	$1,000,000
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$1,052,346	$4,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$3,298,709	$88,172,500
SP-Wolf - Yuma 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 1 mile of 115kV from Wolf - Yuma	Current Study	$313,282	$750,000
Sundown 230/115/13.2KV Transformer CKT 2 NRIS only required upgrade: Build second Sundown 230/115 Transformer	Current Study	$2,475,107	$6,000,000
Tolk 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Tolk	Current Study	$820,968	$15,000,000
Wadsworth 230/69/13kV CKT 2 NRIS only required upgrade: Install second Wadsworth 230/69/13kV Transformer	Current Study	$1,123,276	$4,000,000
Beaver County 345kV Reactive Power Support Install +100Mvar SVC at Beaver County Substation.	Previously Allocated		$26,264,770
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Canyon East - Randall 115kV CKT 1 NRIS only required upgrade: Assigned in SPP-2011-AG3-AFS-11 per SPP-NTC-200369	Previously Allocated		$12,806,065
Canyon East - Randall 115kV CKT 1 NRIS only required upgrade: Assigned in SPP-2011-AG3-AFS-11 per SPP-NTC-200369	Previously Allocated		$12,806,065
Canyon East Tap - Randall 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$4,804,292
Canyon East Tap - Randall 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$4,804,292
Canyon West - Dawn 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$9,756,809

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Carlisle 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace transformer assigned in SPP-2014-AG1-AFS-6 per SPP-NTC-200359	Previously Allocated		$3,853,326
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Cleo Corner - Cleo Plant Tap 138kV CKT 1 Replace terminal equipment to at least 1200 amps	Previously Allocated		$61,890
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Crawfish Draw Substation Upgrade 345/230kV Tap Border-TUCO approximately 2 miles from TUCO and build Crawfish Draw 345kV substation and add 345/230/13.2kV transformer and tie on TUCO-Swisher 230kV.	Previously Allocated		$24,764,205
Dawn - Panda 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$5,901,274
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Harrington East - Potter County 230kV CKT 1 Upgrade terminal equipment per SPP-NTC-200395	Previously Allocated		$914,347
Kress Interchange - Swisher 115kV CKT 1 Replace terminal equipment	Previously Allocated		$500,000
Panda - Deaf Smith 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$3,501,534
Potter County Interchange 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Potter County	Previously Allocated		$15,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Stevens Co. 345 kV Substation Per SPP-NTC-200343 (Total Project E&C Cost Shown).	Previously Allocated		$13,831,957
Tatonga - Mathewson 345kV CKT 2 Build second 345kV circuit from Tatonga - Matthewson @ 3000 amps per ITP10.	Previously Allocated		$104,260,473
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
TUCO Interchange - Yoakum - Hobbs 345/230kV Project Per HPILs SPP-NTC-200283 (Total Project E&C Cost Shown)	Previously Allocated		$241,826,483
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
Wolfforth - Terry County 115kV CKT 1 NRIS only required upgrade: Replace terminal equipment per SPP-NTC-200395	Previously Allocated		$1,461,643
Woodward - GEN-2011-051 Tap - Tatonga 345kV CKT 2 Build second 345kV circuit from Woodward - Tatonga @ 3000 amps per ITP10.	Previously Allocated		$71,876,622
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$44,832,694	
GEN-2016-060			
Caney River - Neosho 345kV CKT 1 Replace terminal equipment	Current Study	$17,904	$500,000
Cleveland - Tulsa 345kV CKT 1 Replace terminal equipment	Current Study	$4,496	$500,000
Farber - Belle Plains 138kV CKT 1 Rebuild approximately 10.3 miles of 138kV from Farber to Belle Plains	Current Study	$2,548,017	$9,000,000
GEN-2016-012 Tap - LaCygne 345kV CKT 1 Rebuild approximately 31 miles of 345kV from GEN-2016-012 Tap - LaCyne	Current Study	$321,261	$31,600,000
GEN-2016-012 Tap - Waverly Tap 345kV CKT 1 Replace terminal equipment	Current Study	$5,083	$500,000
GEN-2016-060 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
Neosho - Riverton 161kV CKT 1 Rebuild approximately 28 miles of 161kV	Current Study	$409,222	$23,000,000
Wolf Creek - Neosho 345kV CKT 1 Build approximately 95 miles of new 345kV	Current Study	$2,031,702	$117,126,900
Cleveland - Silver City 138kV CKT 1 AECI Affected System Study is required	Previously Allocated		$790,900

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$5,337,686	
GEN-2016-061			
Caney River - Neosho 345kV CKT 1 Replace terminal equipment	Current Study	$72,092	$500,000
Cleveland - Tulsa 345kV CKT 1 Replace terminal equipment	Current Study	$105,456	$500,000
GEN-2016-012 Tap - LaCygne 345kV CKT 1 Rebuild approximately 31 miles of 345kV from GEN-2016-012 Tap - LaCyne	Current Study	$2,088,100	$31,600,000
GEN-2016-012 Tap - Waverly Tap 345kV CKT 1 Replace terminal equipment	Current Study	$33,040	$500,000
GEN-2016-061 Interconnection Costs See One-Line Diagram.	Current Study	$11,737,557	$11,737,557
Neosho - Riverton 161kV CKT 1 Rebuild approximately 28 miles of 161kV	Current Study	$1,574,901	$23,000,000
Northwest - Spring Creek 345kV CKT 1 Replace terminal equipment	Current Study	$1,000,000	$1,000,000
Wolf Creek - Neosho 345kV CKT 1 Build approximately 95 miles of new 345kV	Current Study	$4,507,759	$117,126,900
Clearwater - Viola 138kV CKT 1 SPP 2013 ITP NT assigneg upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$35,992,903
Cleveland - Silver City 138kV CKT 1 AECI Affected System Study is required	Previously Allocated		$790,900
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$21,118,904	
GEN-2016-062			
Andrews - National Enrichment Plant 115 kV CKT 2 Build 2 miles of second 115kV circuit	Current Study	$1,072,284	$1,500,000
Andrews 345/115/13kV Transformer CKT 1 Replace 230/115kV transformer CKT 1 with 345/115kV transformer	Current Study	$5,718,848	$8,000,000
Andrews 345/115/13kV Transformer CKT 2 Replace 230/115kV transformer CKT 2 with 345/115kV transformer	Current Study	$5,718,848	$8,000,000
Andrews Substation Voltage Conversion Convert Andrews 230kV to 345kV	Current Study	$7,148,560	$10,000,000
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$7,489,186	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$8,891,672	$95,000,000
Crawfish Draw - Seminole 765kV CKT 1 Build approixamately 325 miles of 765kV from Crawfish Draw to Seminole	Current Study	$184,304,396	$975,000,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$41,709	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$1,525,733	$5,000,000
Crawfish Draw 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Crawfish Draw	Current Study	$5,670,771	$30,000,000
Crawfish Draw 765kV Substation Expansion Expand the planned Crawfish Draw 345kV Substation for new 765kV switchyard	Current Study	$7,561,028	$40,000,000
Drinkard - Drinkard Tap 115kV CKT 1 Rebuild approximately 2 miles from Drinkard to Drinkard Tap	Current Study	$1,072,284	$1,500,000
Drinkard Tap - Weest Hobbs 115kV CKT 1 Rebuild approximately 12.5 miles from Drinkard Tap to West Hobbs	Current Study	$6,701,775	$9,375,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2014-074 Tap 345kV Reactive Power Support Intall +300Mvar SVC at GEN-2014-074 Tap	Current Study	$4,847,473	$25,000,000
GEN-2016-062 Interconnection Costs See One-Line Diagram.	Current Study	$1,884,283	$1,884,283
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$5,531,010	$106,737,500
Hereford Capacitor Bank 25Mvar capacitor bank required for stability anlaysis	Current Study	$193,899	$1,000,000
National Enrichment Plant - Drinkard 115kV CKT 1 Rebuild approximately 7.5 miles from NEF Plant to Drinkard	Current Study	$4,021,065	$5,625,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$7,755,957	$40,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$10,365,492	$88,172,500
Seminole 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Seminole	Current Study	$5,670,771	$30,000,000
Seminole 765kV Substation Expansion Expand the existing Seminole Substation for new 765kV switchyard	Current Study	$7,561,028	$40,000,000
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.	Current Study	$20,659,873	$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$38,124,374	$156,000,000
Tolk 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Tolk	Current Study	$1,926,804	$15,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Crawfish Draw Substation Upgrade 345/230kV Tap Border-TUCO approximately 2 miles from TUCO and build Crawfish Draw 345kV substation and add 345/230/13.2kV transformer and tie on TUCO-Swisher 230kV.	Previously Allocated		$24,764,205
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
National Enrichment Plant-Targa 115kV CKT 1 Rebuild approximately 4 miles of 115kV from National Enrichment Plant to Targa per 2015 ITPNT.	Previously Allocated		$2,909,669
Oklaunion 345kV Reactive Power Install (2)-130Mvar Capacitor Bank(s) at Oklaunion	Previously Allocated		$10,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
South Jal - Teague 115kV CKT 1 Rebuild approximately 10 miles from Jal to Teague assigned in SPP-2014-AG1-AFS-6 per SPP-NTC-200365	Previously Allocated		$6,640,592
Targa-Cardinal 115kV CKT 1 Rebuild approximately 3 miles of 115kV from Targa to Cardinal per 2015 ITPNT.	Previously Allocated		$2,049,062
Teague - National Enrichment Plant 115kV CKT 1 Rebuild approximately 7 miles from Teague to NEF assigned in SPP-2014-AG1-AFS-6 per SPP-NTC-200365	Previously Allocated		$4,915,370
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$351,459,121	
GEN-2016-063			
GEN-2016-063 Interconnection Costs See One-Line Diagram.	Current Study	$11,737,557	$11,737,557
	Current Study Total	$11,737,557	

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-064			
Crete - Friend 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 16.5 miles of 115kV	Current Study	$11,900,000	$11,900,000
Fairbury - GEN-2015-087 Tap 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 17 miles of 115kV	Current Study	$7,561,658	$12,250,000
Fairbury - Harbine 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 10 miles of 115kV	Current Study	$4,648,801	$7,000,000
GEN-2016-064 Interconnection Costs See One-Line Diagram.	Current Study	$500,000	$500,000
Harbine - Beatrice 115kV CKT 1 Rebuild approximately 14 miles of 115kV line	Current Study	$9,800,000	$9,800,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Pauline - Rosemont 115kV CKT 1 Rebuild approximately 10.6 miles of 115kV	Current Study	$6,838,370	$7,000,000
Pauline - Rosemont 115kV CKT 2 Build approximately 10.6 miles of second circuit 115kV	Current Study	$6,838,370	$7,000,000
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000
Gavins Point - Yankton Junction 115kV CKT 1 Rebuild approximately 5 miles of 115kV from Gavins to Yankton	Previously Allocated		$5,000,000
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Thedford - Holt County 345kV CKT 1 Build approximately 146 Miles of 345kV from Thedford to Holt County per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$48,087,200	
GEN-2016-065			
Broadland - Split Rock 345kV CKT 1 Build approximately 110 miles of second 345kV	Current Study	$1,053,433	$150,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Broadland 345/230/13kV Transformer CKT 2 Install second Broadland 345/230/13kV transformer	Current Study	$3,460	$15,000,000
GEN-2009-001IS - Groton 345kV CKT 1 Replace terminal equipment	Current Study	$2,816	$500,000
GEN-2009-001IS - Watertown 345kV CKT 1 Replace terminal equipment	Current Study	$2,816	$500,000
GEN-2016-044 Tap - Groton 345kV CKT 2 Build approximately 110 miles of second 345kV	Current Study	$483,038	$100,000,000
GEN-2016-065 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Split Rock - White 345kV CKT 1 Replace terminal equipment and increaes conductor clearance	Current Study	$4,848	$750,000
Watertown - White 345kV CKT 1 Uprate CT	Current Study	$338	$50,000
Watertown 345/230/13kV Transformer CKT 1 Replace transformer	Current Study	$10,316	$5,600,000
Daglum - Dickinson 230kV CKT 1 Build new 230kV line from Daglum - Dickinson.	Previously Allocated		$28,000,000
Dickinson 230/115/13.8kV CKT 2 Build new 230/115/13.8kV Transformer circuit #2 at Dickinson.	Previously Allocated		$3,500,000
Neset - Tande 230kV CKT 1 Build new 230kV line from Neset - Tande	Previously Allocated		$3,000,000
Neset 230kV Terminal Upgrade(s) Install necessary terminal equInstall necessary terminal upgrades at Neset 230kV to accommodate new 230kV line from new Tande substation	Previously Allocated		$4,000,000
Patent Gate - Kummer Ridge - Roundup Project	Previously Allocated		$122,736,877
Tande 345/230 Substation Construct new 345kV Tande Substation & Tande 345/230/13kV transformer Construct new 345kV Tande Substation adjacent to the existing 230kV Neset Substation and	Previously Allocated		$18,000,000
	Current Study Total	$1,561,064	

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-066			
Broadland - Split Rock 345kV CKT 1 Build approximately 110 miles of second 345kV	Current Study	$2,013,916	$150,000,000
Broadland 345/230/13kV Transformer CKT 2 Install second Broadland 345/230/13kV transformer	Current Study	$6,615	$15,000,000
GEN-2009-001IS - Groton 345kV CKT 1 Replace terminal equipment	Current Study	$5,383	$500,000
GEN-2009-001IS - Watertown 345kV CKT 1 Replace terminal equipment	Current Study	$5,383	$500,000
GEN-2016-044 Tap - Groton 345kV CKT 2 Build approximately 110 miles of second 345kV	Current Study	$923,456	$100,000,000
GEN-2016-066 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Split Rock - White 345kV CKT 1 Replace terminal equipment and increaes conductor clearance	Current Study	$9,267	$750,000
Watertown - White 345kV CKT 1 Uprate CT	Current Study	$647	$50,000
Watertown 345/230/13kV Transformer CKT 1 Replace transformer	Current Study	$19,722	$5,600,000
Daglum - Dickinson 230kV CKT 1 Build new 230kV line from Daglum - Dickinson.	Previously Allocated		$28,000,000
Dickinson 230/115/13.8kV CKT 2 Build new 230/115/13.8kV Transformer circuit #2 at Dickinson.	Previously Allocated		$3,500,000
Neset - Tande 230kV CKT 1 Build new 230kV line from Neset - Tande	Previously Allocated		$3,000,000
Neset 230kV Terminal Upgrade(s) Install necessary terminal equInstall necessary terminal upgrades at Neset 230kV to accommodate new 230kV line from new Tande substation	Previously Allocated		$4,000,000
Patent Gate - Kummer Ridge - Roundup Project	Previously Allocated		$122,736,877

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Tande 345/230 Substation Construct new 345kV Tande Substation & Tande 345/230/13kV transformer Construct new 345kV Tande Substation adjacent to the existing 230kV Neset Substation and	Previously Allocated		$18,000,000
	Current Study Total	$2,984,388	
GEN-2016-067			
GEN-2016-067 Interconnection Costs See One-Line Diagram.	Current Study	$55,000	$55,000
	Current Study Total	$55,000	
GEN-2016-068			
Caney River - Neosho 345kV CKT 1 Replace terminal equipment	Current Study	$72,571	$500,000
Cleveland - Tulsa 345kV CKT 1 Replace terminal equipment	Current Study	$80,690	$500,000
Cleveland 345/138/13kV Transformer CKT 2 NRIS only required upgrade: Install second 345/138kV Transformer	Current Study	$4,993,624	$5,100,000
GEN-2016-012 Tap - LaCygne 345kV CKT 1 Rebuild approximately 31 miles of 345kV from GEN-2016-012 Tap - LaCyne	Current Study	$2,025,663	$31,600,000
GEN-2016-012 Tap - Waverly Tap 345kV CKT 1 Replace terminal equipment	Current Study	$32,052	$500,000
GEN-2016-068 Interconnection Costs See One-Line Diagram.	Current Study	$1,900,000	$1,900,000
Neosho - Riverton 161kV CKT 1 Rebuild approximately 28 miles of 161kV	Current Study	$1,635,106	$23,000,000
Wolf Creek - Neosho 345kV CKT 1 Build approximately 95 miles of new 345kV	Current Study	$5,448,694	$117,126,900
Clearwater - Viola 138kV CKT 1 SPP 2013 ITP NT assigneg upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$35,992,903
Cleveland - Silver City 138kV CKT 1 AECI Affected System Study is required	Previously Allocated		$790,900
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$16,188,399	
GEN-2016-069			
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$983,175	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$1,157,491	$95,000,000
Crawfish Draw - Seminole 765kV CKT 1 Build approixamately 325 miles of 765kV from Crawfish Draw to Seminole	Current Study	$22,160,891	$975,000,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$10,371	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$107,959	$5,000,000
Crawfish Draw 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Crawfish Draw	Current Study	$681,876	$30,000,000
Crawfish Draw 765kV Substation Expansion Expand the planned Crawfish Draw 345kV Substation for new 765kV switchyard	Current Study	$909,168	$40,000,000
Eddy County 230/115/13kV CKT 3 NRIS only required upgrade: Build third 230/115/13kV 300MVA Transformer	Current Study	$813,729	$6,000,000
GEN-2014-074 Tap 345kV Reactive Power Support Intall +300Mvar SVC at GEN-2014-074 Tap	Current Study	$549,836	$25,000,000
GEN-2016-069 Interconnection Costs See One-Line Diagram.	Current Study	$2,309,814	$2,309,814
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$1,000,857	$106,737,500
Hereford Capacitor Bank 25Mvar capacitor bank required for stability anlaysis	Current Study	$21,993	$1,000,000
Hobbs 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace Hobbs 230/115/13kV CKT 1	Current Study	$6,000,000	$6,000,000
Jones - Lubbock Holly 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$20,708	$500,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$122,106	$4,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$879,738	$40,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$1,498,979	$88,172,500
Seminole 765/345kV Transformer CKT 1 & 2 Intsall two 765/345kV transformers at Seminole	Current Study	$681,876	$30,000,000
Seminole 765kV Substation Expansion Expand the existing Seminole Substation for new 765kV switchyard	Current Study	$909,168	$40,000,000
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.	Current Study	$5,319,344	$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$5,544,724	$156,000,000
Tolk 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Tolk	Current Study	$296,755	$15,000,000
Wadsworth 230/69/13kV CKT 2 NRIS only required upgrade: Install second Wadsworth 230/69/13kV Transformer	Current Study	$124,423	$4,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Crawfish Draw Substation Upgrade 345/230kV Tap Border-TUCO approximately 2 miles from TUCO and build Crawfish Draw 345kV substation and add 345/230/13.2kV transformer and tie on TUCO-Swisher 230kV.	Previously Allocated		$24,764,205
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Oklaunion 345kV Reactive Power Install (2)-130Mvar Capacitor Bank(s) at Oklaunion	Previously Allocated		$10,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$52,104,984	
GEN-2016-070			
Asarco Tap - Highland Park 115kV CKT 1 Replace terminal equipment	Current Study	$600,000	$600,000
Beaver County - Clark County 345kV CKT 1 Build approximately 125 miles of new 345kV from Beaver County - Clark County	Current Study	$258,065	$150,000,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$80,799	$95,000,000
Bushland - Potter County 230kV CKT 1 Replace line traps at both terminals	Current Study	$1,041	$250,000
GEN-2016-070 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$126,701	$106,737,500
Harrington West - Potter County 230kV CKT 1 Rebuild approximately 11 miles of 230kV	Current Study	$59,711	$8,800,000
Highland Park Tap - Pantex South 115kV CKT 1 Upgrade terminal equipment	Current Study	$400,000	$400,000
Martin - Pantex North 115kV CKT 1 Upgrade terminal equipment	Current Study	$400,000	$400,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$67,439	$88,172,500
Beaver County 345kV Reactive Power Support Install +100Mvar SVC at Beaver County Substation.	Previously Allocated		$26,264,770
Cleo Corner - Cleo Plant Tap 138kV CKT 1 Replace terminal equipment to at least 1200 amps	Previously Allocated		$61,890
Harrington East - Potter County 230kV CKT 1 Upgrade terminal equipment per SPP-NTC-200395	Previously Allocated		$914,347
Potter County Interchange 345/230/13kV Transformer CKT 2 Build second 345/230/13kV transformer at Potter County	Previously Allocated		$15,000,000
Stevens Co. 345 kV Substation Per SPP-NTC-200343 (Total Project E&C Cost Shown).	Previously Allocated		$13,831,957
Tatonga - Mathewson 345kV CKT 2 Build second 345kV circuit from Tatonga - Matthewson @ 3000 amps per ITP10.	Previously Allocated		$104,260,473
Woodward - GEN-2011-051 Tap - Tatonga 345kV CKT 2 Build second 345kV circuit from Woodward - Tatonga @ 3000 amps per ITP10.	Previously Allocated		$71,876,622
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$1,993,755	
GEN-2016-071			
Caney River - Neosho 345kV CKT 1 Replace terminal equipment	Current Study	$90,002	$500,000
Cleveland - Tulsa 345kV CKT 1 Replace terminal equipment	Current Study	$52,867	$500,000
Farber - Belle Plains 138kV CKT 1 Rebuild approximately 10.3 miles of 138kV from Farber to Belle Plains	Current Study	$6,102,762	$9,000,000
GEN-2016-012 Tap - LaCygne 345kV CKT 1 Rebuild approximately 31 miles of 345kV from GEN-2016-012 Tap - LaCyne	Current Study	$2,009,614	$31,600,000
GEN-2016-012 Tap - Waverly Tap 345kV CKT 1 Replace terminal equipment	Current Study	$31,798	$500,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-071 Interconnection Costs See One-Line Diagram.	Current Study	$4,612,190	$4,612,190
Kildare - White Eagle 138kV CKT 1 Rebuild approximately 11 miles of 138kV from Kildare to White Eagle	Current Study	$2,805,000	$2,805,000
Kinze - McElroy 138kV CKT 1 Rebuild approximately 2 miles of 138kV from Kinze to McElroy	Current Study	$270,477	$600,000
Middleton Tap - Chilocco 138kV CKT 1 Rebuild approximately 5.7 miles of 138kV from Middleton to Chilocco	Current Study	$3,000,000	$3,000,000
Neosho - Riverton 161kV CKT 1 Rebuild approximately 28 miles of 161kV	Current Study	$2,132,495	$23,000,000
Osage - Webb Tap 138kV CKT 1 Rebuild approximately 22 miles of 138kV from Osage to Webb City	Current Study	$8,027,870	$10,545,000
Osage - White Eagle 138kV CKT 1 Rebuild approximately 3 miles of 138kV from Osage to White Eagle	Current Study	$48,992	$50,000
Wolf Creek - Neosho 345kV CKT 1 Build approximately 95 miles of new 345kV	Current Study	$8,827,993	$117,126,900
Clearwater - Viola 138kV CKT 1 SPP 2013 ITP NT assigneg upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$35,992,903
Cleveland - Silver City 138kV CKT 1 AECI Affected System Study is required	Previously Allocated		$790,900
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$38,012,060	
GEN-2016-072			
Caney River - Neosho 345kV CKT 1 Replace terminal equipment	Current Study	$124,583	$500,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Cleveland - Tulsa 345kV CKT 1 Replace terminal equipment	Current Study	$75,565	$500,000
GEN-2016-012 Tap - LaCygne 345kV CKT 1 Rebuild approximately 31 miles of 345kV from GEN-2016-012 Tap - LaCyne	Current Study	$2,710,247	$31,600,000
GEN-2016-012 Tap - Waverly Tap 345kV CKT 1 Replace terminal equipment	Current Study	$42,884	$500,000
GEN-2016-072 Interconnection Costs See One-Line Diagram.	Current Study	$1,925,000	$1,925,000
Hunter - Woodring 345kV CKT 1 Replace terminal equipment including 4 breakers	Current Study	$3,000,000	$3,000,000
Neosho - Riverton 161kV CKT 1 Rebuild approximately 28 miles of 161kV	Current Study	$3,052,791	$23,000,000
Viola 345/138/13kV Transformer CKT 2 Build second 345/138/13.8kV transformer at Viola	Current Study	$9,000,000	$9,000,000
Wolf Creek - Neosho 345kV CKT 1 Build approximately 95 miles of new 345kV	Current Study	$14,052,677	$117,126,900
Clearwater - Viola 138kV CKT 1 SPP 2013 ITP NT assigneg upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$35,992,903
Cleveland - Silver City 138kV CKT 1 AECI Affected System Study is required	Previously Allocated		$790,900
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Renfrow - Renfrow 138kV CKT 1 NRIS only required upgrade: replace terminal equipment	Previously Allocated		$90,000
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$33,983,746	

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-073			
Caney River - Neosho 345kV CKT 1 Replace terminal equipment	Current Study	$122,847	$500,000
Cleveland - Tulsa 345kV CKT 1 Replace terminal equipment	Current Study	$30,578	$500,000
GEN-2016-012 Tap - LaCygne 345kV CKT 1 Rebuild approximately 31 miles of 345kV from GEN-2016-012 Tap - LaCyne	Current Study	$2,058,452	$31,600,000
GEN-2016-012 Tap - Waverly Tap 345kV CKT 1 Replace terminal equipment	Current Study	$32,570	$500,000
GEN-2016-073 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
Neosho - Riverton 161kV CKT 1 Rebuild approximately 28 miles of 161kV	Current Study	$3,322,784	$23,000,000
Wichita 345/138/13kV Transformer CKT 1 NRIS only required upgrade: Replace existing Wichita transformer CKT 1 to 560/616 MVA	Current Study	$4,860,651	$9,048,819
Wichita 345/138/13kV Transformer CKT 2 NRIS only required upgrade: Replace existing Wichita transformer CKT 2 to 560/616 MVA	Current Study	$4,860,982	$9,048,819
Wolf Creek - Neosho 345kV CKT 1 Build approximately 95 miles of new 345kV	Current Study	$18,536,456	$117,126,900
Cleveland - Silver City 138kV CKT 1 AECI Affected System Study is required	Previously Allocated		$790,900
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$33,825,320	
GEN-2016-075			
GEN-2016-075 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Grand Island - Grand Praire 345kV CKT 1 NRIS only required upgrade: terminal equipment and conductor clearance increase	Current Study	$245,366	$1,000,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$245,366	
	TOTAL CURRENT STUDY COSTS:	**$3,407,845,039***	

*Total costs do no include potential stability mitigations as listed through out Appendix E and F. Total cost does not include AECI, Northwestern Energy, MISO, and MPC Affected System costs.

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11.6 E1: STAND-ALONE COST ALLOCATION PER INTERCONNECTION REQUEST (INCLUDING PRIOR-QUEUED UPGRADES)

Appendix E1. Cost Allocation Per Stand-Alone Request

(Including Previously Allocated Network Upgrades*)

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
ASGI-2016-001			
ASGI-2016-001 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$0	
ASGI-2016-002			
ASGI-2016-002 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$0	
ASGI-2016-003			
ASGI-2016-003 Interconnection Costs See One-Line Diagram.	Current Study	$10,000	$10,000
	Current Study Total	$10,000	
ASGI-2016-004			
ASGI-2016-004 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$0	

GEN-2015-018

Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$5,000,000	$5,000,000
Crawfish Draw 345/230/13kV Transformer CKT 2 Build Crawfish Draw 345/230kV Transformer CKT 2	Current Study	$12,000,000	$12,000,000
GEN-2015-018 Interconnection Costs See One-Line Diagram.	Current Study	$5,148,927	$5,148,927
Jones - TUCO 230kV CKT 1 NRIS only required upgrade: Replace line traps	Current Study	$200,000	$200,000
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$4,000,000	$4,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
TUCO Interchange - Yoakum - Hobbs 345/230kV Project Per HPILs SPP-NTC-200283 (Total Project E&C Cost Shown)	Previously Allocated		$241,826,483
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$26,348,927	
GEN-2015-033			
Carlisle - LP-Doud 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 3 miles of 115kV from Carlisle - LP Doud	Current Study	$2,100,000	$2,100,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$3,000,000	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$5,000,000	$5,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Crawfish Draw 345/230/13kV Transformer CKT 2 Build Crawfish Draw 345/230kV Transformer CKT 2	Current Study	$12,000,000	$12,000,000
GEN-2014-057 - Lawton Eastside 345kV CKT 1 Replace terminal equipment to atleast 1600 amps	Current Study	$500,000	$500,000
GEN-2014-057 - Sunnyside 345kV CKT 1 Replace terminal equipment to atleast 1600 amps	Current Study	$500,000	$500,000
GEN-2015-033 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
GEN-2015-079 Tap - Hobbs 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$500,000	$500,000
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$106,737,500	$106,737,500
Hale County - Crawfish Draw 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 19 miles of 115kV from Hale County - Crawfish Draw	Current Study	$11,500,000	$11,500,000
Jones - TUCO 230kV CKT 1 NRIS only required upgrade: Replace line traps	Current Study	$200,000	$200,000
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$4,000,000	$4,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$40,000,000	$40,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$88,172,500	$88,172,500
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.	Current Study	$88,170,000	$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$156,000,000	$156,000,000
Wolfforth Interchange 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace existing Wolfforth Interchange Transformer	Current Study	$6,000,000	$6,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Crawfish Draw 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Build 115kV yard, re-terminate Hale County - TUCO 115kV, build 230/115/13kV transformer 1	Previously Allocated		$12,000,000
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
TUCO Interchange - Yoakum - Hobbs 345/230kV Project Per HPILs SPP-NTC-200283 (Total Project E&C Cost Shown)	Previously Allocated		$241,826,483
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
Wolfforth - Terry County 115kV CKT 1 NRIS only required upgrade: Replace terminal equipment per SPP-NTC-200395	Previously Allocated		$1,461,643
	Current Study Total	$524,380,000	
GEN-2015-036			
GEN-2015-036 Interconnection Costs See One-Line Diagram.	Current Study	$2,025,000	$2,025,000
	Current Study Total	$2,025,000	
GEN-2015-038			
GEN-2015-038 Interconnection Costs See One-Line Diagram.	Current Study	$20,000	$20,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$20,000	
GEN-2015-039			
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$5,000,000	$5,000,000
Crawfish Draw 345/230/13kV Transformer CKT 2 Build Crawfish Draw 345/230kV Transformer CKT 2	Current Study	$12,000,000	$12,000,000
GEN-2015-039 Interconnection Costs See One-Line Diagram.	Current Study	$9,114,879	$9,114,879
GEN-2015-079 Tap - Hobbs 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$500,000	$500,000
Hereford Capacitor Bank 25Mvar capacitor bank required for stability analysis.	Current Study	$1,000,000	$1,000,000
Jones - TUCO 230kV CKT 1 NRIS only required upgrade: Replace line traps	Current Study	$200,000	$200,000
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$4,000,000	$4,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
TUCO Interchange - Yoakum - Hobbs 345/230kV Project Per HPILs SPP-NTC-200283 (Total Project E&C Cost Shown)	Previously Allocated		$241,826,483
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$31,814,879	
GEN-2015-040			
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$5,000,000	$5,000,000
Crawfish Draw 345/230/13kV Transformer CKT 2 Build Crawfish Draw 345/230kV Transformer CKT 2	Current Study	$12,000,000	$12,000,000
GEN-2014-057 - Sunnyside 345kV CKT 1 Replace terminal equipment to atleast 1600 amps	Current Study	$500,000	$500,000
GEN-2015-040 Interconnection Costs See One-Line Diagram.	Current Study	$1,112,116	$1,112,116
GEN-2015-079 Tap - Hobbs 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$500,000	$500,000
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$4,000,000	$4,000,000
Mustang 230/115/13.2KV Transformer CKT 2 NRIS only required upgrade: Build second Mustang 230/115 Transformer	Current Study	$6,000,000	$6,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Mustang - Seminole 115kV CKT 1 NRIS only required upgrade: Build new 115kV from Mustang - Seminole 115kV per SPP-NTC-200407.	Previously Allocated		$20,136,042
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Seminole 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace existing Seminole Interchange Transformer CKT 1 per SPP-NTC-200395	Previously Allocated		$3,621,405
Seminole 230/115/13kV Transformer CKT 2 NRIS only required upgrade: Replace existing Seminole Interchange Transformer CKT 2 per SPP-NTC-200395	Previously Allocated		$3,621,405
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
TUCO Interchange - Yoakum - Hobbs 345/230kV Project Per HPILs SPP-NTC-200283 (Total Project E&C Cost Shown)	Previously Allocated		$241,826,483
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
Yoakum County 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace existing Yoakum Interchange 230/115kV Transformer CKT 1 per SPP-NTC-200262	Previously Allocated		$3,632,101
Yoakum County 230/115/13kV Transformer CKT 2 NRIS only required upgrade: Replace existing Yoakum Interchange 230/115kV Transformer CKT 2 per SPP-NTC-200262	Previously Allocated		$3,432,506
	Current Study Total	$29,112,116	

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2015-041			
Carlisle - LP-Doud 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 3 miles of 115kV from Carlisle - LP Doud	Current Study	$2,100,000	$2,100,000
GEN-2015-041 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
GEN-2015-079 Tap - Hobbs 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$500,000	$500,000
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$106,737,500	$106,737,500
Hale County - Crawfish Draw 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 19 miles of 115kV from Hale County - Crawfish Draw	Current Study	$11,500,000	$11,500,000
Jones - TUCO 230kV CKT 1 NRIS only required upgrade: Replace line traps	Current Study	$200,000	$200,000
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$4,000,000	$4,000,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$40,000,000	$40,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$88,172,500	$88,172,500
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.	Current Study	$88,170,000	$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$156,000,000	$156,000,000
Wolfforth Interchange 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace existing Wolfforth Interchange Transformer	Current Study	$6,000,000	$6,000,000
Crawfish Draw 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Build 115kV yard, re-terminate Hale County - TUCO 115kV, build 230/115/13kV transformer 1	Previously Allocated		$12,000,000
Wolfforth - Terry County 115kV CKT 1 NRIS only required upgrade: Replace terminal equipment per SPP-NTC-200395	Previously Allocated		$1,461,643
	Current Study Total	$503,380,000	
GEN-2015-078			
Allred Tap - ShellC3 Tap 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 4.2 miles of 115kV	Current Study	$3,150,000	$3,150,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$5,000,000	$5,000,000
Crawfish Draw 345/230/13kV Transformer CKT 2 Build Crawfish Draw 345/230kV Transformer CKT 2	Current Study	$12,000,000	$12,000,000
GEN-2014-057 - Sunnyside 345kV CKT 1 Replace terminal equipment to atleast 1600 amps	Current Study	$500,000	$500,000
GEN-2015-078 Interconnection Costs See One-Line Diagram.	Current Study	$3,107,988	$3,107,988
GEN-2015-079 Tap - Hobbs 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$500,000	$500,000
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$4,000,000	$4,000,000
Seminole - Gaines County 115kV CKT 2 NRIS only required upgrade: Build approximately 10.5 miles of second 115kV from Seminole - Gaines County	Current Study	$8,500,000	$8,500,000
ShellC2 - ShellC3 Tap 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 2.1 miles of 115kV	Current Study	$1,575,000	$1,575,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Mustang - Seminole 115kV CKT 1 NRIS only required upgrade: Build new 115kV from Mustang - Seminole 115kV per SPP-NTC-200407.	Previously Allocated		$20,136,042
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
TUCO Interchange - Yoakum - Hobbs 345/230kV Project Per HPILs SPP-NTC-200283 (Total Project E&C Cost Shown)	Previously Allocated		$241,826,483
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$38,332,988	
GEN-2015-082			
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$95,000,000	$95,000,000
GEN-2015-082 Interconnection Costs See One-Line Diagram.	Current Study	$1,930,000	$1,930,000
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$106,737,500	$106,737,500
Hitchland 345/115kV Transformer CKT 1 NRIS only required upgrade: Build Hitchland 345/115kV transformer circuit 1	Current Study	$12,000,000	$12,000,000
Beaver County 345kV Reactive Power Support Install +100Mvar SVC at Beaver County Substation.	Previously Allocated		$26,264,770
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
Woodward - GEN-2011-051 Tap - Tatonga 345kV CKT 2 Build second 345kV circuit from Woodward - Tatonga @ 3000 amps per ITP10.	Previously Allocated		$71,876,622
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$215,667,500	

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2015-089			
Belden - Hartington 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 12 miles of 115kV	Current Study	$8,400,000	$8,400,000
Bloomfield - Gavins 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 17 miles of 115kV from Gavins - Bloomfield.	Current Study	$20,000,000	$20,000,000
Gavins Point - Hartington 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 20 miles of 115kV	Current Study	$14,000,000	$14,000,000
GEN-2015-089 Interconnection Costs See One-Line Diagram.	Current Study	$2,000,000	$2,000,000
Meadow Grove - Kelly 230kV CKT 1 Upgrade conductor clearance to 100°C for 478MVA rating	Current Study	$3,600,000	$3,600,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Napa Junction - Utica 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 13 miles of 115kV	Current Study	$4,322,500	$4,322,500
Napa Junction - Yankton Junction 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 2.7 miles of 115kV	Current Study	$832,000	$832,000
Northwestern Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Pahoja - Sioux Falls 230kV CKT 1 NRIS only required upgrade: Rebuild approximately 20 miles of 230kV	Current Study	$14,000,000	$14,000,000
Plymouth - Sioux City 161kV CKT 1 NRIS only required upgrade: Rebuild approximately 2 miles of 115kV	Current Study	$2,000,000	$2,000,000
Albion - Petersburg - North Petersburg 115kV CKT 1 Reconductor 115kV lines and replace all terminal equipment for at least a 193MVA rate.	Previously Allocated		$3,500,000
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000
Gavins Point - Yankton Junction 115kV CKT 1 Rebuild approximately 5 miles of 115kV from Gavins to Yankton	Previously Allocated		$5,000,000
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Hoskins - Dixon County - Twin Church 230kV Rerate per NPPD Facility Study	Previously Allocated		$500,000
Thedford - Holt County 345kV CKT 1 Build approximately 146 Miles of 345kV from Thedford to Holt County per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Thedford 345/115kV Transformer CKT 1 Install Thedford 345/115kV transformer per SPP-NTC-200277 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$69,154,500	
GEN-2015-095			
DeGrasse - Mooreland 138kV CKT 1 Rebuild approximately 30 miles of 138kV from DeGrasse - Mooreland	Current Study	$21,000,000	$21,000,000
GEN-2015-095 Interconnection Costs See One-Line Diagram.	Current Study	$942,900	$942,900
DeGrasse 345/138kV Project Per 2016 ITPNT: NTC 200391. DeGrasse 345kV Substation and 345/138kV transformer. (Total Project E&C Cost Shown)	Previously Allocated		$30,500,000
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$21,942,900	
GEN-2016-001			
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$95,000,000	$95,000,000
Bushland - Potter County 230kV CKT 1 Replace line traps at both terminals	Current Study	$250,000	$250,000
GEN-2016-001 Interconnection Costs See One-Line Diagram.	Current Study	$15,975,000	$15,975,000
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$106,737,500	$106,737,500
Beaver County 345kV Reactive Power Support Install +100Mvar SVC at Beaver County Substation.	Previously Allocated		$26,264,770

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Woodward - GEN-2011-051 Tap - Tatonga 345kV CKT 2 Build second 345kV circuit from Woodward - Tatonga @ 3000 amps per ITP10.	Previously Allocated		$71,876,622
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$217,962,500	
GEN-2016-002			
Carlisle - LP-Doud 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 3 miles of 115kV from Carlisle - LP Doud	Current Study	$2,100,000	$2,100,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$5,000,000	$5,000,000
Crawfish Draw 345/230/13kV Transformer CKT 2 Build Crawfish Draw 345/230kV Transformer CKT 2	Current Study	$12,000,000	$12,000,000
GEN-2015-079 Tap - Hobbs 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$500,000	$500,000
GEN-2016-002 Interconnection Costs See One-Line Diagram.	Current Study	$7,557,984	$7,557,984
Jones - TUCO 230kV CKT 1 NRIS only required upgrade: Replace line traps	Current Study	$200,000	$200,000
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$4,000,000	$4,000,000
Wolfforth Interchange 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace existing Wolfforth Interchange Transformer	Current Study	$6,000,000	$6,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
TUCO Interchange - Yoakum - Hobbs 345/230kV Project Per HPILs SPP-NTC-200283 (Total Project E&C Cost Shown)	Previously Allocated		$241,826,483
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
Wolfforth - Terry County 115kV CKT 1 NRIS only required upgrade: Replace terminal equipment per SPP-NTC-200395	Previously Allocated		$1,461,643
	Current Study Total	$37,357,984	
GEN-2016-003			
GEN-2016-003 Interconnection Costs See One-Line Diagram.	Current Study	$15,925,000	$15,925,000
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$106,737,500	$106,737,500
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$122,662,500	

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-004			
Antelope - EmmonsCo Tap - Broadland 345kV CKT 1 Replace terminal equipment. Costs Included in Emmons - GEN-2016-044 Tap	Current Study	$0	$0
Bismark - Hilken 230kV CKT 1 NRIS only required upgrade: Rebuild approximately 22 miles of second 230kV	Current Study	$3,600,000	$3,600,000
Broadland - Split Rock 345kV CKT 1 Build a new approximately 110 mile line from Broadland - Split Rock 345kV.	Current Study	$150,000,000	$150,000,000
Fargo - Sheynne 230kV CKT 1 Replace terminal equipment	Current Study	$80,000	$80,000
G16-044 Tap - LeLand Olds 345kV CKT 1 Replace terminal equipment at LeLand Olds 345kV	Current Study	$500,000	$500,000
GEN-2009-001IS - Watertown 345kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$500,000	$500,000
GEN-2016-004 Interconnection Costs See One-Line Diagram.	Current Study	$2,871,212	$2,871,212
GEN-2016-044 Tap - Emmons 345kV CKT 1 Build approximately 45 miles of new 345kV, tap AVS - Broadland 345kV, and build new Emmons Substation	Current Study	$65,000,000	$65,000,000
GEN-2016-044 Tap - Groton 345kV CKT 2 Build approximately 110 miles of second 345kV	Current Study	$100,000,000	$100,000,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Split Rock - White 345kV CKT 1 Replace terminal equipment and increaes conductor clearance	Current Study	$750,000	$750,000
Watertown 345/230/13kV Transformer CKT 1 NRIS only required upgrade: Replace transformer	Current Study	$5,600,000	$5,600,000
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Neset - Tande 230kV CKT 1 Build new 230kV line from Neset - Tande	Previously Allocated		$3,000,000
Neset 230kV Terminal Upgrade(s) Install necessary terminal equInstall necessary terminal upgrades at Neset 230kV to accommodate new 230kV line from new Tande substation	Previously Allocated		$4,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Patent Gate - Kummer Ridge - Roundup Project	Previously Allocated		$122,736,877
Tande 345/230 Substation Construct new 345kV Tande Substation & Tande 345/230/13kV transformer Construct new 345kV Tande Substation adjacent to the existing 230kV Neset Substation and	Previously Allocated		$18,000,000
	Current Study Total	$328,901,212	
GEN-2016-005			
GEN-2016-005 Interconnection Costs See One-Line Diagram.	Current Study	$8,614,897	$8,614,897
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$8,614,897	
GEN-2016-007			
GEN-2016-007 Interconnection Costs See One-Line Diagram.	Current Study	$1,100,000	$1,100,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
	Current Study Total	$1,100,000	
GEN-2016-008			
GEN-2016-008 Interconnection Costs See One-Line Diagram.	Current Study	$4,850,000	$4,850,000
GEN-2016-008 Interconnection Facilities Upgrade Over frequence protection to mitigate unstable results identified in the transient stability analysis	Current Study	$TBD	$TBD
Chisholm - Gracemont 345kV CKT 1 Per SPP-NTC-200255 and 200240 (Total Project E&C Cost Shown)	Previously Allocated		$162,952,357
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Naples Tap - Payne 138kV CKT 1 Rebuild approximately 8 miles of 138kV from Naples Tap to Payne	Previously Allocated		$5,600,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Norge - Southwest Station 138kV CKT 1 Rebuild approximately 23 miles of 138kV from Norge to Southwest Station	Previously Allocated		$23,000,000
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$4,850,000	
GEN-2016-009			
GEN-2016-009 Interconnection Costs See One-Line Diagram.	Current Study	$956,218	$956,218
	Current Study Total	$956,218	
GEN-2016-012			
GEN-2016-012 Interconnection Costs See One-Line Diagram.	Current Study	$11,823,344	$11,823,344
GEN-2016-012 Tap - LaCygne 345kV CKT 1 Rebuild approximately 31 miles of 345kV from GEN-2016-012 Tap - LaCyne	Current Study	$31,600,000	$31,600,000
Wolf Creek - Neosho 345kV CKT 1 Build approximately 95 miles of new 345kV	Current Study	$117,126,900	$117,126,900
Wolf Creek Generation Plant Studies and Agreements Please refer to Appendix K	Current Study	$TBD	$TBD
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$160,550,244	
GEN-2016-013			
GEN-2016-013 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
GEN-2016-013 Interconnection Facilities Upgrade Reset relay settings at La Russell 161kV	Current Study	$0	$0

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Neosho - Riverton 161kV CKT 1 NRIS only required upgrade: Rebuild approximately 28 miles of 161kV	Current Study	$23,000,000	$23,000,000
	Current Study Total	$23,000,000	
GEN-2016-014			
GEN-2016-014 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
GEN-2016-014 Interconnection Facilities Upgrade Reset relay settings at La Russell 161kV	Current Study	$0	$0
Neosho - Riverton 161kV CKT 1 NRIS only required upgrade: Rebuild approximately 28 miles of 161kV	Current Study	$23,000,000	$23,000,000
	Current Study Total	$23,000,000	
GEN-2016-015			
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$3,000,000	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$5,000,000	$5,000,000
Crawfish Draw 345/230/13kV Transformer CKT 2 Build Crawfish Draw 345/230kV Transformer CKT 2	Current Study	$12,000,000	$12,000,000
GEN-2016-015 Interconnection Costs See One-Line Diagram.	Current Study	$6,454,408	$6,454,408
GEN-2016-015 Interconnection Facilities Upgrade Over frequence and voltage protection to mitigate unstable results identified in the transient stability analysis	Current Study	$TBD	$TBD
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
TUCO Interchange - Yoakum - Hobbs 345/230kV Project Per HPILs SPP-NTC-200283 (Total Project E&C Cost Shown)	Previously Allocated		$241,826,483
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$26,454,408	
GEN-2016-016			
GEN-2016-016 Interconnection Costs See One-Line Diagram.	Current Study	$4,000,000	$4,000,000
Knoll - Post Rock 230kV CKT 2 NRIS only required upgrade: Build second 230kV circuit between Knoll - Post Rock	Current Study	$3,306,000	$3,306,000
Wichita 345/230/13kV Transformer CKT 1 NRIS only required upgrade: Replace existing Wichita transformer CKT 1 to 560/616 MVA	Current Study	$9,048,819	$9,048,819
Wichita 345/230/13kV Transformer CKT 2 NRIS only required upgrade: Replace existing Wichita transformer CKT 2 to 560/616 MVA	Current Study	$9,048,819	$9,048,819
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$25,403,638	
GEN-2016-017			
Broadland - Split Rock 345kV CKT 1 NRIS only required upgrade: Build a new approximately 110 mile line from Broadland - Split Rock 345kV	Current Study	$150,000,000	$150,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Ft. Randall - Ft. Thomson 230kV CKT 1 NRIS only required upgrade: Replace Breakers/CT and clearance	Current Study	$550,000	$550,000
Ft. Thomson 345/230kV Transformer CKT 1 & 2 NRIS only required upgrade: Replace both 345/230kV transformers with larger ones	Current Study	$13,400,000	$13,400,000
GEN-2016-017 Interconnection Costs See One-Line Diagram.	Current Study	$19,264,793	$19,264,793
GEN-2016-044 Tap - Groton 345kV CKT 2 Build approximately 110 miles of second 345kV	Current Study	$100,000,000	$100,000,000
Holt County - Grand Island 345kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$1,000,000	$1,000,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Split Rock - White 345kV CKT 1 Replace terminal equipment and increaes conductor clearance	Current Study	$750,000	$750,000
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Patent Gate - Kummer Ridge - Roundup Project	Previously Allocated		$122,736,877
	Current Study Total	$284,964,793	

GEN-2016-020

DeGrasse - Mooreland 138kV CKT 1 Rebuild approximately 30 miles of 138kV from DeGrasse - Mooreland	Current Study	$21,000,000	$21,000,000
GEN-2016-020 Interconnection Costs See One-Line Diagram.	Current Study	$2,000,000	$2,000,000
DeGrasse 345/138kV Project Per 2016 ITPNT: NTC 200391. DeGrasse 345kV Substation and 345/138kV transformer. (Total Project E&C Cost Shown)	Previously Allocated		$30,500,000
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$23,000,000	

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-021			
Columbus East 230/115/13kV CKT 1 NRIS only required upgrade: Replace existing Columbus Transformer CKT 1	Current Study	$10,000,000	$10,000,000
GEN-2016-021 Interconnection Costs See One-Line Diagram.	Current Study	$2,000,000	$2,000,000
Holt County - Grand Island 345kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$1,000,000	$1,000,000
Meadow Grove - Kelly 230kV CKT 1 Upgrade conductor clearance to 100°C for 478MVA rating	Current Study	$3,600,000	$3,600,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Albion - Petersburg - North Petersburg 115kV CKT 1 Reconductor 115kV lines and replace all terminal equipment for at least a 193MVA rate.	Previously Allocated		$3,500,000
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Hoskins - Dixon County - Twin Church 230kV Rerate per NPPD Facility Study	Previously Allocated		$500,000
Thedford - Holt County 345kV CKT 1 Build approximately 146 Miles of 345kV from Thedford to Holt County per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Thedford 345/115kV Transformer CKT 1 Install Thedford 345/115kV transformer per SPP-NTC-200277 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$16,600,000	
GEN-2016-022			
GEN-2016-022 Interconnection Costs See One-Line Diagram.	Current Study	$4,450,650	$4,450,650
Ranch Road - Sooner 345kV CKT 1 Replace terminal equipment	Current Study	$500,000	$500,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$4,950,650	
GEN-2016-023			
Banner County - Keystone 345kV CKT 1 Build approximately 140 of new 345kV from Banner County to Keystone	Current Study	$175,000,000	$175,000,000
BEPC Laramie Stability Limit Potential mitigation for BEPC Laramie Stability Limit	Current Study	$TBD	$TBD
GEN-2016-023 Interconnection Costs See One-Line Diagram.	Current Study	$19,264,793	$19,264,793
Gerald Gentleman Station Flowgate Stability Limit Mitigation Potential Mitigation for GGS Flowgate Stability Limit. TBD in the Facilities Study with NPPD.	Current Study	$TBD	$TBD
GGS - Keystone 345kV CKT 2 Build approximately 30 miles of new 345kV.	Current Study	$37,500,000	$37,500,000
Albion - Petersburg - North Petersburg 115kV CKT 1 Reconductor 115kV lines and replace all terminal equipment for at least a 193MVA rate.	Previously Allocated		$3,500,000
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Hoskins - Dixon County - Twin Church 230kV Rerate per NPPD Facility Study	Previously Allocated		$500,000
Thedford - Holt County 345kV CKT 1 Build approximately 146 Miles of 345kV from Thedford to Holt County per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Thedford 345/115kV Transformer CKT 1 Install Thedford 345/115kV transformer per SPP-NTC-200277 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$231,764,793	
GEN-2016-024			
GEN-2016-024 Interconnection Costs See One-Line Diagram.	Current Study	$1,784,502	$1,784,502
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$1,784,502	
GEN-2016-028			
GEN-2016-028 Interconnection Costs See One-Line Diagram.	Current Study	$4,000,000	$4,000,000
	Current Study Total	$4,000,000	
GEN-2016-029			
Banner County - Keystone 345kV CKT 1 Build approximately 140 of new 345kV from Banner County to Keystone	Current Study	$175,000,000	$175,000,000
BEPC Laramie Stability Limit Potential mitigation for BEPC Laramie Stability Limit	Current Study	$TBD	$TBD
GEN-2016-029 Interconnection Costs See One-Line Diagram.	Current Study	$19,264,793	$19,264,793
Gerald Gentleman Station Flowgate Stability Limit Mitigation Potential Mitigation for GGS Flowgate Stability Limit. TBD in the Facilities Study with NPPD.	Current Study	$TBD	$TBD
GGS - Keystone 345kV CKT 2 Build approximately 30 miles of new 345kV.	Current Study	$37,500,000	$37,500,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Albion - Petersburg - North Petersburg 115kV CKT 1 Reconductor 115kV lines and replace all terminal equipment for at least a 193MVA rate.	Previously Allocated		$3,500,000
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Hoskins - Dixon County - Twin Church 230kV Rerate per NPPD Facility Study	Previously Allocated		$500,000
Thedford - Holt County 345kV CKT 1 Build approximately 146 Miles of 345kV from Thedford to Holt County per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Thedford 345/115kV Transformer CKT 1 Install Thedford 345/115kV transformer per SPP-NTC-200277 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$231,764,793	
GEN-2016-030			
GEN-2016-030 Interconnection Costs See One-Line Diagram.	Current Study	$2,183,000	$2,183,000
GEN-2016-030 Interconnection Facilities Upgrade Over frequence protection to mitigate unstable results identified in the transient stability analysis	Current Study	$TBD	$TBD
	Current Study Total	$2,183,000	
GEN-2016-031			
GEN-2016-031 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$0	
GEN-2016-032			
GEN-2016-032 Interconnection Costs See One-Line Diagram.	Current Study	$3,288,799	$3,288,799
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$3,288,799	
GEN-2016-034			
Banner County - Keystone 345kV CKT 1 Build approximately 140 of new 345kV from Banner County to Keystone	Current Study	$175,000,000	$175,000,000
BEPC Laramie Stability Limit Potential mitigation for BEPC Laramie Stability Limit	Current Study	$TBD	$TBD
GEN-2016-034 Interconnection Costs See One-Line Diagram.	Current Study	$19,264,793	$19,264,793
Gerald Gentleman Station Flowgate Stability Limit Mitigation Potential Mitigation for GGS Flowgate Stability Limit. TBD in the Facilities Study with NPPD.	Current Study	$TBD	$TBD
GGS - Keystone 345kV CKT 2 Build approximately 30 miles of new 345kV.	Current Study	$37,500,000	$37,500,000
Albion - Petersburg - North Petersburg 115kV CKT 1 Reconductor 115kV lines and replace all terminal equipment for at least a 193MVA rate.	Previously Allocated		$3,500,000
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Hoskins - Dixon County - Twin Church 230kV Rerate per NPPD Facility Study	Previously Allocated		$500,000
Thedford - Holt County 345kV CKT 1 Build approximately 146 Miles of 345kV from Thedford to Holt County per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Thedford 345/115kV Transformer CKT 1 Install Thedford 345/115kV transformer per SPP-NTC-200277 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$231,764,793	
GEN-2016-037			
GEN-2016-037 Interconnection Costs See One-Line Diagram.	Current Study	$18,000,000	$18,000,000
Chisholm - Gracemont 345kV CKT 1 Per SPP-NTC-200255 and 200240 (Total Project E&C Cost Shown)	Previously Allocated		$162,952,357
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Naples Tap - Payne 138kV CKT 1 Rebuild approximately 8 miles of 138kV from Naples Tap to Payne	Previously Allocated		$5,600,000
Norge - Southwest Station 138kV CKT 1 Rebuild approximately 23 miles of 138kV from Norge to Southwest Station	Previously Allocated		$23,000,000
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$18,000,000	
GEN-2016-038			
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$95,000,000	$95,000,000
Carlisle - LP-Doud 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 3 miles of 115kV from Carlisle - LP Doud	Current Study	$2,100,000	$2,100,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2015-079 Tap - Hobbs 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$500,000	$500,000
GEN-2016-038 Interconnection Costs See One-Line Diagram.	Current Study	$1,154,068	$1,154,068
GEN-2016-038 Interconnection Facilities Upgrade Install +90/-10 Mvar SVC at the customer 34.5kV bus.	Current Study	$0	$0
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$106,737,500	$106,737,500
Beaver County 345kV Reactive Power Support Install +100Mvar SVC at Beaver County Substation.	Previously Allocated		$26,264,770
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Canyon East Tap - Randall 115kV CKT 1 NRIS only required upgrade: Assigned in SPP-2011-AG3-AFS-11 per SPP-NTC-200369	Previously Allocated		$12,806,065
Canyon West - Dawn 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$9,756,809
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Dawn - Panda 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$5,901,274
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
TUCO Interchange - Jones 230kV CKT 1 NRIS only required upgrade: Replace line traps at both terminals	Previously Allocated		$400,000
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
Woodward - GEN-2011-051 Tap - Tatonga 345kV CKT 2 Build second 345kV circuit from Woodward - Tatonga @ 3000 amps per ITP10.	Previously Allocated		$71,876,622
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$205,491,568	

GEN-2016-039

Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$5,000,000	$5,000,000
Crawfish Draw 345/230/13kV Transformer CKT 2 Build Crawfish Draw 345/230kV Transformer CKT 2	Current Study	$12,000,000	$12,000,000
GEN-2014-057 - Sunnyside 345kV CKT 1 Replace terminal equipment to atleast 1600 amps	Current Study	$500,000	$500,000
GEN-2016-039 Interconnection Costs See One-Line Diagram.	Current Study	$3,991,014	$3,991,014
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Kress Interchange - Swisher 115kV CKT 1 Replace terminal equipment	Previously Allocated		$500,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
TUCO Interchange - Yoakum - Hobbs 345/230kV Project Per HPILs SPP-NTC-200283 (Total Project E&C Cost Shown)	Previously Allocated		$241,826,483
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$21,491,014	
GEN-2016-040			
GEN-2016-040 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
	Current Study Total	$0	
GEN-2016-041			
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$95,000,000	$95,000,000
Carlisle - LP-Doud 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 3 miles of 115kV from Carlisle - LP Doud	Current Study	$2,100,000	$2,100,000
GEN-2015-079 Tap - Hobbs 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$500,000	$500,000
GEN-2016-041 Interconnection Costs See One-Line Diagram.	Current Study	$317,991	$317,991
GEN-2016-041 Interconnection Facilities Upgrade Over frequence protection to mitigate unstable results identified in the transient stability analysis	Current Study	$TBD	$TBD

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$106,737,500	$106,737,500
Hansford - Hitchland 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 6.7 miles of 115kV from Hansford - Hitchland 115kV	Current Study	$4,400,000	$4,400,000
Hansford - Spearman 115kV CKT 1 NRIS only required upgrade: Rebuild approxmately 15 miles of 115kV from Hansford - Spearman 115kV	Current Study	$9,750,000	$9,750,000
Hitchland 345/115kV Transformer CKT 1 NRIS only required upgrade: Build Hitchland 345/115kV transformer circuit 1	Current Study	$12,000,000	$12,000,000
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$4,000,000	$4,000,000
SP-Wolf Tap - LP-Doud Tap 115kV CKT 2 NRIS only required upgrade: Build apprioxmately 1.4 miles of second 115kV from SP-Wolf to LP-Doud. Affected System study required	Current Study	$1,000,000	$1,000,000
Wolfforth Interchange 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace existing Wolfforth Interchange Transformer	Current Study	$6,000,000	$6,000,000
Beaver County 345kV Reactive Power Support Install +100Mvar SVC at Beaver County Substation.	Previously Allocated		$26,264,770
Canyon East Tap - Randall 115kV CKT 1 NRIS only required upgrade: Assigned in SPP-2011-AG3-AFS-11 per SPP-NTC-200369	Previously Allocated		$12,806,065
Canyon West - Dawn 115kV CKT 1 NRIS only required upgrade: Assigned in 2016 ITPNT per SPP-NTC-200395	Previously Allocated		$9,756,809
TUCO Interchange - Jones 230kV CKT 1 NRIS only required upgrade: Replace line traps at both terminals	Previously Allocated		$400,000
Wolfforth - Terry County 115kV CKT 1 NRIS only required upgrade: Replace terminal equipment per SPP-NTC-200395	Previously Allocated		$1,461,643
Woodward - GEN-2011-051 Tap - Tatonga 345kV CKT 2 Build second 345kV circuit from Woodward - Tatonga @ 3000 amps per ITP10.	Previously Allocated		$71,876,622
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$241,805,491	

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-042			
GEN-2016-042 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
	Current Study Total	$0	
GEN-2016-043			
GEN-2016-043 Interconnection Costs See One-Line Diagram.	Current Study	$2,000,000	$2,000,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Albion - Petersburg - North Petersburg 115kV CKT 1 Reconductor 115kV lines and replace all terminal equipment for at least a 193MVA rate.	Previously Allocated		$3,500,000
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000
Hoskins - Dixon County - Twin Church 230kV Rerate per NPPD Facility Study	Previously Allocated		$500,000
Thedford - Holt County 345kV CKT 1 Build approximately 146 Miles of 345kV from Thedford to Holt County per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Thedford 345/115kV Transformer CKT 1 Install Thedford 345/115kV transformer per SPP-NTC-200277 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$2,000,000	
GEN-2016-044			
Antelope - EmmonsCo Tap - Broadland 345kV CKT 1 Replace terminal equipment. Costs Included in Emmons - GEN-2016-044 Tap	Current Study	$0	$0
Bristol - Summit 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 32 miles of 115kV.	Current Study	$6,300,000	$6,300,000
Broadland - Split Rock 345kV CKT 1 Build a new approximately 110 mile line from Broadland - Split Rock 345kV.	Current Study	$150,000,000	$150,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2009-001IS - Groton 345kV CKT 1 Replace terminal equipment	Current Study	$500,000	$500,000
GEN-2009-001IS - Watertown 345kV CKT 1 Replace terminal equipment	Current Study	$500,000	$500,000
GEN-2013-001IS - Summit 115kV CKT 1 Replace terminal equipment	Current Study	$50,000	$50,000
GEN-2016-044 Interconnection Costs See One-Line Diagram.	Current Study	$19,264,793	$19,264,793
GEN-2016-044 Interconnection Facilities Upgrade Over frequence protection to mitigate unstable results identified in the transient stability analysis	Current Study	$TBD	$TBD
GEN-2016-044 Tap - Emmons 345kV CKT 1 Build approximately 45 miles of new 345kV, tap AVS - Broadland 345kV, and build new Emmons Substation	Current Study	$65,000,000	$65,000,000
GEN-2016-044 Tap - Groton 345kV CKT 2 Build approximately 110 miles of second 345kV	Current Study	$100,000,000	$100,000,000
Groton - Aberdeen 115kV CKT 1 NRIS only required upgrade: Replace jumpers at Redfield	Current Study	$100,000	$100,000
Groton - Bristol 115kV CKT 1 NRIS only required upgrade: Rebuild approximately 21 miles of 115kV.	Current Study	$4,000,000	$4,000,000
Groton - Redfield 115kV CKT 1 NRIS only required upgrade: Replace jumpers at Redfield	Current Study	$100,000	$100,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Sioux City - Split Rock 345kV CKT 1 Replace terminal equipment	Current Study	$360,000	$360,000
Split Rock - White 345kV CKT 1 Replace terminal equipment and increaes conductor clearance	Current Study	$750,000	$750,000
Watertown - White 345kV CKT 1 Uprate CT	Current Study	$50,000	$50,000
Watertown 345/230/13kV Transformer CKT 1 Replace transformer	Current Study	$5,600,000	$5,600,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Neset - Tande 230kV CKT 1 Build new 230kV line from Neset - Tande	Previously Allocated		$3,000,000
Neset 230kV Terminal Upgrade(s) Install necessary terminal equInstall necessary terminal upgrades at Neset 230kV to accommodate new 230kV line from new Tande substation	Previously Allocated		$4,000,000
Patent Gate - Kummer Ridge - Roundup Project	Previously Allocated		$122,736,877
Tande 345/230 Substation Construct new 345kV Tande Substation & Tande 345/230/13kV transformer Construct new 345kV Tande Substation adjacent to the existing 230kV Neset Substation and	Previously Allocated		$18,000,000
	Current Study Total	$352,574,793	
GEN-2016-045			
GEN-2016-045 Interconnection Costs See One-Line Diagram.	Current Study	$8,629,014	$8,629,014
GEN-2016-045 Interconnection Facilities Upgrade Build second 300 miles of 345kV generator lead or other means to mitigate unstable results identified in the transient stability analysis	Current Study	$TBD	$TBD
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$8,629,014	
GEN-2016-046			
GEN-2016-046 Interconnection Costs See One-Line Diagram.	Current Study	$10,000,000	$10,000,000
	Current Study Total	$10,000,000	
GEN-2016-047			
GEN-2016-047 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
	Current Study Total	$0	
GEN-2016-048			
GEN-2016-048 Interconnection Costs See One-Line Diagram.	Current Study	$3,521,000	$3,521,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Kinze - McElroy 138kV CKT 1 Rebuild approximately 2 miles of 138kV from Kinze to McElroy	Current Study	$600,000	$600,000
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$4,121,000	
GEN-2016-049			
GEN-2016-049 Interconnection Costs See One-Line Diagram.	Current Study	$10,000,000	$10,000,000
	Current Study Total	$10,000,000	
GEN-2016-050			
GEN-2016-050 Interconnection Costs See One-Line Diagram.	Current Study	$12,500,000	$12,500,000
Holt County - Grand Island 345kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$1,000,000	$1,000,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Albion - Petersburg - North Petersburg 115kV CKT 1 Reconductor 115kV lines and replace all terminal equipment for at least a 193MVA rate.	Previously Allocated		$3,500,000
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Hoskins - Dixon County - Twin Church 230kV Rerate per NPPD Facility Study	Previously Allocated		$500,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Thedford - Holt County 345kV CKT 1 Build approximately 146 Miles of 345kV from Thedford to Holt County per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Thedford 345/115kV Transformer CKT 1 Install Thedford 345/115kV transformer per SPP-NTC-200277 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$13,500,000	
GEN-2016-051			
GEN-2016-051 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
Chisholm - Gracemont 345kV CKT 1 Per SPP-NTC-200255 and 200240 (Total Project E&C Cost Shown)	Previously Allocated		$162,952,357
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Naples Tap - Payne 138kV CKT 1 Rebuild approximately 8 miles of 138kV from Naples Tap to Payne	Previously Allocated		$5,600,000
Norge - Southwest Station 138kV CKT 1 Rebuild approximately 23 miles of 138kV from Norge to Southwest Station	Previously Allocated		$23,000,000
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$0	
GEN-2016-052			
Antelope - EmmonsCo Tap - Broadland 345kV CKT 1 Replace terminal equipment. Costs Included in Emmons - GEN-2016-044 Tap	Current Study	$0	$0
Bismark - Hilken 230kV CKT 1 NRIS only required upgrade: Rebuild approximately 22 miles of second 230kV	Current Study	$3,600,000	$3,600,000
GEN-2016-044 Tap - Emmons 345kV CKT 1 Build approximately 45 miles of new 345kV, tap AVS - Broadland 345kV, and build new Emmons Substation	Current Study	$65,000,000	$65,000,000
GEN-2016-052 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Neset - Tande 230kV CKT 1 Build new 230kV line from Neset - Tande	Previously Allocated		$3,000,000
Neset 230kV Terminal Upgrade(s) Install necessary terminal equInstall necessary terminal upgrades at Neset 230kV to accommodate new 230kV line from new Tande substation	Previously Allocated		$4,000,000
Patent Gate - Kummer Ridge - Roundup Project	Previously Allocated		$122,736,877
Tande 345/230 Substation Construct new 345kV Tande Substation & Tande 345/230/13kV transformer Construct new 345kV Tande Substation adjacent to the existing 230kV Neset Substation and	Previously Allocated		$18,000,000
	Current Study Total	$68,600,000	
GEN-2016-053			
Antelope - EmmonsCo Tap - Broadland 345kV CKT 1 Replace terminal equipment. Costs Included in Emmons - GEN-2016-044 Tap	Current Study	$0	$0
Bismark - Hilken 230kV CKT 1 NRIS only required upgrade: Rebuild approximately 22 miles of second 230kV	Current Study	$3,600,000	$3,600,000
GEN-2016-044 Tap - Emmons 345kV CKT 1 Build approximately 45 miles of new 345kV, tap AVS - Broadland 345kV, and build new Emmons Substation	Current Study	$65,000,000	$65,000,000
GEN-2016-053 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Neset - Tande 230kV CKT 1 Build new 230kV line from Neset - Tande	Previously Allocated		$3,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Neset 230kV Terminal Upgrade(s) Install necessary terminal equInstall necessary terminal upgrades at Neset 230kV to accommodate new 230kV line from new Tande substation	Previously Allocated		$4,000,000
Patent Gate - Kummer Ridge - Roundup Project	Previously Allocated		$122,736,877
Tande 345/230 Substation Construct new 345kV Tande Substation & Tande 345/230/13kV transformer Construct new 345kV Tande Substation adjacent to the existing 230kV Neset Substation and	Previously Allocated		$18,000,000
	Current Study Total	$68,600,000	
GEN-2016-054			
GEN-2016-054 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
	Current Study Total	$0	
GEN-2016-055			
GEN-2016-055 Interconnection Costs See One-Line Diagram.	Current Study	$6,300,000	$6,300,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Albion - Petersburg - North Petersburg 115kV CKT 1 Reconductor 115kV lines and replace all terminal equipment for at least a 193MVA rate.	Previously Allocated		$3,500,000
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Hoskins - Dixon County - Twin Church 230kV Rerate per NPPD Facility Study	Previously Allocated		$500,000
Thedford - Holt County 345kV CKT 1 Build approximately 146 Miles of 345kV from Thedford to Holt County per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Thedford 345/115kV Transformer CKT 1 Install Thedford 345/115kV transformer per SPP-NTC-200277 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$6,300,000	
GEN-2016-056			
Carlisle - LP-Doud 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 3 miles of 115kV from Carlisle - LP Doud	Current Study	$2,100,000	$2,100,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$3,000,000	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$5,000,000	$5,000,000
Crawfish Draw 345/230/13kV Transformer CKT 2 Build Crawfish Draw 345/230kV Transformer CKT 2	Current Study	$12,000,000	$12,000,000
GEN-2014-057 - Sunnyside 345kV CKT 1 Replace terminal equipment to atleast 1600 amps	Current Study	$500,000	$500,000
GEN-2015-079 Tap - Hobbs 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$500,000	$500,000
GEN-2016-056 Interconnection Costs See One-Line Diagram.	Current Study	$4,237,857	$4,237,857
SP-Wolf - Yuma 115kV CKT 1 NRIS only required upgrade: Rebuild approximatley 1 mile of 115kV from Wolf - Yuma	Current Study	$750,000	$750,000
SP-Wolf Tap - LP-Doud Tap 115kV CKT 2 NRIS only required upgrade: Build apprioxmately 1.4 miles of second 115kV from SP-Wolf to LP-Doud. Affected System study required	Current Study	$1,000,000	$1,000,000
Sundown 230/115/13.2KV Transformer CKT 2 NRIS only required upgrade: Build second Sundown 230/115 Transformer	Current Study	$6,000,000	$6,000,000
Wolfforth Interchange 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace existing Wolfforth Interchange Transformer	Current Study	$6,000,000	$6,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Carlisle 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace transformer assigned in SPP-2014-AG1-AFS-6 per SPP-NTC-200359	Previously Allocated		$3,853,326
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
TUCO Interchange - Yoakum - Hobbs 345/230kV Project Per HPILs SPP-NTC-200283 (Total Project E&C Cost Shown)	Previously Allocated		$241,826,483
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
Wolfforth - Sundown 230kV CKT 1 NRIS only required upgrade: Replace line traps at both terminals	Previously Allocated		$400,000
Wolfforth - Terry County 115kV CKT 1 NRIS only required upgrade: Replace terminal equipment per SPP-NTC-200395	Previously Allocated		$1,461,643
	Current Study Total	$41,087,857	
GEN-2016-057			
GEN-2016-057 Interconnection Costs See One-Line Diagram.	Current Study	$8,629,014	$8,629,014
GEN-2016-057 Interconnection Facilities Upgrade Build second 300 miles of 345kV generator lead or other means to mitigate unstable results identified in the transient stability analysis	Current Study	$TBD	$TBD

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$8,629,014	
GEN-2016-058			
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$3,000,000	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$5,000,000	$5,000,000
Crawfish Draw 345/230/13kV Transformer CKT 2 Build Crawfish Draw 345/230kV Transformer CKT 2	Current Study	$12,000,000	$12,000,000
GEN-2014-057 - Sunnyside 345kV CKT 1 Replace terminal equipment to atleast 1600 amps	Current Study	$500,000	$500,000
GEN-2016-058 Interconnection Costs See One-Line Diagram.	Current Study	$2,781,836	$2,781,836
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$106,737,500	$106,737,500
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2 Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)	Current Study	$40,000,000	$40,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$88,172,500	$88,172,500
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.	Current Study	$88,170,000	$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$156,000,000	$156,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
TUCO Interchange - Yoakum - Hobbs 345/230kV Project Per HPILs SPP-NTC-200283 (Total Project E&C Cost Shown)	Previously Allocated		$241,826,483
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$502,361,836	
GEN-2016-059			
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$95,000,000	$95,000,000
GEN-2016-059 Interconnection Costs See One-Line Diagram.	Current Study	$1,272,967	$1,272,967
GEN-2016-059 Interconnection Facilities Upgrade Install +105/-40 Mvar SVC at the customer 34.5kV bus.	Current Study	$0	$0
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$106,737,500	$106,737,500
Wolfforth Interchange 230/115/13kV Transformer CKT 1 NRIS only required upgrade: Replace existing Wolfforth Interchange Transformer	Current Study	$6,000,000	$6,000,000
Beaver County 345kV Reactive Power Support Install +100Mvar SVC at Beaver County Substation.	Previously Allocated		$26,264,770

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
Woodward - GEN-2011-051 Tap - Tatonga 345kV CKT 2 Build second 345kV circuit from Woodward - Tatonga @ 3000 amps per ITP10.	Previously Allocated		$71,876,622
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$209,010,467	

GEN-2016-060

Farber - Belle Plains 138kV CKT 1 Rebuild approximately 10.3 miles of 138kV from Farber to Belle Plains	Current Study	$9,000,000	$9,000,000
GEN-2016-060 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$9,000,000	
GEN-2016-061			
GEN-2016-061 Interconnection Costs See One-Line Diagram.	Current Study	$11,737,557	$11,737,557
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$11,737,557	
GEN-2016-062			
Andrews Substation Voltage Conversion Convert Andrews 230kV to 345kV	Current Study	$10,000,000	$10,000,000
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$3,000,000	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$5,000,000	$5,000,000
Crawfish Draw 345/230/13kV Transformer CKT 2 Build Crawfish Draw 345/230kV Transformer CKT 2	Current Study	$12,000,000	$12,000,000
GEN-2014-057 - Sunnyside 345kV CKT 1 Replace terminal equipment to atleast 1600 amps	Current Study	$500,000	$500,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2015-079 Tap - Yoakum 230kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$500,000	$500,000
GEN-2016-062 Interconnection Costs See One-Line Diagram.	Current Study	$1,884,283	$1,884,283
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
TUCO Interchange - Yoakum - Hobbs 345/230kV Project Per HPILs SPP-NTC-200283 (Total Project E&C Cost Shown)	Previously Allocated		$241,826,483
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$32,884,283	

GEN-2016-063

GEN-2016-063 Interconnection Costs See One-Line Diagram.	Current Study	$11,737,557	$11,737,557
	Current Study Total	$11,737,557	

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-064			
Fairbury - GEN-2015-087 Tap 115kV CKT 1 Rebuild approximately 17 miles of 115kV	Current Study	$12,250,000	$12,250,000
Fairbury - Harbine 115kV CKT 1 Rebuild approximately 10 miles of 115kV	Current Study	$7,000,000	$7,000,000
GEN-2016-064 Interconnection Costs See One-Line Diagram.	Current Study	$500,000	$500,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Pauline - Rosemont 115kV CKT 1 Rebuild approximately 10.6 miles of 115kV	Current Study	$7,000,000	$7,000,000
Pauline - Rosemont 115kV CKT 2 Build approximately 10.6 miles of second circuit 115kV	Current Study	$7,000,000	$7,000,000
Albion - Petersburg - North Petersburg 115kV CKT 1 Reconductor 115kV lines and replace all terminal equipment for at least a 193MVA rate.	Previously Allocated		$3,500,000
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Hoskins - Dixon County - Twin Church 230kV Rerate per NPPD Facility Study	Previously Allocated		$500,000
Thedford - Holt County 345kV CKT 1 Build approximately 146 Miles of 345kV from Thedford to Holt County per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Thedford 345/115kV Transformer CKT 1 Install Thedford 345/115kV transformer per SPP-NTC-200277 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$33,750,000	
GEN-2016-065			
Antelope - EmmonsCo Tap - Broadland 345kV CKT 1 Replace terminal equipment. Costs Included in Emmons - GEN-2016-044 Tap	Current Study	$0	$0

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-044 Tap - Emmons 345kV CKT 1 Build approximately 45 miles of new 345kV, tap AVS - Broadland 345kV, and build new Emmons Substation	Current Study	$65,000,000	$65,000,000
GEN-2016-065 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Neset - Tande 230kV CKT 1 Build new 230kV line from Neset - Tande	Previously Allocated		$3,000,000
Neset 230kV Terminal Upgrade(s) Install necessary terminal equInstall necessary terminal upgrades at Neset 230kV to accommodate new 230kV line from new Tande substation	Previously Allocated		$4,000,000
Patent Gate - Kummer Ridge - Roundup Project	Previously Allocated		$122,736,877
Tande 345/230 Substation Construct new 345kV Tande Substation & Tande 345/230/13kV transformer Construct new 345kV Tande Substation adjacent to the existing 230kV Neset Substation and	Previously Allocated		$18,000,000
	Current Study Total	$65,000,000	

GEN-2016-066

Antelope - EmmonsCo Tap - Broadland 345kV CKT 1 Replace terminal equipment. Costs Included in Emmons - GEN-2016-044 Tap	Current Study	$0	$0
GEN-2016-044 Tap - Emmons 345kV CKT 1 Build approximately 45 miles of new 345kV, tap AVS - Broadland 345kV, and build new Emmons Substation	Current Study	$65,000,000	$65,000,000
GEN-2016-066 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
MPC Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Neset - Tande 230kV CKT 1 Build new 230kV line from Neset - Tande	Previously Allocated		$3,000,000
Neset 230kV Terminal Upgrade(s) Install necessary terminal equInstall necessary terminal upgrades at Neset 230kV to accommodate new 230kV line from new Tande substation	Previously Allocated		$4,000,000
Patent Gate - Kummer Ridge - Roundup Project	Previously Allocated		$122,736,877
Tande 345/230 Substation Construct new 345kV Tande Substation & Tande 345/230/13kV transformer Construct new 345kV Tande Substation adjacent to the existing 230kV Neset Substation and	Previously Allocated		$18,000,000
	Current Study Total	$65,000,000	
GEN-2016-067			
GEN-2016-067 Interconnection Costs See One-Line Diagram.	Current Study	$55,000	$55,000
	Current Study Total	$55,000	
GEN-2016-068			
GEN-2016-068 Interconnection Costs See One-Line Diagram.	Current Study	$1,900,000	$1,900,000
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$1,900,000	
GEN-2016-069			
Crawfish Draw - TUCO 345kV CKT 2 Build second 345kV from TUCO - Crawfish Draw	Current Study	$3,000,000	$3,000,000
Crawfish Draw - Yoakum 345kV Retermination Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV	Current Study	$5,000,000	$5,000,000
Crawfish Draw 345/230/13kV Transformer CKT 2 Build Crawfish Draw 345/230kV Transformer CKT 2	Current Study	$12,000,000	$12,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2016-069 Interconnection Costs See One-Line Diagram.	Current Study	$2,309,814	$2,309,814
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$106,737,500	$106,737,500
Jones - TUCO 230kV CKT 1 NRIS only required upgrade: Replace line traps	Current Study	$200,000	$200,000
Lubbock Holly 230/69/13kV CKT 2 NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer	Current Study	$4,000,000	$4,000,000
Potter County - Grapevine 345kV CKT 1 Build approximately 65 miles of new 345kV from Potter County - Grapevine	Current Study	$88,172,500	$88,172,500
Tolk - Crawfish Draw 345kV CKT 1 Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.	Current Study	$88,170,000	$88,170,000
Tolk - Potter County 345kV CKT 1 Build approximately 115 miles of 345kV from Tolk - Potter County	Current Study	$156,000,000	$156,000,000
Border - Chisholm 345kV CKT 2 Build approximately 25 miles of second circuit 345kV from Border - Chisholm	Previously Allocated		$25,000,000
Border 345kV Reactive Power Support Install (6)Steps of 50Mvar Capacitor Bank(s) and +300Mvar SVC at Border Substation	Previously Allocated		$32,633,384
Chaves County - Price - CV Pines - Capitan 115kV CKT 1 Per HPILs SPP-NTC-200256 (Total Project E&C Cost Shown)	Previously Allocated		$14,275,000
Chisholm Substation Upgrade 345kV Expand planned Chisholm Substation to tap and terminate Woodward - Border 345kV into the Chisholm Substation	Previously Allocated		$12,000,000
Crawfish Draw - Border 345kV CKT 2 Build approximately 194 miles of second circuit 345kV from TUCO 2 - Border	Previously Allocated		$194,000,000
Grapevine - Nichols 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Grapevine - Wheeler 230kV CKT 1 Replace terminal equipment	Previously Allocated		$400,000
Oklaunion 345kV Reactive Power Support Incremental Upgrade #1 Install +/-100Mvar SVC at Oklaunion	Previously Allocated		$20,000,000
Shamrock 115kV Capacitor Bank Add 2nd step of 9.6Mvars to Shamrock 115kV Capacitor Bank(s)	Previously Allocated		$500,000

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Tolk - Plant X 230kV CKT 1 & 2 Rebuild circuit 1 and 2 betweek Tolk - Plant X 230kV to 1200 amps each.	Previously Allocated		$9,921,693
TUCO 345/230/13.2kV Transformer CKT 1 Replace existing TUCO 345/230/13.2kV Transformer circuit #1 with 640MVA.	Previously Allocated		$3,347,036
TUCO Interchange - Yoakum - Hobbs 345/230kV Project Per HPILs SPP-NTC-200283 (Total Project E&C Cost Shown)	Previously Allocated		$241,826,483
Wheeler - Sweetwater 230kV CKT 1 Rebuild AEP's portion of the circuit and replace terminal equipment on SPS portion	Previously Allocated		$6,000,000
	Current Study Total	$465,589,814	
GEN-2016-070			
Asarco Tap - Highland Park 115kV CKT 1 Replace terminal equipment	Current Study	$600,000	$600,000
Beaver County - Grapevine 345kV CKT 1 Build approximately 75 miles of new 345kV from Beaver County - Grapevine	Current Study	$95,000,000	$95,000,000
Bushland - Potter County 230kV CKT 1 Replace line traps at both terminals	Current Study	$250,000	$250,000
GEN-2016-070 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
Grapevine - Chisholm 345kV CKT 1 Build approximately 75 miles of new 345kV from Grapevine - Chisholm	Current Study	$106,737,500	$106,737,500
Highland Park Tap - Pantex South 115kV CKT 1 Upgrade terminal equipment	Current Study	$400,000	$400,000
Martin 230/115kV Project CKT 1 Build 230kV Substation on Grapevine - Nichols circuit 1 and install 230/115kV transformer and build 2 mile line to Martin 115kV	Current Study	$8,000,000	$8,000,000
Beaver County 345kV Reactive Power Support Install +100Mvar SVC at Beaver County Substation.	Previously Allocated		$26,264,770
Stevens Co. 345 kV Substation Per SPP-NTC-200343 (Total Project E&C Cost Shown).	Previously Allocated		$13,831,957
Woodward - GEN-2011-051 Tap - Tatonga 345kV CKT 2 Build second 345kV circuit from Woodward - Tatonga @ 3000 amps per ITP10.	Previously Allocated		$71,876,622
Woodward 345/138/13kV Transformer CKT 3 Add Woodward 345/138/13kV Transformer circuit #3	Previously Allocated		$9,634,457

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
Woodward EHV Phase Shifting Transformer CKT 1 Install one phase shifting transformer at Woodward	Previously Allocated		$7,200,000
	Current Study Total	$210,987,500	
GEN-2016-071			
Farber - Belle Plains 138kV CKT 1 Rebuild approximately 10.3 miles of 138kV from Farber to Belle Plains	Current Study	$9,000,000	$9,000,000
GEN-2016-071 Interconnection Costs See One-Line Diagram.	Current Study	$4,612,190	$4,612,190
Kildare - White Eagle 138kV CKT 1 Rebuild approximately 11 miles of 138kV from Kildare to White Eagle	Current Study	$2,805,000	$2,805,000
Kinze - McElroy 138kV CKT 1 Rebuild approximately 2 miles of 138kV from Kinze to McElroy	Current Study	$600,000	$600,000
Middleton Tap - Chilocco 138kV CKT 1 Rebuild approximately 5.7 miles of 138kV from Middleton to Chilocco	Current Study	$3,000,000	$3,000,000
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$20,017,190	
GEN-2016-072			
GEN-2016-072 Interconnection Costs See One-Line Diagram.	Current Study	$1,925,000	$1,925,000
Renfrow - Renfrow 138kV CKT 1 Rebuild approximately 2 miles of 138kV from Renfrow to Renfrow.	Current Study	$1,400,000	$1,400,000
Renfrow - Wakitas 138kV CKT 1 Rebuild approximately 17 miles of 138kV from Renfrow to Wakitas	Current Study	$11,900,000	$11,900,000
Viola 345/138/13kV Transformer CKT 2 Build second 345/138/13.8kV transformer at Viola	Current Study	$9,000,000	$9,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$24,225,000	
GEN-2016-073			
GEN-2016-073 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
GEN-2015-063 Tap - Mathewson 345kV CKT 1 Replace terminal equipment to achieve conductor limit	Previously Allocated		$4,715,335
Viola - Sumner County 138kV CKT 1 SPP 2014 ITP NT assigned upgrade per SPP-NTC-200296 for 6/1/2019 in-service.	Previously Allocated		$51,513,963
Viola 345/138 kV Transformer CKT 1 SPP 2013 ITP NT assigned upgrade per SPP-NTC-200288 for 6/1/2019 in-service.	Previously Allocated		$19,339,327
Viola HPILS Upgrade Project 138kV CKT 1 HPILS assigned upgrades per SPP-NTC-20363 & 200362. Build Anthony - Bluff City - Caldwell - Mayfield - Milan - Viola 138 kV Ckt 1	Previously Allocated		$49,070,637
	Current Study Total	$0	
GEN-2016-075			
GEN-2016-075 Interconnection Costs See One-Line Diagram.	Current Study	$0	$0
Holt County - Grand Island 345kV CKT 1 NRIS only required upgrade: Replace terminal equipment	Current Study	$1,000,000	$1,000,000
MISO Affected System Study See Section 8 power flow analysis.	Current Study	$TBD	$TBD
Albion - Petersburg - North Petersburg 115kV CKT 1 Reconductor 115kV lines and replace all terminal equipment for at least a 193MVA rate.	Previously Allocated		$3,500,000
Battle Creek-County Line 115kV CKT 1 Rebuild approximately 11 miles of 115kV from Battle Creek to County Line.	Previously Allocated		$4,000,000

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Interconnection Request and Upgrades	Upgrade Type	Allocated Cost	Upgrade Cost
County Line-Neligh East 115kV CKT 1 Rebuild approximately 12 miles of 115kV from County Line to Neligh East.	Previously Allocated		$8,050,000
Gentleman - Thedford 345kV CKT 1 Build approximately 76 Miles of 345kV from Gentleman to Thedford per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Hoskins - Dixon County - Twin Church 230kV Rerate per NPPD Facility Study	Previously Allocated		$500,000
Thedford - Holt County 345kV CKT 1 Build approximately 146 Miles of 345kV from Thedford to Holt County per SPP-NTC-200220 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Thedford 345/115kV Transformer CKT 1 Install Thedford 345/115kV transformer per SPP-NTC-200277 (Total Project E&C Cost Shown).	Previously Allocated		$311,717,040
Twin Church - Dixon County 230kV Increase conductor clearances to accommodate 320MVA facility rating	Previously Allocated		$100,000
	Current Study Total	$1,000,000	
	TOTAL CURRENT STUDY COSTS:	**$6,224,154,489***	

*Total costs do no include potential stability mitigations as listed through out Appendix E and F. Total cost does not include AECI, Northwestern Energy, MISO, and MPC Affected System costs.

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11.7 F: COST ALLOCATION PER PROPOSED STUDY NETWORK UPGRADE

Appendix F. Cost Allocation by Upgrade

Altoona - Bulter 138kV CKT 1			**$74,810,342**
NRIS only required upgrade: Rebuild approximately 70.6 miles of 138kV			
	GEN-2016-024	$74,810,342	
	Total Allocated Costs	**$74,810,342**	
Andrews - National Enrichment Plant 115 kV CKT 2			**$1,500,000**
Build 2 miles of second 115kV circuit			
	GEN-2016-015	$427,716	
	GEN-2016-062	$1,072,284	
	Total Allocated Costs	**$1,500,000**	
Andrews 345/115/13kV Transformer CKT 1			**$8,000,000**
Replace 230/115kV transformer CKT 1 with 345/115kV transformer			
	GEN-2016-015	$2,281,152	
	GEN-2016-062	$5,718,848	
	Total Allocated Costs	**$8,000,000**	
Andrews 345/115/13kV Transformer CKT 2			**$8,000,000**
Replace 230/115kV transformer CKT 2 with 345/115kV transformer			
	GEN-2016-015	$2,281,152	
	GEN-2016-062	$5,718,848	
	Total Allocated Costs	**$8,000,000**	
Andrews Substation Voltage Conversion			**$10,000,000**
Convert Andrews 230kV to 345kV			
	GEN-2016-015	$2,851,440	
	GEN-2016-062	$7,148,560	
	Total Allocated Costs	**$10,000,000**	
Asarco Tap - Highland Park 115kV CKT 1			**$600,000**
Replace terminal equipment			
	GEN-2016-070	$600,000	
	Total Allocated Costs	**$600,000**	

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ASGI-2016-001 Interconnection Costs			**$0**
See One-Line Diagram.			
	ASGI-2016-001	$0	
	Total Allocated Costs	**$0**	
ASGI-2016-002 Interconnection Costs			**$0**
See One-Line Diagram.			
	ASGI-2016-002	$0	
	Total Allocated Costs	**$0**	
ASGI-2016-003 Interconnection Costs			**$10,000**
See One-Line Diagram.			
	ASGI-2016-003	$10,000	
	Total Allocated Costs	**$10,000**	
ASGI-2016-004 Interconnection Costs			**$0**
See One-Line Diagram.			
	ASGI-2016-004	$0	
	Total Allocated Costs	**$0**	
Banner County - Keystone 345kV CKT 1			**$175,000,000**
Build approximately 140 of new 345kV from Banner County to Keystone			
	GEN-2016-023	$66,888,285	
	GEN-2016-029	$66,666,065	
	GEN-2016-034	$41,445,649	
	Total Allocated Costs	**$175,000,000**	
Bearcat - Mooreland 138kV CKT 1			**$25,000**
Replace Mooreland switch to at least 1200A			
	GEN-2016-020	$25,000	
	Total Allocated Costs	**$25,000**	

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Beaver County - Grapevine 345kV CKT 1 **$95,000,000**

Build approximately 75 miles of new 345kV from Beaver County - Grapevine

ASGI-2016-001	$85,812
ASGI-2016-002	$11,933
ASGI-2016-004	$363,745
GEN-2015-018	$3,005,278
GEN-2015-033	$4,414,040
GEN-2015-039	$1,960,979
GEN-2015-040	$1,755,723
GEN-2015-078	$1,759,025
GEN-2015-082	$12,244,376
GEN-2016-001	$12,442,493
GEN-2016-002	$2,751,425
GEN-2016-003	$8,149,612
GEN-2016-015	$3,546,738
GEN-2016-038	$3,952,173
GEN-2016-039	$4,102,174
GEN-2016-041	$6,318,863
GEN-2016-056	$6,667,164
GEN-2016-058	$7,386,312
GEN-2016-059	$3,952,173
GEN-2016-062	$8,891,672
GEN-2016-069	$1,157,491
GEN-2016-070	$80,799
Total Allocated Costs	**$95,000,000**

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Beaver County - Clark County 345kV CKT 1 **$150,000,000**

Build approximately 125 miles of new 345kV from Beaver County - Clark County

ASGI-2016-001	$72,496
ASGI-2016-002	$10,067
ASGI-2016-004	$377,629
GEN-2015-018	$2,627,895
GEN-2015-033	$3,617,630
GEN-2015-039	$1,847,119
GEN-2015-040	$1,478,572
GEN-2015-078	$1,483,090
GEN-2015-082	$12,832,899
GEN-2016-001	$14,593,607
GEN-2016-002	$2,685,026
GEN-2016-005	$9,613,854
GEN-2016-015	$2,987,310
GEN-2016-016	$2,109,731
GEN-2016-038	$14,438,364
GEN-2016-039	$3,807,310
GEN-2016-041	$6,229,348
GEN-2016-046	$20,663,974
GEN-2016-049	$13,568,681
GEN-2016-056	$5,579,678
GEN-2016-058	$6,206,932
GEN-2016-059	$14,438,364
GEN-2016-062	$7,489,186
GEN-2016-069	$983,175
GEN-2016-070	$258,065
Total Allocated Costs	**$150,000,000**

Belden - Hartington 115kV CKT 1 **$8,400,000**

NRIS only required upgrade: Rebuild approximately 12 miles of 115kV

GEN-2015-089	$8,400,000
Total Allocated Costs	**$8,400,000**

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

BEPC Laramie Stability Limit		**$TBD**
Potential mitigation for BEPC Laramie Stability Limit		
	GEN-2016-023	$TBD
	GEN-2016-029	$TBD
	GEN-2016-034	$TBD
	Total Allocated Costs	**$TBD**
Bismark - Hilken 230kV CKT 1		**$3,600,000**
Rebuild approximately 22 miles of second 230kV		
	GEN-2016-004	$2,361,896
	GEN-2016-052	$619,052
	GEN-2016-053	$619,052
	Total Allocated Costs	**$3,600,000**
Broadland - Split Rock 345kV CKT 1		**$150,000,000**
Build approximately 110 miles of second 345kV		
	GEN-2016-004	$33,111,605
	GEN-2016-017	$31,590,223
	GEN-2016-044	$81,294,338
	GEN-2016-052	$468,242
	GEN-2016-053	$468,242
	GEN-2016-065	$1,053,433
	GEN-2016-066	$2,013,916
	Total Allocated Costs	**$150,000,000**
Broadland 345/230/13kV Transformer CKT 2		**$15,000,000**
Install second Broadland 345/230/13kV transformer		
	GEN-2016-017	$14,943,351
	GEN-2016-052	$23,287
	GEN-2016-053	$23,287
	GEN-2016-065	$3,460
	GEN-2016-066	$6,615
	Total Allocated Costs	**$15,000,000**

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Bushland - Potter County 230kV CKT 1			**$250,000**
Replace line traps at both terminals			
	GEN-2015-082	$27,221	
	GEN-2016-001	$33,571	
	GEN-2016-038	$84,236	
	GEN-2016-041	$19,694	
	GEN-2016-059	$84,236	
	GEN-2016-070	$1,041	
	Total Allocated Costs	**$250,000**	
Caney River - Neosho 345kV CKT 1			**$500,000**
Replace terminal equipment			
	GEN-2016-060	$17,904	
	GEN-2016-061	$72,092	
	GEN-2016-068	$72,571	
	GEN-2016-071	$90,002	
	GEN-2016-072	$124,583	
	GEN-2016-073	$122,847	
	Total Allocated Costs	**$500,000**	
Carlisle - LP-Doud 115kV CKT 1			**$2,100,000**
NRIS only required upgrade: Rebuild approximatley 3 miles of 115kV from Carlisle - LP Doud			
	GEN-2015-033	$156,736	
	GEN-2015-039	$24,878	
	GEN-2015-041	$5,262	
	GEN-2016-002	$64,659	
	GEN-2016-038	$444,881	
	GEN-2016-041	$175,287	
	GEN-2016-056	$783,416	
	GEN-2016-059	$444,881	
	Total Allocated Costs	**$2,100,000**	
Cleveland - Cleveland 138kV CKT Z1			**$1,200,000**
NRIS only rquired upgrade: Replace bus tie breaker with a three breaker ring			
	GEN-2016-008	$43,386	
	GEN-2016-037	$1,156,614	
	Total Allocated Costs	**$1,200,000**	

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Cleveland - Tulsa 345kV CKT 1			**$500,000**
Replace terminal equipment			
	GEN-2016-012	$2,701	
	GEN-2016-022	$63,247	
	GEN-2016-024	$6,962	
	GEN-2016-031	$625	
	GEN-2016-032	$42,773	
	GEN-2016-048	$34,042	
	GEN-2016-060	$4,496	
	GEN-2016-061	$105,456	
	GEN-2016-068	$80,690	
	GEN-2016-071	$52,867	
	GEN-2016-072	$75,565	
	GEN-2016-073	$30,578	
	Total Allocated Costs	**$500,000**	
Cleveland 345/138/13kV Transformer CKT 2			**$5,100,000**
NRIS only required upgrade: Install second 345/138kV Transformer			
	GEN-2016-048	$106,376	
	GEN-2016-068	$4,993,624	
	Total Allocated Costs	**$5,100,000**	
Clinton Junction - Elk City 138kV CKT 1			**$29,200,000**
NRIS only rquired upgrade: Rebuild or Reconductor approximately 24 miles of 138kV			
	GEN-2015-082	$4,906,952	
	GEN-2016-003	$6,801,571	
	GEN-2016-008	$3,123,895	
	GEN-2016-020	$5,796,423	
	GEN-2016-037	$8,571,160	
	Total Allocated Costs	**$29,200,000**	
Columbus East 230/115/13kV CKT 1			**$10,000,000**
NRIS only required upgrade: Replace existing Columbus Transformer CKT 1			
	GEN-2016-021	$10,000,000	
	Total Allocated Costs	**$10,000,000**	

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Cox Interchange - Hale County 115kV CKT 1		**$15,000,000**
NRIS only required upgrade: Rebuild approximately 20 miles of 115kV from Hale Co to Cox Co		
	GEN-2016-002	$15,000,000
	Total Allocated Costs	**$15,000,000**
Crawfish Draw - Seminole 765kV CKT 1		**$975,000,000**
Build approixamately 325 miles of 765kV from Crawfish Draw to Seminole		
	ASGI-2016-001	$1,879,021
	ASGI-2016-002	$264,678
	ASGI-2016-004	$5,031,463
	GEN-2015-018	$53,822,511
	GEN-2015-033	$101,290,948
	GEN-2015-039	$29,293,062
	GEN-2015-040	$37,193,351
	GEN-2015-078	$37,097,053
	GEN-2016-002	$43,856,800
	GEN-2016-015	$73,515,914
	GEN-2016-039	$72,138,221
	GEN-2016-056	$154,724,342
	GEN-2016-058	$158,427,351
	GEN-2016-062	$184,304,396
	GEN-2016-069	$22,160,891
	Total Allocated Costs	**$975,000,000**

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Crawfish Draw - TUCO 345kV CKT 2 **$3,000,000**

Build second 345kV from TUCO - Crawfish Draw

ASGI-2016-001	$7,143
ASGI-2016-002	$1,142
ASGI-2016-004	$9,913
GEN-2015-018	$70,199
GEN-2015-033	$1,205,245
GEN-2015-039	$41,396
GEN-2015-040	$11,556
GEN-2015-078	$21,846
GEN-2016-002	$114,251
GEN-2016-015	$16,637
GEN-2016-038	$178,809
GEN-2016-039	$214,475
GEN-2016-056	$876,501
GEN-2016-059	$178,809
GEN-2016-062	$41,709
GEN-2016-069	$10,371
Total Allocated Costs	**$3,000,000**

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Crawfish Draw - Yoakum 345kV Retermination **$5,000,000**

Incremental Upgrade for SPP-NTC-200283 to reterminate TUCO terminal to TUCO 2 terminal by adding approximately 3 miles of 345kV

ASGI-2016-001	$5,176
ASGI-2016-002	$541
ASGI-2016-004	$4,076
GEN-2015-018	$119,938
GEN-2015-039	$47,498
GEN-2015-040	$334,590
GEN-2015-078	$306,247
GEN-2016-002	$35,703
GEN-2016-015	$608,589
GEN-2016-038	$102,841
GEN-2016-039	$54,845
GEN-2016-056	$50,949
GEN-2016-058	$1,592,474
GEN-2016-059	$102,841
GEN-2016-062	$1,525,733
GEN-2016-069	$107,959
Total Allocated Costs	**$5,000,000**

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Crawfish Draw 765/345kV Transformer CKT 1 & 2 **$30,000,000**

Intsall two 765/345kV transformers at Crawfish Draw

ASGI-2016-001	$57,816
ASGI-2016-002	$8,144
ASGI-2016-004	$154,815
GEN-2015-018	$1,656,084
GEN-2015-033	$3,116,657
GEN-2015-039	$901,329
GEN-2015-040	$1,144,415
GEN-2015-078	$1,141,421
GEN-2016-002	$1,349,445
GEN-2016-015	$2,261,975
GEN-2016-039	$2,219,646
GEN-2016-056	$4,760,768
GEN-2016-058	$4,874,839
GEN-2016-062	$5,670,771
GEN-2016-069	$681,876
Total Allocated Costs	**$30,000,000**

Crawfish Draw 765kV Substation Expansion **$40,000,000**

Expand the planned Crawfish Draw 345kV Substation for new 765kV switchyard

ASGI-2016-001	$77,088
ASGI-2016-002	$10,859
ASGI-2016-004	$206,420
GEN-2015-018	$2,208,112
GEN-2015-033	$4,155,542
GEN-2015-039	$1,201,771
GEN-2015-040	$1,525,887
GEN-2015-078	$1,521,895
GEN-2016-002	$1,799,260
GEN-2016-015	$3,015,966
GEN-2016-039	$2,959,528
GEN-2016-056	$6,347,690
GEN-2016-058	$6,499,785
GEN-2016-062	$7,561,028
GEN-2016-069	$909,168
Total Allocated Costs	**$40,000,000**

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Crete - Friend 115kV CKT 1		**$11,900,000**
NRIS only required upgrade: Rebuild approximately 16.5 miles of 115kV		
	GEN-2016-064	$11,900,000
	Total Allocated Costs	**$11,900,000**
DeGrasse - Rose Valley 138kV CKT 1		**$1,800,000**
NRIS only required upgrade: Replace terminal equipment and reconductor 1.3 miles of 138kV		
	GEN-2016-003	$1,800,000
	Total Allocated Costs	**$1,800,000**
Denver - ShellC2 115kV CKT 1		**$2,225,000**
NRIS only required upgrade: Rebuild approximately 3.3 miles of 115kV		
	GEN-2015-078	$2,225,000
	Total Allocated Costs	**$2,225,000**
Denver South - San Andres Tap 115kV CKT 1		**$1,125,000**
NRIS only required upgrade: Rebuild approximately 1.5 miles of 115kV		
	GEN-2015-078	$1,125,000
	Total Allocated Costs	**$1,125,000**
Drinkard - Drinkard Tap 115kV CKT 1		**$1,500,000**
Rebuild approximately 2 miles from Drinkard to Drinkard Tap		
	GEN-2016-015	$427,716
	GEN-2016-062	$1,072,284
	Total Allocated Costs	**$1,500,000**
Drinkard Tap - Weest Hobbs 115kV CKT 1		**$9,375,000**
Rebuild approximately 12.5 miles from Drinkard Tap to West Hobbs		
	GEN-2016-015	$2,673,225
	GEN-2016-062	$6,701,775
	Total Allocated Costs	**$9,375,000**
Eagle - Pahoja 230kV CKT 1		**$500,000**
NRIS only required upgrade: Rebuild terminal equipment		
	GEN-2015-089	$500,000
	Total Allocated Costs	**$500,000**

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East Plant Transformer 230/115/13kV CKT 2			**$6,000,000**
NRIS only required upgrade: Build second 230/115/13kV 250MVA Transformer			
	GEN-2016-038	$3,000,000	
	GEN-2016-059	$3,000,000	
	Total Allocated Costs	**$6,000,000**	
Eddy County 230/115/13kV CKT 3			**$6,000,000**
NRIS only required upgrade: Build third 230/115/13kV 300MVA Transformer			
	GEN-2015-018	$262,409	
	GEN-2015-033	$637,932	
	GEN-2015-039	$230,219	
	GEN-2015-041	$20,679	
	GEN-2016-002	$333,186	
	GEN-2016-038	$1,491,332	
	GEN-2016-056	$719,181	
	GEN-2016-059	$1,491,332	
	GEN-2016-069	$813,729	
	Total Allocated Costs	**$6,000,000**	
Fairbury - GEN-2015-087 Tap 115kV CKT 1			**$12,250,000**
NRIS only required upgrade: Rebuild approximately 17 miles of 115kV			
	GEN-2016-055	$4,688,342	
	GEN-2016-064	$7,561,658	
	Total Allocated Costs	**$12,250,000**	
Fairbury - Harbine 115kV CKT 1			**$7,000,000**
NRIS only required upgrade: Rebuild approximately 10 miles of 115kV			
	GEN-2016-055	$2,351,199	
	GEN-2016-064	$4,648,801	
	Total Allocated Costs	**$7,000,000**	
Fairfax Tap - Shidler 138kV CKT 1			**$3,250,000**
NRIS only required upgrade: Rebuild approximately 2.4 miles of 138kV			
	GEN-2016-048	$3,250,000	
	Total Allocated Costs	**$3,250,000**	

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Farber - Belle Plains 138kV CKT 1		**$9,000,000**
Rebuild approximately 10.3 miles of 138kV from Farber to Belle Plains		
	GEN-2016-048	$349,221
	GEN-2016-060	$2,548,017
	GEN-2016-071	$6,102,762
	Total Allocated Costs	**$9,000,000**
Fargo - Sheynne 230kV CKT 1		**$3,000,000**
NRIS only required upgrade: Rebuild approximately 4 miles of 230kV		
	GEN-2016-004	$1,065,211
	GEN-2016-007	$1,934,789
	Total Allocated Costs	**$3,000,000**
Fort Randall - Sioux City 230kV CKT 1		**$200,000**
NRIS only required upgrade: Replace terminal equipment		
	GEN-2015-089	$200,000
	Total Allocated Costs	**$200,000**
Gavins Point - Hartington 115kV CKT 1		**$14,000,000**
NRIS only required upgrade: Rebuild approximately 20 miles of 115kV		
	GEN-2015-089	$14,000,000
	Total Allocated Costs	**$14,000,000**
GEN-2009-001IS - Groton 345kV CKT 1		**$500,000**
Replace terminal equipment		
	GEN-2016-004	$96,903
	GEN-2016-044	$392,506
	GEN-2016-052	$1,196
	GEN-2016-053	$1,196
	GEN-2016-065	$2,816
	GEN-2016-066	$5,383
	Total Allocated Costs	**$500,000**

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GEN-2009-001IS - Watertown 345kV CKT 1		**$500,000**
Replace terminal equipment		
	GEN-2016-004	$96,903
	GEN-2016-044	$392,506
	GEN-2016-052	$1,196
	GEN-2016-053	$1,196
	GEN-2016-065	$2,816
	GEN-2016-066	$5,383
	Total Allocated Costs	**$500,000**
GEN-2013-001 - Summit 115kV CKT 1		**$50,000**
Replace terminal equipment		
	GEN-2016-004	$3,894
	GEN-2016-007	$1,853
	GEN-2016-044	$44,253
	Total Allocated Costs	**$50,000**
GEN-2014-074 Tap 345kV Reactive Power Support		**$25,000,000**
Intall +300Mvar SVC at GEN-2014-074 Tap		
	ASGI-2016-001	$50,936
	ASGI-2016-002	$7,232
	ASGI-2016-004	$59,268
	GEN-2015-018	$1,237,117
	GEN-2015-033	$2,919,444
	GEN-2015-039	$503,694
	GEN-2015-040	$991,193
	GEN-2015-078	$985,252
	GEN-2016-002	$773,889
	GEN-2016-015	$1,933,575
	GEN-2016-039	$1,531,600
	GEN-2016-056	$4,350,738
	GEN-2016-058	$4,258,753
	GEN-2016-062	$4,847,473
	GEN-2016-069	$549,836
	Total Allocated Costs	**$25,000,000**

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GEN-2015-018 Interconnection Costs			**$5,148,927**
See One-Line Diagram.			
	GEN-2015-018	$5,148,927	
	Total Allocated Costs	**$5,148,927**	
GEN-2015-033 Interconnection Costs			**$0**
See One-Line Diagram.			
	GEN-2015-033	$0	
	Total Allocated Costs	**$0**	
GEN-2015-036 Interconnection Costs			**$2,025,000**
See One-Line Diagram.			
	GEN-2015-036	$2,025,000	
	Total Allocated Costs	**$2,025,000**	
GEN-2015-038 Interconnection Costs			**$20,000**
See One-Line Diagram.			
	GEN-2015-038	$20,000	
	Total Allocated Costs	**$20,000**	
GEN-2015-039 Interconnection Costs			**$9,114,879**
See One-Line Diagram.			
	GEN-2015-039	$9,114,879	
	Total Allocated Costs	**$9,114,879**	
GEN-2015-040 Interconnection Costs			**$1,112,116**
See One-Line Diagram.			
	GEN-2015-040	$1,112,116	
	Total Allocated Costs	**$1,112,116**	
GEN-2015-041 Interconnection Costs			**$0**
See One-Line Diagram.			
	GEN-2015-041	$0	
	Total Allocated Costs	**$0**	
GEN-2015-078 Interconnection Costs			**$3,107,988**
See One-Line Diagram.			
	GEN-2015-078	$3,107,988	
	Total Allocated Costs	**$3,107,988**	

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GEN-2015-079 Tap - Hobbs 230kV CKT 1			**$500,000**
NRIS only required upgrade: Replace terminal equipment			
	GEN-2016-038	$213,218	
	GEN-2016-041	$73,564	
	GEN-2016-059	$213,218	
	Total Allocated Costs	**$500,000**	
GEN-2015-082 Interconnection Costs			**$1,930,000**
See One-Line Diagram.			
	GEN-2015-082	$1,930,000	
	Total Allocated Costs	**$1,930,000**	
GEN-2015-089 Interconnection Costs			**$2,000,000**
See One-Line Diagram.			
	GEN-2015-089	$2,000,000	
	Total Allocated Costs	**$2,000,000**	
GEN-2015-095 Interconnection Costs			**$942,900**
See One-Line Diagram.			
	GEN-2015-095	$942,900	
	Total Allocated Costs	**$942,900**	
GEN-2016-001 Interconnection Costs			**$15,975,000**
See One-Line Diagram.			
	GEN-2016-001	$15,975,000	
	Total Allocated Costs	**$15,975,000**	
GEN-2016-002 Interconnection Costs			**$7,557,984**
See One-Line Diagram.			
	GEN-2016-002	$7,557,984	
	Total Allocated Costs	**$7,557,984**	
GEN-2016-002 Interconnection Facilities Upgrade			**$TBD**
Unstable results identified in the transient stability analysis			
	GEN-2016-002	$TBD	
	Total Allocated Costs	**$TBD**	

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GEN-2016-003 Interconnection Costs			**$15,925,000**
See One-Line Diagram.			
	GEN-2016-003	$15,925,000	
	Total Allocated Costs	**$15,925,000**	
GEN-2016-004 Interconnection Costs			**$2,871,212**
See One-Line Diagram.			
	GEN-2016-004	$2,871,212	
	Total Allocated Costs	**$2,871,212**	
GEN-2016-005 Interconnection Costs			**$8,614,897**
See One-Line Diagram.			
	GEN-2016-005	$8,614,897	
	Total Allocated Costs	**$8,614,897**	
GEN-2016-007 Interconnection Costs			**$1,100,000**
See One-Line Diagram.			
	GEN-2016-007	$1,100,000	
	Total Allocated Costs	**$1,100,000**	
GEN-2016-008 Interconnection Costs			**$4,850,000**
See One-Line Diagram.			
	GEN-2016-008	$4,850,000	
	Total Allocated Costs	**$4,850,000**	
GEN-2016-008 Interconnection Facilities Upgrade			**$TBD**
Frequence protection to mitigate unstable results identified in the transient stability analysis			
	GEN-2016-008	$TBD	
	Total Allocated Costs	**$TBD**	
GEN-2016-009 Interconnection Costs			**$956,218**
See One-Line Diagram.			
	GEN-2016-009	$956,218	
	Total Allocated Costs	**$956,218**	
GEN-2016-012 Interconnection Costs			**$11,823,344**
See One-Line Diagram.			
	GEN-2016-012	$11,823,344	
	Total Allocated Costs	**$11,823,344**	

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GEN-2016-012 Tap - LaCygne 345kV CKT 1 **$31,600,000**

Rebuild approximately 31 miles of 345kV from GEN-2016-012 Tap - LaCyne

GEN-2016-012	$15,746,430
GEN-2016-022	$1,729,241
GEN-2016-024	$800,693
GEN-2016-031	$17,087
GEN-2016-032	$1,412,447
GEN-2016-048	$680,765
GEN-2016-060	$321,261
GEN-2016-061	$2,088,100
GEN-2016-068	$2,025,663
GEN-2016-071	$2,009,614
GEN-2016-072	$2,710,247
GEN-2016-073	$2,058,452
Total Allocated Costs	**$31,600,000**

GEN-2016-012 Tap - Waverly Tap 345kV CKT 1 **$500,000**

Replace terminal equipment

GEN-2016-012	$249,152
GEN-2016-022	$27,361
GEN-2016-024	$12,669
GEN-2016-031	$270
GEN-2016-032	$22,349
GEN-2016-048	$10,772
GEN-2016-060	$5,083
GEN-2016-061	$33,040
GEN-2016-068	$32,052
GEN-2016-071	$31,798
GEN-2016-072	$42,884
GEN-2016-073	$32,570
Total Allocated Costs	**$500,000**

GEN-2016-013 Interconnection Costs **$0**

See One-Line Diagram.

GEN-2016-013	$0
Total Allocated Costs	**$0**

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GEN-2016-013 Interconnection Facilities Upgrade			**$TBD**
Reset relay settings at La Russell 161kV			
	GEN-2016-013	$TBD	
	Total Allocated Costs	**$TBD**	
GEN-2016-014 Interconnection Costs			**$0**
See One-Line Diagram.			
	GEN-2016-014	$0	
	Total Allocated Costs	**$0**	
GEN-2016-014 Interconnection Facilities Upgrade			**$TBD**
Reset relay settings at La Russell 161kV			
	GEN-2016-014	$TBD	
	Total Allocated Costs	**$TBD**	
GEN-2016-015 Interconnection Costs			**$6,454,408**
See One-Line Diagram.			
	GEN-2016-015	$6,454,408	
	Total Allocated Costs	**$6,454,408**	
GEN-2016-015 Interconnection Facilities Upgrade			**$TBD**
Over frequence and voltage protection to mitigate unstable results identified in the transient stability analysis			
	GEN-2016-015	$TBD	
	Total Allocated Costs	**$TBD**	
GEN-2016-016 Interconnection Costs			**$4,000,000**
See One-Line Diagram.			
	GEN-2016-016	$4,000,000	
	Total Allocated Costs	**$4,000,000**	
GEN-2016-017 Interconnection Costs			**$19,264,793**
See One-Line Diagram.			
	GEN-2016-017	$19,264,793	
	Total Allocated Costs	**$19,264,793**	
GEN-2016-020 Interconnection Costs			**$2,000,000**
See One-Line Diagram.			
	GEN-2016-020	$2,000,000	
	Total Allocated Costs	**$2,000,000**	

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GEN-2016-021 Interconnection Costs			**$1,000,000**
See One-Line Diagram.			
	GEN-2016-021	$1,000,000	
	Total Allocated Costs	**$1,000,000**	
GEN-2016-022 Interconnection Costs			**$4,450,650**
See One-Line Diagram.			
	GEN-2016-022	$4,450,650	
	Total Allocated Costs	**$4,450,650**	
GEN-2016-023 Interconnection Costs			**$9,632,397**
See One-Line Diagram.			
	GEN-2016-023	$9,632,397	
	Total Allocated Costs	**$9,632,397**	
GEN-2016-024 Interconnection Costs			**$1,784,502**
See One-Line Diagram.			
	GEN-2016-024	$1,784,502	
	Total Allocated Costs	**$1,784,502**	
GEN-2016-028 Interconnection Costs			**$4,000,000**
See One-Line Diagram.			
	GEN-2016-028	$4,000,000	
	Total Allocated Costs	**$4,000,000**	
GEN-2016-029 Interconnection Costs			**$9,632,397**
See One-Line Diagram.			
	GEN-2016-029	$9,632,397	
	Total Allocated Costs	**$9,632,397**	
GEN-2016-030 Interconnection Costs			**$2,183,000**
See One-Line Diagram.			
	GEN-2016-030	$2,183,000	
	Total Allocated Costs	**$2,183,000**	
GEN-2016-030 Interconnection Facilities Upgrade			**$TBD**
Over frequence protection to mitigate unstable results identified in the transient stability analysis			
	GEN-2016-030	$TBD	
	Total Allocated Costs	**$TBD**	

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GEN-2016-031 Interconnection Costs			**$0**
See One-Line Diagram.			
	GEN-2016-031	$0	
	Total Allocated Costs	**$0**	
GEN-2016-032 Interconnection Costs			**$3,288,799**
See One-Line Diagram.			
	GEN-2016-032	$3,288,799	
	Total Allocated Costs	**$3,288,799**	
GEN-2016-034 Interconnection Costs			**$19,264,793**
See One-Line Diagram.			
	GEN-2016-034	$19,264,793	
	Total Allocated Costs	**$19,264,793**	
GEN-2016-037 Interconnection Costs			**$18,000,000**
See One-Line Diagram.			
	GEN-2016-037	$18,000,000	
	Total Allocated Costs	**$18,000,000**	
GEN-2016-038 Interconnection Costs			**$1,154,068**
See One-Line Diagram.			
	GEN-2016-038	$1,154,068	
	Total Allocated Costs	**$1,154,068**	
GEN-2016-038 Interconnection Facilities Upgrade			**$TBD**
Build second 150 miles of 230kV generator lead or other means to mitigate unstable results identified in the transient stability analysis			
	GEN-2016-038	$TBD	
	Total Allocated Costs	**$TBD**	
GEN-2016-039 Interconnection Costs			**$3,991,014**
See One-Line Diagram.			
	GEN-2016-039	$3,991,014	
	Total Allocated Costs	**$3,991,014**	
GEN-2016-040 Interconnection Costs			**$0**
See One-Line Diagram.			
	GEN-2016-040	$0	
	Total Allocated Costs	**$0**	

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GEN-2016-041 Interconnection Costs			**$317,991**
See One-Line Diagram.			
	GEN-2016-041	$317,991	
	Total Allocated Costs	**$317,991**	
GEN-2016-041 Interconnection Facilities Upgrade			**$TBD**
Over frequence protection to mitigate unstable results identified in the transient stability analysis			
	GEN-2016-041	$TBD	
	Total Allocated Costs	**$TBD**	
GEN-2016-042 Interconnection Costs			**$0**
See One-Line Diagram.			
	GEN-2016-042	$0	
	Total Allocated Costs	**$0**	
GEN-2016-043 Interconnection Costs			**$1,000,000**
See One-Line Diagram.			
	GEN-2016-043	$1,000,000	
	Total Allocated Costs	**$1,000,000**	
GEN-2016-044 Interconnection Costs			**$19,264,793**
See One-Line Diagram.			
	GEN-2016-044	$19,264,793	
	Total Allocated Costs	**$19,264,793**	
GEN-2016-044 Interconnection Facilities Upgrade			**$TBD**
Over frequence protection to mitigate unstable results identified in the transient stability analysis			
	GEN-2016-044	$TBD	
	Total Allocated Costs	**$TBD**	
GEN-2016-044 Tap - Emmons 345kV CKT 1			**$65,000,000**
Build approximately 45 miles of new 345kV, tap AVS - Broadland 345kV, and build new Emmons Substation			
	GEN-2016-044	$65,000,000	
	Total Allocated Costs	**$65,000,000**	

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GEN-2016-044 Tap - Groton 345kV CKT 2			**$100,000,000**
Build approximately 110 miles of second 345kV			
	GEN-2016-004	$17,324,918	
	GEN-2016-044	$80,909,270	
	GEN-2016-052	$179,659	
	GEN-2016-053	$179,659	
	GEN-2016-065	$483,038	
	GEN-2016-066	$923,456	
	Total Allocated Costs	**$100,000,000**	
GEN-2016-045 Interconnection Costs			**$8,629,014**
See One-Line Diagram.			
	GEN-2016-045	$8,629,014	
	Total Allocated Costs	**$8,629,014**	
GEN-2016-045 Interconnection Facilities Upgrade			**$TBD**
Build second 300 miles of 345kV generator lead or other means to mitigate unstable results identified in the transient stability analysis			
	GEN-2016-045	$TBD	
	Total Allocated Costs	**$TBD**	
GEN-2016-046 Interconnection Costs			**$10,000,000**
See One-Line Diagram.			
	GEN-2016-046	$10,000,000	
	Total Allocated Costs	**$10,000,000**	
GEN-2016-047 Interconnection Costs			**$0**
See One-Line Diagram.			
	GEN-2016-047	$0	
	Total Allocated Costs	**$0**	
GEN-2016-048 Interconnection Costs			**$3,521,000**
See One-Line Diagram.			
	GEN-2016-048	$3,521,000	
	Total Allocated Costs	**$3,521,000**	
GEN-2016-049 Interconnection Costs			**$10,000,000**
See One-Line Diagram.			
	GEN-2016-049	$10,000,000	
	Total Allocated Costs	**$10,000,000**	

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GEN-2016-050 Interconnection Costs			**$12,500,000**
See One-Line Diagram.			
	GEN-2016-050	$12,500,000	
	Total Allocated Costs	**$12,500,000**	
GEN-2016-051 Interconnection Costs			**$0**
See One-Line Diagram.			
	GEN-2016-051	$0	
	Total Allocated Costs	**$0**	
GEN-2016-052 Interconnection Costs			**$0**
See One-Line Diagram.			
	GEN-2016-052	$0	
	Total Allocated Costs	**$0**	
GEN-2016-053 Interconnection Costs			**$0**
See One-Line Diagram.			
	GEN-2016-053	$0	
	Total Allocated Costs	**$0**	
GEN-2016-054 Interconnection Costs			**$0**
See One-Line Diagram.			
	GEN-2016-054	$0	
	Total Allocated Costs	**$0**	
GEN-2016-055 Interconnection Costs			**$6,300,000**
See One-Line Diagram.			
	GEN-2016-055	$6,300,000	
	Total Allocated Costs	**$6,300,000**	
GEN-2016-056 Interconnection Costs			**$4,237,857**
See One-Line Diagram.			
	GEN-2016-056	$4,237,857	
	Total Allocated Costs	**$4,237,857**	
GEN-2016-057 Interconnection Costs			**$8,629,014**
See One-Line Diagram.			
	GEN-2016-057	$8,629,014	
	Total Allocated Costs	**$8,629,014**	

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GEN-2016-057 Interconnection Facilities Upgrade			**$TBD**
Build second 300 miles of 345kV generator lead or other means to mitigate unstable results identified in the transient stability analysis			
	GEN-2016-057	$TBD	
	Total Allocated Costs	**$TBD**	
GEN-2016-058 Interconnection Costs			**$2,781,836**
See One-Line Diagram.			
	GEN-2016-058	$2,781,836	
	Total Allocated Costs	**$2,781,836**	
GEN-2016-059 Interconnection Costs			**$1,272,967**
See One-Line Diagram.			
	GEN-2016-059	$1,272,967	
	Total Allocated Costs	**$1,272,967**	
GEN-2016-059 Interconnection Facilities Upgrade			**$TBD**
Build second 150 miles of 230kV generator lead or other means to mitigate unstable results identified in the transient stability analysis			
	GEN-2016-059	$TBD	
	Total Allocated Costs	**$TBD**	
GEN-2016-060 Interconnection Costs			**$0**
See One-Line Diagram.			
	GEN-2016-060	$0	
	Total Allocated Costs	**$0**	
GEN-2016-061 Interconnection Costs			**$11,737,557**
See One-Line Diagram.			
	GEN-2016-061	$11,737,557	
	Total Allocated Costs	**$11,737,557**	
GEN-2016-062 Interconnection Costs			**$1,884,283**
See One-Line Diagram.			
	GEN-2016-062	$1,884,283	
	Total Allocated Costs	**$1,884,283**	
GEN-2016-063 Interconnection Costs			**$11,737,557**
See One-Line Diagram.			
	GEN-2016-063	$11,737,557	
	Total Allocated Costs	**$11,737,557**	

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GEN-2016-064 Interconnection Costs			**$500,000**
See One-Line Diagram.			
	GEN-2016-064	$500,000	
	Total Allocated Costs	**$500,000**	
GEN-2016-065 Interconnection Costs			**$0**
See One-Line Diagram.			
	GEN-2016-065	$0	
	Total Allocated Costs	**$0**	
GEN-2016-066 Interconnection Costs			**$0**
See One-Line Diagram.			
	GEN-2016-066	$0	
	Total Allocated Costs	**$0**	
GEN-2016-067 Interconnection Costs			**$55,000**
See One-Line Diagram.			
	GEN-2016-067	$55,000	
	Total Allocated Costs	**$55,000**	
GEN-2016-068 Interconnection Costs			**$1,900,000**
See One-Line Diagram.			
	GEN-2016-068	$1,900,000	
	Total Allocated Costs	**$1,900,000**	
GEN-2016-069 Interconnection Costs			**$2,309,814**
See One-Line Diagram.			
	GEN-2016-069	$2,309,814	
	Total Allocated Costs	**$2,309,814**	
GEN-2016-070 Interconnection Costs			**$0**
See One-Line Diagram.			
	GEN-2016-070	$0	
	Total Allocated Costs	**$0**	
GEN-2016-071 Interconnection Costs			**$4,612,190**
See One-Line Diagram.			
	GEN-2016-071	$4,612,190	
	Total Allocated Costs	**$4,612,190**	

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GEN-2016-072 Interconnection Costs		**$1,925,000**
See One-Line Diagram.		
	GEN-2016-072	$1,925,000
	Total Allocated Costs	**$1,925,000**
GEN-2016-073 Interconnection Costs		**$0**
See One-Line Diagram.		
	GEN-2016-073	$0
	Total Allocated Costs	**$0**
GEN-2016-075 Interconnection Costs		**$0**
See One-Line Diagram.		
	GEN-2016-075	$0
	Total Allocated Costs	**$0**
Gerald Gentleman Station Flowgate Stability Limit Mitigation		**$TBD**
Potential Mitigation for GGS Flowgate Stability Limit. TBD in the Facilities Study with NPPD.		
	GEN-2016-023	$TBD
	GEN-2016-029	$TBD
	GEN-2016-034	$TBD
	Total Allocated Costs	**$TBD**
Glenham - Mound City 230kV CKT 1		**$50,000**
Uprate CT		
	GEN-2016-004	$50,000
	Total Allocated Costs	**$50,000**
Grand Island - Grand Praire 345kV CKT 1		**$1,000,000**
NRIS only required upgrade: terminal equipment and conductor clearance increase		
	GEN-2016-004	$49,864
	GEN-2016-017	$480,812
	GEN-2016-021	$35,555
	GEN-2016-044	$44,938
	GEN-2016-050	$143,463
	GEN-2016-075	$245,366
	Total Allocated Costs	**$1,000,000**

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Grapevine - Chisholm 345kV CKT 1		**$106,737,500**
Build approximately 75 miles of new 345kV from Grapevine - Chisholm		
	ASGI-2016-001	$39,068
	ASGI-2016-002	$4,909
	ASGI-2016-004	$713,298
	GEN-2015-018	$3,285,305
	GEN-2015-039	$3,264,113
	GEN-2015-040	$975,841
	GEN-2015-078	$1,004,758
	GEN-2015-082	$19,200,461
	GEN-2016-001	$19,511,130
	GEN-2016-002	$4,271,172
	GEN-2016-003	$12,779,444
	GEN-2016-015	$2,206,227
	GEN-2016-038	$6,197,421
	GEN-2016-039	$5,063,519
	GEN-2016-041	$9,908,637
	GEN-2016-056	$1,657,470
	GEN-2016-058	$3,798,742
	GEN-2016-059	$6,197,421
	GEN-2016-062	$5,531,010
	GEN-2016-069	$1,000,857
	GEN-2016-070	$126,701
	Total Allocated Costs	**$106,737,500**
Harbine - Beatrice 115kV CKT 1		**$9,800,000**
Rebuild approximately 14 miles of 115kV line		
	GEN-2016-064	$9,800,000
	Total Allocated Costs	**$9,800,000**
Harrington West - Harrington Mid Bus 230kV CKT 1		**$150,000**
Upgrade bus ties to soft jumper		
	GEN-2016-038	$75,000
	GEN-2016-059	$75,000
	Total Allocated Costs	**$150,000**

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Harrington West - Potter County 230kV CKT 1		**$8,800,000**
Rebuild approximately 11 miles of 230kV		
	ASGI-2016-004	$96,199
	GEN-2016-002	$408,176
	GEN-2016-038	$3,996,683
	GEN-2016-039	$242,548
	GEN-2016-059	$3,996,683
	GEN-2016-070	$59,711
	Total Allocated Costs	**$8,800,000**
Hereford Capacitor Bank		**$1,000,000**
25Mvar capacitor bank required for stability anlaysis		
	ASGI-2016-001	$2,037
	ASGI-2016-002	$289
	ASGI-2016-004	$2,371
	GEN-2015-018	$49,485
	GEN-2015-033	$116,778
	GEN-2015-039	$20,148
	GEN-2015-040	$39,648
	GEN-2015-078	$39,410
	GEN-2016-002	$30,956
	GEN-2016-015	$77,343
	GEN-2016-039	$61,264
	GEN-2016-056	$174,030
	GEN-2016-058	$170,350
	GEN-2016-062	$193,899
	GEN-2016-069	$21,993
	Total Allocated Costs	**$1,000,000**
Highland Park Tap - Pantex South 115kV CKT 1		**$400,000**
Upgrade terminal equipment		
	GEN-2016-070	$400,000
	Total Allocated Costs	**$400,000**
Hobbs 230/115/13kV Transformer CKT 1		**$6,000,000**
NRIS only required upgrade: Replace Hobbs 230/115/13kV CKT 1		
	GEN-2016-069	$6,000,000
	Total Allocated Costs	**$6,000,000**

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Hugo - Valliant 138kV CKT 1			**$150,000**
NRIS only required upgrade: Replace terminal equipment			
	GEN-2016-028	$32,312	
	GEN-2016-037	$117,688	
	Total Allocated Costs	**$150,000**	
Hunter - Woodring 345kV CKT 1			**$3,000,000**
Replace terminal equipment including 4 breakers			
	GEN-2016-072	$3,000,000	
	Total Allocated Costs	**$3,000,000**	
Jones - Lubbock Holly 230kV CKT 1			**$500,000**
NRIS only required upgrade: Replace terminal equipment			
	GEN-2015-018	$52,407	
	GEN-2015-033	$98,056	
	GEN-2015-039	$32,681	
	GEN-2015-040	$33,511	
	GEN-2015-041	$3,224	
	GEN-2015-078	$33,467	
	GEN-2016-002	$47,477	
	GEN-2016-038	$89,234	
	GEN-2016-059	$89,234	
	GEN-2016-069	$20,708	
	Total Allocated Costs	**$500,000**	
Keystone - Gentleman 345kV CKT 2			**$37,500,000**
Build approximately 30 miles of new 345kV			
	GEN-2016-023	$14,333,204	
	GEN-2016-029	$14,285,585	
	GEN-2016-034	$8,881,211	
	Total Allocated Costs	**$37,500,000**	
Kildare - White Eagle 138kV CKT 1			**$2,805,000**
Rebuild approximately 11 miles of 138kV from Kildare to White Eagle			
	GEN-2016-071	$2,805,000	
	Total Allocated Costs	**$2,805,000**	

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Kinsley - Pawnee 115kV CKT 1		**$125,000**
Increase conductor clearance		
	GEN-2016-016	$125,000
	Total Allocated Costs	**$125,000**
Kinze - McElroy 138kV CKT 1		**$600,000**
Rebuild approximately 2 miles of 138kV from Kinze to McElroy		
	GEN-2016-048	$329,523
	GEN-2016-071	$270,477
	Total Allocated Costs	**$600,000**
Kinze - Stillwater 138kV CKT 1		**$100,000**
NRIS only required upgrade: Replace terminal equipment		
	GEN-2016-032	$55,049
	GEN-2016-037	$25,431
	GEN-2016-048	$19,520
	Total Allocated Costs	**$100,000**
Knoll - Post Rock 230kV CKT 2		**$3,306,000**
Build second 230kV circuit between Knoll - Post Rock		
	GEN-2016-005	$193,221
	GEN-2016-016	$26,409
	GEN-2016-046	$520,638
	GEN-2016-049	$1,390,803
	GEN-2016-050	$1,174,929
	Total Allocated Costs	**$3,306,000**
Litchfield - Asbury 161kV CKT 1		**$5,500,000**
NRIS only required upgrade:Rebuild approximately 6.8 miles of 161kV		
	GEN-2016-013	$2,750,000
	GEN-2016-014	$2,750,000
	Total Allocated Costs	**$5,500,000**

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

LP-Doud - SP-Wolf 115kV CKT 1		**$1,000,000**
NRIS only required upgrade: Rebuild approximately 1.4 miles of 115kV		
	GEN-2015-033	$74,636
	GEN-2015-039	$11,846
	GEN-2015-041	$2,506
	GEN-2016-002	$30,790
	GEN-2016-038	$211,848
	GEN-2016-041	$83,470
	GEN-2016-056	$373,055
	GEN-2016-059	$211,848
	Total Allocated Costs	**$1,000,000**
Lubbock Holly 230/69/13kV CKT 2		**$4,000,000**
NRIS only required upgrade: Install second Lubbock Holly 230/69/13kV Transformer		
	GEN-2015-018	$308,882
	GEN-2015-033	$577,928
	GEN-2015-039	$192,705
	GEN-2015-040	$197,601
	GEN-2015-041	$19,011
	GEN-2015-078	$197,254
	GEN-2016-002	$279,822
	GEN-2016-038	$1,052,346
	GEN-2016-059	$1,052,346
	GEN-2016-069	$122,106
	Total Allocated Costs	**$4,000,000**
Lubbock Milwaukee 230/69/13kV CKT 2		**$4,000,000**
NRIS only required upgrade: Install second Milwaukee 230/69/13kV Transformer		
	GEN-2016-056	$4,000,000
	Total Allocated Costs	**$4,000,000**
Martin - Pantex North 115kV CKT 1		**$400,000**
Upgrade terminal equipment		
	GEN-2016-070	$400,000
	Total Allocated Costs	**$400,000**

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Mathewson - Northwest 345kV CKT 1			**$250,000**
Replace wave trap and line switch			
	GEN-2015-038	$16,623	
	GEN-2015-095	$9,843	
	GEN-2016-003	$17,615	
	GEN-2016-020	$7,869	
	GEN-2016-045	$99,025	
	GEN-2016-057	$99,025	
	Total Allocated Costs	**$250,000**	
Meadow Grove - Kelly 230kV CKT 1			**$3,600,000**
Upgrade conductor clearance to 100°C for 478MVA rating			
	GEN-2015-089	$2,462,476	
	GEN-2016-021	$1,137,524	
	Total Allocated Costs	**$3,600,000**	
Meadow Grove 230/115/13kV Transformer CKT 1			**$11,300,000**
NRIS only required upgrade: Build 230/115/13kV transformer and 115kV yard			
	GEN-2015-089	$7,729,437	
	GEN-2016-021	$3,570,563	
	Total Allocated Costs	**$11,300,000**	
Middleton Tap - Chilocco 138kV CKT 1			**$3,000,000**
Rebuild approximately 5.7 miles of 138kV from Middleton to Chilocco			
	GEN-2016-071	$3,000,000	
	Total Allocated Costs	**$3,000,000**	

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MISO Affected System Study **$TBD**

See Section 8 power flow analysis.

GEN-2015-089	$TBD
GEN-2016-004	$TBD
GEN-2016-007	$TBD
GEN-2016-017	$TBD
GEN-2016-021	$TBD
GEN-2016-043	$TBD
GEN-2016-044	$TBD
GEN-2016-050	$TBD
GEN-2016-052	$TBD
GEN-2016-053	$TBD
GEN-2016-054	$TBD
GEN-2016-055	$TBD
GEN-2016-064	$TBD
GEN-2016-065	$TBD
GEN-2016-066	$TBD
GEN-2016-075	$TBD
Total Allocated Costs	**$TBD**

MPC Affected System Study **$TBD**

See Section 8 power flow analysis.

GEN-2016-004	$TBD
GEN-2016-007	$TBD
GEN-2016-017	$TBD
GEN-2016-044	$TBD
GEN-2016-052	$TBD
GEN-2016-053	$TBD
GEN-2016-054	$TBD
GEN-2016-065	$TBD
GEN-2016-066	$TBD
Total Allocated Costs	**$TBD**

Mustang 230/115/13.2KV Transformer CKT 2 **$6,000,000**

NRIS only required upgrade: Build second Mustang 230/115 Transformer

GEN-2015-040	$6,000,000
Total Allocated Costs	**$6,000,000**

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Napa Junction - Utica 115kV CKT 1			**$4,322,500**
NRIS only required upgrade: Rebuild approximately 13 miles of 115kV			
	GEN-2015-089	$4,322,500	
	Total Allocated Costs	**$4,322,500**	
Napa Junction - Yankton Junction 115kV CKT 1			**$832,000**
NRIS only required upgrade: Rebuild approximately 2.7 miles of 115kV			
	GEN-2015-089	$832,000	
	Total Allocated Costs	**$832,000**	
National Enrichment Plant - Drinkard 115kV CKT 1			**$5,625,000**
Rebuild approximately 7.5 miles from NEF Plant to Drinkard			
	GEN-2016-015	$1,603,935	
	GEN-2016-062	$4,021,065	
	Total Allocated Costs	**$5,625,000**	
Neosho - Riverton 161kV CKT 1			**$23,000,000**
Rebuild approximately 28 miles of 161kV			
	GEN-2016-012	$4,867,001	
	GEN-2016-013	$944,351	
	GEN-2016-014	$944,351	
	GEN-2016-022	$1,624,518	
	GEN-2016-024	$1,269,173	
	GEN-2016-031	$16,053	
	GEN-2016-032	$746,713	
	GEN-2016-048	$460,542	
	GEN-2016-060	$409,222	
	GEN-2016-061	$1,574,901	
	GEN-2016-068	$1,635,106	
	GEN-2016-071	$2,132,495	
	GEN-2016-072	$3,052,791	
	GEN-2016-073	$3,322,784	
	Total Allocated Costs	**$23,000,000**	
Northwest - Spring Creek 345kV CKT 1			**$1,000,000**
Replace terminal equipment			
	GEN-2016-061	$1,000,000	
	Total Allocated Costs	**$1,000,000**	

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Northwestern Affected System Study		**$TBD**
See Section 8 power flow analysis.		
	GEN-2015-089	$TBD
	Total Allocated Costs	**$TBD**
Oklaunion 345kV Reactive Power Support Incremental Upgrade #2		**$40,000,000**
Increase 100Mvar SVC to 300Mvars and install 200Mvars of additional Capacitor Bank(s)		
	ASGI-2016-001	$81,498
	ASGI-2016-002	$11,571
	ASGI-2016-004	$94,828
	GEN-2015-018	$1,979,387
	GEN-2015-033	$4,671,110
	GEN-2015-039	$805,910
	GEN-2015-040	$1,585,908
	GEN-2015-078	$1,576,403
	GEN-2016-002	$1,238,222
	GEN-2016-015	$3,093,721
	GEN-2016-039	$2,450,560
	GEN-2016-056	$6,961,181
	GEN-2016-058	$6,814,005
	GEN-2016-062	$7,755,957
	GEN-2016-069	$879,738
	Total Allocated Costs	**$40,000,000**
Osage - Webb Tap 138kV CKT 1		**$10,545,000**
Rebuild approximately 22 miles of 138kV from Osage to Webb City		
	GEN-2016-048	$2,517,130
	GEN-2016-071	$8,027,870
	Total Allocated Costs	**$10,545,000**
Osage - White Eagle 138kV CKT 1		**$50,000**
Rebuild approximately 3 miles of 138kV from Osage to White Eagle		
	GEN-2016-048	$1,008
	GEN-2016-071	$48,992
	Total Allocated Costs	**$50,000**

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Pahoja - Sioux Falls 230kV CKT 1			**$14,000,000**
NRIS only required upgrade: Rebuild approximately 20 miles of 230kV			
	GEN-2015-089	$14,000,000	
	Total Allocated Costs	**$14,000,000**	
Pauline - Rosemont 115kV CKT 1			**$7,000,000**
Rebuild approximately 10.6 miles of 115kV			
	GEN-2016-023	$80,949	
	GEN-2016-029	$80,680	
	GEN-2016-064	$6,838,370	
	Total Allocated Costs	**$7,000,000**	
Pauline - Rosemont 115kV CKT 2			**$7,000,000**
Build approximately 10.6 miles of second circuit 115kV			
	GEN-2016-023	$80,949	
	GEN-2016-029	$80,680	
	GEN-2016-064	$6,838,370	
	Total Allocated Costs	**$7,000,000**	
Plymouth - Sioux City 161kV CKT 1			**$2,000,000**
NRIS only required upgrade: Rebuild approximately 2 miles of 115kV			
	GEN-2015-089	$2,000,000	
	Total Allocated Costs	**$2,000,000**	

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Potter County - Grapevine 345kV CKT 1		**$88,172,500**
Build approximately 65 miles of new 345kV from Potter County - Grapevine		
	ASGI-2016-001	$92,429
	ASGI-2016-002	$12,573
	ASGI-2016-004	$683,270
	GEN-2015-018	$4,257,416
	GEN-2015-033	$2,815,081
	GEN-2015-039	$3,374,138
	GEN-2015-040	$1,984,838
	GEN-2015-078	$2,003,216
	GEN-2015-082	$9,302,780
	GEN-2016-001	$10,385,212
	GEN-2016-002	$4,569,917
	GEN-2016-015	$4,134,620
	GEN-2016-038	$3,298,709
	GEN-2016-039	$6,119,586
	GEN-2016-041	$5,274,082
	GEN-2016-056	$6,447,017
	GEN-2016-058	$8,186,997
	GEN-2016-059	$3,298,709
	GEN-2016-062	$10,365,492
	GEN-2016-069	$1,498,979
	GEN-2016-070	$67,439
	Total Allocated Costs	**$88,172,500**
Rasmussen - Sioux City 230kV CKT 1		**$5,000,000**
NRIS only required upgrade: Replace terminal equipment and increase conductor clearance		
	GEN-2015-089	$5,000,000
	Total Allocated Costs	**$5,000,000**
San Andres Tap - Seminole 115kV CKT 1		**$13,125,000**
NRIS only required upgrade: Rebuild approximately 17.5 miles of 115kV		
	GEN-2015-078	$13,125,000
	Total Allocated Costs	**$13,125,000**

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Seminole 765/345kV Transformer CKT 1 & 2 **$30,000,000**

Intsall two 765/345kV transformers at Seminole

ASGI-2016-001	$57,816
ASGI-2016-002	$8,144
ASGI-2016-004	$154,815
GEN-2015-018	$1,656,084
GEN-2015-033	$3,116,657
GEN-2015-039	$901,329
GEN-2015-040	$1,144,415
GEN-2015-078	$1,141,421
GEN-2016-002	$1,349,445
GEN-2016-015	$2,261,975
GEN-2016-039	$2,219,646
GEN-2016-056	$4,760,768
GEN-2016-058	$4,874,839
GEN-2016-062	$5,670,771
GEN-2016-069	$681,876
Total Allocated Costs	**$30,000,000**

Seminole 765kV Substation Expansion **$40,000,000**

Expand the existing Seminole Substation for new 765kV switchyard

ASGI-2016-001	$77,088
ASGI-2016-002	$10,859
ASGI-2016-004	$206,420
GEN-2015-018	$2,208,112
GEN-2015-033	$4,155,542
GEN-2015-039	$1,201,771
GEN-2015-040	$1,525,887
GEN-2015-078	$1,521,895
GEN-2016-002	$1,799,260
GEN-2016-015	$3,015,966
GEN-2016-039	$2,959,528
GEN-2016-056	$6,347,690
GEN-2016-058	$6,499,785
GEN-2016-062	$7,561,028
GEN-2016-069	$909,168
Total Allocated Costs	**$40,000,000**

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

ShellC2 - ShellC2 Tap 115kV CKT 1		**$1,575,000**
NRIS only required upgrade: Rebuild approximately 2.1 miles of 115kV		
	GEN-2015-078	$1,575,000
	Total Allocated Costs	**$1,575,000**
Sioux City - Split Rock 345kV CKT 1		**$360,000**
Replace terminal equipment		
	GEN-2016-044	$360,000
	Total Allocated Costs	**$360,000**
Sioux City 230/161/13kV Transformer CKT 1		**$3,000,000**
NRIS only required upgrade: Replace existing Sioux City Interchange 230/161kV Transformer CKT 1		
	GEN-2015-089	$3,000,000
	Total Allocated Costs	**$3,000,000**
Sioux City 230/161/13kV Transformer CKT 2		**$3,000,000**
NRIS only required upgrade: Replace existing Sioux City Interchange 230/161kV Transformer CKT 2		
	GEN-2015-089	$3,000,000
	Total Allocated Costs	**$3,000,000**
Split Rock - White 345kV CKT 1		**$750,000**
Replace terminal equipment and increaes conductor clearance		
	GEN-2016-004	$156,488
	GEN-2016-007	$57,342
	GEN-2016-017	$98,727
	GEN-2016-044	$418,256
	GEN-2016-052	$2,536
	GEN-2016-053	$2,536
	GEN-2016-065	$4,848
	GEN-2016-066	$9,267
	Total Allocated Costs	**$750,000**
SP-Wolf - Yuma 115kV CKT 1		**$750,000**
NRIS only required upgrade: Rebuild approximatley 1 mile of 115kV from Wolf - Yuma		
	GEN-2016-038	$313,282
	GEN-2016-041	$123,436
	GEN-2016-059	$313,282
	Total Allocated Costs	**$750,000**

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Sundown 230/115/13.2KV Transformer CKT 2		**$6,000,000**
NRIS only required upgrade: Build second Sundown 230/115 Transformer		
	GEN-2015-018	$19,889
	GEN-2016-038	$2,475,107
	GEN-2016-041	$860,837
	GEN-2016-056	$169,060
	GEN-2016-059	$2,475,107
	Total Allocated Costs	**$6,000,000**
Tolk - Crawfish Draw 345kV CKT 1		**$88,170,000**
Build approximately 64 miles of 345kV from Tolk - Crawfish Draw.		
	ASGI-2016-001	$64,969
	ASGI-2016-002	$4,873
	ASGI-2016-004	$779,049
	GEN-2015-018	$13,692,336
	GEN-2015-039	$6,617,936
	GEN-2015-040	$3,542,491
	GEN-2015-078	$3,681,606
	GEN-2016-002	$5,372,335
	GEN-2016-015	$8,240,875
	GEN-2016-039	$7,137,862
	GEN-2016-058	$13,056,451
	GEN-2016-062	$20,659,873
	GEN-2016-069	$5,319,344
	Total Allocated Costs	**$88,170,000**

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Tolk - Potter County 345kV CKT 1 **$156,000,000**

Build approximately 115 miles of 345kV from Tolk - Potter County

ASGI-2016-001	$295,976
ASGI-2016-002	$39,996
GEN-2015-018	$11,748,639
GEN-2015-033	$12,655,419
GEN-2015-039	$1,853,051
GEN-2015-040	$7,046,701
GEN-2015-078	$7,069,670
GEN-2016-002	$656,436
GEN-2016-015	$15,207,169
GEN-2016-039	$5,258,996
GEN-2016-056	$21,123,497
GEN-2016-058	$29,375,351
GEN-2016-062	$38,124,374
GEN-2016-069	$5,544,724
Total Allocated Costs	**$156,000,000**

Tolk 345/230/13kV Transformer CKT 2 **$15,000,000**

Build second 345/230/13kV transformer at Tolk

ASGI-2016-001	$26,787
ASGI-2016-002	$3,353
ASGI-2016-004	$64,493
GEN-2015-018	$2,543,412
GEN-2015-039	$1,000,441
GEN-2015-040	$580,311
GEN-2015-078	$566,610
GEN-2016-002	$749,737
GEN-2016-015	$768,570
GEN-2016-038	$820,968
GEN-2016-039	$1,374,192
GEN-2016-056	$1,215,866
GEN-2016-058	$2,240,735
GEN-2016-059	$820,968
GEN-2016-062	$1,926,804
GEN-2016-069	$296,755
Total Allocated Costs	**$15,000,000**

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Tupelo - Tupleo Tap 138kV CKT 1		**$757,500**
NRIS only required upgrade: Build approximately 1.3 miles of circuit 138kV from Tupelo to Tupelo Tap and replace CT		
	GEN-2016-008	$59,952
	GEN-2016-020	$303,389
	GEN-2016-037	$394,159
	Total Allocated Costs	**$757,500**
Viola 345/138/13kV Transformer CKT 2		**$9,000,000**
Build second 345/138/13.8kV transformer at Viola		
	GEN-2016-072	$9,000,000
	Total Allocated Costs	**$9,000,000**
Wadsworth 230/69/13kV CKT 2		**$4,000,000**
NRIS only required upgrade: Install second Wadsworth 230/69/13kV Transformer		
	GEN-2015-018	$322,823
	GEN-2015-033	$594,648
	GEN-2015-039	$201,485
	GEN-2015-078	$195,719
	GEN-2016-002	$314,349
	GEN-2016-038	$1,123,276
	GEN-2016-059	$1,123,276
	GEN-2016-069	$124,423
	Total Allocated Costs	**$4,000,000**
Watertown - White 345kV CKT 1		**$50,000**
Uprate CT		
	GEN-2016-004	$11,032
	GEN-2016-007	$1,852
	GEN-2016-044	$35,822
	GEN-2016-052	$154
	GEN-2016-053	$154
	GEN-2016-065	$338
	GEN-2016-066	$647
	Total Allocated Costs	**$50,000**

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Watertown 345/230/13kV Transformer CKT 1		**$5,600,000**
Replace transformer		
GEN-2016-004	$548,772	
GEN-2016-044	$5,019,056	
GEN-2016-052	$1,067	
GEN-2016-053	$1,067	
GEN-2016-065	$10,316	
GEN-2016-066	$19,722	
Total Allocated Costs	**$5,600,000**	
Webb City Tap - Fairfax Tap 138kV CKT 1		**$0**
NRIS only required upgrade: Rebuild approximately 0.3 miles of 138kV. Costs included in Fairfax Tap - Shilder Upgrade		
GEN-2016-048	$0	
Total Allocated Costs	**$0**	
Wichita 345/138/13kV Transformer CKT 1		**$9,048,819**
NRIS only required upgrade: Replace existing Wichita transformer CKT 1 to 560/616 MVA		
GEN-2015-082	$1,790,924	
GEN-2016-003	$2,397,244	
GEN-2016-073	$4,860,651	
Total Allocated Costs	**$9,048,819**	
Wichita 345/138/13kV Transformer CKT 2		**$9,048,819**
NRIS only required upgrade: Replace existing Wichita transformer CKT 2 to 560/616 MVA		
GEN-2015-082	$1,790,997	
GEN-2016-003	$2,396,840	
GEN-2016-073	$4,860,982	
Total Allocated Costs	**$9,048,819**	

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

Wolf Creek - Neosho 345kV CKT 1		**$117,126,900**
Build approximately 95 miles of new 345kV		
	GEN-2016-012	$50,458,207
	GEN-2016-022	$6,556,740
	GEN-2016-024	$4,767,170
	GEN-2016-031	$64,790
	GEN-2016-032	$987,369
	GEN-2016-048	$887,343
	GEN-2016-060	$2,031,702
	GEN-2016-061	$4,507,759
	GEN-2016-068	$5,448,694
	GEN-2016-071	$8,827,993
	GEN-2016-072	$14,052,677
	GEN-2016-073	$18,536,456
	Total Allocated Costs	**$117,126,900**
Wolf Creek Generation Plant Studies and Agreements		**$TBD**
Please refer to Appendix K		
	GEN-2016-012	$TBD
	Total Allocated Costs	**$TBD**
Wolfforth Interchange 230/115/13kV Transformer CKT 1		**$6,000,000**
NRIS only required upgrade: Replace existing Wolfforth Interchange Transformer		
	GEN-2016-056	$6,000,000
	Total Allocated Costs	**$6,000,000**

* Withdrawal of higher queued projects will cause a restudy and may result in higher costs

11.8 G-T: THERMAL POWER FLOW ANALYSIS (CONSTRAINTS REQUIRING TRANSMISSION REINFORCEMENT)

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	ASGI_16_01	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06317	111.2423	BASE CASE
0	20SP	ASGI_16_01	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06020	106.965	BASE CASE
0	17G	ASGI_16_01	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06337	104.3555	BASE CASE
0	20WP	ASGI_16_01	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06118	100.6452	BASE CASE
0	16WP	ASGI_16_01	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24902	117.2755	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	ASGI_16_01	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22171	113.9417	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	ASGI_16_01	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24902	112.5386	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	ASGI_16_01	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24841	107.9528	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17SP	ASGI_16_01	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24841	103.4902	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31965	197.2146	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31965	189.9362	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26671	129.0423	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26671	124.2865	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26817	118.6552	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26817	115.7594	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33401	115.1329	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33401	114.7364	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.40046	213.0015	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.41244	134.0852	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.34394	119.8072	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.34307	109.6936	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	ASGI_16_01	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.09125	117.8449	BASE CASE
0	17SP	ASGI_16_01	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.09035	113.6626	BASE CASE
0	20L	ASGI_16_01	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.09791	117.1249	BASE CASE
0	20WP	ASGI_16_01	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12080	109.9811	BASE CASE
0	16WP	ASGI_16_01	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12993	108.8041	BASE CASE
0	17G	ASGI_16_01	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12777	107.5286	BASE CASE
0	20L	ASGI_16_01	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09791	131.0896	BASE CASE
0	20WP	ASGI_16_01	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12080	123.9661	BASE CASE
0	16WP	ASGI_16_01	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12993	122.9494	BASE CASE
0	17G	ASGI_16_01	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12777	120.973	BASE CASE
0	17SP	ASGI_16_01	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.13018	106.8776	BASE CASE
0	20SP	ASGI_16_01	TO->FROM	G15039_T 230.00 - PLANT X STATION 230KV CKT 1	318.7	350.6	0.09125	101.2007	BASE CASE
0	16WP	ASGI_16_01	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24902	106.6944	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	ASGI_16_01	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.22171	103.5122	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	ASGI_16_01	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24902	102.1214	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	ASGI_16_01	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04070	104.9056	BASE CASE
0	20SP	ASGI_16_01	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04006	103.3041	BASE CASE
0	17G	ASGI_16_01	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03601	102.2178	BASE CASE
0	17SP	ASGI_16_01	TO->FROM	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	1011.0	1176.0	0.22010	101.3643	BASE CASE
0	16WP	ASGI_16_01	-	Non-Converged Contingency	1022.0	1124.0	0.20354	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	1022.0	1124.0	0.20354	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.19923	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.19169	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.18657	-	CIMARRON - MINCO 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.18657	-	GRACEMONT - MINCO 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	1330.0	1940.0	0.17599	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	1330.0	1940.0	0.17599	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.16555	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	987.2	1082.8	0.16216	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.15206	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.15206	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	16WP	ASGI_16_01	-	Non-Converged Contingency	987.16	1082.77	0.13212	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	956.09	1051.7	0.13212	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	1420.0	1775.0	0.09862	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	1420.0	1775.0	0.09862	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	1420.0	1775.0	0.09862	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.08680	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.08680	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	439.0	439.0	0.06728	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	450.0	450.0	0.06728	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	16WP	ASGI_16_01	-	Non-Converged Contingency	439.0	439.0	0.04404	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17G	ASGI_16_01	-	Non-Converged Contingency	0.0	0.0	0.07240	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	17G	ASGI_16_01	-	Non-Converged Contingency	0.0	0.0	0.05910	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	17G	ASGI_16_01	-	Non-Converged Contingency	0.0	0.0	0.03621	-	P12:138:AEPW:REDROCKRD4:WTH_JCT4
0	17G	ASGI_16_01	-	Non-Converged Contingency	0.0	0.0	0.03398	-	P12:138:WFEC-AEPW:WASHITA4:CLINTJC4
0	17G	ASGI_16_01	-	Non-Converged Contingency	0.0	0.0	0.03281	-	P12:138:AEPW:HOB-JCT4:ELKCTY-4
0	17G	ASGI_16_01	-	Non-Converged Contingency	0.0	0.0	0.03194	-	P12:138:AEPW:WTHWF4:WTH_SE4
0	17SP	ASGI_16_01	-	Non-Converged Contingency	956.0	1042.0	0.22010	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17SP	ASGI_16_01	-	Non-Converged Contingency	956.0	1042.0	0.22010	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.21434	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.18194	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.17894	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	17SP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.17894	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	17SP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.17595	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	ASGI_16_01	-	Non-Converged Contingency	1330.0	1940.0	0.15941	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17SP	ASGI_16_01	-	Non-Converged Contingency	1330.0	1940.0	0.15941	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17SP	ASGI_16_01	-	Non-Converged Contingency	956.1	1051.7	0.15283	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17SP	ASGI_16_01	-	Non-Converged Contingency	956.09	1051.7	0.13617	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	ASGI_16_01	-	Non-Converged Contingency	956.09	1051.7	0.11509	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	ASGI_16_01	-	Non-Converged Contingency	478.0	502.0	0.10409	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17SP	ASGI_16_01	-	Non-Converged Contingency	478.0	502.0	0.10000	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	ASGI_16_01	-	Non-Converged Contingency	1420.0	1775.0	0.09081	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	ASGI_16_01	-	Non-Converged Contingency	318.7	350.6	0.09035	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	17SP	ASGI_16_01	-	Non-Converged Contingency	318.7	350.6	0.09035	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	17SP	ASGI_16_01	-	Non-Converged Contingency	353.0	353.0	0.04663	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17SP	ASGI_16_01	-	Non-Converged Contingency	318.7	350.57	0.04070	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	497.0	547.0	0.20787	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	0.0	0.0	0.18810	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.18395	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.16683	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1022.0	1124.0	0.16269	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1022.0	1124.0	0.16269	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1022.0	1124.0	0.16269	-	OKLAUNION 345KV SWITCHED SHUNT
0	20L	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.15019	-	CIMARRON - MINCO 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.15019	-	GRACEMONT - MINCO 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.14819	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.14819	-	GEN509403 1-PIRKEY GENERATION
0	20L	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.14819	-	GEN509416 1-TURK GENERATION
0	20L	ASGI_16_01	-	Non-Converged Contingency	560.0	644.0	0.14777	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	560.0	644.0	0.14777	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	560.0	644.0	0.14777	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	ASGI_16_01	-	Non-Converged Contingency	560.0	644.0	0.14777	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.14504	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	560.0	560.0	0.12987	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.12908	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
0	20L	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.12908	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.12908	-	BORDER 7345.00 345KV SWITCHED SHUNT
0	20L	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.12907	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.12907	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20L	ASGI_16_01	-	Non-Converged Contingency	1584.0	2098.0	0.12562	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1584.0	2098.0	0.12562	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	956.1	1051.7	0.12561	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	956.1	1051.7	0.12561	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	0.0	0.0	0.10343	-	P12:345:SPS:J15.1.XRDS.TOLK
0	20L	ASGI_16_01	-	Non-Converged Contingency	956.09	1051.7	0.09975	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	956.09	1051.7	0.09975	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	717.0	789.0	0.09791	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	717.0	789.0	0.09791	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	717.0	789.0	0.09791	-	GEN515040 1-SEMINOLE 1G
0	20L	ASGI_16_01	-	Non-Converged Contingency	0.0	0.0	0.09235	-	P12:138:WFEC:MSL03
0	20L	ASGI_16_01	-	Non-Converged Contingency	956.09	1051.7	0.08835	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	956.09	1051.7	0.08835	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	956.09	1051.7	0.08835	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	956.09	1051.7	0.08835	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.07843	-	ARCADIA - NORTHWEST 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	478.0	502.0	0.07696	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	0.0	0.0	0.07485	-	P12:230:AEPW:ELKCITY6:SWEETWT6
0	20L	ASGI_16_01	-	Non-Converged Contingency	478.0	502.0	0.07247	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	478.0	502.0	0.07009	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	478.0	502.0	0.07009	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	478.0	502.0	0.07009	-	BUSHLAND INTERCHANGE 230KV SWITCHED SHUNT
0	20L	ASGI_16_01	-	Non-Converged Contingency	1561.0	1793.0	0.06655	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1561.0	1793.0	0.06655	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1561.0	1793.0	0.06655	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	ASGI_16_01	-	Non-Converged Contingency	1561.0	1793.0	0.06655	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	ASGI_16_01	-	Non-Converged Contingency	1192.0	1192.0	0.06592	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	956.0	956.0	0.06592	-	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	318.7	350.57	0.06196	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	318.7	350.57	0.06196	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	ASGI_16_01	-	Non-Converged Contingency	560.0	560.0	0.06187	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	560.0	560.0	0.06187	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	318.7	350.6	0.06134	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	318.7	350.6	0.06134	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1420.0	1775.0	0.05838	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1420.0	1775.0	0.05838	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	ASGI_16_01	-	Non-Converged Contingency	1420.0	1775.0	0.05838	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1420.0	1775.0	0.05838	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	ASGI_16_01	-	Non-Converged Contingency	1420.0	1775.0	0.05838	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1420.0	1775.0	0.05838	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.05687	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.05687	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	0.0	0.0	0.05569	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	20L	ASGI_16_01	-	Non-Converged Contingency	0.0	0.0	0.05228	-	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
0	20L	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.05109	-	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1532.0	1793.0	0.05082	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1532.0	1793.0	0.05082	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20L	ASGI_16_01	-	Non-Converged Contingency	1532.0	1793.0	0.05082	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.05066	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.05066	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
0	20L	ASGI_16_01	-	Non-Converged Contingency	1793.0	1793.0	0.05066	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1716.0	1793.0	0.05066	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	ASGI_16_01	-	Non-Converged Contingency	1793.0	1793.0	0.05066	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1716.0	1793.0	0.05066	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	ASGI_16_01	-	Non-Converged Contingency	1793.0	1793.0	0.05066	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1716.0	1793.0	0.05066	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.04944	-	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	785.0	785.0	0.04879	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	785.0	785.0	0.04879	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	439.0	439.0	0.04871	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	450.0	450.0	0.04871	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	450.0	450.0	0.04871	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	762.5	762.5	0.04782	-	MINGO - SETAB 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	762.5	762.5	0.04782	-	MINGO - SETAB 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	0.0	0.0	0.04743	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	20L	ASGI_16_01	-	Non-Converged Contingency	717.1	717.1	0.04705	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	717.1	717.1	0.04705	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	0.0	0.0	0.04359	-	P12:138:WFEC:MSL14
0	20L	ASGI_16_01	-	Non-Converged Contingency	0.0	0.0	0.04158	-	917X
0	20L	ASGI_16_01	-	Non-Converged Contingency	1504.0	1792.0	0.04130	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1504.0	1792.0	0.04130	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1505.0	1793.0	0.04050	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1505.0	1793.0	0.04050	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1505.0	1793.0	0.04050	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	501.95	501.95	0.03952	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	501.95	501.95	0.03952	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	956.0	956.0	0.03798	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	726.6	726.6	0.03765	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	726.6	726.6	0.03765	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1413.0	1517.0	0.03765	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1413.0	1517.0	0.03765	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	318.7	350.57	0.03455	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	318.7	350.57	0.03455	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1141.0	1195.0	0.03437	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1141.0	1195.0	0.03437	-	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	ASGI_16_01	-	Non-Converged Contingency	1141.0	1195.0	0.03437	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20SP	ASGI_16_01	-	Non-Converged Contingency	956.0	1042.0	0.21472	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20SP	ASGI_16_01	-	Non-Converged Contingency	956.0	1042.0	0.21472	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.17767	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20SP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.17767	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20SP	ASGI_16_01	-	Non-Converged Contingency	956.1	1051.7	0.15368	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.19615	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	1022.0	1124.0	0.18977	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	1022.0	1124.0	0.18977	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.17492	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.16452	-	CIMARRON - MINCO 345KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.16452	-	GRACEMONT - MINCO 345KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.15807	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	987.2	1082.8	0.15734	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	1584.0	2098.0	0.15404	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	ASGI_16_01	-	Non-Converged Contingency	1584.0	2098.0	0.15404	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.14588	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.14588	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	ASGI_16_01	-	Non-Converged Contingency	987.16	1082.77	0.12755	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	717.0	789.0	0.12080	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	956.09	1051.7	0.11346	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	987.16	1082.77	0.11346	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	560.0	560.0	0.08023	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.07931	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.07931	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	439.0	439.0	0.06118	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	450.0	450.0	0.06118	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	329.05	360.92	0.04403	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	421.0	439.0	0.04031	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20WP	ASGI_16_01	-	Non-Converged Contingency	329.05	360.92	0.03554	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	25SP	ASGI_16_01	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.19916	104.2165	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
2	17SP	ASGI_16_01	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06600	113.9867	BASE CASE
2	20SP	ASGI_16_01	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06286	110.7777	BASE CASE
2	17G	ASGI_16_01	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06337	104.3556	BASE CASE
2	20WP	ASGI_16_01	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06121	99.1	BASE CASE
2	17SP	ASGI_16_01	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.30831	103.9462	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20SP	ASGI_16_01	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.30332	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	ASGI_16_01	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24907	117.0258	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	ASGI_16_01	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22182	112.9654	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	ASGI_16_01	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24907	112.441	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	ASGI_16_01	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22182	108.3696	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17SP	ASGI_16_01	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24421	108.1247	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17SP	ASGI_16_01	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24421	103.6738	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26675	122.5534	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26675	118.7382	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26819	115.9388	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26819	113.406	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27217	112.2087	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27217	110.2344	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27002	107.0133	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27002	104.9152	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17SP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.35040	126.3303	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20SP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.34778	117.4113	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.34397	110.5121	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.34308	105.6091	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	ASGI_16_01	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12083	109.7093	BASE CASE
2	16WP	ASGI_16_01	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12995	108.7418	BASE CASE
2	17G	ASGI_16_01	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12777	107.5286	BASE CASE
2	20WP	ASGI_16_01	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12083	123.7856	BASE CASE
2	16WP	ASGI_16_01	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12995	122.9306	BASE CASE
2	17G	ASGI_16_01	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12777	120.973	BASE CASE
2	17SP	ASGI_16_01	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12638	105.8511	BASE CASE
2	16WP	ASGI_16_01	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24907	106.376	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	ASGI_16_01	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.22182	102.3425	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	ASGI_16_01	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24907	101.9464	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	ASGI_16_01	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03601	102.2178	BASE CASE
2	16WP	ASGI_16_01	-	Non-Converged Contingency	1022.0	1124.0	0.20357	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	ASGI_16_01	-	Non-Converged Contingency	1022.0	1124.0	0.20357	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.19926	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	16WP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.19173	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.18660	-	CIMARRON - MINCO 345KV CKT 1
2	16WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.18660	-	GRACEMONT - MINCO 345KV CKT 1
2	16WP	ASGI_16_01	-	Non-Converged Contingency	1330.0	1940.0	0.17602	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	16WP	ASGI_16_01	-	Non-Converged Contingency	1330.0	1940.0	0.17602	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	16WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.16559	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	16WP	ASGI_16_01	-	Non-Converged Contingency	987.2	1082.8	0.16219	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.15208	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	16WP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.15208	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	16WP	ASGI_16_01	-	Non-Converged Contingency	987.16	1082.77	0.13215	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	16WP	ASGI_16_01	-	Non-Converged Contingency	956.09	1051.7	0.13215	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	ASGI_16_01	-	Non-Converged Contingency	1420.0	1775.0	0.09864	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.08682	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	16WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.08682	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	ASGI_16_01	-	Non-Converged Contingency	439.0	439.0	0.06729	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	16WP	ASGI_16_01	-	Non-Converged Contingency	450.0	450.0	0.06729	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	ASGI_16_01	-	Non-Converged Contingency	343.79	343.79	0.20295	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	497.0	547.0	0.19975	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1022.0	1124.0	0.19558	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1022.0	1124.0	0.19558	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.19414	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.19249	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.19249	-	GEN509403 1-PIRKEY GENERATION
2	17G	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.19249	-	GEN509404 1-WELSH #1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.19249	-	GEN509406 1-WELSH #3
2	17G	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.19249	-	GEN509416 1-TURK GENERATION
2	17G	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.19249	-	GEN511848 1-SOUTHWESTERN STATION #3
2	17G	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.18043	-	CIMARRON - MINCO 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.18043	-	GRACEMONT - MINCO 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	478.0	502.0	0.18034	-	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.18009	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1330.0	1940.0	0.16969	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1330.0	1940.0	0.16969	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.15915	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	956.1	1051.7	0.15171	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	560.0	644.0	0.14582	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	560.0	644.0	0.14582	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.14559	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.14559	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
2	17G	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.14559	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.14559	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	17G	ASGI_16_01	-	Non-Converged Contingency	560.0	560.0	0.13011	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	717.0	789.0	0.12777	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	717.0	789.0	0.12777	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	956.09	1051.7	0.12099	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	956.09	1051.7	0.12099	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.09808	-	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1420.0	1775.0	0.09800	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1420.0	1775.0	0.09800	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1420.0	1775.0	0.09800	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1561.0	1793.0	0.08946	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1561.0	1793.0	0.08946	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.08852	-	ARCADIA - NORTHWEST 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	560.0	560.0	0.08721	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.08139	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.08139	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	478.0	502.0	0.07687	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	478.0	502.0	0.07608	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	318.7	350.57	0.07596	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1532.0	1793.0	0.07161	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1532.0	1793.0	0.07161	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	ASGI_16_01	-	Non-Converged Contingency	1532.0	1793.0	0.07161	-	G1524G1525 345.00 - WICHITA 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1532.0	1793.0	0.07161	-	G1524G1525 345.00 - WICHITA 345KV CKT 2
2	17G	ASGI_16_01	-	Non-Converged Contingency	1532.0	1793.0	0.07161	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	318.7	350.57	0.06877	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	318.7	350.6	0.06660	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	318.7	350.6	0.06660	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.06472	-	CIMARRON - DRAPER LAKE 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.06371	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.06371	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
2	17G	ASGI_16_01	-	Non-Converged Contingency	1793.0	1793.0	0.06371	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1716.0	1793.0	0.06371	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	ASGI_16_01	-	Non-Converged Contingency	1793.0	1793.0	0.06371	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1716.0	1793.0	0.06371	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	ASGI_16_01	-	Non-Converged Contingency	1793.0	1793.0	0.06371	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1716.0	1793.0	0.06371	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.06371	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.06371	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 2
2	17G	ASGI_16_01	-	Non-Converged Contingency	439.0	439.0	0.06337	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	450.0	450.0	0.06337	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	878.0	956.0	0.06277	-	BENTON - WICHITA 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1793.0	1793.0	0.06159	-	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1793.0	1793.0	0.06159	-	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1192.0	1192.0	0.05762	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	956.0	956.0	0.05762	-	G15063_T 345.00 - WOODRING 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.05716	-	GEN520947 1-HUGO1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	ASGI_16_01	-	Non-Converged Contingency	717.1	717.1	0.05706	-	HOLCOMB - SETAB 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	762.5	762.5	0.05588	-	MINGO - SETAB 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	785.0	785.0	0.05551	-	MINGO - RED WILLOW 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1039.0	1195.0	0.05509	-	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.05501	-	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	560.0	644.0	0.05172	-	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	ASGI_16_01	-	Non-Converged Contingency	726.6	726.6	0.05012	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1413.0	1517.0	0.05012	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1505.0	1793.0	0.04975	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1505.0	1793.0	0.04975	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1505.0	1793.0	0.04975	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	501.95	501.95	0.04975	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	478.05	547.36	0.04974	-	NEWHART 230 - PLANT X STATION 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1035.0	1035.0	0.04730	-	G14_001T 345.00 - WICHITA 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1504.0	1792.0	0.04689	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1504.0	1792.0	0.04689	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1141.0	1195.0	0.04684	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1141.0	1195.0	0.04684	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	560.0	644.0	0.04499	-	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	318.7	350.57	0.04261	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	318.7	350.57	0.04142	-	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	439.0	439.0	0.04057	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	502.0	502.0	0.04057	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	500.0	723.0	0.04057	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	717.0	926.0	0.03888	-	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	1022.0	1143.0	0.03791	-	PITTSBURG - VALLIANT 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	717.0	789.0	0.03700	-	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	560.0	560.0	0.03697	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	560.0	560.0	0.03697	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	ASGI_16_01	-	Non-Converged Contingency	318.7	350.57	0.03601	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
2	17G	ASGI_16_01	-	Non-Converged Contingency	502.0	502.0	0.03468	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
2	17SP	ASGI_16_01	-	Non-Converged Contingency	956.0	1042.0	0.19973	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1792.0	0.19624	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20WP	ASGI_16_01	-	Non-Converged Contingency	1022.0	1124.0	0.18983	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	ASGI_16_01	-	Non-Converged Contingency	1022.0	1124.0	0.18983	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.17498	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	20WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.16460	-	GRACEMONT - MINCO 345KV CKT 1
2	20WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.15817	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	20WP	ASGI_16_01	-	Non-Converged Contingency	987.2	1082.8	0.15742	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	ASGI_16_01	-	Non-Converged Contingency	1584.0	2098.0	0.15410	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	20WP	ASGI_16_01	-	Non-Converged Contingency	1584.0	2098.0	0.15410	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	20WP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.14593	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	20WP	ASGI_16_01	-	Non-Converged Contingency	1792.0	1972.0	0.14593	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	20WP	ASGI_16_01	-	Non-Converged Contingency	987.16	1082.77	0.12762	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.07935	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	20WP	ASGI_16_01	-	Non-Converged Contingency	1195.0	1195.0	0.07935	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	ASGI_16_01	-	Non-Converged Contingency	439.0	439.0	0.06121	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	20WP	ASGI_16_01	-	Non-Converged Contingency	450.0	450.0	0.06121	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
3	17G	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.37832	219.0037	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.37832	218.7841	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35566	212.6842	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35566	212.3523	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38233	206.7258	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38233	206.6	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.39128	198.5451	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.39128	197.214	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.39204	191.0186	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.39204	188.8782	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38746	182.2433	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38746	180.1336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.39976	128.2336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.39976	124.1314	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22490	100.7674	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22490	100.7674	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22490	100.7674	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22490	100.7674	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22490	100.6264	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22490	100.6264	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22490	100.6264	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22490	100.6264	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23674	100.4252	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23674	100.4252	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23674	100.4252	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23674	100.4252	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23674	100.4196	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23674	100.4196	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23674	100.4196	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23674	100.4196	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	17G	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.42380	205.8094	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.41338	191.8466	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.44191	182.1676	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.43689	170.544	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.43179	165.6022	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.43704	158.3084	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.44665	130.4315	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	ASGI_16_01	-	Non-Converged Contingency	3975.0	4570.0	0.38073	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	20L	ASGI_16_01	-	Non-Converged Contingency	3975.0	4570.0	0.32894	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	17G	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.37794	219.2477	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.37794	218.9034	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35525	212.5533	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35525	212.4877	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38183	206.5319	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38183	206.4431	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.39087	198.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.39087	197.0767	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.39161	191.0175	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.39161	188.7404	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38695	181.83	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38695	179.8003	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.39923	128.3207	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.39923	124.1778	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22443	100.5697	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22443	100.5697	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22443	100.5697	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22443	100.5697	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22443	100.3504	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22443	100.3504	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22443	100.3504	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22443	100.3504	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23616	100.1644	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23616	100.1644	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23616	100.1644	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23616	100.1644	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23616	100.1193	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23616	100.1193	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23616	100.1193	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23616	100.1193	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	17G	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.42373	205.5105	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.41330	191.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.44182	182.0402	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.43680	170.4128	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.43169	165.4035	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.43697	158.2063	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.44655	130.4862	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	ASGI_16_01	-	Non-Converged Contingency	3975.0	4570.0	0.37658	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	20L	ASGI_16_01	-	Non-Converged Contingency	3975.0	4570.0	0.32491	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
5	17G	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.37565	217.7095	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.37565	216.9825	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35346	211.2861	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35346	210.7754	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.37959	204.8525	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.37959	204.7326	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38841	196.7495	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38841	195.2293	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38930	189.7734	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38930	187.2532	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38468	180.5705	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38468	178.2726	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.39681	127.7475	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.39681	123.5792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22308	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
5	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22308	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
5	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22308	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
5	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22308	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
5	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22308	99	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
5	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22308	99	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
5	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22308	99	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
5	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22308	99	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
5	17G	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.42303	204.5119	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.41277	190.5492	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.44108	181.3291	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.43605	169.7873	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.43096	164.743	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.43622	157.4925	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.44576	130.3275	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	ASGI_16_04	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	478.0	502.0	0.20250	104.1278	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	ASGI_16_04	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	478.0	502.0	0.20250	104.1278	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	ASGI_16_04	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	478.0	502.0	0.20132	101.0261	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	ASGI_16_04	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	478.0	502.0	0.20132	101.0261	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	ASGI_16_04	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06349	111.2423	BASE CASE
0	20SP	ASGI_16_04	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.05985	106.965	BASE CASE
0	17G	ASGI_16_04	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06762	104.3555	BASE CASE
0	20WP	ASGI_16_04	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06505	100.6452	BASE CASE
0	16WP	ASGI_16_04	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21721	117.2755	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	ASGI_16_04	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21721	112.5386	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	ASGI_16_04	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.19539	107.9528	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17SP	ASGI_16_04	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.19539	103.4902	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	ASGI_16_04	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.08036	117.1249	BASE CASE
0	20WP	ASGI_16_04	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.10325	109.9811	BASE CASE
0	16WP	ASGI_16_04	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11281	108.8041	BASE CASE
0	17G	ASGI_16_04	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11065	107.5286	BASE CASE
0	20L	ASGI_16_04	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08036	131.0896	BASE CASE
0	20WP	ASGI_16_04	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10325	123.9661	BASE CASE
0	16WP	ASGI_16_04	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11281	122.9494	BASE CASE
0	17G	ASGI_16_04	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11065	120.973	BASE CASE
0	17SP	ASGI_16_04	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10512	106.8776	BASE CASE
0	16WP	ASGI_16_04	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.21721	106.6944	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	ASGI_16_04	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.21721	102.1214	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	ASGI_16_04	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.10379	104.9056	BASE CASE
0	20SP	ASGI_16_04	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.10239	103.3041	BASE CASE
0	17G	ASGI_16_04	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.07958	102.2178	BASE CASE
0	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.20288	138.3915	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.20288	138.3915	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25394	135.2614	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25394	135.2614	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29153	135.198	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29153	135.198	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.20170	134.7141	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.20170	134.7141	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.23719	134.4445	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.23719	134.4445	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25220	133.052	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25220	133.052	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.23986	121.1115	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.23986	121.1115	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29484	116.9229	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29484	116.9229	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17G	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.15891	108.3473	BASE CASE
0	17SP	ASGI_16_04	TO->FROM	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	1011.0	1176.0	0.13794	101.3643	BASE CASE
0	16WP	ASGI_16_04	-	Non-Converged Contingency	987.2	1082.8	0.18509	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	1330.0	1940.0	0.18033	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	1330.0	1940.0	0.18033	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.16299	-	CIMARRON - MINCO 345KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.16299	-	GRACEMONT - MINCO 345KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1792.0	0.15459	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	987.16	1082.77	0.15400	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	956.09	1051.7	0.15400	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14990	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14990	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14910	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	ASGI_16_04	-	Non-Converged Contingency	1022.0	1124.0	0.13878	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	1022.0	1124.0	0.13878	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	1420.0	1775.0	0.11413	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	1420.0	1775.0	0.11413	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	1420.0	1775.0	0.11413	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	439.0	439.0	0.10276	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.07689	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.07689	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	16WP	ASGI_16_04	-	Non-Converged Contingency	439.0	439.0	0.07153	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	16WP	ASGI_16_04	-	Non-Converged Contingency	450.0	450.0	0.07153	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	17G	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.07551	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	17G	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.05174	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	17G	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.04222	-	P12:138:WFEC-AEPW:WASHITA4:CLINTJC4
0	17G	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.03704	-	P12:138:AEPW:REDROCKRD4:WTH_JCT4
0	17G	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.03683	-	P12:138:AEPW:HOB-JCT4:ELKCTY-4
0	17G	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.03309	-	P12:138:AEPW:S.W.S.-4:HOB-JCT4
0	17G	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.03267	-	P12:138:AEPW:WTHWF4:WTH_SE4
0	17SP	ASGI_16_04	-	Non-Converged Contingency	956.1	1051.7	0.24192	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17SP	ASGI_16_04	-	Non-Converged Contingency	956.09	1051.7	0.17960	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	ASGI_16_04	-	Non-Converged Contingency	956.09	1051.7	0.15182	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	ASGI_16_04	-	Non-Converged Contingency	1330.0	1940.0	0.14869	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17SP	ASGI_16_04	-	Non-Converged Contingency	1330.0	1940.0	0.14869	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17SP	ASGI_16_04	-	Non-Converged Contingency	956.0	1042.0	0.13794	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17SP	ASGI_16_04	-	Non-Converged Contingency	956.0	1042.0	0.13794	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	ASGI_16_04	-	Non-Converged Contingency	353.0	353.0	0.12977	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17SP	ASGI_16_04	-	Non-Converged Contingency	1420.0	1775.0	0.11538	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	ASGI_16_04	-	Non-Converged Contingency	318.7	350.57	0.10379	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	17SP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1792.0	0.09776	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.09009	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	17SP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.09009	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	17SP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.08241	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.06984	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.22972	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.16921	-	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
0	20L	ASGI_16_04	-	Non-Converged Contingency	478.0	502.0	0.16140	-	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	478.0	502.0	0.16140	-	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	956.1	1051.7	0.14945	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	956.1	1051.7	0.14945	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	560.0	560.0	0.14604	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	560.0	560.0	0.14604	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	560.0	560.0	0.14604	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	ASGI_16_04	-	Non-Converged Contingency	318.7	350.57	0.13852	-	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	318.7	350.57	0.13852	-	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.13718	-	P12:230:AEPW:ELKCITY6:SWEETWT6
0	20L	ASGI_16_04	-	Non-Converged Contingency	1792.0	1792.0	0.13184	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1584.0	2098.0	0.12792	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1584.0	2098.0	0.12792	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.12441	-	CIMARRON - MINCO 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.12441	-	GRACEMONT - MINCO 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	956.09	1051.7	0.12179	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	956.09	1051.7	0.12179	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.12005	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.12005	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	956.09	1051.7	0.10793	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	956.09	1051.7	0.10793	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	956.09	1051.7	0.10793	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	956.09	1051.7	0.10793	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	478.0	502.0	0.10423	-	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	478.0	502.0	0.10423	-	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1022.0	1124.0	0.09717	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1022.0	1124.0	0.09717	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1022.0	1124.0	0.09717	-	OKLAUNION 345KV SWITCHED SHUNT
0	20L	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.09589	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.09589	-	GEN509403 1-PIRKEY GENERATION
0	20L	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.09589	-	GEN509416 1-TURK GENERATION
0	20L	ASGI_16_04	-	Non-Converged Contingency	421.0	439.0	0.08460	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	348.58	381.24	0.08460	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	500.0	723.0	0.08460	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1792.0	1792.0	0.08290	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1792.0	1792.0	0.08290	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	ASGI_16_04	-	Non-Converged Contingency	1793.0	1793.0	0.08290	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1716.0	1793.0	0.08290	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	ASGI_16_04	-	Non-Converged Contingency	1793.0	1793.0	0.08290	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1716.0	1793.0	0.08290	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	ASGI_16_04	-	Non-Converged Contingency	1793.0	1793.0	0.08290	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1716.0	1793.0	0.08290	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.08190	-	P12:138:WFEC:MSL03
0	20L	ASGI_16_04	-	Non-Converged Contingency	717.0	789.0	0.08036	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	717.0	789.0	0.08036	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	717.0	789.0	0.08036	-	GEN515040 1-SEMINOLE 1G
0	20L	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.07974	-	ARCADIA - NORTHWEST 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	560.0	560.0	0.07234	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	318.7	350.57	0.07121	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	318.7	350.57	0.07121	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1420.0	1775.0	0.06987	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1420.0	1775.0	0.06987	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	ASGI_16_04	-	Non-Converged Contingency	1420.0	1775.0	0.06987	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1420.0	1775.0	0.06987	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	ASGI_16_04	-	Non-Converged Contingency	1420.0	1775.0	0.06987	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1420.0	1775.0	0.06987	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	ASGI_16_04	-	Non-Converged Contingency	1561.0	1793.0	0.06763	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1561.0	1793.0	0.06763	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1561.0	1793.0	0.06763	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	ASGI_16_04	-	Non-Converged Contingency	1561.0	1793.0	0.06763	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	ASGI_16_04	-	Non-Converged Contingency	318.7	350.57	0.06662	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	318.7	350.57	0.06662	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	501.95	501.95	0.06610	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	501.95	501.95	0.06610	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1192.0	1192.0	0.06103	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	956.0	956.0	0.06103	-	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.05777	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	20L	ASGI_16_04	-	Non-Converged Contingency	1532.0	1793.0	0.05615	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1532.0	1793.0	0.05615	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20L	ASGI_16_04	-	Non-Converged Contingency	1532.0	1793.0	0.05615	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	785.0	785.0	0.05431	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	785.0	785.0	0.05431	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	560.0	644.0	0.05431	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	560.0	644.0	0.05431	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	560.0	644.0	0.05431	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	ASGI_16_04	-	Non-Converged Contingency	560.0	644.0	0.05431	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	ASGI_16_04	-	Non-Converged Contingency	762.5	762.5	0.05393	-	MINGO - SETAB 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	762.5	762.5	0.05393	-	MINGO - SETAB 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1792.0	1792.0	0.05385	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1792.0	1792.0	0.05385	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
0	20L	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.05385	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.05385	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20L	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.05385	-	BORDER 7345.00 345KV SWITCHED SHUNT
0	20L	ASGI_16_04	-	Non-Converged Contingency	717.1	717.1	0.05324	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	717.1	717.1	0.05324	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	439.0	439.0	0.05257	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	450.0	450.0	0.05257	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	450.0	450.0	0.05257	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.05162	-	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	726.6	726.6	0.05109	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	726.6	726.6	0.05109	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1413.0	1517.0	0.05109	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1413.0	1517.0	0.05109	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.04668	-	P12:230:SPS:K43.1.PRNGLE.HARR_E
0	20L	ASGI_16_04	-	Non-Converged Contingency	318.7	350.57	0.04644	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	318.7	350.57	0.04644	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1505.0	1793.0	0.04408	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1505.0	1793.0	0.04408	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1505.0	1793.0	0.04408	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.04370	-	917X
0	20L	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.04364	-	P12:115:SPS:T53.1.NICHLS.KIRBY
0	20L	ASGI_16_04	-	Non-Converged Contingency	1504.0	1792.0	0.04347	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1504.0	1792.0	0.04347	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.04335	-	P12:115:SPS:W08.1.HITCH.LASLEY
0	20L	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.04241	-	P12:138:WFEC:MSL14
0	20L	ASGI_16_04	-	Non-Converged Contingency	956.0	956.0	0.04236	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.04024	-	P12:115:SPS:V29.1.NICHLS.KNGSMLL
0	20L	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.04011	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	20L	ASGI_16_04	-	Non-Converged Contingency	318.7	350.57	0.03880	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	318.7	350.57	0.03880	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1141.0	1195.0	0.03470	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1141.0	1195.0	0.03470	-	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	1141.0	1195.0	0.03470	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	159.35	159.95	0.03290	-	Hansford County Switch Station - SPEARMAN INTERCHANGE 115KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	159.35	159.95	0.03290	-	Hansford County Switch Station - SPEARMAN INTERCHANGE 115KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	159.95	159.95	0.03290	-	HITCHLAND INTERCHANGE - Hansford County Switch Station 115KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	159.95	159.95	0.03290	-	HITCHLAND INTERCHANGE - Hansford County Switch Station 115KV CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.03255	-	P12:115:SPS:T54.1.KIRBY.SHM(520)
0	20L	ASGI_16_04	-	Non-Converged Contingency	0.0	0.0	0.03255	-	P12:138:AEPW:SHAM4WT:CHILD4WT
0	20L	ASGI_16_04	-	Non-Converged Contingency	560.0	560.0	0.03076	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	ASGI_16_04	-	Non-Converged Contingency	560.0	560.0	0.03076	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20SP	ASGI_16_04	-	Non-Converged Contingency	956.1	1051.7	0.24242	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20SP	ASGI_16_04	-	Non-Converged Contingency	956.0	1042.0	0.13247	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20SP	ASGI_16_04	-	Non-Converged Contingency	956.0	1042.0	0.13247	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.08982	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20SP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.08982	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	ASGI_16_04	-	Non-Converged Contingency	987.2	1082.8	0.18117	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1792.0	0.16117	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	1584.0	2098.0	0.15635	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	1584.0	2098.0	0.15635	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	987.16	1082.77	0.14957	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14247	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14247	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.13874	-	CIMARRON - MINCO 345KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.13874	-	GRACEMONT - MINCO 345KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	956.09	1051.7	0.13304	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	987.16	1082.77	0.13304	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	1022.0	1124.0	0.12425	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	1022.0	1124.0	0.12425	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.12263	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	717.0	789.0	0.10325	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	421.0	439.0	0.09876	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	329.05	360.92	0.07891	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.07066	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.07066	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	ASGI_16_04	-	Non-Converged Contingency	439.0	439.0	0.06505	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	450.0	450.0	0.06505	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	329.05	360.92	0.05592	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	ASGI_16_04	-	Non-Converged Contingency	560.0	560.0	0.04909	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	17SP	ASGI_16_04	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.07033	113.9867	BASE CASE
2	20SP	ASGI_16_04	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06672	110.7777	BASE CASE
2	17G	ASGI_16_04	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06762	104.3556	BASE CASE
2	20WP	ASGI_16_04	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06507	99.1	BASE CASE
2	17SP	ASGI_16_04	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.23512	103.9462	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20SP	ASGI_16_04	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.22947	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	ASGI_16_04	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21726	117.0258	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	ASGI_16_04	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21726	112.441	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17SP	ASGI_16_04	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21188	108.1247	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17SP	ASGI_16_04	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21188	103.6738	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	ASGI_16_04	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.10329	109.7093	BASE CASE
2	16WP	ASGI_16_04	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11283	108.7418	BASE CASE
2	17G	ASGI_16_04	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11065	107.5286	BASE CASE
2	20WP	ASGI_16_04	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10329	123.7856	BASE CASE
2	16WP	ASGI_16_04	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11283	122.9306	BASE CASE
2	17G	ASGI_16_04	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11065	120.973	BASE CASE
2	17SP	ASGI_16_04	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10898	105.8511	BASE CASE
2	16WP	ASGI_16_04	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.21726	106.376	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	ASGI_16_04	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.21726	101.9464	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	ASGI_16_04	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.07958	102.2178	BASE CASE
2	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29151	132.8575	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29151	132.8575	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.23717	132.1852	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.23717	132.1852	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24186	128.5245	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24186	128.5245	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24002	126.7588	CHERRY1 - HARRINGTON STATION 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24002	126.7588	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29670	124.8081	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29670	124.8081	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29420	124.6894	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29420	124.6894	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.23986	120.1894	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.23986	120.1894	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29483	116.1281	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29483	116.1281	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.15891	108.3474	BASE CASE
2	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.19505	101.5911	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
2	16WP	ASGI_16_04	-	Non-Converged Contingency	987.2	1082.8	0.18513	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	ASGI_16_04	-	Non-Converged Contingency	1330.0	1940.0	0.18036	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	16WP	ASGI_16_04	-	Non-Converged Contingency	1330.0	1940.0	0.18036	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	16WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.16303	-	CIMARRON - MINCO 345KV CKT 1
2	16WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.16303	-	GRACEMONT - MINCO 345KV CKT 1
2	16WP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1792.0	0.15462	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	ASGI_16_04	-	Non-Converged Contingency	987.16	1082.77	0.15403	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	16WP	ASGI_16_04	-	Non-Converged Contingency	956.09	1051.7	0.15403	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14992	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	16WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14992	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14913	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	16WP	ASGI_16_04	-	Non-Converged Contingency	1022.0	1124.0	0.13881	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	ASGI_16_04	-	Non-Converged Contingency	1022.0	1124.0	0.13881	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	ASGI_16_04	-	Non-Converged Contingency	1420.0	1775.0	0.11414	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.07692	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	16WP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.07692	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	16WP	ASGI_16_04	-	Non-Converged Contingency	439.0	439.0	0.07154	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	16WP	ASGI_16_04	-	Non-Converged Contingency	450.0	450.0	0.07154	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	251.0	251.0	0.73376	-	PALO DURO SUB - RANDALL COUNTY INTERCHANGE 115KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	478.0	502.0	0.18127	-	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	956.1	1051.7	0.17465	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1330.0	1940.0	0.17403	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1330.0	1940.0	0.17403	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	560.0	560.0	0.16463	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	560.0	560.0	0.16463	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	ASGI_16_04	-	Non-Converged Contingency	318.7	350.57	0.15891	-	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.15685	-	CIMARRON - MINCO 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.15685	-	GRACEMONT - MINCO 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14449	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14449	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1792.0	1792.0	0.14298	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	956.09	1051.7	0.14287	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	956.09	1051.7	0.14287	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14236	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14236	-	GEN509403 1-PIRKEY GENERATION
2	17G	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14236	-	GEN509404 1-WELSH #1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14236	-	GEN509406 1-WELSH #3
2	17G	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14236	-	GEN509416 1-TURK GENERATION
2	17G	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14236	-	GEN511848 1-SOUTHWESTERN STATION #3
2	17G	ASGI_16_04	-	Non-Converged Contingency	1022.0	1124.0	0.13082	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1022.0	1124.0	0.13082	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	478.0	502.0	0.12385	-	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1420.0	1775.0	0.11351	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1420.0	1775.0	0.11351	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1420.0	1775.0	0.11351	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	717.0	789.0	0.11065	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	717.0	789.0	0.11065	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	439.0	439.0	0.09929	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	502.0	502.0	0.09929	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	500.0	723.0	0.09929	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1792.0	1792.0	0.09546	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1792.0	1792.0	0.09546	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
2	17G	ASGI_16_04	-	Non-Converged Contingency	1793.0	1793.0	0.09546	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1716.0	1793.0	0.09546	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	ASGI_16_04	-	Non-Converged Contingency	1793.0	1793.0	0.09546	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1716.0	1793.0	0.09546	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	ASGI_16_04	-	Non-Converged Contingency	1793.0	1793.0	0.09546	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1716.0	1793.0	0.09546	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	ASGI_16_04	-	Non-Converged Contingency	1792.0	1792.0	0.09546	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	ASGI_16_04	-	Non-Converged Contingency	1792.0	1792.0	0.09546	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 2
2	17G	ASGI_16_04	-	Non-Converged Contingency	1561.0	1793.0	0.09209	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1561.0	1793.0	0.09209	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.08906	-	ARCADIA - NORTHWEST 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	560.0	644.0	0.08510	-	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	ASGI_16_04	-	Non-Converged Contingency	502.0	502.0	0.08376	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	560.0	560.0	0.07965	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	318.7	350.57	0.07958	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1532.0	1793.0	0.07819	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1532.0	1793.0	0.07819	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	ASGI_16_04	-	Non-Converged Contingency	1532.0	1793.0	0.07819	-	G1524G1525 345.00 - WICHITA 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1532.0	1793.0	0.07819	-	G1524G1525 345.00 - WICHITA 345KV CKT 2
2	17G	ASGI_16_04	-	Non-Converged Contingency	1532.0	1793.0	0.07819	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	501.95	501.95	0.07614	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	560.0	644.0	0.07403	-	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1792.0	1792.0	0.07042	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1792.0	1792.0	0.07042	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
2	17G	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.07042	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.07042	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	17G	ASGI_16_04	-	Non-Converged Contingency	878.0	956.0	0.06934	-	BENTON - WICHITA 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	439.0	439.0	0.06762	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	450.0	450.0	0.06762	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.06623	-	CIMARRON - DRAPER LAKE 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	726.6	726.6	0.06401	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1413.0	1517.0	0.06401	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	717.1	717.1	0.06366	-	HOLCOMB - SETAB 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1793.0	1793.0	0.06245	-	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1793.0	1793.0	0.06245	-	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	762.5	762.5	0.06211	-	MINGO - SETAB 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	785.0	785.0	0.06101	-	MINGO - RED WILLOW 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	560.0	644.0	0.06064	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	560.0	644.0	0.06064	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	ASGI_16_04	-	Non-Converged Contingency	318.7	350.57	0.05423	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1505.0	1793.0	0.05360	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1505.0	1793.0	0.05360	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1505.0	1793.0	0.05360	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.05209	-	GEN520947 1-HUGO1
2	17G	ASGI_16_04	-	Non-Converged Contingency	560.0	560.0	0.05194	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1192.0	1192.0	0.05101	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	956.0	956.0	0.05101	-	G15063_T 345.00 - WOODRING 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1039.0	1195.0	0.05052	-	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1504.0	1792.0	0.04921	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1504.0	1792.0	0.04921	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1035.0	1035.0	0.04793	-	G14_001T 345.00 - WICHITA 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1141.0	1195.0	0.04729	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1141.0	1195.0	0.04729	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.04660	-	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	318.7	350.57	0.04261	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	159.35	159.95	0.03797	-	Hansford County Switch Station - SPEARMAN INTERCHANGE 115KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	159.95	159.95	0.03797	-	HITCHLAND INTERCHANGE - Hansford County Switch Station 115KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	1022.0	1143.0	0.03786	-	PITTSBURG - VALLIANT 345KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	158.95	159.95	0.03361	-	PRINGLE INTERCHANGE - SPEARMAN INTERCHANGE 115KV CKT 1
2	17G	ASGI_16_04	-	Non-Converged Contingency	717.0	717.0	0.02955	-	PITTSBURG - SEMINOLE 345KV CKT 1
2	17SP	ASGI_16_04	-	Non-Converged Contingency	956.0	1042.0	0.13415	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	ASGI_16_04	-	Non-Converged Contingency	987.2	1082.8	0.18126	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1792.0	0.16126	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20WP	ASGI_16_04	-	Non-Converged Contingency	1584.0	2098.0	0.15640	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	20WP	ASGI_16_04	-	Non-Converged Contingency	1584.0	2098.0	0.15640	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	20WP	ASGI_16_04	-	Non-Converged Contingency	987.16	1082.77	0.14965	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14252	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	20WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.14252	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.13883	-	GRACEMONT - MINCO 345KV CKT 1
2	20WP	ASGI_16_04	-	Non-Converged Contingency	1022.0	1124.0	0.12432	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	ASGI_16_04	-	Non-Converged Contingency	1022.0	1124.0	0.12432	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	ASGI_16_04	-	Non-Converged Contingency	1195.0	1195.0	0.12269	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	20WP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.07072	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	20WP	ASGI_16_04	-	Non-Converged Contingency	1792.0	1972.0	0.07072	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	20WP	ASGI_16_04	-	Non-Converged Contingency	439.0	439.0	0.06507	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	20WP	ASGI_16_04	-	Non-Converged Contingency	450.0	450.0	0.06507	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
3	17G	ASGI_16_04	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	478.0	502.0	0.23209	101.4072	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17G	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28661	138.7854	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	17G	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.23284	136.7177	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	20L	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24846	133.2137	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	20L	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24846	133.2137	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	20L	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.19722	129.8466	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	20L	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.19722	129.8466	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24136	123.246	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24136	123.246	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.23920	122.4256	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.23920	122.4256	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.23612	120.8923	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.23612	120.8923	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29294	120.3622	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29294	120.3622	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29582	120.2482	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29582	120.2482	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29004	120.0413	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29004	120.0413	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.23915	110.4359	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.23915	110.4359	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29373	108.0427	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29373	108.0427	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	17G	ASGI_16_04	-	Non-Converged Contingency	3975.0	4570.0	0.27148	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	20L	ASGI_16_04	-	Non-Converged Contingency	3975.0	4570.0	0.21640	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	17G	ASGI_16_04	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	478.0	502.0	0.23479	102.6716	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	17G	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28964	141.053	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	17G	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.23553	138.5823	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	20L	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25128	135.5337	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	20L	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25128	135.5337	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	20L	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.19973	131.79	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	20L	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.19973	131.79	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24428	124.822	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24428	124.822	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24223	124.2631	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24223	124.2631	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.23910	122.7766	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.23910	122.7766	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29636	122.5486	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29636	122.5486	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29339	122.2522	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29339	122.2522	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29911	122.1589	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29911	122.1589	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.24205	111.9983	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.24205	111.9983	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29700	109.9182	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29700	109.9182	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	17G	ASGI_16_04	-	Non-Converged Contingency	3975.0	4570.0	0.26707	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	20L	ASGI_16_04	-	Non-Converged Contingency	3975.0	4570.0	0.21196	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
5	17G	ASGI_16_04	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	478.0	502.0	0.23652	104.1255	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	17G	ASGI_16_04	FROM->TO	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	478.0	502.0	0.30066	99.9	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	17G	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29157	143.3681	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	17G	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.23722	140.6187	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	20L	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25286	137.6091	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	20L	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25286	137.6091	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	20L	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.20111	133.6132	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	20L	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.20111	133.6132	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24598	126.4312	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24598	126.4312	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24391	125.9728	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24391	125.9728	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.24076	124.6681	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.24076	124.6681	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29828	124.4496	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29828	124.4496	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29529	124.3757	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29529	124.3757	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.30106	123.9873	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.30106	123.9873	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.24387	113.9597	CHERRY1 - HARRINGTON STATION 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.24387	113.9597	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29907	112.0885	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29907	112.0885	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	17G	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29084	142.6825	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	17G	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.23662	140.0461	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	20L	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25219	136.6932	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	20L	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25219	136.6932	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	20L	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.20056	132.809	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	20L	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.20056	132.809	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24540	125.6083	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24540	125.6083	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24332	124.9415	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24332	124.9415	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.24018	123.3956	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.24018	123.3956	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29756	123.255	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29756	123.255	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.30035	123.0411	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.30035	123.0411	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29459	122.9028	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29459	122.9028	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.24323	113.0027	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.24323	113.0027	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29830	111.0343	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	16WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29830	111.0343	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	ASGI_16_05	FROM->TO	FT RANDAL - SPENCER 115KV CKT 1	120.0	120.0	0.04698	107.1258	BASE CASE
0	20SP	ASGI_16_05	FROM->TO	FT RANDAL - SPENCER 115KV CKT 1	120.0	120.0	0.04686	103.6364	BASE CASE
0	25SP	ASGI_16_05	TO->FROM	ONEILL - SPENCER 115KV CKT 1	120.0	120.0	0.04698	102.6892	BASE CASE
0	20SP	ASGI_16_05	TO->FROM	ONEILL - SPENCER 115KV CKT 1	120.0	120.0	0.04686	99.3	BASE CASE
0	25SP	ASGI_16_07	FROM->TO	FT RANDAL - SPENCER 115KV CKT 1	120.0	120.0	0.04698	107.1258	BASE CASE
0	20SP	ASGI_16_07	FROM->TO	FT RANDAL - SPENCER 115KV CKT 1	120.0	120.0	0.04686	103.6364	BASE CASE
0	25SP	ASGI_16_07	TO->FROM	ONEILL - SPENCER 115KV CKT 1	120.0	120.0	0.04698	102.6892	BASE CASE
0	20SP	ASGI_16_07	TO->FROM	ONEILL - SPENCER 115KV CKT 1	120.0	120.0	0.04686	99.3	BASE CASE
0	17SP	G15_018	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06275	111.2423	BASE CASE
0	20SP	G15_018	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.05958	106.965	BASE CASE
0	17G	G15_018	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06433	104.3555	BASE CASE
0	20WP	G15_018	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06199	100.6452	BASE CASE
0	16WP	G15_018	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.23768	117.2755	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G15_018	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.20969	113.9417	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G15_018	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.23768	112.5386	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G15_018	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.23003	107.9528	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17SP	G15_018	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.23003	103.4902	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26861	197.2146	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26861	189.9362	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28297	115.1329	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28297	114.7364	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_018	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.23662	213.0015	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G15_018	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.24860	134.0852	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_018	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96.0	96.0	0.10476	101.0437	BASE CASE
0	20SP	G15_018	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.09653	117.8449	BASE CASE
0	17SP	G15_018	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.09240	113.6626	BASE CASE
0	20L	G15_018	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.09170	117.1249	BASE CASE
0	20WP	G15_018	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11460	109.9811	BASE CASE
0	16WP	G15_018	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12381	108.8041	BASE CASE
0	17G	G15_018	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12165	107.5286	BASE CASE
0	20L	G15_018	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09170	131.0896	BASE CASE
0	20WP	G15_018	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11460	123.9661	BASE CASE
0	16WP	G15_018	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12381	122.9494	BASE CASE
0	17G	G15_018	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12165	120.973	BASE CASE
0	17SP	G15_018	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12161	106.8776	BASE CASE
0	20SP	G15_018	TO->FROM	G15039_T 230.00 - PLANT X STATION 230KV CKT 1	318.7	350.6	0.09653	101.2007	BASE CASE
0	16WP	G15_018	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.23768	106.6944	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G15_018	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.20969	103.5122	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G15_018	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.23768	102.1214	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G15_018	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.06017	104.9056	BASE CASE
0	20SP	G15_018	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.05884	103.3041	BASE CASE
0	17G	G15_018	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04648	102.2178	BASE CASE
0	25SP	G15_018	TO->FROM	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1	141.02	141.02	0.04925	109.5178	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1	141.02	141.02	0.04925	109.4064	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05939	124.4658	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05575	112.9438	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05575	112.9438	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05575	112.9086	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05575	112.9086	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	112.5354	GEN526331 1-JONES GEN #1 22 KV
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	112.3468	GEN526332 1-JONES GEN #2 21 KV
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06284	111.3346	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06284	111.3053	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.03102	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.03102	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05841	107.3472	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	107	GEN527884 1-CUNNINGHAM GEN #4 22 KV
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	106.0884	GEN563142 1-G15079_3 0.5500
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	106.0884	GEN563151 1-G15080_2 0.5500
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05841	106.0791	P12:115:SPS:V15.1.TUCO.INDANA
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05841	106.0442	INDIANA SUB - STANTON SUB 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05872	106.0084	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05872	105.974	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05731	105.4304	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04452	105.2063	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05731	105.1732	P12:345:SPS:J14.1.EDDY.XRDS
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04452	105.1386	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06133	105.0982	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06133	105.0934	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05585	105.0723	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05585	104.9891	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	104.8526	GEN527883 1-CUNNINGHAM GEN #3 22 KV
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05507	104.7091	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05676	104.6771	P12:345:SPS:J15.1.XRDS.TOLK
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05507	104.6596	P12:230:SPS:K37.1.TOLK.LAMB
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	104.4479	TUCO INTERCHANGE 230/13.0KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05652	104.442	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05605	104.1602	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05507	104.149	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05605	104.1458	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05507	104.0778	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05841	103.9914	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05652	103.9739	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05668	103.9293	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05668	103.8823	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05731	103.6702	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05731	103.6636	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05921	103.5765	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05921	103.5559	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	103.5169	GEN563132 1-G15078_3 0.3570
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05673	103.4535	LUBBOCK SOUTH INTERCHANGE - SOUTH PLAINS REC-WOODROW INTERCHANGE 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	103.4314	GEN587113 1-G16-015-GEN10.4180
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	103.3789	GEN563102 1-G15075_3 0.5500
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05967	103.2873	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05872	103.1846	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05652	103.1627	P12:115:SPS:W54.1.KISER.KRESS
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05872	103.1541	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05652	103.0555	KISER 3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05841	103.0022	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05659	102.9892	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05841	102.9593	P12:115:SPS:V62.1.CRLSLE.INDANA
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	102.8077	GEN562812 1-G15040_3 0.3570
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05336	102.7303	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05464	102.7134	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05464	102.6722	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05659	102.6695	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	102.6062	GEN526678 1-CIRRUS_WND 10.6900
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05633	102.5983	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05863	102.2565	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05967	102.2379	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05543	102.2143	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05430	102.0607	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05921	101.9931	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05921	101.9797	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	101.5877	GEN525845 1-ELK_2 1 18.000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05585	101.5349	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05585	101.5158	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05673	101.1826	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05673	101.0304	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	100.5597	BASE CASE
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	100.5354	BASE CASE
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05040	100.5005	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05040	100.4984	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05677	100.1483	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	100.1357	GEN562270 1-G12-020-2 0.6900
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05872	100.0549	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05686	99.8	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05676	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05676	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05664	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05872	99.5	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05691	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05691	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05691	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05691	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	99.3	GEN562762 1-G15033_3 0.6900
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05707	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05707	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	99.2	GEN300024 1-1CHOTST6 16.000
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	99.2	GEN300031 1-CHOUTEAU CTG 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05593	99.2	P12:115:SPS:V56.1.COCHRAN.SUNDWN
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05872	99.1	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	99.1	GEN300001 1-THOMAS HILL UNIT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	99.1	GEN300017 1-1G2GPDEL 18.000
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	99.1	GEN511938 1-OEC STEAM # 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	99.1	GEN511941 1-OEC STEAM # 2
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	99.1	GEN562517 1-G14_021_S2 0.6900
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	99.1	GEN562691 1-G15_015_3 0.6900
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	99.1	GEN645041 1-CASS COUNTY 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05724	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05724	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	99	GEN300016 1-1G1GPDEL 18.000
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	99	GEN549893 2-SOUTHWEST 2
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	99	GEN562023 1-G11_020_3 0.6900
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	99	GEN562026 1-G11_019_3 0.6900
0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05655	99	GEN659407 1-ANTELPHILLSW0.6900
0	17SP	G15_018	TO->FROM	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	1011.0	1176.0	0.19280	101.3643	BASE CASE
0	16WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.18917	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	1022.0	1124.0	0.18086	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	1022.0	1124.0	0.18086	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	987.2	1082.8	0.17901	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.17891	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.17817	-	CIMARRON - MINCO 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.17817	-	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	1330.0	1940.0	0.17806	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	1330.0	1940.0	0.17806	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.17476	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	987.16	1082.77	0.14002	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	956.09	1051.7	0.14002	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.12620	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.12620	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	16WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.11568	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.11568	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	1420.0	1775.0	0.10435	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	1420.0	1775.0	0.10435	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	1420.0	1775.0	0.10435	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	439.0	439.0	0.06824	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	450.0	450.0	0.06824	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	859.0	956.0	0.06132	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	560.0	560.0	0.06132	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G15_018	-	Non-Converged Contingency	439.0	439.0	0.05713	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17G	G15_018	-	Non-Converged Contingency	0.0	0.0	0.07292	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	17G	G15_018	-	Non-Converged Contingency	0.0	0.0	0.05602	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	17G	G15_018	-	Non-Converged Contingency	0.0	0.0	0.03642	-	P12:138:WFEC-AEPW:WASHITA4:CLINTJC4
0	17G	G15_018	-	Non-Converged Contingency	0.0	0.0	0.03617	-	P12:138:AEPW:REDROCKRD4:WTH_JCT4

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G15_018	-	Non-Converged Contingency	0.0	0.0	0.03419	-	P12:138:AEPW:HOB-JCT4:ELKCTY-4
0	17G	G15_018	-	Non-Converged Contingency	0.0	0.0	0.03190	-	P12:138:AEPW:WTHWF4:WTH_SE4
0	17SP	G15_018	-	Non-Converged Contingency	956.0	1042.0	0.19280	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17SP	G15_018	-	Non-Converged Contingency	956.0	1042.0	0.19280	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G15_018	-	Non-Converged Contingency	956.1	1051.7	0.18786	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17SP	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.17684	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G15_018	-	Non-Converged Contingency	478.0	502.0	0.17440	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_018	-	Non-Converged Contingency	1330.0	1940.0	0.15529	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17SP	G15_018	-	Non-Converged Contingency	1330.0	1940.0	0.15529	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17SP	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.15212	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G15_018	-	Non-Converged Contingency	956.09	1051.7	0.15147	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.14954	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	17SP	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.14954	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	17SP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.14696	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	G15_018	-	Non-Converged Contingency	956.09	1051.7	0.12803	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	G15_018	-	Non-Converged Contingency	478.0	502.0	0.11247	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_018	-	Non-Converged Contingency	1420.0	1775.0	0.09939	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G15_018	-	Non-Converged Contingency	318.7	350.6	0.09240	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	17SP	G15_018	-	Non-Converged Contingency	318.7	350.6	0.09240	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	17SP	G15_018	-	Non-Converged Contingency	353.0	353.0	0.07108	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17SP	G15_018	-	Non-Converged Contingency	318.7	350.57	0.06017	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	0.0	0.0	0.37094	-	P12:345:SPS:J15.1.XRDS.TOLK
0	20L	G15_018	-	Non-Converged Contingency	560.0	560.0	0.24876	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_018	-	Non-Converged Contingency	560.0	560.0	0.24876	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_018	-	Non-Converged Contingency	0.0	0.0	0.20293	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.15608	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.15499	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	956.1	1051.7	0.14262	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	956.1	1051.7	0.14262	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.14110	-	CIMARRON - MINCO 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.14110	-	GRACEMONT - MINCO 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1022.0	1124.0	0.14002	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1022.0	1124.0	0.14002	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1022.0	1124.0	0.14002	-	OKLAUNION 345KV SWITCHED SHUNT
0	20L	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.13745	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.13745	-	GEN509403 1-PIRKEY GENERATION
0	20L	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.13745	-	GEN509416 1-TURK GENERATION
0	20L	G15_018	-	Non-Converged Contingency	0.0	0.0	0.12856	-	P12:345:SPS:J15.1.XRDS.TOLK
0	20L	G15_018	-	Non-Converged Contingency	1584.0	2098.0	0.12693	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1584.0	2098.0	0.12693	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	478.0	502.0	0.12391	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	478.0	502.0	0.12391	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	478.0	502.0	0.12391	-	BUSHLAND INTERCHANGE 230KV SWITCHED SHUNT
0	20L	G15_018	-	Non-Converged Contingency	318.7	350.57	0.10792	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	318.7	350.57	0.10792	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	956.09	1051.7	0.10760	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	956.09	1051.7	0.10760	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.10350	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.10350	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
0	20L	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.10350	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.10350	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20L	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.10350	-	BORDER 7345.00 345KV SWITCHED SHUNT
0	20L	G15_018	-	Non-Converged Contingency	956.09	1051.7	0.09532	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	956.09	1051.7	0.09532	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	956.09	1051.7	0.09532	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	956.09	1051.7	0.09532	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	717.0	789.0	0.09170	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	717.0	789.0	0.09170	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	717.0	789.0	0.09170	-	GEN515040 1-SEMINOLE 1G
0	20L	G15_018	-	Non-Converged Contingency	0.0	0.0	0.08851	-	P12:230:AEPW:ELKCITY6:SWEETWT6
0	20L	G15_018	-	Non-Converged Contingency	0.0	0.0	0.08831	-	P12:138:WFEC:MSL03
0	20L	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.08544	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.08544	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	478.0	502.0	0.07943	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.07892	-	ARCADIA - NORTHWEST 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	0.0	0.0	0.07799	-	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
0	20L	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.07165	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1561.0	1793.0	0.06699	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1561.0	1793.0	0.06699	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1561.0	1793.0	0.06699	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G15_018	-	Non-Converged Contingency	1561.0	1793.0	0.06699	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_018	-	Non-Converged Contingency	1192.0	1192.0	0.06419	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	956.0	956.0	0.06419	-	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	560.0	644.0	0.06358	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_018	-	Non-Converged Contingency	560.0	644.0	0.06358	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_018	-	Non-Converged Contingency	560.0	644.0	0.06358	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G15_018	-	Non-Converged Contingency	560.0	644.0	0.06358	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G15_018	-	Non-Converged Contingency	478.0	502.0	0.06302	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1420.0	1775.0	0.06257	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1420.0	1775.0	0.06257	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G15_018	-	Non-Converged Contingency	1420.0	1775.0	0.06257	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1420.0	1775.0	0.06257	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_018	-	Non-Converged Contingency	1420.0	1775.0	0.06257	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1420.0	1775.0	0.06257	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G15_018	-	Non-Converged Contingency	560.0	560.0	0.06225	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.06208	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.06208	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
0	20L	G15_018	-	Non-Converged Contingency	1793.0	1793.0	0.06208	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1716.0	1793.0	0.06208	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	G15_018	-	Non-Converged Contingency	1793.0	1793.0	0.06208	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1716.0	1793.0	0.06208	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	G15_018	-	Non-Converged Contingency	1793.0	1793.0	0.06208	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1716.0	1793.0	0.06208	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_018	-	Non-Converged Contingency	0.0	0.0	0.05827	-	P12:345:SPS:J02.1.TOLK.EDDY
0	20L	G15_018	-	Non-Converged Contingency	0.0	0.0	0.05584	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	20L	G15_018	-	Non-Converged Contingency	1532.0	1793.0	0.05276	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1532.0	1793.0	0.05276	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20L	G15_018	-	Non-Converged Contingency	1532.0	1793.0	0.05276	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	G15_018	-	Non-Converged Contingency	318.7	350.6	0.05271	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	318.7	350.6	0.05271	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	497.0	547.0	0.05183	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	785.0	785.0	0.05076	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	785.0	785.0	0.05076	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.05027	-	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	762.5	762.5	0.05001	-	MINGO - SETAB 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	762.5	762.5	0.05001	-	MINGO - SETAB 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	439.0	439.0	0.04951	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	450.0	450.0	0.04951	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G15_018	-	Non-Converged Contingency	450.0	450.0	0.04951	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G15_018	-	Non-Converged Contingency	717.1	717.1	0.04926	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	717.1	717.1	0.04926	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	501.95	501.95	0.04666	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	501.95	501.95	0.04666	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	0.0	0.0	0.04435	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	20L	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.04363	-	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	0.0	0.0	0.04248	-	P12:138:WFEC:MSL14
0	20L	G15_018	-	Non-Converged Contingency	726.6	726.6	0.04243	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	726.6	726.6	0.04243	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1413.0	1517.0	0.04243	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1413.0	1517.0	0.04243	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	0.0	0.0	0.04234	-	917X
0	20L	G15_018	-	Non-Converged Contingency	1504.0	1792.0	0.04208	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1504.0	1792.0	0.04208	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1505.0	1793.0	0.04179	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1505.0	1793.0	0.04179	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1505.0	1793.0	0.04179	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	318.7	350.57	0.04082	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	318.7	350.57	0.04082	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	956.0	956.0	0.03955	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	421.0	439.0	0.03899	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	348.58	381.24	0.03899	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	500.0	723.0	0.03899	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	560.0	560.0	0.03599	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_018	-	Non-Converged Contingency	560.0	560.0	0.03599	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_018	-	Non-Converged Contingency	560.0	560.0	0.03599	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G15_018	-	Non-Converged Contingency	1141.0	1195.0	0.03449	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1141.0	1195.0	0.03449	-	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1141.0	1195.0	0.03449	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	318.7	350.57	0.03350	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	318.7	350.57	0.03350	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G15_018	-	Non-Converged Contingency	318.7	350.57	0.03319	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	318.7	350.57	0.03319	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.03077	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_018	-	Non-Converged Contingency	0.0	0.0	0.02956	-	P12:115:SPS:W08.1.HITCH.LASLEY
0	20SP	G15_018	-	Non-Converged Contingency	956.0	1042.0	0.18805	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20SP	G15_018	-	Non-Converged Contingency	956.0	1042.0	0.18805	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_018	-	Non-Converged Contingency	956.1	1051.7	0.18764	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20SP	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.14931	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20SP	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.14931	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	G15_018	-	Non-Converged Contingency	560.0	560.0	0.26708	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.18432	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	987.2	1082.8	0.17434	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.16913	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	1022.0	1124.0	0.16711	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	1022.0	1124.0	0.16711	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.16418	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.15543	-	CIMARRON - MINCO 345KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.15543	-	GRACEMONT - MINCO 345KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	1584.0	2098.0	0.15535	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	1584.0	2098.0	0.15535	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	987.16	1082.77	0.13539	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	956.09	1051.7	0.12043	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	987.16	1082.77	0.12043	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.12032	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.12032	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	G15_018	-	Non-Converged Contingency	717.0	789.0	0.11460	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.10786	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.10786	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	439.0	439.0	0.06199	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	450.0	450.0	0.06199	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	421.0	439.0	0.05315	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	329.05	360.92	0.05030	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G15_018	-	Non-Converged Contingency	329.05	360.92	0.04579	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	25SP	G15_018	-	Non-Converged Contingency	0.0	0.0	0.10645	-	P12:345:SPS:J02.1.TOLK.EDDY
0	25SP	G15_018	-	Non-Converged Contingency	478.05	501.95	0.08692	-	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	25SP	G15_018	-	Non-Converged Contingency	343.79	343.79	0.05655	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G15_018	-	Non-Converged Contingency	0.0	0.0	0.05074	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
0	25SP	G15_018	-	Non-Converged Contingency	0.0	0.0	0.03829	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
0	25SP	G15_018	-	Non-Converged Contingency	0.0	0.0	0.03283	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	17SP	G15_018	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	442.0	752.0	0.10372	100.8893	BASE CASE
0	17SP	G15_018	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	442.0	752.0	0.10431	100.8893	BASE CASE
0	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28262	123.8739	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28262	118.8321	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27289	109.536	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29241	106.255	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30171	105.3963	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30171	105.3963	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27289	104.1874	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28181	103.6263	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	16WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29241	102.8429	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31052	102.2888	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31052	102.2888	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28194	101.6705	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28716	100.9647	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28716	100.9647	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28181	100.9155	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30171	100.7065	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30171	100.7065	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28181	99.1	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
2	17SP	G15_018	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06700	113.9867	BASE CASE
2	20SP	G15_018	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06366	110.7777	BASE CASE
2	17G	G15_018	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06433	104.3556	BASE CASE
2	20WP	G15_018	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06201	99.1	BASE CASE
2	17SP	G15_018	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.29006	103.9462	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20SP	G15_018	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.28529	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G15_018	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.23773	117.0258	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G15_018	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.20979	112.9654	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G15_018	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.23773	112.441	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	G15_018	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.20979	108.3696	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17SP	G15_018	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.23253	108.1247	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G15_018	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.23253	103.6738	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	16WP	G15_018	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.09176	102.4471	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	16WP	G15_018	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.09176	101.7764	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	20WP	G15_018	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11463	109.7093	BASE CASE
2	16WP	G15_018	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12382	108.7418	BASE CASE
2	17G	G15_018	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12165	107.5286	BASE CASE
2	20WP	G15_018	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11463	123.7856	BASE CASE
2	16WP	G15_018	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12382	122.9306	BASE CASE
2	17G	G15_018	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12165	120.973	BASE CASE
2	17SP	G15_018	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12007	105.8511	BASE CASE
2	16WP	G15_018	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.23773	106.376	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G15_018	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.20979	102.3425	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G15_018	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.23773	101.9464	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G15_018	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04648	102.2178	BASE CASE
2	25SP	G15_018	TO->FROM	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1	141.02	141.02	0.04718	108.8072	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
2	25SP	G15_018	TO->FROM	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1	141.02	141.02	0.04718	108.8072	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07509	125.3293	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07509	125.3293	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06387	121.2944	GEN526333 1-JONES GEN #3 21 KV
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06387	120.8816	GEN526334 1-JONES_4 116.500
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06879	114.0091	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07659	107.098	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07659	107.098	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04162	106.8942	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04162	106.8942	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06595	104.5606	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06595	104.5481	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06595	104.5174	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06595	104.5174	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06387	103.4092	GEN587373 1-G16-056-GEN10.6900
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06357	103.2676	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06357	103.2676	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06357	103.2676	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06357	103.2676	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07057	103.1516	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07057	103.1516	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05664	102.5939	P12:345:SPS:J15.1.XRDS.TOLK
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06387	102.3409	GEN526331 1-JONES GEN #1 22 KV
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06387	102.3328	GEN526332 1-JONES GEN #2 21 KV
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06537	100.5338	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06489	99.7	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06489	99.7	P12:345:SPS:J14.1.EDDY.XRDS
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06489	99.6	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06489	99.6	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06605	99.2	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.18920	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	1022.0	1124.0	0.18089	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	1022.0	1124.0	0.18089	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	987.2	1082.8	0.17905	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.17895	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.17821	-	CIMARRON - MINCO 345KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.17821	-	GRACEMONT - MINCO 345KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	1330.0	1940.0	0.17809	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	1330.0	1940.0	0.17809	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.17480	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	987.16	1082.77	0.14005	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	956.09	1051.7	0.14005	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.12622	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.12622	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	16WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.11570	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.11570	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	1420.0	1775.0	0.10436	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	439.0	439.0	0.06826	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	450.0	450.0	0.06826	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	859.0	956.0	0.04673	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G15_018	-	Non-Converged Contingency	560.0	560.0	0.04673	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_018	-	Non-Converged Contingency	560.0	560.0	0.26862	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.18242	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.18242	-	GEN509403 1-PIRKEY GENERATION
2	17G	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.18242	-	GEN509404 1-WELSH #1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.18242	-	GEN509406 1-WELSH #3
2	17G	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.18242	-	GEN509416 1-TURK GENERATION
2	17G	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.18242	-	GEN511848 1-SOUTHWESTERN STATION #3
2	17G	G15_018	-	Non-Converged Contingency	1022.0	1124.0	0.17290	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1022.0	1124.0	0.17290	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.17203	-	CIMARRON - MINCO 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.17203	-	GRACEMONT - MINCO 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1330.0	1940.0	0.17176	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1330.0	1940.0	0.17176	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	956.1	1051.7	0.16857	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.16836	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.16731	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	478.0	502.0	0.13285	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	956.09	1051.7	0.12889	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	956.09	1051.7	0.12889	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	717.0	789.0	0.12165	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	717.0	789.0	0.12165	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.11973	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.11973	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
2	17G	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.11973	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.11973	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	17G	G15_018	-	Non-Converged Contingency	318.7	350.57	0.11651	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.11027	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.11027	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1420.0	1775.0	0.10373	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1420.0	1775.0	0.10373	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1420.0	1775.0	0.10373	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	96.0	96.0	0.09956	-	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	478.05	547.36	0.09233	-	NEWHART 230 - PLANT X STATION 230KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1561.0	1793.0	0.09048	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1561.0	1793.0	0.09048	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G15_018	-	Non-Converged Contingency	318.7	350.57	0.08942	-	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.08873	-	ARCADIA - NORTHWEST 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	685.0	796.0	0.08659	-	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
2	17G	G15_018	-	Non-Converged Contingency	478.0	502.0	0.08370	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.07510	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.07510	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
2	17G	G15_018	-	Non-Converged Contingency	1793.0	1793.0	0.07510	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1716.0	1793.0	0.07510	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	G15_018	-	Non-Converged Contingency	1793.0	1793.0	0.07510	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1716.0	1793.0	0.07510	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G15_018	-	Non-Converged Contingency	1793.0	1793.0	0.07510	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1716.0	1793.0	0.07510	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.07510	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.07510	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 2
2	17G	G15_018	-	Non-Converged Contingency	1532.0	1793.0	0.07404	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1532.0	1793.0	0.07404	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	G15_018	-	Non-Converged Contingency	1532.0	1793.0	0.07404	-	G1524G1525 345.00 - WICHITA 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1532.0	1793.0	0.07404	-	G1524G1525 345.00 - WICHITA 345KV CKT 2
2	17G	G15_018	-	Non-Converged Contingency	1532.0	1793.0	0.07404	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.07367	-	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	560.0	560.0	0.06813	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_018	-	Non-Converged Contingency	560.0	644.0	0.06780	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_018	-	Non-Converged Contingency	560.0	644.0	0.06780	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.06530	-	CIMARRON - DRAPER LAKE 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	878.0	956.0	0.06518	-	BENTON - WICHITA 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	439.0	439.0	0.06433	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	450.0	450.0	0.06433	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_018	-	Non-Converged Contingency	318.7	350.57	0.06266	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1793.0	1793.0	0.06190	-	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1793.0	1793.0	0.06190	-	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	717.1	717.1	0.05945	-	HOLCOMB - SETAB 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	560.0	644.0	0.05911	-	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G15_018	-	Non-Converged Contingency	762.5	762.5	0.05814	-	MINGO - SETAB 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	785.0	785.0	0.05750	-	MINGO - RED WILLOW 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	501.95	501.95	0.05696	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.05534	-	GEN520947 1-HUGO1
2	17G	G15_018	-	Non-Converged Contingency	1192.0	1192.0	0.05524	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	956.0	956.0	0.05524	-	G15063_T 345.00 - WOODRING 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	560.0	560.0	0.05524	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G15_018	-	Non-Converged Contingency	560.0	560.0	0.05524	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G15_018	-	Non-Converged Contingency	726.6	726.6	0.05513	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1413.0	1517.0	0.05513	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	318.7	350.6	0.05385	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	318.7	350.6	0.05385	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	439.0	439.0	0.05367	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	502.0	502.0	0.05367	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	500.0	723.0	0.05367	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1039.0	1195.0	0.05343	-	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.05200	-	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	560.0	644.0	0.05142	-	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1505.0	1793.0	0.05115	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1505.0	1793.0	0.05115	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1505.0	1793.0	0.05115	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	318.7	350.57	0.04896	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	497.0	547.0	0.04873	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1504.0	1792.0	0.04774	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1504.0	1792.0	0.04774	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1035.0	1035.0	0.04754	-	G14_001T 345.00 - WICHITA 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1141.0	1195.0	0.04701	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1141.0	1195.0	0.04701	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	318.7	350.57	0.04648	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	502.0	502.0	0.04573	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1022.0	1143.0	0.03788	-	PITTSBURG - VALLIANT 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.03637	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G15_018	-	Non-Converged Contingency	717.0	926.0	0.03471	-	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	17SP	G15_018	-	Non-Converged Contingency	956.0	1042.0	0.17646	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G15_018	-	Non-Converged Contingency	1792.0	1792.0	0.18442	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20WP	G15_018	-	Non-Converged Contingency	987.2	1082.8	0.17443	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.16923	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	20WP	G15_018	-	Non-Converged Contingency	1022.0	1124.0	0.16717	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G15_018	-	Non-Converged Contingency	1022.0	1124.0	0.16717	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.16424	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	20WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.15552	-	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G15_018	-	Non-Converged Contingency	1584.0	2098.0	0.15541	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	20WP	G15_018	-	Non-Converged Contingency	1584.0	2098.0	0.15541	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	20WP	G15_018	-	Non-Converged Contingency	987.16	1082.77	0.13546	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20WP	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.12038	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	20WP	G15_018	-	Non-Converged Contingency	1792.0	1972.0	0.12037	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	20WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.10791	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	20WP	G15_018	-	Non-Converged Contingency	1195.0	1195.0	0.10791	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G15_018	-	Non-Converged Contingency	439.0	439.0	0.06201	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	20WP	G15_018	-	Non-Converged Contingency	450.0	450.0	0.06201	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	25SP	G15_018	-	Non-Converged Contingency	343.79	343.79	0.06387	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G15_018	-	Non-Converged Contingency	0.0	0.0	0.05090	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
2	25SP	G15_018	-	Non-Converged Contingency	0.0	0.0	0.03847	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
2	25SP	G15_018	-	Non-Converged Contingency	0.0	0.0	0.03261	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
2	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28279	122.2742	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28279	117.8115	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	16WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29248	105.19	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27307	104.6152	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29248	102.0601	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30190	101.3194	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30190	101.3194	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31072	101.0674	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
2	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31072	101.0674	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
2	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27307	100.2519	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28199	99.9	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
3	17G	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20525	219.0037	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20525	218.7841	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20647	206.7258	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20647	206.6	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21822	198.5451	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21822	197.214	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21344	191.0186	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21344	188.8782	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21159	182.2433	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21159	180.1336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22389	128.2336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22389	124.1314	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G15_018	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.09185	102.99	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G15_018	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.09185	102.3933	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	25SP	G15_018	TO->FROM	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1	141.02	141.02	0.04725	106.3907	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G15_018	TO->FROM	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1	141.02	141.02	0.04725	106.3907	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G15_018	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03579	113.6961	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_018	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03579	113.6922	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07482	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07482	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06369	119.248	GEN526333 1-JONES GEN #3 21 KV
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06369	118.8723	GEN526334 1-JONES_4 116.500
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06855	114.4952	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06361	112.8126	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06361	112.8111	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07065	111.8354	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07650	106.8773	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07650	106.8773	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05609	105.5745	P12:345:SPS:J02.1.TOLK.EDDY
3	16WP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04102	104.0964	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04102	104.0964	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06576	103.9995	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06576	103.984	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06576	103.976	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06576	103.976	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06369	103.6041	GEN587373 1-G16-056-GEN10.6900
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06336	103.2394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06336	103.2394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06336	103.2394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06336	103.2394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07039	103.2214	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07039	103.2214	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05635	102.9873	P12:345:SPS:J15.1.XRDS.TOLK
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06369	102.4114	GEN526331 1-JONES GEN #1 22 KV
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06369	102.4061	GEN526332 1-JONES GEN #2 21 KV
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06516	100.2458	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06586	99.6	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06573	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06573	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06471	99	P12:345:SPS:J14.1.EDDY.XRDS
3	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03579	150.821	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03579	150.8177	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	118.3664	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	118.3017	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	101.1875	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	101.1522	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03579	99	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03579	99	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03027	110.7208	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
3	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03027	110.6974	P12:230:LPL:K26.1.JONES.LP-HOLLY
3	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03027	110.6461	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03027	110.6461	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	17G	G15_018	-	Non-Converged Contingency	3975.0	4570.0	0.34345	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	20L	G15_018	-	Non-Converged Contingency	3975.0	4570.0	0.29096	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28526	104.0129	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
3	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29431	103.6344	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28526	103.0789	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
3	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29431	101.402	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20484	219.2477	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20484	218.9034	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20592	206.5319	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20592	206.4431	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21778	198.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21778	197.0767	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21297	191.0175	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21297	188.7404	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21104	181.83	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21104	179.8003	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	25SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22332	128.3207	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22332	124.1778	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G15_018	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.09185	103.0572	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G15_018	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.09185	102.4534	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	25SP	G15_018	TO->FROM	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1	141.02	141.02	0.04725	106.4807	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
4	25SP	G15_018	TO->FROM	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1	141.02	141.02	0.04725	106.4807	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
4	25SP	G15_018	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03579	113.6646	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_018	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03579	113.6599	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07483	125.0569	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07483	125.0569	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06369	119.0612	GEN526333 1-JONES GEN #3 21 KV
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06369	118.6856	GEN526334 1-JONES_4 116.500
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06856	114.2489	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06361	112.5996	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06361	112.5946	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07066	111.5567	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07650	106.7476	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07650	106.7476	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05609	105.4545	P12:345:SPS:J02.1.TOLK.EDDY
4	16WP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04103	104.0099	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04103	104.0099	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06577	103.8244	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06577	103.8052	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06577	103.7969	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06577	103.7969	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06369	103.416	GEN587373 1-G16-056-GEN10.6900
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07039	103.2672	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07039	103.2672	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06337	103.0315	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06337	103.0315	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06337	103.0315	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06337	103.0315	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05635	102.755	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06369	102.1709	GEN526331 1-JONES GEN #1 22 KV
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06369	102.1659	GEN526332 1-JONES GEN #2 21 KV
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06517	100	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06587	99.4	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03579	150.9857	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03579	150.9823	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	118.304	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	118.2713	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	101.1568	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	101.1421	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03579	99.3	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03579	99.3	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03027	110.6999	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
4	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03027	110.6899	P12:230:LPL:K26.1.JONES.LP-HOLLY
4	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03027	110.6243	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03027	110.6243	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	17G	G15_018	-	Non-Converged Contingency	3975.0	4570.0	0.33896	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	20L	G15_018	-	Non-Converged Contingency	3975.0	4570.0	0.28652	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28595	104.2517	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
4	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29490	103.733	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28595	103.3603	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
4	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29490	101.5907	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20230	217.7095	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20230	216.9825	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20344	204.8525	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20344	204.7326	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21506	196.7495	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21506	195.2293	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21040	189.7734	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21040	187.2532	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20853	180.5705	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20853	178.2726	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22066	127.7475	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	25SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22066	123.5792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_018	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.09185	103.0311	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	16WP	G15_018	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.09185	102.4344	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	25SP	G15_018	TO->FROM	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1	141.02	141.02	0.04725	106.591	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
5	25SP	G15_018	TO->FROM	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1	141.02	141.02	0.04725	106.591	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
5	25SP	G15_018	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03579	113.6714	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_018	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03579	113.6673	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07481	124.8975	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07481	124.8975	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06369	118.9383	GEN526333 1-JONES GEN #3 21 KV
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06369	118.5628	GEN526334 1-JONES_4 116.500
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06855	114.1042	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06361	112.5331	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06361	112.531	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07064	111.409	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07650	106.6731	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07650	106.6731	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05609	105.3409	P12:345:SPS:J02.1.TOLK.EDDY
5	16WP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04099	104.1015	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04099	104.1015	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06576	103.707	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06576	103.6946	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06576	103.6865	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06576	103.6865	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06369	103.2876	GEN587373 1-G16-056-GEN10.6900
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07038	103.1458	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07038	103.1458	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06336	102.9044	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06336	102.9044	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06336	102.9044	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06336	102.9044	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05634	102.6383	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06369	102.0561	GEN526331 1-JONES GEN #1 22 KV
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06369	102.051	GEN526332 1-JONES GEN #2 21 KV
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06516	99.9	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
5	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06586	99.3	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03579	150.9628	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03579	150.9601	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	118.3008	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	118.268	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	101.1553	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	101.1406	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03446	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03579	99.2	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03579	99.2	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03027	110.6972	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
5	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03027	110.6738	P12:230:LPL:K26.1.JONES.LP-HOLLY
5	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03027	110.6217	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03027	110.6217	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
5	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28621	104.2778	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
5	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29483	103.471	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28621	103.3863	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
5	20WP	G15_018	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29483	101.3486	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
6	25SP	G15_018	TO->FROM	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1	141.02	141.02	0.04626	107.1901	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
6	25SP	G15_018	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03579	113.5161	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07697	124.2902	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
6	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06518	118.5502	GEN526333 1-JONES GEN #3 21 KV
6	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06518	118.1772	GEN526334 1-JONES_4 116.500
6	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07047	113.6007	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06510	111.9176	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07231	110.107	CRAWFISH_DR 345.00 - YOAKUM_345 345.00 345KV CKT 1
6	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07743	106.564	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
6	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06726	103.2173	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06726	103.216	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
6	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06518	102.8608	GEN587373 1-G16-056-GEN10.6900
6	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07195	102.7727	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
6	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06498	102.4925	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
6	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06498	102.4925	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06518	101.6462	GEN526331 1-JONES GEN #1 22 KV
6	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06518	101.6414	GEN526332 1-JONES GEN #2 21 KV
6	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06672	99.4	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
6	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03579	151.3756	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03448	118.1734	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03448	118.1275	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03448	101.1279	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03448	101.1113	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03579	100.0897	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03029	110.6217	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
6	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03029	110.5253	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
0	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03186	132.0544	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03186	131.9956	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.04315	115.7084	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.15007	107.5416	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.15007	107.5416	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.09211	102.9062	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.09211	102.9062	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.08339	99.4	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.07651	155.1081	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.07651	155.1081	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.07651	144.4695	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.07651	144.4695	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03694	139.4948	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03694	131.8853	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06237	127.6091	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05531	126.2169	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06237	125.8663	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05267	125.7356	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05267	125.7356	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06237	125.0574	P12:115:SPS:V15.1.TUCO.INDANA
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06237	124.7606	INDIANA SUB - STANTON SUB 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	124.1537	GEN527166 1-MUSTANG_6 118.000
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05457	123.8128	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05457	123.805	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05457	123.805	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05457	123.7915	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06237	123.4175	P12:115:SPS:V15.1.TUCO.INDANA
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06237	123.1351	INDIANA SUB - STANTON SUB 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06237	120.6969	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	120.4581	GEN527903 1-HOBBS PLANT #3 (ST)
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05457	120.0848	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05457	120.0727	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05457	120.0727	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05457	120.0649	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06237	119.2123	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05267	119.1722	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05267	119.1722	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06237	119.009	P12:115:SPS:V62.1.CRLSLE.INDANA
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06237	118.803	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05531	118.7443	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05556	118.1529	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06237	117.6066	P12:115:SPS:V62.1.CRLSLE.INDANA
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06237	117.4069	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	117.2761	GEN527166 1-MUSTANG_6 118.000
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05556	116.756	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05457	116.4793	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05457	116.4781	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05457	116.4781	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	115.6905	GEN527901 1-HOBBS PLANT #1 (CT)
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05352	115.6871	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	115.2235	GEN527902 1-HOBBS PLANT #2 (CT)
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06929	115.1773	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06929	115.1773	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	115.1175	GEN527903 1-HOBBS PLANT #3 (ST)
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05773	114.5086	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05773	114.5086	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05556	114.1373	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05738	114.1158	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05738	114.1158	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05457	114.0543	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05556	113.1643	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05321	112.9092	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05321	112.9092	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05300	112.7464	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05300	112.7464	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05773	112.5646	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05773	112.5646	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05457	112.5047	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05457	112.504	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05457	112.504	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06929	112.3162	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06929	112.3162	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	112.2121	GEN527901 1-HOBBS PLANT #1 (CT)
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05738	112.1714	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05738	112.1714	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05352	112.17	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05277	112.1355	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05277	112.1355	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05444	112.0698	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05355	112.0434	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05248	112.0254	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05248	112.0254	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	111.7033	GEN527902 1-HOBBS PLANT #2 (CT)
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05215	111.623	P12:115:LCEC:W56.1.HOBBG.LE-LVN
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05346	111.6034	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05346	111.6034	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05457	111.4117	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05247	111.3793	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	111.3765	GEN563132 1-G15078_3 0.3570
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05258	111.3545	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05321	111.3093	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05321	111.3093	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05319	111.1809	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	111.0984	GEN562812 1-G15040_3 0.3570
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06913	111.0009	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06913	111.0009	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05574	110.953	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	110.9228	GEN587423 1-G16-062-GEN10.6900
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05258	110.6552	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	110.6408	GEN563102 1-G15075_3 0.5500
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	110.5718	GEN587393 1-G16-058-GEN10.5500
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05326	110.5074	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05326	110.5074	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05319	110.3889	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05321	109.9687	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05321	109.9687	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05277	109.9541	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05277	109.9541	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05248	109.9463	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05248	109.9463	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05444	109.9346	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05346	109.5101	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05346	109.5101	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05355	109.4641	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05258	109.278	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	109.1786	GEN563132 1-G15078_3 0.3570
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06913	108.9863	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06913	108.9863	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05574	108.9825	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	108.9435	GEN562812 1-G15040_3 0.3570
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05319	108.9182	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05300	108.8881	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05300	108.8881	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05247	108.8335	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	108.8246	GEN587423 1-G16-062-GEN10.6900
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05321	108.7503	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05321	108.7503	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05258	108.6249	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05215	108.6053	P12:115:LCEC:W56.1.HOBBG.LE-LVN
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	108.5854	2074-CARLISLE INTERCHANGE
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	108.5854	BASE CASE
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	108.5748	GEN563102 1-G15075_3 0.5500
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	108.4473	GEN587393 1-G16-058-GEN10.5500
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05380	106.7761	P12:230:AEPW:ELKCITY6:SWEETWT6
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	106.76	GEN640009 1-COOPER NUCLEAR STATION
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	106.6432	BASE CASE
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05214	106.5195	P12:115:SPS:V80.1.DC_STH.LE-WAIT
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05380	106.4543	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05231	106.3694	P12:115:SPS:V49.1.YOAKUM.SHLCO2
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05255	106.2682	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05255	106.2662	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04186	105.5965	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04186	105.5965	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	105.4944	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05380	104.8547	P12:230:AEPW:ELKCITY6:SWEETWT6
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05214	104.7649	P12:115:SPS:V80.1.DC_STH.LE-WAIT
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05231	104.6722	P12:115:SPS:V49.1.YOAKUM.SHLCO2
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05380	104.5349	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06119	104.5133	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05234	104.3074	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05255	104.3049	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05255	104.3025	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05230	103.7299	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04186	103.7208	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04186	103.7208	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05234	102.9725	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06119	102.577	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05234	102.2329	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05234	102.144	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05234	101.0487	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05234	100.9839	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	17SP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05501	100.868	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05234	99.4	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05234	99.4	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	17SP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05501	99.4	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	20SP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03635	99.1	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	17SP	G15_033	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.04876	111.2423	BASE CASE
0	20SP	G15_033	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.04654	106.965	BASE CASE
0	17G	G15_033	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.04751	104.3555	BASE CASE
0	20WP	G15_033	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.04594	100.6452	BASE CASE
0	16WP	G15_033	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.29316	117.2755	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G15_033	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.26929	113.9417	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G15_033	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.29316	112.5386	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G15_033	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.29605	107.9528	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17SP	G15_033	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.29605	103.4902	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17G	G15_033	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.06482	102.1239	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25256	197.2146	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25256	189.9362	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24698	129.0423	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24698	124.2865	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25517	118.6552	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25517	115.7594	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26692	115.1329	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26692	114.7364	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.11056	111.7808	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.11056	107.7227	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17G	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.17319	102.2735	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.35164	213.0015	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.36361	134.0852	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.19260	123.3294	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.33611	119.8072	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.34536	109.6936	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17G	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.28500	107.108	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_033	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.05292	117.8449	BASE CASE
0	17SP	G15_033	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.05337	113.6626	BASE CASE
0	17SP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.22451	119.4889	CIMARRON - MINCO 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.13107	117.1249	BASE CASE
0	17SP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.22451	114.5902	GRACEMONT - MINCO 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.15397	109.9811	BASE CASE
0	16WP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.16257	108.8041	BASE CASE
0	17G	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.16041	107.5286	BASE CASE
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04019	106.7914	PITTSBURG - SEMINOLE 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04019	106.7914	PITTSBURG - SEMINOLE 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	106.4823	BASE CASE
0	20SP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.21759	106.089	CIMARRON - MINCO 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04137	104.932	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	101.9658	GEN509403 1-PIRKEY GENERATION
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	101.9599	GEN509416 1-TURK GENERATION
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04400	101.9001	P12:138:WFEC:MSL03
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04193	101.7838	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04193	101.4566	G15066_T 345.00 - SOONER 345KV CKT 1
0	20SP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.21759	101.2702	GRACEMONT - MINCO 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04193	101.2559	917X
0	17G	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04368	101.0477	BASE CASE
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	100.8203	GEN501801 1-DOLET HILLS UNIT1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	100.5708	GEN562590 1-G14_057_3 0.6900
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	100.423	GEN336821 1-GRAND GULF UNIT
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04183	100.3559	ARCADIA - NORTHWEST 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	100.2115	GEN336153 1-WATERFORD UNIT#3
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04074	100.1228	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04074	100.1228	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04199	100.1	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04199	100.1	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	100	GEN335831 1-RIVERBEND UNIT#1
0	17G	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04188	99.8	PITTSBURG - SEMINOLE 345KV CKT 1
0	17G	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04188	99.8	PITTSBURG - SEMINOLE 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04170	99.7	MINGO - RED WILLOW 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04170	99.7	MINGO - RED WILLOW 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	99.6	GEN300007 1-NEW MADRID UNIT 2
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04201	99.6	PITTSBURG - VALLIANT 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04201	99.6	PITTSBURG - VALLIANT 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	99.5	GEN509404 1-WELSH #1
0	20WP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.20111	99.5	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.20111	99.5	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	99.3	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	99.2	GEN590011 2-ERCOT EQUIVALENCE
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04205	99.2	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04214	99.1	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04214	99.1	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	99.1	GEN335206 1-NELSON UNIT 6
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	99.1	GEN590010 1-ERCOT EQUIVALENCE
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04205	99.1	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04205	99.1	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	99	GEN300006 1-NEW MADRID UNIT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04184	99	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04184	99	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04184	99	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04184	99	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17SP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.22451	132.9309	CIMARRON - MINCO 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.13107	131.0896	BASE CASE
0	17SP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.22451	127.8288	GRACEMONT - MINCO 345KV CKT 1
0	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.15397	123.9661	BASE CASE
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.16257	122.9494	BASE CASE
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.16041	120.973	BASE CASE
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	120.5337	BASE CASE
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04019	119.9605	PITTSBURG - SEMINOLE 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04019	119.9605	PITTSBURG - SEMINOLE 345KV CKT 1
0	20SP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.21759	119.2169	CIMARRON - MINCO 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04137	117.9749	CIMARRON - DRAPER LAKE 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	115.3903	BASE CASE
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	115.1049	GEN509403 1-PIRKEY GENERATION
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	115.0852	GEN509416 1-TURK GENERATION
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04193	114.8188	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04400	114.7951	P12:138:WFEC:MSL03
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04193	114.467	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04193	114.2718	917X
0	20SP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.21759	114.2383	GRACEMONT - MINCO 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	113.9137	GEN501801 1-DOLET HILLS UNIT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	113.4281	GEN336821 1-GRAND GULF UNIT
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04183	113.2385	ARCADIA - NORTHWEST 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04188	113.2135	PITTSBURG - SEMINOLE 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04188	113.2135	PITTSBURG - SEMINOLE 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	113.2127	GEN336153 1-WATERFORD UNIT#3
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04199	113.0392	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04199	113.0392	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04074	112.9	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04074	112.9	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04201	112.8439	PITTSBURG - VALLIANT 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04201	112.8439	PITTSBURG - VALLIANT 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	112.8177	GEN335831 1-RIVERBEND UNIT#1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04170	112.5153	MINGO - RED WILLOW 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04170	112.5153	MINGO - RED WILLOW 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	112.437	GEN509404 1-WELSH #1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	112.4355	GEN300007 1-NEW MADRID UNIT 2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	112.2068	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	112.1234	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04214	112.085	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04214	112.085	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	112.0474	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	112.0343	GEN590011 2-ERCOT EQUIVALENCE
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	111.9576	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	111.9341	GEN335206 1-NELSON UNIT 6
0	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.20111	111.9225	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.20111	111.9225	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	111.921	GEN590010 1-ERCOT EQUIVALENCE
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04184	111.8491	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04184	111.8491	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04184	111.8491	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04184	111.8491	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	111.8479	GEN300006 1-NEW MADRID UNIT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04166	111.7259	ARCADIA - SEMINOLE 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04309	111.6796	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04323	111.6304	P12:138:AEPW:DUNCAN-4:L.E.S.-4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04231	111.6266	COMANCHE - LOCO 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04238	111.6238	CORN TAP - NAPLESTP 138.00 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04322	111.5812	COMANCHE TAP - OMPA-DUNCAN 840 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04238	111.5425	NAPLESTP 138.00 - PAYNE 138.00 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	111.5351	HEALDTON - LOCO 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	111.5218	GEN509416 1-TURK GENERATION
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04174	111.461	MINGO - SETAB 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04174	111.461	MINGO - SETAB 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	111.4512	HEALDTON - RINGLING 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	111.4448	GEN515040 1-SEMINOLE 1G
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	111.4027	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	111.3979	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	111.3749	RINGLING - SOUTH WILSON 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04564	111.3564	P12:138:WFEC:MSL03
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	111.3102	GEN501813 1-RODEMACHER UNIT 3
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	111.3074	WEBRE - WELLS 500KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04245	111.2924	ANADARKO - POCASSETT 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	111.2906	GEN509403 1-PIRKEY GENERATION
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04195	111.2887	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	111.267	GEN506754 1-LEBROCK STEAM 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	111.2656	GEN501812 1-RODEMACHER UNIT 2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	111.256	GEN337652 1-WHITE BLUFF UNIT #1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	111.255	MARIETTA - SOUTH WILSON 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	111.2428	P12:138:WFEC:MSL17
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04468	111.2411	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04322	111.232	DUNCAN - OMPA-DUNCAN 840 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04322	111.232	DUNCAN - OMPA-DUNCAN 840 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	111.2299	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	111.2295	GEN337653 1-WHITE BLUFF UNIT #2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04192	111.2258	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04245	111.2174	POCASSETT - TUTTLE 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	111.2075	DOLET HILLS 345/24.0KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04398	111.2041	LAWTON EASTSIDE (LES 5) 345/138/13.8KV TRANSFORMER CKT 2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04398	111.2041	LAWTON EASTSIDE (LES 5) 345/138/13.8KV TRANSFORMER CKT 2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04192	111.1749	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04187	111.1633	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04187	111.1633	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	111.1217	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04182	111.0934	HOLCOMB - SETAB 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04182	111.0934	HOLCOMB - SETAB 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04198	111.0913	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04198	111.0913	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04195	111.0799	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04192	111.0681	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04245	111.0583	BRIDGECR 138.00 - TUTTLE 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04184	111.0475	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04195	111.0286	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04245	110.9871	P12:138:WFEC:MSL01
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.9525	GEN505432 1-SIKESTON
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04245	110.9509	BRIDGECR 138.00 - SUNSHINE CANYON 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.9459	GEN515223 1-MUSKOGEE 4G
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	110.9432	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.9152	NEW MADRID 345/22.0KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.9083	GEN587433 1-G16-063-GEN10.6900
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04175	110.8882	P12:138:OKGE:3TERM27
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04173	110.8678	CANADIAN - NOBLE 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	110.8559	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	110.8559	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.21067	110.852	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.21067	110.852	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04236	110.8509	P12:138:AEPW-OGE:CORNVIL4:MAUD 4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	110.8503	ELDORADO EHV - SHERIDAN EHV 500KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	110.8474	P12:138:AEPW:REDROCKRD4:WTH_JCT4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04236	110.8436	BLANCHARD - CORNVILLE 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04220	110.8413	CIVIT - PAOLI 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04173	110.8279	NOBLE - PURCELL4 138.00 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	110.8237	HINTON - WEATHERFORD JCT. 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04220	110.7893	CIVIT - STRATFORD 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	110.7784	HINTON - REDROCKRD4 138.00 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04236	110.7731	BLANCHARD - MAUD 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04198	110.7723	DRAPER LAKE - SEMINOLE 345KV CKT 2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04198	110.7721	DRAPER LAKE - SEMINOLE 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.7594	FRONTIER - GRIMES 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.7538	GEN506752 1-LEBROCK GAS 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.7538	GEN506753 1-LEBROCK GAS 2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.7474	GEN334440 1-SABINE UNIT 4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04220	110.7441	OIL CENTER - STRATFORD 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04228	110.7284	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04181	110.7209	PARK LANE - SEMINOLE 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	110.6858	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04220	110.6801	LATTA JCT - OIL CENTER 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.6732	GEN334030 1-FRONTIER UNIT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.6695	GEN334031 1-FRONTIER UNIT 2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	110.6681	G14_001T 345.00 - WICHITA 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04191	110.6588	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04228	110.6578	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04201	110.6576	P12:138:AEPW:WTHWF4:CLINTJC4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	110.6087	P12:138:WFEC:MSL02
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.6061	NEW MADRID 161/22.0KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.6027	GEN335204 1-NELSON UNIT 4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04210	110.6023	TUPELO - TUPELO TAP 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04216	110.6012	GRACEMONT (GRCMNT1) 345/138/13.8KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04173	110.5984	PURCELL4 138.00 - WALNUT CREEK 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.5943	GEN338146 1-INDEPENDENCE UNIT #2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.5889	GEN336170 1-GULF OXY U4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04236	110.5744	BAILEY4 138.00 - SUNSHINE CANYON 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	110.5737	ELDORADO EHV - MOUNT OLIVE 500KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	110.5706	PAOLI - PAYNE 138.00 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.564	GEN515577 1-ARBWND11 0.6900
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.559	WHITE BLUFF 500/26.0KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.555	GEN336252 1-NINEMILE POINT UNIT#5
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04201	110.5475	P12:138:AEPW:WTHWF4:WTH_SE4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.5462	GEN562783 1-G15036_4 0.6900
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.5462	GEN562784 1-G15036_5 0.6900
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04220	110.5233	LASALLE - LATTA JCT 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04236	110.5163	BAILEY4 138.00 - WESTMOORE 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.488	GEN336831 1-BAXTER WILSON SES
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04206	110.4866	ANADARKO - GEORGIA 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04230	110.4753	CIMARRON - NORTHWEST 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04220	110.4634	LASALLE - STONEWAL LH138.00 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	110.4607	MARIETTA - MARIETTA4 138.00 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04236	110.4589	FRANKLIN SW - WESTMOORE 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04214	110.4465	P12:138:AEPW:SHERID4:112GORE4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.4446	GEN338143 1-INDEPENDENCE UNIT #1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04220	110.4431	STONEWAL LH138.00 - TUPELO TAP 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04206	110.443	FLETCHER - GEORGIA 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04270	110.435	P12:138:AEPW:CORNVIL4:DUNCAN-4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04201	110.4251	WEATHERFORD TAP - WEATHERFORD WIND FARM 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.3979	NELSON 230/20.0KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	110.3854	EMPIRE - FLETCHER 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04201	110.3807	WEATHERFORD SOUTHEAST - WEATHERFORD TAP 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04206	110.3799	8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04227	110.3787	DUNCAN (DUNCAN) 138/69/13.8KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04227	110.3787	DUNCAN (DUNCAN) 138/69/13.8KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04301	110.3679	LAWTON EASTSIDE (LES 4) 345/138/13.8KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04301	110.3679	LAWTON EASTSIDE (LES 4) 345/138/13.8KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	110.3447	COMANCHE - EMPIRE 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04198	110.3434	P12:138:OKGE-AEPW:JENSEN4:REDROCKRD4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	110.3427	DRAPER LAKE - SEMINOLE 345KV CKT 3
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04173	110.3135	PAOLI - WALNUT CREEK 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	110.3015	ENVILLE 138.00 - MARIETTA4 138.00 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	110.3013	ANADARKO - GRACMNT4 138.00 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.2951	GEN335614 1-WILLOW GLENN UNIT#4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.295	GEN334441 1-SABINE UNIT 5
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.2945	GEN337041 1-GERALD ANDRUS
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04210	110.2898	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04210	110.2843	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04220	110.2791	P12:138:WFEC:MSL05
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.2787	GEN336191 1-LITTLE GYPSY UNIT#3
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04201	110.2785	CLINTON JUNCTION - CLINTON NATURAL GAS TAP 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.2726	GEN334392 1-EXXON MOBIL IPP 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	110.2666	LAYFLD8 500.00 - MOUNT OLIVE 500KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	110.2666	LAYFLD8 500.00 - MOUNT OLIVE 500KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.2629	GEN336464 1-MICHOUD UNIT #3
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.2586	GEN334393 1-EXXON MOBIL IPP 2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.2586	GEN334394 1-EXXON MOBIL IPP 3
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	110.252	ENVILLE 138.00 - LEBANON 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.2331	GEN334433 1-SABINE UNIT 3
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04213	110.2317	P12:138:AEPW:CORNVIL4:S.W.S.-4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.2296	GEN303007 1-1BC2 U2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.2294	P12:161:AEPW:DYESS 5:HYLAND 5
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.22	GEN303006 1-1BC2 U1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04208	110.2185	GRDA1 - GREC TAP5 345.00 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.2133	GEN336242 1-1NMIL ST1 18.000
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04215	110.2081	NORGE ROAD - SOUTHWESTERN STATION 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04215	110.2081	NORGE ROAD - SOUTHWESTERN STATION 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04203	110.2042	MCADAMS - WOLF CREEK 500KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.1945	GEN336801 1-BAXTER WILSON UNIT #1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04206	110.1716	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.1664	P12:69:AEPW:L.E.S.-2:LAW WC2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04210	110.1611	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	110.1522	G16-061-TAP 345.00 - SOONER 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04203	110.1516	CIMARRON - SARA 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	110.1339	LEBANON - TEXOMA JCT 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04213	110.1322	P12:138:AEPW:112GORE4:L.E.S.-4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	110.1289	GEN509404 1-WELSH #1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	110.1288	GEN509406 1-WELSH #3
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04185	110.1134	SEMINOLE - VANOSTP4 138.00 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04209	110.1111	FRANKLIN - FRANKLIN SW 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04227	110.1026	P12:69:WFEC-AEPW:COMANCH2:DUNCAN-2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04203	110.0994	SARA - STHLAKE4 138.00 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04215	110.0881	CORNVILLE - NORGE ROAD 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04215	110.0881	CORNVILLE - NORGE ROAD 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04227	110.0819	COMANCHE TAP - TOSCO 69KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04227	110.0815	DUNCAN - TOSCO 69KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04203	110.0796	MCCLAIN - STHLAKE4 138.00 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.068	CIMARRON - CZECH HALL 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04209	110.0543	FRANKLIN - PINK SW 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04224	110.0126	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04224	110.0126	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04236	110.0042	P12:69:AEPW-OMPA:COMANC-2:OMWALTR2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04166	110.0042	ARBUCKLE - VANOSTP4 138.00 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04227	110.0014	COMANCHE - COMANCHE TAP 69KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04143	109.9999	MAYSVILLE - PAOLI 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.9931	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04209	109.9661	HIGHLAND - PINK SW 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04209	109.9422	CHISNEY - HIGHLAND 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04385	109.7388	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06997	109.6733	CIMARRON - MINCO 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.6656	SUNNYSIDE 1 13KV SWITCHED SHUNT
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.6656	SUNNYSIDE 1 13KV SWITCHED SHUNT
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.5667	GEN514805 1-SOONER UNIT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.563	GEN514806 1-SOONER UNIT 2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04253	109.5144	P12:69:WFEC-AEPW:RUSSELL2:LAKEP2WT
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04338	109.5007	P12:138:AEPW:112GORE4:SNYDER-4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04233	109.4391	CHILDRESS - HOLLIS TAP 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04253	109.4055	CHILDRESS - LAKE PAULINE 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04253	109.4055	CHILDRESS - LAKE PAULINE 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04233	109.3688	MCLEAN RURAL SUB - SHAMROCK 115KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04233	109.3688	MCLEAN RURAL SUB - SHAMROCK 115KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04233	109.3639	SHAMROCK (SHAMRCK1) 115/69/14.4KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04233	109.3639	SHAMROCK (SHAMRCK1) 115/69/14.4KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04338	109.3295	CACHE - SNYDER 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04233	109.3295	SHAMROCK - WELLINGTON 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04233	109.3191	P12:115:SPS:T54.1.KIRBY.SHM(520)
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04233	109.3191	P12:115:SPS-AEPW:KIRBY3:SHAM3WT
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04233	109.3028	SHAMROCK (SHAMRCK2) 138/69/14.4KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04233	109.3028	SHAMROCK (SHAMRCK2) 138/69/14.4KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04233	109.2879	MCCLELLAN SUB - MCLEAN RURAL SUB 115KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.2843	SUNNYSIDE 138KV SWITCHED SHUNT
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.2843	SUNNYSIDE 138KV SWITCHED SHUNT
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04233	109.277	KIRBY SWITCHING STATION - MCCLELLAN SUB 115KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.2461	GEN515443 1-MNCOWND1 0.7000
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.2306	GEN563273 2-G15093_4 0.6900
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04233	109.2302	P12:138:AEPW:SHAM4WT:CHILD4WT
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	109.2032	GEN520947 1-HUGO1
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05024	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05024	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.1636	GEN562587 1-G14_056_3 0.6900
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.1563	GEN562685 1-G15_013_3 0.3550
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.1491	GEN515449 1-CRSRDW11 0.6900
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.1359	GEN563272 1-G15093_3 0.6900
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.1246	GEN563202 1-G15085_3 0.5500
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04206	109.1039	P12:138:WFEC:MSL06
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04206	109.103	P12:138:AEPW-SWPA:LONEOAK4:TUPELO4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04147	109.1028	P12:138:OKGE:3TERM39
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04198	109.0976	BROWN - RUSSETT 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04198	109.0767	RUSSETT - RUSSETT 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04195	109.0547	RUSSETT - SPRINGDALE 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04203	109.0308	NORTHWEST TEXARKANA - WELSH 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04203	109.0308	NORTHWEST TEXARKANA - WELSH 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	109.0279	GEN501801 1-DOLET HILLS UNIT1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04257	109.0261	P12:138:AEPW:HOB-JCT4:ELKCTY-4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	108.9863	P12:138:WFEC-AEPW:GOLDENSW4:CRAIGJT4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04257	108.9552	CLINTON AIR FORCE BASE TAP - HOBART JUNCTION 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04186	108.9356	ROCKY POINT - SUNNYSIDE 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04257	108.9211	CLINTON AIR FORCE BASE TAP - ELK CITY 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.9092	INDEPENDENCE 500/26.0KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04179	108.8868	CHICKASAW - TOTAL 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04186	108.8743	P12:138:OKGE:3TERM40
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	108.8468	KEO EHV - WEST MEMPHIS 500 500KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	108.8398	P12:138:WFEC:MSL15
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	108.8256	DELL 500 - INDEPENDENCE 500KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.8161	GEN661015 1-COYOTE
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.8098	ALMA 161 161/24.0KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.8046	GEN657748 1-YOUNG 2 GENERATOR
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.7973	GEN562074 1-G1149G1504 0.6900
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.7761	GEN511962 2-RKYRDGW2-1 0.7000
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04163	108.7674	ARDMORE WEST - CARTER 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04213	108.7617	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04209	108.7571	P12:138:WFEC:MSL16
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04191	108.7548	CLARKSVILLE - MUSKOGEE 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04191	108.7548	CLARKSVILLE - MUSKOGEE 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.7447	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.7385	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.7304	4SIOUX 2 138.00 138/18.0KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	108.7143	CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	108.7135	LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04116	108.7132	CANADIAN RIVER - MUSKOGEE 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04163	108.7113	ARDMORE WEST - UNIROYAL 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.6957	P12:138:WFEC:MSL09
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.6846	GEN672310 1-POPLAR RIVER GENERATOR 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04200	108.6422	CROCKETT - GRIMES 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04200	108.6422	CROCKETT - GRIMES 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.6258	GEN587233 1-G16-037-GEN10.6900
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04163	108.6207	SUNNYSIDE - UNIROYAL 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04213	108.5704	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.5454	GEN563263 1-G15092_4 0.6900
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.4464	GEN521103 1-BLUE CANYON WIND FARM
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.4268	GEN600006 1-AS KING
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.4178	GEN560183 1-REDHIL-WTG1 12.000
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04161	108.3967	SUNNYSIDE (SUNNYSD5) 345/138/13.8KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.2788	GEN620315 1-BIG STONE GEN
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.266	GEN563262 1-G15092_3 0.6900
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04198	108.2483	DOLET HILLS 345/230KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04355	108.2359	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.1619	GEN600004 2-PRAIRIE ISLAND G2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.1595	GEN600003 1-PRAIRIE ISLAND G1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	108.143	PITTSBURG - VALLIANT 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	108.143	PITTSBURG - VALLIANT 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	108.1274	GEN336821 1-GRAND GULF UNIT
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.0584	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.0464	GEN636641 1-LOUISA UNIT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.0082	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.9841	GEN635213 3-NEAL UNIT 3
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	107.9685	GEN336153 1-WATERFORD UNIT#3
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.9461	GEN600000 1-SHERBURNECNTY G1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04192	107.942	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04192	107.942	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04416	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04416	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04355	107.9193	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.9179	GEN524295 1-SPNSPUR_WND10.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04328	107.8688	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04328	107.8688	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04328	107.8688	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04328	107.8688	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.8471	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.8409	GEN600005 1-MONTICELLO
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04164	107.8271	JOHNSON COUNTY (JOHNCO) 345/138/13.8KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.8266	GEN600001 2-SHERBURNE CNTY G2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08084	107.7742	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08084	107.7742	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04355	107.7214	917X
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.721	GEN344225 1-1CAL G1 25.000
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.7157	GEN562756 1-G15031_7 0.6900
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.6696	GEN615002 2-COAL CREEK
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	107.6199	GEN335831 1-RIVERBEND UNIT#1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	107.6147	GEN509409 1-WILKES #3
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.5958	GEN635214 4-NEAL UNIT 4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.554	GEN600002 3-SHERBURNE CNTY G3
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.5362	GEN562483 1-G13_027_3 0.6900
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04104	107.517	CANADIAN RIVER - PITTSBURG 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04104	107.517	CANADIAN RIVER - PITTSBURG 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.507	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.5042	GEN562688 1-G15_014_3 0.6900
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.485	GEN563042 1-G15068_3 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04488	107.4839	P12:138:AEPW:DUNCAN-4:L.E.S.-4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04187	107.4055	LYDIA - WELSH 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04187	107.4055	LYDIA - WELSH 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04400	107.3628	CORN TAP - NAPLESTP 138.00 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04487	107.3475	COMANCHE TAP - OMPA-DUNCAN 840 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04406	107.3311	ANADARKO - POCASSETT 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	107.3183	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04400	107.2849	NAPLESTP 138.00 - PAYNE 138.00 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04392	107.2838	COMANCHE - LOCO 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.2539	GEN562590 1-G14_057_3 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04406	107.2177	POCASSETT - TUTTLE 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	107.2156	GEN300006 1-NEW MADRID UNIT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.2152	GEN563043 1-G15068_4 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	107.1995	GEN300007 1-NEW MADRID UNIT 2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.1901	GEN527901 1-HOBBS PLANT #1 (CT)
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.1901	GEN527902 1-HOBBS PLANT #2 (CT)
0	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06152	107.0835	CIMARRON - MINCO 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	107.0654	GEN509408 1-WILKES #2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04449	107.0217	NF
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.0075	GEN635023 3-WALTER SCOTT UNIT 3
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04487	106.9512	DUNCAN - OMPA-DUNCAN 840 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04487	106.9512	DUNCAN - OMPA-DUNCAN 840 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	106.9479	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04406	106.9344	BRIDGECR 138.00 - TUTTLE 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.9064	GEN335206 1-NELSON UNIT 6
0	17SP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.16335	106.8776	BASE CASE
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.8764	GEN523972 1-HARRINGTON GEN #2 24 KV
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.8741	GEN523971 1-HARRINGTON GEN #1 24 KV
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.8741	GEN523973 1-HARRINGTON GEN #3 24 KV
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04328	106.8705	ARCADIA - SEMINOLE 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04269	106.8623	CANADIAN RIVER - MUSKOGEE 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.8544	GEN587393 1-G16-058-GEN10.5500
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04358	106.8518	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04358	106.8518	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	106.8243	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.7952	GEN562655 1-G14_074_3 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04373	106.7755	HEALDTON - LOCO 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04361	106.7611	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04361	106.7611	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04406	106.7447	BRIDGECR 138.00 - SUNSHINE CANYON 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04406	106.7422	P12:138:WFEC:MSL01
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04375	106.7325	P12:138:AEPW:SHERID4:112GORE4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	106.7011	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.693	GEN590011 2-ERCOT EQUIVALENCE
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04373	106.6485	HEALDTON - RINGLING 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.633	GEN527166 1-MUSTANG_6 118.000
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.6235	GEN635024 4-WALTER SCOTT UNIT 4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04338	106.6199	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04338	106.6199	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.6041	GEN590010 1-ERCOT EQUIVALENCE
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04350	106.5583	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04373	106.5486	RINGLING - SOUTH WILSON 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.538	GEN515226 1-MUSKOGEE 6G
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04350	106.4886	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04569	106.4707	LAWTON EASTSIDE (LES 5) 345/138/13.8KV TRANSFORMER CKT 2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04569	106.4707	LAWTON EASTSIDE (LES 5) 345/138/13.8KV TRANSFORMER CKT 2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.47	DOLET HILLS 345/24.0KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.4684	GEN509393 S1-ARSENAL HILL GENS #4 (STALL)
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04178	106.4382	LYDIA - VALLIANT 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04178	106.4382	LYDIA - VALLIANT 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.3888	P12:69:AEPW:L.E.S.-2:LAW WC2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.3705	GEN562269 1-G12-020-1 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04373	106.367	MARIETTA - SOUTH WILSON 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.3583	GEN501813 1-RODEMACHER UNIT 3
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.3559	GEN515223 1-MUSKOGEE 4G
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.3558	GEN515225 1-MUSKOGEE 5G
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04346	106.3506	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04346	106.3506	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04352	106.3468	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.3286	GEN506754 1-LEBROCK STEAM 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.3172	GEN501812 1-RODEMACHER UNIT 2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.316	GEN587423 1-G16-062-GEN10.6900
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.3078	GEN527903 1-HOBBS PLANT #3 (ST)
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04375	106.3054	P12:138:AEPW:112GORE4:L.E.S.-4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.287	P12:161:AEPW:DYESS 5:HYLAND 5
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04373	106.2821	P12:138:WFEC:MSL17
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04350	106.2743	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.2567	GEN509392 G2-ARSENAL HILL GENS #3 (STALL)
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04379	106.2474	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04379	106.2474	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04342	106.2397	PARK LANE - SEMINOLE 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04356	106.2272	7SAREPTA% 345.00 - ELDORADO EHV 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04356	106.2269	3TR3AR8EL7EL
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04396	106.2244	BAILEY4 138.00 - SUNSHINE CANYON 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.2237	GEN587373 1-G16-056-GEN10.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.2216	GEN509391 G1-ARSENAL HILL GENS #2 (STALL)
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04398	106.2199	P12:138:AEPW-OGE:CORNVIL4:MAUD 4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04356	106.2156	ELDORADO EHV 500/345KV TRANSFORMER CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.2148	GEN562762 1-G15033_3 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04369	106.2065	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.2047	GEN562270 1-G12-020-2 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04326	106.1995	MINGO - RED WILLOW 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04326	106.1995	MINGO - RED WILLOW 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.1975	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.1748	GEN503909 1-FULTONU1 1 16.000
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04398	106.1713	BLANCHARD - CORNVILLE 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04353	106.1567	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04353	106.1567	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	106.1532	P12:138:WFEC:MSL02
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.1374	GEN337653 1-WHITE BLUFF UNIT #2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04353	106.1222	P12:138:AEPW:REDROCKRD4:WTH_JCT4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04396	106.1169	BAILEY4 138.00 - WESTMOORE 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04358	106.1155	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04358	106.1155	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.1104	GEN334440 1-SABINE UNIT 4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04433	106.1005	P12:138:AEPW:CORNVIL4:DUNCAN-4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04337	106.0999	HOLCOMB - SETAB 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04337	106.0999	HOLCOMB - SETAB 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.0864	GEN587433 1-G16-063-GEN10.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	106.0717	CIVIT - PAOLI 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04367	106.0677	ANADARKO - GEORGIA 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.0617	GEN337652 1-WHITE BLUFF UNIT #1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	106.0585	P12:138:AEPW:WTHWF4:WTH_SE4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.0402	FRONTIER - GRIMES 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	106.0396	P12:138:AEPW:WTHWF4:CLINTJC4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04353	106.0338	HINTON - WEATHERFORD JCT. 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04367	106.0126	FLETCHER - GEORGIA 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	106.0031	ELDORADO EHV - MOUNT OLIVE 500KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04396	105.9995	FRANKLIN SW - WESTMOORE 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	105.9921	CIVIT - STRATFORD 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.9895	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04362	105.9889	WEBRE - WELLS 500KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04398	105.9866	BLANCHARD - MAUD 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	105.9806	EMPIRE - FLETCHER 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04354	105.9728	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04329	105.9724	MINGO - SETAB 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04329	105.9724	MINGO - SETAB 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04353	105.9714	HINTON - REDROCKRD4 138.00 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	105.96	PAOLI - PAYNE 138.00 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04374	105.9322	P12:138:AEPW:CORNVIL4:S.W.S.-4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.929	P12:161:AEPW:DYESS5:ELMSPRNG:TONTITN5
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04354	105.9238	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	105.9224	OIL CENTER - STRATFORD 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.9215	P12:138:AEPW:CATOOSA4:T.S.E.-4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	105.9067	COMANCHE - EMPIRE 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.8911	GEN506752 1-LEBROCK GAS 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.8911	GEN506753 1-LEBROCK GAS 2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04354	105.8863	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04367	105.8849	8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.8839	GEN334030 1-FRONTIER UNIT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.8813	GEN334031 1-FRONTIER UNIT 2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.878	GEN336252 1-NINEMILE POINT UNIT#5
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.8687	GEN335204 1-NELSON UNIT 4
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.8554	GEN560105 1-G08-22 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	105.8428	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.8426	GEN505432 1-SIKESTON
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	105.8289	WEATHERFORD TAP - WEATHERFORD WIND FARM 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	105.828	LATTA JCT - OIL CENTER 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.8277	P12:161:AEPW:EROGERS5:ECNTRTN5
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	105.8188	ELDORADO EHV - SHERIDAN EHV 500KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04389	105.8141	DUNCAN (DUNCAN) 138/69/13.8KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04389	105.8141	DUNCAN (DUNCAN) 138/69/13.8KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04336	105.7999	P12:138:OKGE:3TERM27
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.7958	GEN303007 1-1BC2 U2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	105.7873	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04334	105.7776	CANADIAN - NOBLE 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04372	105.7752	TUPELO - TUPELO TAP 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	105.7701	G14_001T 345.00 - WICHITA 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04375	105.7644	NORGE ROAD - SOUTHWESTERN STATION 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04375	105.7644	NORGE ROAD - SOUTHWESTERN STATION 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.7642	WHITE BLUFF 500/26.0KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.7459	GEN300010 1-ST FRANCIS UNIT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.7452	GEN336831 1-BAXTER WILSON SES
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.7355	GEN562783 1-G15036_4 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.7355	GEN562784 1-G15036_5 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04352	105.7335	ARCADIA - NORTHWEST 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04399	105.7333	P12:69:AEPW-OMPA:COMANC-2:OMWALTR2
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.7314	GEN562550 1-G14_040_3 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.7282	GEN303008 1-1BC2 U3
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.7254	P12:138:AEPW:N.E.S.-4:CATOOSA4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04353	105.7239	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04354	105.7226	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.7126	GEN334441 1-SABINE UNIT 5
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	105.7095	WEATHERFORD SOUTHEAST - WEATHERFORD TAP 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.7016	GEN336170 1-GULF OXY U4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.6939	GEN300011 1-ST FRANCIS UNIT 2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04334	105.6924	NOBLE - PURCELL4 138.00 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	105.6869	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.6691	GEN515577 1-ARBWND11 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	105.6667	CLINTON JUNCTION - CLINTON NATURAL GAS TAP 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04356	105.6617	P12:138:OKGE-AEPW:JENSEN4:REDROCKRD4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04467	105.6438	LAWTON EASTSIDE (LES 4) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04467	105.6438	LAWTON EASTSIDE (LES 4) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.6313	GEN501910 1-ACADIA UNIT ST1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.6227	8CAJUN2 500/24.0KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.6199	P12:161:AEPW-SWPA:BEAVER5:EROGERS5
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04354	105.6198	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	105.618	LASALLE - LATTA JCT 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04415	105.6161	TUTTLE - TUTTLE CONOCO TAP 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.6131	NELSON 230/20.0KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.6118	GEN334433 1-SABINE UNIT 3
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.6086	P12:138:AEPW:R.S.S.-4:S.HUD.-4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04399	105.6082	G15063_T 345.00 - WOODRING 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04375	105.606	CORNVILLE - NORGE ROAD 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04375	105.606	CORNVILLE - NORGE ROAD 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04374	105.6005	SOUTHWESTERN STATION - VERDEN 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	105.5954	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	105.5952	HOYT - STRANGER CREEK 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5927	GEN336251 1-NINEMILE POINT UNIT#4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5887	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04392	105.5879	CIMARRON - NORTHWEST 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5839	CIMARRON - CZECH HALL 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	105.5819	LAYFLD8 500.00 - MOUNT OLIVE 500KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	105.5819	LAYFLD8 500.00 - MOUNT OLIVE 500KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5797	GEN336191 1-LITTLE GYPSY UNIT#3
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5757	GEN335614 1-WILLOW GLENN UNIT#4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5742	P12:138:AEPW:YARCH-S4:T.S.E.-4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04346	105.5713	BENTON - WICHITA 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5703	P12:138:AEPW:BA_71ST4:T.S.E.-4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04362	105.5672	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04374	105.5635	NORTH 29TH CHICKASHA - VERDEN 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	105.5627	CIMARRON - SARA 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04346	105.559	SEMINOLE - VANOSTP4 138.00 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	105.5579	HOT SPRINGS EHV - MAGNET COVE 500KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04415	105.5531	CIMARRON - TUTTLE CONOCO TAP 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5529	GEN303006 1-1BC2 U1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5524	GEN506749 1-EASTMAN GENERATION A
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5475	P12:69:AEPW:NROGERS2:ECNTRTN2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	105.5444	MC NIEL 500/115KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04415	105.5432	CORNVILLE - TUTTLE 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5395	GEN336464 1-MICHOUD UNIT #3
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04433	105.5391	DUNCAN - DUNCHERTP4 138.00 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04433	105.5391	DUNCAN - DUNCHERTP4 138.00 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04433	105.5376	DUNCAN EASTSIDE - DUNCHERTP4 138.00 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5369	GEN337041 1-GERALD ANDRUS
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5362	P12:161:AEPW:CHAMSPR5:FARMING5
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04399	105.5243	LAWTON RELIFT TAP - OMPA-WALTERS 69KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04389	105.5243	P12:69:WFEC-AEPW:COMANCH2:DUNCAN-2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	105.524	G15088_T 345.00 - MOORE 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5224	GEN505616 1-BROKEN BOW
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5187	GEN501811 1-RODEMACHER UNIT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5146	CZECH HALL - XEROX 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5109	MORGAN - XEROX 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5097	GEN338146 1-INDEPENDENCE UNIT #2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04372	105.5012	CORN TAP - SEQUOYAHJ4 138.00 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04399	105.4981	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04371	105.4917	FRANKLIN - FRANKLIN SW 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.4909	MORGAN - MUSTANG 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.4889	GEN334070 1-LEWIS CREEK 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.4889	GEN334071 1-LEWIS CREEK 2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04415	105.4884	P12:138:AEPW-OGE:CORNVIL4:CIMARON4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04374	105.4855	CORNVILLE - NORTH 29TH CHICKASHA 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04372	105.4851	ANADARKO - SEQUOYAHJ4 138.00 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04367	105.4815	CYPRESS - HARTBURG 500KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.4802	GEN501970 1-EVANGELINE UNIT 7
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	105.4796	WALTERS - WALTERS 69KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.479	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04389	105.4787	DUNCAN - TOSCO 69KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	105.4753	CLINTON NATURAL GAS TAP - WEATHERFORD WIND FARM 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04433	105.4735	DUNCAN EASTSIDE - OMPA-DUNCAN 821 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	105.4714	8WNEWMADRID 500.00 - DELL 500 500KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	105.4713	LASALLE - STONEWAL LH138.00 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.4689	GEN334392 1-EXXON MOBIL IPP 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.4688	FRONTIER 345/18.0KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.4686	GEN336801 1-BAXTER WILSON UNIT #1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.4674	FRONTIER 345/18.0KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.4641	GEN334393 1-EXXON MOBIL IPP 2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.4641	GEN334394 1-EXXON MOBIL IPP 3
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	105.4547	STONEWAL LH138.00 - TUPELO TAP 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04399	105.4469	OMPA-WALTERS - WALTERS 69KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04399	105.4469	OMPA-WALTERS - WALTERS 69KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.4424	RODEMACHER 230/22.0KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04389	105.4339	COMANCHE TAP - TOSCO 69KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.4302	GEN501971 1-EVANGELINE UNIT 7-1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04334	105.4274	PURCELL4 138.00 - WALNUT CREEK 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.4244	P12:138:AEPW:R.S.S-4:T.P.S.-4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	105.4178	FULTON 115 - HOPE 115KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	105.4178	FULTON 115 - HOPE 115KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	105.4111	BLACKBERRY - NEOSHO 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04369	105.4108	P12:138:OKGE:3TERM12
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04373	105.4074	MARIETTA - MARIETTA4 138.00 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.4058	GEN501912 1-ACADIA UNIT CT1B
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.405	GEN501911 1-ACADIA UNIT CT1A
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.4042	P12:138:AEPW:R.S.S.-4:R:96YALE-4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.4014	P12:138:AEPW:MOHAWK4:T.NO--4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04371	105.3964	FRANKLIN - PINK SW 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	105.3962	SARA - STHLAKE4 138.00 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	105.3958	P12:69:WFEC-AEPW:COMANCH2:WALTRS-2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	105.3936	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.3905	7JASPER 345.00 - MORGAN 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04389	105.363	COMANCHE - COMANCHE TAP 69KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	105.3251	MCCLAIN - STHLAKE4 138.00 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	105.3116	COMANCHE - WALTERS 69KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04374	105.286	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04386	105.2404	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04386	105.2404	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04369	105.2378	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04369	105.2337	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04369	105.2297	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04371	105.1519	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04371	105.1519	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04510	104.7187	CACHE - SNYDER 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04375	104.715	P12:138:OKGE:3TERM21
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	104.616	P12:138:AEPW:SHAM4WT:CHILD4WT
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04417	104.5745	CHILDRESS - LAKE PAULINE 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04417	104.5745	CHILDRESS - LAKE PAULINE 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	104.5711	CHILDRESS - HOLLIS TAP 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	104.5697	SHAMROCK - WELLINGTON 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	104.5461	SHAMROCK (SHAMRCK2) 138/69/14.4KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	104.5461	SHAMROCK (SHAMRCK2) 138/69/14.4KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05220	104.4987	BASE CASE
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06997	104.4902	GRACEMONT - MINCO 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.4796	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.4794	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04420	104.4749	P12:138:AEPW:HOB-JCT4:ELKCTY-4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	104.4741	LONE GROVE - SUNNYSIDE 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	104.4735	GLASSES - RUSSETT 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.4682	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	104.4658	MCLEAN RURAL SUB - SHAMROCK 115KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	104.4658	MCLEAN RURAL SUB - SHAMROCK 115KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	104.4628	SHAMROCK (SHAMRCK1) 115/69/14.4KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	104.4628	SHAMROCK (SHAMRCK1) 115/69/14.4KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.456	GEN563273 2-G15093_4 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	104.4524	CARTER - CHICKASAW 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	104.4448	CANEY CREEK - JOHNSON COUNTY 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.4379	GEN515443 1-MNCOWND1 0.7000
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	104.4191	P12:115:SPS:T54.1.KIRBY.SHM(520)
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	104.4191	P12:115:SPS-AEPW:KIRBY3:SHAM3WT
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	104.4063	NORTHWEST TEXARKANA - WELSH 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	104.4063	NORTHWEST TEXARKANA - WELSH 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04355	104.3803	RUSSETT - SPRINGDALE 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04420	104.3763	CLINTON AIR FORCE BASE TAP - HOBART JUNCTION 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	104.3751	MCCLELLAN SUB - MCLEAN RURAL SUB 115KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04352	104.3733	ROCKY POINT - SPRINGDALE 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	104.3692	KIRBY SWITCHING STATION - MCCLELLAN SUB 115KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	104.3683	BROWN - RUSSETT 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	104.3663	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	104.3663	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	104.3647	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	104.3647	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04371	104.3492	P12:138:WFEC:MSL10
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05163	104.3491	CIMARRON - DRAPER LAKE 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.3469	GEN563272 1-G15093_3 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04420	104.3465	CLINTON AIR FORCE BASE TAP - ELK CITY 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.3406	GEN562685 1-G15_013_3 0.3550
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	104.336	RUSSETT - RUSSETT 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.3339	GEN562587 1-G14_056_3 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.3252	P12:161:GRDA:KERR-SALINA-CKT1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.3252	P12:161:GRDA:KERR-SALINA-CKT2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.3214	GEN563202 1-G15085_3 0.5500
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04325	104.3203	CARTRCO4 138.00 - RATLIFF 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.311	GEN629070 2-BEAVER CHANNEL GENERATORFOR UNIT NO 2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.2851	GEN563062 1-G15071_3 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.2795	INDEPENDENCE 500/26.0KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.2759	GEN514805 1-SOONER UNIT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	104.2658	OVEXFRMCCOVE
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	104.2565	7MCCREDIE 345.00 - 7MONTGMRY 345.00 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.2454	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.2398	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	104.2348	8BHAM STEEL 500.00 - WEST MEMPHIS 500 500KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.2037	GEN615010 1-STANTON4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.1946	GEN520812 1-ANADRK5
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.1945	GEN520813 1-ANADRK6
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	104.1807	CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.177	GEN514806 1-SOONER UNIT 2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	104.175	LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	104.1576	P12:138:WFEC:MSL07
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	104.1576	P12:138:WFEC-AEPW:HUGOPP4:ATOKA--4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04367	104.1282	P12:138:AEPW-SWPA:LONEOAK4:TUPELO4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04367	104.1282	P12:138:WFEC:MSL06
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04307	104.1282	P12:138:OKGE:3TERM39
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04340	104.1223	CHICKASAW - TOTAL 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04340	104.1217	SUNNYSIDE (SUNNYSD3) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.1198	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	104.1188	DELL 500 - INDEPENDENCE 500KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.1072	GEN345670 1-1RUSH G1 18.000
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.1011	GEN562074 1-G1149G1504 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04346	104.0921	ROCKY POINT - SUNNYSIDE 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04346	104.0869	P12:138:OKGE:3TERM40
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0676	GEN657749 1-YOUNG 1 GENERATOR
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	104.0651	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0193	GEN681522 3-GENOA 3
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04358	104.0112	DOLET HILLS 345/230KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9994	GEN511962 2-RKYRDGW2-1 0.7000
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9895	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9872	4SIOUX 1 138.00 138/18.0KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	103.9677	P12:138:WFEC-AEPW:GOLDENSW4:CRAIGJT4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9233	GEN344895 2-1LAB G2 20.000
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9169	GEN531447 1-HOLCOMB GENERATOR
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8945	GEN344896 3-1LAB G3 20.000
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8932	GEN344897 4-1LAB G4 20.000
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8931	GEN344894 1-1LAB G1 20.000
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08411	103.8905	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08411	103.8905	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8666	GEN672321 1-SHAND GENERATOR 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	103.8622	KEO EHV - WEST MEMPHIS 500 500KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04370	103.8553	P12:138:WFEC:MSL16
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8456	GEN587233 1-G16-037-GEN10.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8326	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8208	GEN511853 1-COMANCHE #3
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04322	103.7961	ARDMORE WEST - CARTER 138KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04073	103.7821	HUGO - VALLIANT 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04073	103.7821	HUGO - VALLIANT 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.7773	GEN672311 2-POPLAR RIVER GENERATOR 2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.7411	GEN521103 1-BLUE CANYON WIND FARM
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.7388	GEN681542 6-JP MADGETT
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.7319	GEN563263 1-G15092_4 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.7083	GEN560183 1-REDHIL-WTG1 12.000
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04322	103.6939	ARDMORE WEST - UNIROYAL 138KV CKT 1
0	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04541	103.6936	CIMARRON - DRAPER LAKE 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	103.6534	P12:138:WFEC:MSL15
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.6499	GEN562704 1-G15_020_3 0.3550
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.6466	GEN562699 1-G15_018_3 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04350	103.6265	CLARKSVILLE - MUSKOGEE 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04350	103.6265	CLARKSVILLE - MUSKOGEE 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.622	GEN562942 1-G15056_3 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.6064	GEN511852 1-COMANCHE #2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.526	GEN520811 1-ANADRK4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04322	103.5207	SUNNYSIDE - UNIROYAL 138KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.4876	GEN562710 1-G15_022_3 0.5500
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.4859	GEN587253 1-G16-039-GEN10.5500
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.4842	GEN661015 1-COYOTE
0	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04610	103.443	BASE CASE
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.4337	GEN524295 1-SPNSPUR_WND10.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.4272	GEN563262 1-G15092_3 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.3919	GEN523461 1-BLACKHAWK GEN #1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.3899	GEN523462 1-BLACKHAWK GEN #2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.3751	GEN657748 1-YOUNG 2 GENERATOR

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.3749	P12:138:WFEC:MSL09
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.3674	GEN527164 1-MUSTANG GEN #4 22 KV
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.361	GEN636641 1-LOUISA UNIT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.3609	GEN563142 1-G15079_3 0.5500
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.3609	GEN563151 1-G15080_2 0.5500
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.3501	GEN620315 1-BIG STONE GEN
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.2865	GEN527161 1-MUSTANG GEN #1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.2865	GEN527162 1-MUSTANG GEN #2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04352	103.2809	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04352	103.2809	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04320	103.2779	SUNNYSIDE (SUNNYSD5) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.2686	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.1931	GEN562756 1-G15031_7 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.144	GEN600006 1-AS KING
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.1366	GEN600004 2-PRAIRIE ISLAND G2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.1333	GEN600003 1-PRAIRIE ISLAND G1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.0568	GEN562483 1-G13_027_3 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.045	GEN527163 1-MUSTANG GEN #3 22 KV
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.0384	GEN562688 1-G15_014_3 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.0375	GEN635213 3-NEAL UNIT 3
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.0267	GEN511851 1-COMANCHE #1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.0005	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.9522	GEN563042 1-G15068_3 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.9516	GEN600005 1-MONTICELLO
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.8468	GEN511848 1-SOUTHWESTERN STATION #3
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.8221	GEN527901 1-HOBBS PLANT #1 (CT)
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.8221	GEN527902 1-HOBBS PLANT #2 (CT)
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04346	102.7694	LYDIA - WELSH 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04346	102.7694	LYDIA - WELSH 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.7556	GEN615001 1-COAL CREEK
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.7293	GEN600001 2-SHERBURNE CNTY G2
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.6859	GEN563043 1-G15068_4 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.6747	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.628	GEN600000 1-SHERBURNECNTY G1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.5707	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.5001	GEN587393 1-G16-058-GEN10.5500
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.4686	GEN526331 1-JONES GEN #1 22 KV
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.3717	GEN526332 1-JONES GEN #2 21 KV
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04324	102.2979	JOHNSON COUNTY (JOHNCO) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.2968	GEN635214 4-NEAL UNIT 4
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.2948	GEN562590 1-G14_057_3 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.2815	GEN562655 1-G14_074_3 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.2786	GEN527166 1-MUSTANG_6 118.000
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	102.2579	GEN525561 1-TOLK GEN #1 24 KV
0	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06152	102.1688	GRACEMONT - MINCO 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.0431	GEN600002 3-SHERBURNE CNTY G3
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.9894	GEN635023 3-WALTER SCOTT UNIT 3
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.9598	GEN587423 1-G16-062-GEN10.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.9345	GEN527903 1-HOBBS PLANT #3 (ST)
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04337	101.8562	LYDIA - VALLIANT 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04337	101.8562	LYDIA - VALLIANT 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.7769	GEN562269 1-G12-020-1 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.6861	GEN562762 1-G15033_3 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.6186	GEN525844 1-ELK_1 118.000
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.596	GEN562270 1-G12-020-2 0.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.5746	GEN587373 1-G16-056-GEN10.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.5346	GEN635024 4-WALTER SCOTT UNIT 4
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05220	101.4903	GEN587433 1-G16-063-GEN10.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.2683	GEN560105 1-G08-22 0.6900
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03679	101.1907	JOHNSON COUNTY - PITTSBURG 345KV CKT 1
0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03679	101.1907	JOHNSON COUNTY - PITTSBURG 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.1004	GEN562550 1-G14_040_3 0.6900
0	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04610	100.7184	GEN587433 1-G16-063-GEN10.6900
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.2699	GEN523972 1-HARRINGTON GEN #2 24 KV
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.2689	GEN523971 1-HARRINGTON GEN #1 24 KV
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.263	GEN523973 1-HARRINGTON GEN #3 24 KV
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05219	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05219	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.1136	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05220	99.9	GEN509416 1-TURK GENERATION

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03821	99.9	JOHNSON COUNTY - PITTSBURG 345KV CKT 1
0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03821	99.9	JOHNSON COUNTY - PITTSBURG 345KV CKT 1
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05207	99.8	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.21587	99.6	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.21587	99.6	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05207	99.5	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05471	99.3	P12:138:WFEC:MSL03
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05207	99.3	917X
0	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04610	99.3	GEN509403 1-PIRKEY GENERATION
0	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04596	99.3	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04610	99.1	GEN509416 1-TURK GENERATION
0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05220	99	GEN501801 1-DOLET HILLS UNIT1
0	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04596	99	G15066_T 345.00 - SOONER 345KV CKT 1
0	20SP	G15_033	TO->FROM	G15039_T 230.00 - PLANT X STATION 230KV CKT 1	318.7	350.6	0.05292	101.2007	BASE CASE
0	16WP	G15_033	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.29316	106.6944	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G15_033	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.26929	103.5122	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G15_033	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.29316	102.1214	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14878	124.4658	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13234	112.9438	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13234	112.9438	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13234	112.9086	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13234	112.9086	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	112.5354	GEN526331 1-JONES GEN #1 22 KV
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	112.3468	GEN526332 1-JONES GEN #2 21 KV
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13507	111.3346	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13507	111.3053	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.13972	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.13972	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13020	107.3472	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	107	GEN527884 1-CUNNINGHAM GEN #4 22 KV
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	106.0884	GEN563142 1-G15079_3 0.5500
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	106.0884	GEN563151 1-G15080_2 0.5500
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13020	106.0791	P12:115:SPS:V15.1.TUCO.INDANA
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13020	106.0442	INDIANA SUB - STANTON SUB 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12734	106.0084	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12734	105.974	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12656	105.4304	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.15436	105.4088	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.15436	105.4088	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14261	105.2063	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12656	105.1732	P12:345:SPS:J14.1.EDDY.XRDS
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14261	105.1386	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12622	105.0982	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12622	105.0934	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12670	105.0723	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12670	104.9891	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	104.8526	GEN527883 1-CUNNINGHAM GEN #3 22 KV
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12608	104.7091	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12773	104.6771	P12:345:SPS:J15.1.XRDS.TOLK
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12608	104.6596	P12:230:SPS:K37.1.TOLK.LAMB
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	104.4479	TUCO INTERCHANGE 230/13.0KV TRANSFORMER CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12598	104.442	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12766	104.1602	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12608	104.149	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12766	104.1458	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12608	104.0778	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13020	103.9914	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12598	103.9739	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12700	103.9293	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12700	103.8823	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12656	103.6702	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12656	103.6636	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12714	103.5765	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12714	103.5559	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	103.5169	GEN563132 1-G15078_3 0.3570
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12640	103.4535	LUBBOCK SOUTH INTERCHANGE - SOUTH PLAINS REC-WOODROW INTERCHANGE 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	103.4314	GEN587113 1-G16-015-GEN10.4180
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	103.3789	GEN563102 1-G15075_3 0.5500
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12655	103.2873	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12734	103.1846	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14563	103.1673	P12:345:SPS:J15.1.XRDS.TOLK
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12598	103.1627	P12:115:SPS:W54.1.KISER.KRESS
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12734	103.1541	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12598	103.0555	KISER 3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13020	103.0022	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12798	102.9892	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13020	102.9593	P12:115:SPS:V62.1.CRLSLE.INDANA
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	102.8077	GEN562812 1-G15040_3 0.3570
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12859	102.7303	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12655	102.7134	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12655	102.6722	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12798	102.6695	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	102.6062	GEN526678 1-CIRRUS_WND 10.6900
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12763	102.5983	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12838	102.2565	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12655	102.2379	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12678	102.2143	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.13837	102.1679	GEN527166 1-MUSTANG_6 118.000
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12880	102.0607	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12714	101.9931	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12714	101.9797	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	101.5877	GEN525845 1-ELK_2 1 18.000
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12670	101.5349	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12670	101.5158	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14875	101.3882	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14875	101.3882	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12640	101.1826	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12640	101.0304	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	100.5597	BASE CASE
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	100.5354	BASE CASE
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12068	100.5005	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12068	100.4984	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.13837	100.4324	GEN527903 1-HOBBS PLANT #3 (ST)
0	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14148	100.3914	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14148	100.3671	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14148	100.3647	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14148	100.3647	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13092	100.1483	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	100.1357	GEN562270 1-G12-020-2 0.6900
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12734	100.0549	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12379	99.8	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12675	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12675	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12668	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12734	99.5	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14650	99.4	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	99.3	GEN562762 1-G15033_3 0.6900
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12276	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12276	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12276	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12276	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12680	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12680	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	99.2	GEN300024 1-1CHOTST6 16.000
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	99.2	GEN300031 1-CHOUTEAU CTG 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12595	99.2	P12:115:SPS:V56.1.COCHRAN.SUNDWN
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12734	99.1	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	99.1	GEN300001 1-THOMAS HILL UNIT 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	99.1	GEN300017 1-1G2GPDEL 18.000
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	99.1	GEN511938 1-OEC STEAM # 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	99.1	GEN511941 1-OEC STEAM # 2
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	99.1	GEN562517 1-G14_021_S2 0.6900
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	99.1	GEN562691 1-G15_015_3 0.6900
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	99.1	GEN645041 1-CASS COUNTY 1
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	99	GEN300016 1-1G1GPDEL 18.000
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	99	GEN549893 2-SOUTHWEST 2
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	99	GEN562023 1-G11_020_3 0.6900
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	99	GEN562026 1-G11_019_3 0.6900
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	99	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12546	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12546	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G15_033	TO->FROM	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	1011.0	1176.0	0.36586	101.3643	BASE CASE
0	25SP	G15_033	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	159.0	175.0	0.03186	106.2038	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	159.0	175.0	0.03186	106.1228	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_033	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.15007	100	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_033	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.15007	100	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_033	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.05706	107.6192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_033	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.05706	107.6192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	1022.0	1124.0	0.35157	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.21502	-	CIMARRON - MINCO 345KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.21502	-	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	1792.0	1792.0	0.18082	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.14589	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.13939	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.13939	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	16WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.13240	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	987.2	1082.8	0.12727	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	1330.0	1940.0	0.11959	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	1330.0	1940.0	0.11959	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	987.16	1082.77	0.11302	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	956.09	1051.7	0.11302	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	1420.0	1775.0	0.07269	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	1420.0	1775.0	0.07269	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	1420.0	1775.0	0.07269	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	859.0	956.0	0.06992	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	560.0	560.0	0.06992	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	439.0	439.0	0.05143	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	450.0	450.0	0.05143	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.04793	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	16WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.04793	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17G	G15_033	-	Non-Converged Contingency	1022.0	1124.0	0.18913	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17G	G15_033	-	Non-Converged Contingency	0.0	0.0	0.07914	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	17G	G15_033	-	Non-Converged Contingency	0.0	0.0	0.06334	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	17G	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.04381	-	CIMARRON - MINCO 345KV CKT 1
0	17G	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.04381	-	GRACEMONT - MINCO 345KV CKT 1
0	17G	G15_033	-	Non-Converged Contingency	717.0	789.0	0.04368	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17G	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.03432	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	17G	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.03432	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	17G	G15_033	-	Non-Converged Contingency	0.0	0.0	0.03267	-	P12:138:AEPW:REDROCKRD4:WTH_JCT4
0	17SP	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.40211	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G15_033	-	Non-Converged Contingency	956.0	1042.0	0.36586	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17SP	G15_033	-	Non-Converged Contingency	1792.0	1792.0	0.18372	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.16118	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	17SP	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.16118	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	17SP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.13864	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	G15_033	-	Non-Converged Contingency	956.09	1051.7	0.11184	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G15_033	-	Non-Converged Contingency	1330.0	1940.0	0.10979	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17SP	G15_033	-	Non-Converged Contingency	1330.0	1940.0	0.10979	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17SP	G15_033	-	Non-Converged Contingency	956.1	1051.7	0.10693	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17SP	G15_033	-	Non-Converged Contingency	956.09	1051.7	0.09449	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	G15_033	-	Non-Converged Contingency	478.0	502.0	0.06925	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_033	-	Non-Converged Contingency	1420.0	1775.0	0.06396	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G15_033	-	Non-Converged Contingency	478.0	502.0	0.06371	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_033	-	Non-Converged Contingency	318.7	350.6	0.05337	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	17SP	G15_033	-	Non-Converged Contingency	318.7	350.6	0.05337	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.45298	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1022.0	1124.0	0.31149	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1022.0	1124.0	0.31149	-	OKLAUNION 345KV SWITCHED SHUNT
0	20L	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.18205	-	CIMARRON - MINCO 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.18205	-	GRACEMONT - MINCO 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1022.0	1124.0	0.18139	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1022.0	1124.0	0.18139	-	OKLAUNION 345KV SWITCHED SHUNT
0	20L	G15_033	-	Non-Converged Contingency	0.0	0.0	0.15290	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G15_033	-	Non-Converged Contingency	1792.0	1792.0	0.15209	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	717.0	789.0	0.13107	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	717.0	789.0	0.13107	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	717.0	789.0	0.13107	-	GEN515040 1-SEMINOLE 1G
0	20L	G15_033	-	Non-Converged Contingency	1792.0	1792.0	0.11586	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1792.0	1792.0	0.11586	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
0	20L	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.11586	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.11586	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20L	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.11586	-	BORDER 7345.00 345KV SWITCHED SHUNT
0	20L	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.11227	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	0.0	0.0	0.10919	-	P12:138:WFEC:MSL03
0	20L	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.09847	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.09847	-	GEN509403 1-PIRKEY GENERATION
0	20L	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.09847	-	GEN509416 1-TURK GENERATION
0	20L	G15_033	-	Non-Converged Contingency	956.1	1051.7	0.09016	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	956.1	1051.7	0.09016	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	956.09	1051.7	0.08113	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	956.09	1051.7	0.08113	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.07427	-	ARCADIA - NORTHWEST 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1584.0	2098.0	0.07255	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1584.0	2098.0	0.07255	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	956.09	1051.7	0.07177	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	956.09	1051.7	0.07177	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	956.09	1051.7	0.07177	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	956.09	1051.7	0.07177	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1192.0	1192.0	0.07120	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	956.0	956.0	0.07120	-	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	0.0	0.0	0.06734	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	20L	G15_033	-	Non-Converged Contingency	1561.0	1793.0	0.06041	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1561.0	1793.0	0.06041	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1561.0	1793.0	0.06041	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_033	-	Non-Converged Contingency	1561.0	1793.0	0.06041	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_033	-	Non-Converged Contingency	478.0	502.0	0.05700	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	0.0	0.0	0.04828	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	20L	G15_033	-	Non-Converged Contingency	478.0	502.0	0.04712	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.04520	-	CIMARRON - MINCO 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.04520	-	GRACEMONT - MINCO 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	785.0	785.0	0.04336	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	785.0	785.0	0.04336	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.04292	-	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1532.0	1793.0	0.04267	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1532.0	1793.0	0.04267	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20L	G15_033	-	Non-Converged Contingency	1532.0	1793.0	0.04267	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	G15_033	-	Non-Converged Contingency	717.0	789.0	0.04207	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	717.0	789.0	0.04207	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	762.5	762.5	0.04194	-	MINGO - SETAB 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	762.5	762.5	0.04194	-	MINGO - SETAB 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	717.1	717.1	0.04111	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	717.1	717.1	0.04111	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	0.0	0.0	0.04101	-	P12:230:AEPW:ELKCITY6:SWEETWT6
0	20L	G15_033	-	Non-Converged Contingency	0.0	0.0	0.04089	-	P12:138:WFEC:MSL14
0	20L	G15_033	-	Non-Converged Contingency	478.0	502.0	0.04087	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	478.0	502.0	0.04087	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	478.0	502.0	0.04087	-	BUSHLAND INTERCHANGE 230KV SWITCHED SHUNT
0	20L	G15_033	-	Non-Converged Contingency	1420.0	1775.0	0.03920	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1420.0	1775.0	0.03920	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G15_033	-	Non-Converged Contingency	1420.0	1775.0	0.03920	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1420.0	1775.0	0.03920	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_033	-	Non-Converged Contingency	1420.0	1775.0	0.03920	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1420.0	1775.0	0.03920	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G15_033	-	Non-Converged Contingency	1504.0	1792.0	0.03846	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1504.0	1792.0	0.03846	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1505.0	1793.0	0.03629	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1505.0	1793.0	0.03629	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1505.0	1793.0	0.03629	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	0.0	0.0	0.03610	-	917X
0	20L	G15_033	-	Non-Converged Contingency	318.7	350.57	0.03567	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	318.7	350.57	0.03567	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	318.7	350.6	0.03501	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	318.7	350.6	0.03501	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	956.0	956.0	0.03367	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	439.0	439.0	0.03346	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	450.0	450.0	0.03346	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G15_033	-	Non-Converged Contingency	450.0	450.0	0.03346	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1141.0	1195.0	0.03324	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1141.0	1195.0	0.03324	-	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G15_033	-	Non-Converged Contingency	1141.0	1195.0	0.03324	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G15_033	-	Non-Converged Contingency	956.0	1042.0	0.36219	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20SP	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.16048	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20SP	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.16048	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20SP	G15_033	-	Non-Converged Contingency	956.1	1051.7	0.10637	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	1022.0	1124.0	0.33859	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.19639	-	CIMARRON - MINCO 345KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.19639	-	GRACEMONT - MINCO 345KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	1792.0	1792.0	0.18142	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	717.0	789.0	0.15397	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.13269	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.13269	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.12532	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.12522	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	987.2	1082.8	0.12187	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	987.16	1082.77	0.10891	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	1584.0	2098.0	0.10098	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	1584.0	2098.0	0.10098	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	956.09	1051.7	0.09687	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	987.16	1082.77	0.09687	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	439.0	439.0	0.04594	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	450.0	450.0	0.04594	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.04125	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.04125	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G15_033	-	Non-Converged Contingency	329.05	360.92	0.03296	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_033	-	Non-Converged Contingency	0.0	0.0	0.19253	-	P12:345:SPS:J02.1.TOLK.EDDY
0	25SP	G15_033	-	Non-Converged Contingency	343.79	343.79	0.12631	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G15_033	-	Non-Converged Contingency	478.0	502.0	0.09950	-	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G15_033	-	Non-Converged Contingency	0.0	0.0	0.05228	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
0	25SP	G15_033	-	Non-Converged Contingency	0.0	0.0	0.03927	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
0	25SP	G15_033	-	Non-Converged Contingency	0.0	0.0	0.03095	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	25SP	G15_033	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.05121	104.2168	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G15_033	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.05121	104.166	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G15_033	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03743	104.0555	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G15_033	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03743	104.0254	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.06348	123.2708	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.06348	123.2144	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.06348	113.833	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.06348	113.7617	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.06348	123.2144	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.06348	113.7617	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.06348	123.2708	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.06348	113.833	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03439	104.6153	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.08158	101.4541	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05325	148.7448	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05325	148.7448	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05325	138.4514	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05325	138.4514	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03000	135.8101	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03000	128.2279	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05372	124.8306	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04504	122.6788	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03978	121.377	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03978	121.377	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04504	121.1426	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04504	119.9963	P12:115:SPS:V15.1.TUCO.INDANA
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04504	119.8657	INDIANA SUB - STANTON SUB 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05372	119.3497	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03905	119.2999	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03905	119.2999	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03905	119.2885	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03905	119.2878	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04504	118.5642	P12:115:SPS:V15.1.TUCO.INDANA
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04504	118.4407	INDIANA SUB - STANTON SUB 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03978	116.51	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03978	116.51	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03905	116.2765	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03905	116.2765	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03905	116.2702	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03905	116.2698	P12:230:LPL:K39.1.CRLSLE.LP-MLWK

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04504	115.8497	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04252	115.4574	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04504	114.5544	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04161	114.0895	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04504	114.0383	P12:115:SPS:V62.1.CRLSLE.INDANA
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04504	113.9569	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	113.1778	GEN527166 1-MUSTANG_6 118.000
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04504	112.8286	P12:115:SPS:V62.1.CRLSLE.INDANA
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04504	112.7492	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04161	112.3517	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04252	112.213	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	111.5706	GEN525561 1-TOLK GEN #1 24 KV
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04161	111.2902	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	110.5402	GEN527903 1-HOBBS PLANT #3 (ST)
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04099	110.4485	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04099	110.4485	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03905	110.118	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04161	110.1009	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04076	110.0808	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04076	110.0808	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	109.998	GEN527166 1-MUSTANG_6 118.000
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	109.0035	GEN527901 1-HOBBS PLANT #1 (CT)
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03960	108.9977	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03872	108.7584	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04754	108.7391	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04754	108.7391	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04099	108.7343	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04099	108.7343	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03831	108.7267	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03831	108.7267	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	108.6747	GEN525561 1-TOLK GEN #1 24 KV
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03867	108.4955	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03867	108.4955	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	108.4823	GEN527902 1-HOBBS PLANT #2 (CT)
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04076	108.365	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04076	108.365	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	108.3162	GEN527903 1-HOBBS PLANT #3 (ST)
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03905	107.7349	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03829	107.6267	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03829	107.6267	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03811	107.6044	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03811	107.6044	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03853	107.5467	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03735	107.0768	P12:115:LCEC:W56.1.HOBBG.LE-LVN
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	107.07	GEN563132 1-G15078_3 0.3570
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03960	106.9711	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	106.9469	GEN527901 1-HOBBS PLANT #1 (CT)
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	106.9155	GEN563102 1-G15075_3 0.5500
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	106.8288	GEN562812 1-G15040_3 0.3570
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03831	106.7917	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03831	106.7917	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03872	106.7846	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03994	106.7777	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03853	106.7234	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04754	106.6426	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04754	106.6426	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	106.4754	GEN527902 1-HOBBS PLANT #2 (CT)
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03829	105.7829	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03829	105.7829	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03811	105.627	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03811	105.627	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03853	105.5141	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03867	105.2708	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03867	105.2708	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	105.1522	GEN563132 1-G15078_3 0.3570
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	105.0805	GEN563102 1-G15075_3 0.5500
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03735	105.0284	P12:115:LCEC:W56.1.HOBBG.LE-LVN
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03994	105.0255	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	104.952	GEN562812 1-G15040_3 0.3570
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	104.8889	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	103.1547	BASE CASE
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04157	102.7497	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03736	102.7066	P12:115:SPS:V80.1.DC_STH.LE-WAIT
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03766	102.5953	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03766	102.5935	P12:LPL:SPS:K64.1.LP-SE.LUBBS
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	102.5287	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03748	102.4879	P12:115:SPS:V49.1.YOAKUM.SHLCO2
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03736	101.1371	P12:115:SPS:V80.1.DC_STH.LE-WAIT
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04157	101.0098	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03748	100.9742	P12:115:SPS:V49.1.YOAKUM.SHLCO2
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	100.9236	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03766	100.8352	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03766	100.8335	P12:LPL:SPS:K64.1.LP-SE.LUBBS
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03776	100.5827	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
2	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03776	99.4	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
2	17SP	G15_033	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.05006	113.9867	BASE CASE
2	20SP	G15_033	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.04761	110.7777	BASE CASE
2	17G	G15_033	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.04751	104.3556	BASE CASE
2	20WP	G15_033	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.04596	99.1	BASE CASE
2	17SP	G15_033	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.24787	103.9462	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20SP	G15_033	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.24454	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G15_033	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.29321	117.0258	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G15_033	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.26939	112.9654	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G15_033	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.29321	112.441	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	G15_033	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.26939	108.3696	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17SP	G15_033	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.28802	108.1247	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17G	G15_033	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.06482	104.9454	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17SP	G15_033	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.28802	103.6738	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G15_033	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.06482	100.1043	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24702	122.5534	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24702	118.7382	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25518	115.9388	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25518	113.406	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25045	112.2087	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25045	110.2344	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.11056	108.0357	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25029	107.0133	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.11056	106.4735	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25029	104.9152	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33912	126.3303	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33995	117.4113	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20L	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.19260	115.1136	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.33614	110.5121	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.34537	105.6091	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G15_033	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08623	102.4471	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	16WP	G15_033	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08623	101.7764	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	20WP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.20684	134.2888	CIMARRON - MINCO 345KV CKT 1
2	17G	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.05591	122.6092	CIMARRON - MINCO 345KV CKT 1
2	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.05423	120.9451	CIMARRON - MINCO 345KV CKT 1
2	17SP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.21788	118.0603	CIMARRON - MINCO 345KV CKT 1
2	17G	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.05591	117.3457	GRACEMONT - MINCO 345KV CKT 1
2	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.05423	116.2453	GRACEMONT - MINCO 345KV CKT 1
2	17SP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.21788	113.0338	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.15401	109.7093	BASE CASE
2	16WP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.16259	108.7418	BASE CASE
2	17G	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.16041	107.5286	BASE CASE
2	20SP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.21055	105.2393	CIMARRON - MINCO 345KV CKT 1
2	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04019	104.4575	PITTSBURG - SEMINOLE 345KV CKT 1
2	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04019	104.4575	PITTSBURG - SEMINOLE 345KV CKT 1
2	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	104.0047	BASE CASE
2	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04246	102.6234	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04137	102.5352	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20SP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.21055	100.4366	GRACEMONT - MINCO 345KV CKT 1
2	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.03998	99.8	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.03998	99.8	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.03998	99.8	P12:345:SPS:J07.1.FINN.HITCH
2	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	99.4	GEN509403 1-PIRKEY GENERATION
2	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04207	99.4	GEN509416 1-TURK GENERATION
2	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04400	99.3	P12:138:WFEC:MSL03
2	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04193	99.2	CLEVELAND - G15066_T 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04368	99.1	BASE CASE
2	17G	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04368	99.1	BASE CASE
2	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.04193	99	G15066_T 345.00 - SOONER 345KV CKT 1
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.20684	147.8313	CIMARRON - MINCO 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05591	136.8479	CIMARRON - MINCO 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05423	134.7955	CIMARRON - MINCO 345KV CKT 1
2	17SP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.21788	131.4971	CIMARRON - MINCO 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05591	131.4134	GRACEMONT - MINCO 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05423	129.9126	GRACEMONT - MINCO 345KV CKT 1
2	17SP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.21788	126.3065	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.15401	123.7856	BASE CASE
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.16259	122.9306	BASE CASE
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.16041	120.973	BASE CASE
2	20SP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.21055	118.3853	CIMARRON - MINCO 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	118.2717	BASE CASE
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	118.2717	BASE CASE
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04019	117.7447	PITTSBURG - SEMINOLE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04019	117.7447	PITTSBURG - SEMINOLE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04246	115.7466	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04137	115.7146	CIMARRON - DRAPER LAKE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	113.68	BASE CASE
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	113.6799	BASE CASE
2	20SP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.21055	113.4445	GRACEMONT - MINCO 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03998	112.9303	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03998	112.9303	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03998	112.8673	P12:345:SPS:J07.1.FINN.HITCH
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	112.745	GEN509403 1-PIRKEY GENERATION
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	112.739	GEN509416 1-TURK GENERATION
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04193	112.4378	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04400	112.3348	P12:138:WFEC:MSL03
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04193	112.1429	G15066_T 345.00 - SOONER 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04193	111.9564	917X
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05838	111.8558	CIMARRON - MINCO 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04188	111.7471	PITTSBURG - SEMINOLE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04188	111.7471	PITTSBURG - SEMINOLE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	111.7362	GEN501801 1-DOLET HILLS UNIT1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03962	111.3935	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03962	111.3935	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	111.1855	GEN336821 1-GRAND GULF UNIT
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.996	GEN336153 1-WATERFORD UNIT#3
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04201	110.7315	PITTSBURG - VALLIANT 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04201	110.7315	PITTSBURG - VALLIANT 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04199	110.731	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04199	110.731	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.6228	GEN335831 1-RIVERBEND UNIT#1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04183	110.6159	ARCADIA - NORTHWEST 345KV CKT 1
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.21069	110.5961	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.21069	110.5961	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04358	110.4987	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04358	110.4987	PITTSBURG - SEMINOLE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04074	110.3486	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04074	110.3486	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04496	110.1793	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.1304	GEN509404 1-WELSH #1
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03998	110.0488	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03998	110.0488	PITTSBURG - SEMINOLE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	110.0333	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	110.0208	GEN300007 1-NEW MADRID UNIT 2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	110.0175	GEN509416 1-TURK GENERATION
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04074	109.9951	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04074	109.9951	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04309	109.9536	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04214	109.9394	REDBUD - RIVERSIDE STATION 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04214	109.9394	REDBUD - RIVERSIDE STATION 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	109.8919	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	109.8447	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04170	109.7889	MINGO - RED WILLOW 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04170	109.7889	MINGO - RED WILLOW 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.7699	GEN335206 1-NELSON UNIT 6
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04564	109.6344	P12:138:WFEC:MSL03

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04231	109.5912	COMANCHE - LOCO 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.5353	GEN590011 2-ERCOT EQUIVALENCE
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	109.5111	GEN509403 1-PIRKEY GENERATION
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05390	109.4907	CIMARRON - MINCO 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04166	109.4866	ARCADIA - SEMINOLE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04238	109.4773	CORN TAP - NAPLESTP 138.00 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04323	109.4695	P12:138:AEPW:DUNCAN-4:L.E.S.-4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.4457	GEN590010 1-ERCOT EQUIVALENCE
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.4059	GEN300006 1-NEW MADRID UNIT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04238	109.4009	NAPLESTP 138.00 - PAYNE 138.00 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	109.4	HEALDTON - LOCO 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04322	109.3707	COMANCHE TAP - OMPA-DUNCAN 840 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	109.3124	HEALDTON - RINGLING 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04184	109.2618	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04184	109.2618	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04184	109.2618	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04184	109.2618	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	109.249	RINGLING - SOUTH WILSON 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	109.1804	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.1725	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.1709	GEN501813 1-RODEMACHER UNIT 3
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	109.1588	WEBRE - WELLS 500KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	109.1336	MARIETTA - SOUTH WILSON 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.1276	GEN501812 1-RODEMACHER UNIT 2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	109.1118	P12:138:WFEC:MSL17
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04245	109.104	ANADARKO - POCASSETT 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04195	109.0791	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04322	109.0758	DUNCAN - OMPA-DUNCAN 840 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04322	109.0758	DUNCAN - OMPA-DUNCAN 840 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.0718	GEN337652 1-WHITE BLUFF UNIT #1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04162	109.0487	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04162	109.0487	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.0458	GEN337653 1-WHITE BLUFF UNIT #2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04245	109.0407	POCASSETT - TUTTLE 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	109.0234	GEN506754 1-LEBROCK STEAM 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04398	109.0119	LAWTON EASTSIDE (LES 5) 345/138/13.8KV TRANSFORMER CKT 2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04398	109.0119	LAWTON EASTSIDE (LES 5) 345/138/13.8KV TRANSFORMER CKT 2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	108.9971	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04198	108.9683	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04198	108.9682	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04174	108.9441	MINGO - SETAB 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04174	108.9441	MINGO - SETAB 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04192	108.9295	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.9136	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04195	108.909	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04245	108.8938	BRIDGECR 138.00 - TUTTLE 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.8882	GEN515040 1-SEMINOLE 1G
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04184	108.8804	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04933	108.8724	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04192	108.8617	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04195	108.8463	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04245	108.8182	P12:138:WFEC:MSL01
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04220	108.8152	CIVIT - PAOLI 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04245	108.794	BRIDGECR 138.00 - SUNSHINE CANYON 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04173	108.7937	CANADIAN - NOBLE 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04175	108.7914	P12:138:OKGE:3TERM27
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04128	108.7907	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04128	108.7907	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04468	108.776	P12:138:AEPW:S.W.S.-4:L.E.S.-4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04220	108.767	CIVIT - STRATFORD 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.7655	GEN587433 1-G16-063-GEN10.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04173	108.7526	NOBLE - PURCELL4 138.00 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04220	108.725	OIL CENTER - STRATFORD 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	108.7053	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04236	108.6975	P12:138:AEPW-OGE:CORNVIL4:MAUD 4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	108.6857	ELDORADO EHV - SHERIDAN EHV 500KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.6843	FRONTIER - GRIMES 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04187	108.681	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04187	108.681	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04236	108.6713	BLANCHARD - CORNVILLE 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04220	108.6605	LATTA JCT - OIL CENTER 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	108.6427	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	108.6427	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	108.6375	P12:138:AEPW:REDROCKRD4:WTH_JCT4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04192	108.6357	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04181	108.6267	PARK LANE - SEMINOLE 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.6201	GEN334440 1-SABINE UNIT 4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	108.6186	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04210	108.6142	TUPELO - TUPELO TAP 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04198	108.6061	DRAPER LAKE - SEMINOLE 345KV CKT 2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04198	108.606	DRAPER LAKE - SEMINOLE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04182	108.6051	HOLCOMB - SETAB 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04182	108.6051	HOLCOMB - SETAB 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	108.595	MARIETTA - MARIETTA4 138.00 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	108.5947	HINTON - WEATHERFORD JCT. 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04236	108.5789	BLANCHARD - MAUD 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.5762	GEN505432 1-SIKESTON
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	108.5662	HINTON - REDROCKRD4 138.00 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.5529	GEN334030 1-FRONTIER UNIT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.5491	GEN334031 1-FRONTIER UNIT 2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.5435	GEN506752 1-LEBROCK GAS 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.5434	GEN506753 1-LEBROCK GAS 2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.5426	GEN515223 1-MUSKOGEE 4G
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	108.5331	G14_001T 345.00 - WICHITA 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04173	108.5321	PURCELL4 138.00 - WALNUT CREEK 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04216	108.5172	GRACEMONT (GRCMNT1) 345/138/13.8KV TRANSFORMER CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04220	108.4989	LASALLE - LATTA JCT 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	108.4977	ELDORADO EHV - MOUNT OLIVE 500KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04201	108.4942	P12:138:AEPW:WTHWF4:CLINTJC4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.4774	GEN335204 1-NELSON UNIT 4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04236	108.4773	BAILEY4 138.00 - SUNSHINE CANYON 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.4581	GEN336170 1-GULF OXY U4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.4564	GEN509394 1-FLINT CREEK
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	108.4537	GEN509404 1-WELSH #1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	108.4536	GEN509406 1-WELSH #3
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	108.4365	PAOLI - PAYNE 138.00 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04220	108.4342	LASALLE - STONEWAL LH138.00 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	108.434	P12:138:WFEC:MSL02
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.4251	GEN336252 1-NINEMILE POINT UNIT#5
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.4202	GEN338146 1-INDEPENDENCE UNIT #2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	108.4191	ENVILLE 138.00 - MARIETTA4 138.00 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04220	108.4178	STONEWAL LH138.00 - TUPELO TAP 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04236	108.4176	BAILEY4 138.00 - WESTMOORE 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04228	108.4175	G15063_T 345.00 - WOODRING 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.4102	GEN515577 1-ARBWND11 0.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.4082	GEN562783 1-G15036_4 0.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.4082	GEN562784 1-G15036_5 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04128	108.3752	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	108.3698	ENVILLE 138.00 - LEBANON 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.3565	GEN336831 1-BAXTER WILSON SES
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04236	108.3521	FRANKLIN SW - WESTMOORE 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04270	108.3384	P12:138:AEPW:CORNVIL4:DUNCAN-4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04201	108.3205	P12:138:AEPW:WTHWF4:WTH_SE4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04206	108.3119	ANADARKO - GEORGIA 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04214	108.3095	P12:138:AEPW:SHERID4:112GORE4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04191	108.2814	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04206	108.2806	FLETCHER - GEORGIA 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.273	GEN338143 1-INDEPENDENCE UNIT #1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04173	108.2573	PAOLI - WALNUT CREEK 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04198	108.2567	P12:138:OKGE-AEPW:JENSEN4:REDROCKRD4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04220	108.2554	P12:138:WFEC:MSL05
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	108.2519	EMPIRE - FLETCHER 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	108.2431	LEBANON - TEXOMA JCT 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04301	108.2366	LAWTON EASTSIDE (LES 4) 345/138/13.8KV TRANSFORMER CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04301	108.2366	LAWTON EASTSIDE (LES 4) 345/138/13.8KV TRANSFORMER CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04228	108.2294	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04201	108.2196	WEATHERFORD TAP - WEATHERFORD WIND FARM 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	108.2152	COMANCHE - EMPIRE 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04230	108.2134	CIMARRON - NORTHWEST 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	108.1886	LAYFLD8 500.00 - MOUNT OLIVE 500KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04201	108.1834	WEATHERFORD SOUTHEAST - WEATHERFORD TAP 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.1788	GEN334441 1-SABINE UNIT 5
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.1743	GEN335614 1-WILLOW GLENN UNIT#4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.1657	GEN337041 1-GERALD ANDRUS
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	108.1631	DRAPER LAKE - SEMINOLE 345KV CKT 3
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.1584	GEN336191 1-LITTLE GYPSY UNIT#3
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.1569	GEN334392 1-EXXON MOBIL IPP 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	108.1566	ANADARKO - GRACMNT4 138.00 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04227	108.1557	DUNCAN (DUNCAN) 138/69/13.8KV TRANSFORMER CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04227	108.1557	DUNCAN (DUNCAN) 138/69/13.8KV TRANSFORMER CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.1432	GEN334393 1-EXXON MOBIL IPP 2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.1432	GEN334394 1-EXXON MOBIL IPP 3
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.1426	GEN336464 1-MICHOUD UNIT #3
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04209	108.1332	FRANKLIN - FRANKLIN SW 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.1182	GEN334433 1-SABINE UNIT 3
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.1177	P12:69:AEPW:L.E.S.-2:LAW WC2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.1108	GEN303007 1-1BC2 U2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04208	108.11	GRDA1 - GREC TAP5 345.00 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.106	P12:230:AEPW:ELKCITY6:SWEETWT6
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04203	108.1028	MCADAMS - WOLF CREEK 500KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.1027	P12:161:AEPW:DYESS 5:HYLAND 5
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.1017	GEN303006 1-1BC2 U1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04213	108.0986	P12:138:AEPW:112GORE4:L.E.S.-4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04213	108.0955	P12:138:AEPW:CORNVIL4:S.W.S.-4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04201	108.0949	CLINTON JUNCTION - CLINTON NATURAL GAS TAP 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.0948	GEN336242 1-1NMIL ST1 18.000
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	108.0861	MOREWOOD SW - NINE MILE 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04209	108.0755	FRANKLIN - PINK SW 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.074	GEN336801 1-BAXTER WILSON UNIT #1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.0738	P12:161:AEPW:EROGERS5:ECNTRTN5
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	108.0691	HOT SPRINGS EHV - MAGNET COVE 500KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	108.0671	MAGNET COVE - SHERIDAN EHV 500KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04227	108.0615	P12:69:WFEC-AEPW:COMANCH2:DUNCAN-2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.0589	GEN336251 1-NINEMILE POINT UNIT#4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04206	108.0582	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	108.0569	7SAREPTA% 345.00 - ELDORADO EHV 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	108.0522	ELDORADO EHV 500/345KV TRANSFORMER CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04196	108.0511	3TR3AR8EL7EL
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04203	108.0441	CIMARRON - SARA 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04203	108.0359	BLACKBERRY - NEOSHO 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	108.0351	G16-061-TAP 345.00 - SOONER 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04227	108.0285	DUNCAN - TOSCO 69KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.0272	GEN334070 1-LEWIS CREEK 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.0272	GEN334071 1-LEWIS CREEK 2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04185	108.027	SEMINOLE - VANOSTP4 138.00 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.0186	GEN599951 1-PSCO LAMAR DC TIE
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04215	108.0178	NORGE ROAD - SOUTHWESTERN STATION 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04215	108.0178	NORGE ROAD - SOUTHWESTERN STATION 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	108.0153	LAKEOVER - MCADAMS 500KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04227	108.0147	COMANCHE TAP - TOSCO 69KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	108.0108	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04270	108.0031	DUNCAN - DUNCHERTP4 138.00 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04270	108.003	DUNCAN - DUNCHERTP4 138.00 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.0024	GEN336240 1-1NMIL CT1 18.000
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.0024	GEN336241 1-1NMIL CT2 18.000
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.0021	GEN337430 1-PERYVILLE UNIT #3
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04270	108.002	DUNCAN EASTSIDE - DUNCHERTP4 138.00 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	108.0012	GEN337428 1-PERYVILLE UNIT #1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04198	108.0005	Canadian Pump Station - REDROCKRD4 138.00 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04203	107.9962	SARA - STHLAKE4 138.00 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.992	GEN335571 1-CARVILLE UNIT #1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.9919	GEN335570 1-CARVILLE CTG
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04209	107.9915	HIGHLAND - PINK SW 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04203	107.9836	MCCLAIN - STHLAKE4 138.00 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.9817	GEN336167 1-GULF OXY U1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.9817	GEN336168 1-GULF OXY U2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.9817	GEN336169 1-GULF OXY U3
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	107.978	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04270	107.9733	DUNCAN EASTSIDE - OMPA-DUNCAN 821 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.9678	GEN303024 1-1G3INTHB 18.000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04209	107.9669	CHISNEY - HIGHLAND 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.9612	CIMARRON - CZECH HALL 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04215	107.9564	CORNVILLE - NORGE ROAD 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04215	107.9563	CORNVILLE - NORGE ROAD 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04212	107.9544	CANEY CREEK - TEXOMA JCT 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04222	107.9529	NORTHWEST - SPRING CREEK 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04227	107.9517	COMANCHE - COMANCHE TAP 69KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04236	107.9502	P12:69:AEPW-OMPA:COMANC-2:OMWALTR2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.9479	GEN303008 1-1BC2 U3
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04209	107.9469	CHISNEY - CLARKSVILLE 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04222	107.9426	SOONER - SPRING CREEK 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.9422	GEN335644 1-EXXON UNIT5
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.9369	GEN337432 1-PERYVILLE UNIT #5
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.928	GEN501811 1-RODEMACHER UNIT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04213	107.9275	SOUTHWESTERN STATION - VERDEN 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.9246	GEN335201 1-NELSON UNIT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04209	107.9228	CLARKSVILLE - HAZEL JCT 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04220	107.9169	WALTERS - WALTERS 69KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04213	107.9158	NORTH 29TH CHICKASHA - VERDEN 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04209	107.9099	HAZEL JCT - UNITED CLAY 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.909	CZECH HALL - XEROX 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.9074	MORGAN - XEROX 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.8986	MORGAN - MUSTANG 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04209	107.8927	UNITED CLAY - WEWOKA 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04236	107.8681	COMANCHE - LAWTON EASTSIDE 69KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04236	107.868	COMANCHE - LAWTON EASTSIDE 69KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	107.8097	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	107.8068	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	107.8068	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04210	107.7944	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.7316	OKLAUNION 345/13.2KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	107.7018	GEN520947 1-HUGO1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04213	107.6169	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	107.5315	GEN501801 1-DOLET HILLS UNIT1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.4789	803-OKLAUNION
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04259	107.3291	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04259	107.3102	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04338	107.1941	P12:138:AEPW:112GORE4:SNYDER-4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.1655	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04253	107.1569	P12:69:WFEC-AEPW:RUSSELL2:LAKEP2WT
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04253	107.1184	CHILDRESS - LAKE PAULINE 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04253	107.1184	CHILDRESS - LAKE PAULINE 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.092	GEN514805 1-SOONER UNIT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04192	107.0879	ROCKY POINT - SPRINGDALE 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.0872	GEN563273 2-G15093_4 0.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04233	107.073	P12:138:AEPW:SHAM4WT:CHILD4WT
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04147	107.0647	P12:138:OKGE:3TERM39
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04103	107.0614	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04103	107.0614	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.0566	GEN515443 1-MNCOWND1 0.7000
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04206	107.0459	P12:138:WFEC:MSL06
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04206	107.0452	P12:138:AEPW-SWPA:LONEOAK4:TUPELO4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04198	107.0406	BROWN - RUSSETT 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04338	107.0357	CACHE - SNYDER 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04198	107.0178	RUSSETT - RUSSETT 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04199	107.0077	LONGWOOD - WILKES 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04199	107.0077	LONGWOOD - WILKES 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.0023	GEN515393 1-OGEWND2G
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04203	107.0005	NORTHWEST TEXARKANA - WELSH 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04203	107.0005	NORTHWEST TEXARKANA - WELSH 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.9893	GEN514806 1-SOONER UNIT 2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.9852	GEN563202 1-G15085_3 0.5500
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04195	106.9847	RUSSETT - SPRINGDALE 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.9801	GEN563272 1-G15093_3 0.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.9787	GEN515449 1-CRSRDW11 0.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.9692	GEN562685 1-G15_013_3 0.3550
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.9676	GEN563062 1-G15071_3 0.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.9494	GEN562587 1-G14_056_3 0.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	106.947	CARROLL - DOLET HILLS 230KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	106.9414	P12:138:WFEC-AEPW:GOLDENSW4:CRAIGJT4

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04199	106.9287	HOPE - MCNAB REC 115KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04199	106.9194	MCNAB REC - Turk 115 115KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04199	106.9193	TURK (TURK 1) 138/115/13.2KV TRANSFORMER CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04199	106.9193	TURK (TURK 1) 138/115/13.2KV TRANSFORMER CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04199	106.9158	P12:115:AEPW:TURK3:HOPE3
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04257	106.9091	P12:138:AEPW:HOB-JCT4:ELKCTY-4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.8925	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04186	106.8879	ROCKY POINT - SUNNYSIDE 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.8832	GEN562802 1-G15039_3 0.3570
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	106.875	WELSH - WILKES 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	106.875	WELSH - WILKES 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04257	106.864	CLINTON AIR FORCE BASE TAP - HOBART JUNCTION 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.8606	GEN681542 6-JP MADGETT
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.8532	GEN344894 1-1LAB G1 20.000
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04257	106.8428	CLINTON AIR FORCE BASE TAP - ELK CITY 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.8422	GEN562812 1-G15040_3 0.3570
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.8409	GEN524485 1-CAPROCK WIND GEN
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.8389	GEN563132 1-G15078_3 0.3570
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.8353	GEN526678 1-CIRRUS_WND 10.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04209	106.8175	P12:138:WFEC:MSL16
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.8174	GEN562531 1-G14_033_3 0.3420
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.8174	GEN562535 1-G14_034_3 0.3420
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.8117	GEN562074 1-G1149G1504 0.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04179	106.8057	CHICKASAW - TOTAL 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04186	106.8054	P12:138:OKGE:3TERM40
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05838	106.779	GRACEMONT - MINCO 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04204	106.7663	KEO EHV - WEST MEMPHIS 500 500KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.7645	GEN661015 1-COYOTE
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	106.7609	PITTSBURG - VALLIANT 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	106.7609	PITTSBURG - VALLIANT 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	106.7591	DELL 500 - INDEPENDENCE 500KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.7535	GEN657748 1-YOUNG 2 GENERATOR
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04191	106.7523	CLARKSVILLE - MUSKOGEE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04191	106.7523	CLARKSVILLE - MUSKOGEE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.7205	GEN527882 1-CUNNINGHAM GEN #2 20 KV
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.7152	GEN511962 2-RKYRDGW2-1 0.7000
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04163	106.7129	ARDMORE WEST - CARTER 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.6907	GEN672306 6-BOUNDARY DAM GENERATOR 6
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04163	106.6678	ARDMORE WEST - UNIROYAL 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.6543	P12:138:WFEC:MSL09
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.6516	GEN562007 1-G11_025_3 0.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.6421	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.6331	GEN672310 1-POPLAR RIVER GENERATOR 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04116	106.6138	CANADIAN RIVER - MUSKOGEE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04355	106.6132	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	106.6114	CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.6044	GEN587013 1-G16-002-GEN10.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04202	106.6033	LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04163	106.5772	SUNNYSIDE - UNIROYAL 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.5757	GEN336821 1-GRAND GULF UNIT
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	106.5676	P12:138:WFEC:MSL15
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.5499	GEN523461 1-BLACKHAWK GEN #1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.5498	GEN523462 1-BLACKHAWK GEN #2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04200	106.5371	CROCKETT - GRIMES 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.5308	GEN587233 1-G16-037-GEN10.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.5287	GEN562704 1-G15_020_3 0.3550
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.527	GEN562699 1-G15_018_3 0.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.4892	GEN562942 1-G15056_3 0.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.4889	GEN521103 1-BLUE CANYON WIND FARM
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.4808	GEN587113 1-G16-015-GEN10.4180
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.4706	GEN525844 1-ELK_1 118.000
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.4558	GEN527161 1-MUSTANG GEN #1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.4557	GEN527162 1-MUSTANG GEN #2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.4359	GEN336153 1-WATERFORD UNIT#3
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.4357	GEN526331 1-JONES GEN #1 22 KV
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.4192	GEN524285 1-WILDORADO WIND GEN
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04161	106.3986	SUNNYSIDE (SUNNYSD5) 345/138/13.8KV TRANSFORMER CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.3964	GEN560183 1-REDHIL-WTG1 12.000
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.3917	GEN526332 1-JONES GEN #2 21 KV
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04213	106.3907	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.3834	GEN562710 1-G15_022_3 0.5500
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.382	GEN563263 1-G15092_4 0.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.3817	GEN600006 1-AS KING
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.3814	GEN587253 1-G16-039-GEN10.5500
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04355	106.3321	G15066_T 345.00 - SOONER 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.2967	GEN527163 1-MUSTANG GEN #3 22 KV
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04213	106.2626	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.2484	GEN524295 1-SPNSPUR_WND10.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.2424	GEN620315 1-BIG STONE GEN
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.174	GEN563142 1-G15079_3 0.5500
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.174	GEN563151 1-G15080_2 0.5500
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04355	106.149	917X
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04198	106.1316	DOLET HILLS 345/230KV TRANSFORMER CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.1304	GEN562756 1-G15031_7 0.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.1221	GEN600004 2-PRAIRIE ISLAND G2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.1198	GEN600003 1-PRAIRIE ISLAND G1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.096	GEN335831 1-RIVERBEND UNIT#1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.0847	GEN563262 1-G15092_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	106.0559	GEN509409 1-WILKES #3
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	106.0093	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.9949	GEN562483 1-G13_027_3 0.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.9905	GEN636641 1-LOUISA UNIT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.9649	GEN562688 1-G15_014_3 0.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.948	GEN635213 3-NEAL UNIT 3
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.9212	GEN563042 1-G15068_3 0.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.9097	GEN600000 1-SHERBURNECNTY G1
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04545	105.9095	BASE CASE
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04488	105.8655	P12:138:AEPW:DUNCAN-4:L.E.S.-4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04192	105.8644	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04192	105.8644	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
2	17SP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.15885	105.8511	BASE CASE
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04164	105.826	JOHNSON COUNTY (JOHNCO) 345/138/13.8KV TRANSFORMER CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.8055	GEN600005 1-MONTICELLO
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.7921	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.7912	GEN600001 2-SHERBURNE CNTY G2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.7892	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04392	105.7818	COMANCHE - LOCO 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04328	105.7817	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04328	105.7817	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04328	105.7817	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04328	105.7817	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04400	105.7436	CORN TAP - NAPLESTP 138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04487	105.7322	COMANCHE TAP - OMPA-DUNCAN 840 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.6967	GEN563043 1-G15068_4 0.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.6951	GEN527901 1-HOBBS PLANT #1 (CT)
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.6951	GEN527902 1-HOBBS PLANT #2 (CT)
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04400	105.6651	NAPLESTP 138.00 - PAYNE 138.00 138KV CKT 1
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04484	105.6536	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.6519	GEN615002 2-COAL CREEK
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04406	105.6514	ANADARKO - POCASSETT 138KV CKT 1
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04115	105.6202	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.6042	GEN344225 1-1CAL G1 25.000
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.5663	GEN635214 4-NEAL UNIT 4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04406	105.5427	POCASSETT - TUTTLE 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.5194	GEN600002 3-SHERBURNE CNTY G3
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5183	GEN300006 1-NEW MADRID UNIT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.5035	GEN300007 1-NEW MADRID UNIT 2
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04186	105.4417	BASE CASE
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04186	105.4417	BASE CASE
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04104	105.4351	CANADIAN RIVER - PITTSBURG 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04104	105.4351	CANADIAN RIVER - PITTSBURG 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.396	GEN335206 1-NELSON UNIT 6
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.3955	GEN587393 1-G16-058-GEN10.5500
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.389	GEN523972 1-HARRINGTON GEN #2 24 KV
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.3885	GEN523971 1-HARRINGTON GEN #1 24 KV
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.3884	GEN523973 1-HARRINGTON GEN #3 24 KV
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	105.3783	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04358	105.357	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04358	105.357	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04487	105.3427	DUNCAN - OMPA-DUNCAN 840 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04487	105.3427	DUNCAN - OMPA-DUNCAN 840 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04269	105.338	CANADIAN RIVER - MUSKOGEE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.3376	GEN509408 1-WILKES #2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04187	105.3285	LYDIA - WELSH 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04187	105.3285	LYDIA - WELSH 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04406	105.2761	BRIDGECR 138.00 - TUTTLE 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	105.2671	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04328	105.2635	ARCADIA - SEMINOLE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.2398	GEN562655 1-G14_074_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04373	105.2099	HEALDTON - LOCO 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.1984	GEN527166 1-MUSTANG_6 118.000
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04361	105.1864	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04361	105.1864	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04375	105.1518	P12:138:AEPW:SHERID4:112GORE4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	105.1494	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04406	105.0985	BRIDGECR 138.00 - SUNSHINE CANYON 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.093	GEN590011 2-ERCOT EQUIVALENCE
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04406	105.0897	P12:138:WFEC:MSL01
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04373	105.0662	HEALDTON - RINGLING 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	105.0164	GEN562590 1-G14_057_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	105.0129	GEN590010 1-ERCOT EQUIVALENCE
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04373	104.9747	RINGLING - SOUTH WILSON 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	104.9678	GEN635023 3-WALTER SCOTT UNIT 3
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	104.9479	GEN562269 1-G12-020-1 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04449	104.9344	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.9333	DOLET HILLS 345/24.0KV TRANSFORMER CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	104.9184	GEN587423 1-G16-062-GEN10.6900
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	104.9123	GEN527903 1-HOBBS PLANT #3 (ST)
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.9044	GEN509393 S1-ARSENAL HILL GENS #4 (STALL)
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.8648	GEN501813 1-RODEMACHER UNIT 3
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04338	104.8504	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04338	104.8504	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.8449	P12:69:AEPW:L.E.S.-2:LAW WC2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.8349	GEN515226 1-MUSKOGEE 6G
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	104.826	GEN587373 1-G16-056-GEN10.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.8229	GEN501812 1-RODEMACHER UNIT 2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04346	104.8173	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04346	104.8173	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04569	104.8024	LAWTON EASTSIDE (LES 5) 345/138/13.8KV TRANSFORMER CKT 2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04569	104.8023	LAWTON EASTSIDE (LES 5) 345/138/13.8KV TRANSFORMER CKT 2
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	104.8023	GEN562270 1-G12-020-2 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04373	104.7902	MARIETTA - SOUTH WILSON 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.7877	GEN506754 1-LEBROCK STEAM 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04350	104.7674	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.7663	P12:161:AEPW:DYESS 5:HYLAND 5
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04375	104.761	P12:138:AEPW:112GORE4:L.E.S.-4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04352	104.7404	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04342	104.7318	PARK LANE - SEMINOLE 138KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	104.7257	GEN562762 1-G15033_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04373	104.7227	P12:138:WFEC:MSL17
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04379	104.7128	REDBUD - RIVERSIDE STATION 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04379	104.7128	REDBUD - RIVERSIDE STATION 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04350	104.6984	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.6964	GEN509392 G2-ARSENAL HILL GENS #3 (STALL)
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.6786	GEN509391 G1-ARSENAL HILL GENS #2 (STALL)
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.6774	GEN515223 1-MUSKOGEE 4G
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.6773	GEN515225 1-MUSKOGEE 5G
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04356	104.6706	7SAREPTA% 345.00 - ELDORADO EHV 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04356	104.6703	3TR3AR8EL7EL
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04356	104.6689	ELDORADO EHV 500/345KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04398	104.634	P12:138:AEPW-OGE:CORNVIL4:MAUD 4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.6225	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.6194	GEN503909 1-FULTONU1 1 16.000
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05390	104.6043	GRACEMONT - MINCO 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04396	104.6026	BAILEY4 138.00 - SUNSHINE CANYON 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.5922	GEN337653 1-WHITE BLUFF UNIT #2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.5888	GEN334440 1-SABINE UNIT 4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	104.5881	P12:138:WFEC:MSL02
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	104.5811	GEN635024 4-WALTER SCOTT UNIT 4
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	104.5683	GEN560105 1-G08-22 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.562	GEN587433 1-G16-063-GEN10.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04398	104.5564	BLANCHARD - CORNVILLE 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04433	104.5516	P12:138:AEPW:CORNVIL4:DUNCAN-4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	104.5283	CIVIT - PAOLI 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.5236	FRONTIER - GRIMES 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.5167	GEN337652 1-WHITE BLUFF UNIT #1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04353	104.5087	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04353	104.5087	WEATHERFORD JCT. - WEATHERFORD SOUTHEAST 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04367	104.4967	ANADARKO - GEORGIA 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04396	104.4956	BAILEY4 138.00 - WESTMOORE 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04350	104.4768	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04353	104.4709	P12:138:AEPW:REDROCKRD4:WTH_JCT4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	104.4706	ELDORADO EHV - MOUNT OLIVE 500KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04354	104.4633	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	104.4533	GEN562550 1-G14_040_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	104.4463	CIVIT - STRATFORD 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05438	104.439	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04367	104.4351	FLETCHER - GEORGIA 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	104.4231	P12:138:AEPW:WTHWF4:CLINTJC4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04362	104.4222	WEBRE - WELLS 500KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.4212	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04178	104.4102	LYDIA - VALLIANT 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04178	104.4102	LYDIA - VALLIANT 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	104.4006	P12:138:AEPW:WTHWF4:WTH_SE4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	104.3888	PAOLI - PAYNE 138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04353	104.3872	HINTON - WEATHERFORD JCT. 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.3806	P12:161:AEPW:DYESS5:ELMSPRNG:TONTITN5
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	104.3764	OIL CENTER - STRATFORD 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04396	104.3752	FRANKLIN SW - WESTMOORE 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.373	P12:138:AEPW:CATOOSA4:T.S.E.-4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04398	104.3609	BLANCHARD - MAUD 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.3609	GEN334030 1-FRONTIER UNIT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.3589	GEN506752 1-LEBROCK GAS 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.3589	GEN506753 1-LEBROCK GAS 2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.3581	GEN334031 1-FRONTIER UNIT 2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.3473	GEN336252 1-NINEMILE POINT UNIT#5
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.3415	GEN335204 1-NELSON UNIT 4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04326	104.3324	MINGO - RED WILLOW 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04326	104.3324	MINGO - RED WILLOW 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04353	104.3282	HINTON - REDROCKRD4 138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	104.328	EMPIRE - FLETCHER 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04354	104.3246	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04374	104.3181	P12:138:AEPW:CORNVIL4:S.W.S.-4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04354	104.3042	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04367	104.2949	8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	104.2875	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.2772	P12:161:AEPW:EROGERS5:ECNTRTN5
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	104.2743	COMANCHE - EMPIRE 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	104.2645	LATTA JCT - OIL CENTER 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04336	104.2641	P12:138:OKGE:3TERM27
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.2638	GEN303007 1-1BC2 U2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	104.2629	ELDORADO EHV - SHERIDAN EHV 500KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04337	104.2533	HOLCOMB - SETAB 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04337	104.2533	HOLCOMB - SETAB 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04372	104.2516	TUPELO - TUPELO TAP 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04334	104.2475	CANADIAN - NOBLE 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04329	104.2315	MINGO - SETAB 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04329	104.2315	MINGO - SETAB 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.2215	GEN505432 1-SIKESTON
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	104.221	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.21	GEN336831 1-BAXTER WILSON SES
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04389	104.2093	DUNCAN (DUNCAN) 138/69/13.8KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04389	104.2093	DUNCAN (DUNCAN) 138/69/13.8KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.2038	GEN562783 1-G15036_4 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.2038	GEN562784 1-G15036_5 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.195	GEN303008 1-1BC2 U3
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04353	104.1858	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.1837	GEN334441 1-SABINE UNIT 5
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08084	104.1717	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08084	104.1717	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.1689	GEN336170 1-GULF OXY U4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.1685	WHITE BLUFF 500/26.0KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.1643	P12:138:AEPW:N.E.S.-4:CATOOSA4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04334	104.161	NOBLE - PURCELL4 138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	104.1565	WEATHERFORD TAP - WEATHERFORD WIND FARM 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	104.1515	G14_001T 345.00 - WICHITA 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.1384	GEN515577 1-ARBWND11 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.1351	GEN300010 1-ST FRANCIS UNIT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04399	104.1276	P12:69:AEPW-OMPA:COMANC-2:OMWALTR2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04354	104.1188	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04320	104.1162	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04320	104.1162	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	104.1156	P12:230:AEPW:ELKCITY6:SWEETWT6
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04375	104.1113	NORGE ROAD - SOUTHWESTERN STATION 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04375	104.1113	NORGE ROAD - SOUTHWESTERN STATION 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0989	GEN501910 1-ACADIA UNIT ST1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0812	GEN300011 1-ST FRANCIS UNIT 2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0802	GEN334433 1-SABINE UNIT 3
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0743	NELSON 230/20.0KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	104.0683	WEATHERFORD SOUTHEAST - WEATHERFORD TAP 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0619	P12:161:AEPW-SWPA:BEAVER5:EROGERS5
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04356	104.0618	P12:138:OKGE-AEPW:JENSEN4:REDROCKRD4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0582	8CAJUN2 500/24.0KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0579	GEN336251 1-NINEMILE POINT UNIT#4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04354	104.0517	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.05	P12:138:AEPW:R.S.S.-4:S.HUD.-4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	104.0468	HOYT - STRANGER CREEK 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04378	104.0466	GRACEMONT (GRCMNT1) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	104.0459	LASALLE - LATTA JCT 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0445	GEN336191 1-LITTLE GYPSY UNIT#3
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0393	GEN335614 1-WILLOW GLENN UNIT#4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04389	104.0369	P12:69:WFEC-AEPW:COMANCH2:DUNCAN-2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	104.0352	LAYFLD8 500.00 - MOUNT OLIVE 500KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	104.0352	LAYFLD8 500.00 - MOUNT OLIVE 500KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0326	GEN509394 1-FLINT CREEK
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0242	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04467	104.0233	LAWTON EASTSIDE (LES 4) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04467	104.0233	LAWTON EASTSIDE (LES 4) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	104.0183	CLINTON JUNCTION - CLINTON NATURAL GAS TAP 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0175	GEN303006 1-1BC2 U1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0138	P12:138:AEPW:YARCH-S4:T.S.E.-4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	104.0098	HOT SPRINGS EHV - MAGNET COVE 500KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0093	P12:138:AEPW:BA_71ST4:T.S.E.-4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04352	104.0059	ARCADIA - NORTHWEST 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04346	104.0059	SEMINOLE - VANOSTP4 138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0038	GEN506749 1-EASTMAN GENERATION A
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	104.0034	GEN336464 1-MICHOUD UNIT #3
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9969	GEN337041 1-GERALD ANDRUS
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	103.9964	CIMARRON - SARA 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	103.9956	MC NIEL 500/115KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04433	103.9947	DUNCAN - DUNCHERTP4 138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04433	103.9947	DUNCAN - DUNCHERTP4 138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04433	103.9941	DUNCAN EASTSIDE - DUNCHERTP4 138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9876	CIMARRON - CZECH HALL 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9854	P12:69:AEPW:NROGERS2:ECNTRTN2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9846	GEN501811 1-RODEMACHER UNIT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04375	103.9806	CORNVILLE - NORGE ROAD 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04375	103.9806	CORNVILLE - NORGE ROAD 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9795	GEN505616 1-BROKEN BOW
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9755	P12:161:AEPW:CHAMSPR5:FARMING5
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	103.9753	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04415	103.9739	TUTTLE - TUTTLE CONOCO TAP 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9734	GEN511843 1-RIVERSIDE STATION #2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04389	103.9713	DUNCAN - TOSCO 69KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04374	103.9682	SOUTHWESTERN STATION - VERDEN 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04371	103.967	FRANKLIN - FRANKLIN SW 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9556	GEN334070 1-LEWIS CREEK 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9556	GEN334071 1-LEWIS CREEK 2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9509	GEN515040 1-SEMINOLE 1G
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04399	103.9486	G15063_T 345.00 - WOODRING 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04346	103.9485	BENTON - WICHITA 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04374	103.9458	NORTH 29TH CHICKASHA - VERDEN 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9447	GEN501970 1-EVANGELINE UNIT 7
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	103.9442	LASALLE - STONEWAL LH138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04362	103.9384	GRAND ISLAND - SWEETWATER 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04399	103.9351	LAWTON RELIFT TAP - OMPA-WALTERS 69KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9342	GEN334392 1-EXXON MOBIL IPP 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04389	103.9306	COMANCHE TAP - TOSCO 69KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9296	GEN336801 1-BAXTER WILSON UNIT #1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9293	GEN334393 1-EXXON MOBIL IPP 2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9293	GEN334394 1-EXXON MOBIL IPP 3
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	103.9286	STONEWAL LH138.00 - TUPELO TAP 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9251	GEN338146 1-INDEPENDENCE UNIT #2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04367	103.9237	CYPRESS - HARTBURG 500KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9232	FRONTIER 345/18.0KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9218	CZECH HALL - XEROX 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.921	FRONTIER 345/18.0KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9185	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.9184	MORGAN - XEROX 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04392	103.9157	CIMARRON - NORTHWEST 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	103.9148	8WNEWMADRID 500.00 - DELL 500 500KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	103.9136	G15088_T 345.00 - MOORE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	103.9081	WALTERS - WALTERS 69KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	103.906	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04415	103.8985	CIMARRON - TUTTLE CONOCO TAP 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8977	MORGAN - MUSTANG 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8929	GEN501971 1-EVANGELINE UNIT 7-1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04415	103.8887	CORNVILLE - TUTTLE 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8885	GEN515041 1-SEMINOLE 2G
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04433	103.8875	DUNCAN EASTSIDE - OMPA-DUNCAN 821 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04334	103.8823	PURCELL4 138.00 - WALNUT CREEK 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	103.882	CLINTON NATURAL GAS TAP - WEATHERFORD WIND FARM 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04373	103.8786	MARIETTA - MARIETTA4 138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04374	103.8775	CORNVILLE - NORTH 29TH CHICKASHA 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04327	103.8752	ARBUCKLE - VANOSTP4 138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04371	103.8729	FRANKLIN - PINK SW 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8702	RODEMACHER 230/22.0KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8683	GEN501912 1-ACADIA UNIT CT1B
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8675	GEN501911 1-ACADIA UNIT CT1A
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8655	GEN515266 1-AES 1G
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8655	GEN515267 1-AES 2G
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.865	GEN515042 1-SEMINOLE 3G
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8639	P12:138:AEPW:R.S.S-4:T.P.S.-4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	103.859	FULTON 115 - HOPE 115KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	103.859	FULTON 115 - HOPE 115KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04389	103.8563	COMANCHE - COMANCHE TAP 69KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04372	103.8563	ANADARKO - SEQUOYAHJ4 138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04362	103.8554	AXTELL - PAULINE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8546	GEN336242 1-1NMIL ST1 18.000
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04372	103.8516	CORN TAP - SEQUOYAHJ4 138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	103.8479	BLACKBERRY - NEOSHO 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04369	103.845	P12:138:OKGE:3TERM12
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8434	P12:138:AEPW:R.S.S.-4:R:96YALE-4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04399	103.8425	OMPA-WALTERS - WALTERS 69KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04399	103.8425	OMPA-WALTERS - WALTERS 69KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.841	SABINE 230/24.0KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	103.8407	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8401	GEN300015 1-1SGPDEL 18.000
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8385	P12:138:AEPW:MOHAWK4:T.NO--4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	103.8383	P12:69:WFEC-AEPW:COMANCH2:WALTRS-2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8348	7JASPER 345.00 - MORGAN 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04362	103.8333	BISMARK - HOT SPRINGS WEST BUS 115KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	103.8299	SWISSVALE - WEST GARDNER 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	103.8266	ETTA (DUKE HOTSPRINGS) - MC NIEL 500KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04356	103.8255	Canadian Pump Station - REDROCKRD4 138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	103.8229	SARA - STHLAKE4 138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.821	ST FRANCIS - ST FRANCIS 1 161KV CKT Z1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	103.8159	G15088_T 345.00 - PAULINE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8125	GEN337766 1-TRACTEBEL UNIT S1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.8079	GEN501972 1-EVANGELINE UNIT 7-2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04415	103.8048	P12:138:AEPW-OGE:CORNVIL4:CIMARON4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	103.7995	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04362	103.7978	P12:138:AEPW:OKMULGE4:R.S.S-4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	103.7959	MCCLAIN - STHLAKE4 138.00 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.7911	GEN338143 1-INDEPENDENCE UNIT #1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04399	103.7869	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04362	103.7853	ALPINE AECC - BISMARK 115KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.773	GEN337430 1-PERYVILLE UNIT #3
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.7721	GEN337428 1-PERYVILLE UNIT #1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.7719	GEN336240 1-1NMIL CT1 18.000
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.7719	GEN336241 1-1NMIL CT2 18.000
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.7717	GEN334432 1-SABINE UNIT 2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.7715	GEN334431 1-SABINE UNIT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	103.7641	SEMINOLE (SEMINOL2) 345/138/14.4KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04369	103.7626	P12:138:OKGE:3TERM47
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04369	103.7415	LACYGNE - STILWELL 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04381	103.7396	COMANCHE - WALTERS 69KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04371	103.7334	HIGHLAND - PINK SW 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04358	103.7045	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04358	103.6995	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04358	103.6995	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04374	103.6644	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04369	103.5748	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.3805	OKLAUNION 345/13.2KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.3061	803-OKLAUNION
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04426	103.1599	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04426	103.1489	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	103.0067	P12:138:AEPW:SHAM4WT:CHILD4WT
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04417	102.994	CHILDRESS - LAKE PAULINE 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04417	102.9939	CHILDRESS - LAKE PAULINE 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04510	102.9901	CACHE - SNYDER 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	102.9872	CHILDRESS - HOLLIS TAP 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04372	102.9732	ELK CITY (ELKCTY-4) 138/69/13.8KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04372	102.9732	ELK CITY (ELKCTY-4) 138/69/13.8KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04377	102.9641	HOBART JUNCTION - OMPA-ALTUS TAMARACK 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04377	102.9641	HOBART JUNCTION - OMPA-ALTUS TAMARACK 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	102.9539	SHAMROCK - WELLINGTON 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	102.9479	SHAMROCK (SHAMRCK2) 138/69/14.4KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	102.9479	SHAMROCK (SHAMRCK2) 138/69/14.4KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	102.8981	CARTER - CHICKASAW 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	102.897	GLASSES - RUSSETT 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.8944	GEN563273 2-G15093_4 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	102.8944	CANEY CREEK - JOHNSON COUNTY 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	102.8894	P12:138:OKGE:3TERM41
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	102.8649	MCLEAN RURAL SUB - SHAMROCK 115KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	102.8649	MCLEAN RURAL SUB - SHAMROCK 115KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	102.8644	SHAMROCK (SHAMRCK1) 115/69/14.4KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	102.8644	SHAMROCK (SHAMRCK1) 115/69/14.4KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	102.8604	P12:115:SPS:T54.1.KIRBY.SHM(520)
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	102.8604	P12:115:SPS-AEPW:KIRBY3:SHAM3WT
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.851	GEN515443 1-MNCOWND1 0.7000
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04373	102.8454	CANEY CREEK - TEXOMA JCT 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04420	102.8445	P12:138:AEPW:HOB-JCT4:ELKCTY-4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	102.8366	LONGWOOD - WILKES 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	102.8366	LONGWOOD - WILKES 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	102.8286	KIRBY SWITCHING STATION - MCCLELLAN SUB 115KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	102.8266	NORTHWEST TEXARKANA - WELSH 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	102.8266	NORTHWEST TEXARKANA - WELSH 345KV CKT 1
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04545	102.8259	GEN587433 1-G16-063-GEN10.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04395	102.8248	MCCLELLAN SUB - MCLEAN RURAL SUB 115KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.8166	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.8164	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04352	102.81	ROCKY POINT - SPRINGDALE 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04355	102.8093	RUSSETT - SPRINGDALE 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.8083	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.8081	GEN672303 3-BOUNDARY DAM GENERATOR 3
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.8081	GEN672304 4-BOUNDARY DAM GENERATOR 4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.8081	GEN672305 5-BOUNDARY DAM GENERATOR 5
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04371	102.8028	P12:138:WFEC:MSL10
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.8028	GEN520998 1-MORLND3

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.8025	GEN520997 1-MORLND2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.8022	GEN600011 5-BLACK DOG GEN 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.794	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.7924	GEN563202 1-G15085_3 0.5500
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	102.7885	BROWN - RUSSETT 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	102.7879	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	102.7879	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	102.7864	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	102.7864	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.7837	GEN615052 1-CAMBRIDGE GENERATING STATION
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.7824	GEN563272 1-G15093_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.7809	GEN562685 1-G15_013_3 0.3550
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.7782	GEN562432 1-G13-030 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04361	102.7769	DELAWARE - NORTHEAST STATION 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04361	102.7769	DELAWARE - NORTHEAST STATION 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.7755	GEN600070 9-RIVER SIDE
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.7754	GEN600071 10-RIVER SIDE
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.772	GEN672392 1-NBECGT1G 18.000
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.769	GEN600007 7-RIVERSIDE GEN 7
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.7658	GEN563062 1-G15071_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.7643	BURLINGTON NO1 + NO 2 + NO 3 161/20.0KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.7632	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.7625	GEN562017 1-G11_022_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.7613	GEN600014 4-BLACK DOG GEN 4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04359	102.7588	RUSSETT - RUSSETT 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.7579	GEN615021 1-GRE-ER 14G 16.000
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04420	102.743	CLINTON AIR FORCE BASE TAP - HOBART JUNCTION 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.7372	GEN562587 1-G14_056_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.7346	GEN629070 2-BEAVER CHANNEL GENERATORFOR UNIT NO 2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04325	102.7297	CARTRCO4 138.00 - RATLIFF 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04420	102.7079	CLINTON AIR FORCE BASE TAP - ELK CITY 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.688	P12:161:GRDA:KERR-SALINA-CKT1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.688	P12:161:GRDA:KERR-SALINA-CKT2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.6847	GEN563132 1-G15078_3 0.3570
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.6806	GEN562802 1-G15039_3 0.3570
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.6584	INDEPENDENCE 500/26.0KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	102.6429	8BHAM STEEL 500.00 - WEST MEMPHIS 500 500KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	102.6364	OVEXFRMCCOVE
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	102.6277	7MCCREDIE 345.00 - 7MONTGMRY 345.00 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.6276	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.6253	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.6203	GEN526678 1-CIRRUS_WND 10.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.6098	GEN562531 1-G14_033_3 0.3420
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.6098	GEN562535 1-G14_034_3 0.3420
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.6085	GEN524021 1-NICHOLS GEN #1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.6082	GEN524485 1-CAPROCK WIND GEN
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.6016	GEN615010 1-STANTON4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04307	102.5951	P12:138:OKGE:3TERM39
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	102.594	P12:138:WFEC:MSL07
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	102.594	P12:138:WFEC-AEPW:HUGOPP4:ATOKA--4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	102.5868	CROCKETT - TENASKA RUSK COUNTY 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.5828	GEN562074 1-G1149G1504 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04363	102.5793	LEBROCK - TENASKA RUSK COUNTY 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04367	102.5711	P12:138:WFEC:MSL06
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04367	102.5709	P12:138:AEPW-SWPA:LONEOAK4:TUPELO4
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04186	102.5682	GEN587433 1-G16-063-GEN10.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04346	102.5494	P12:138:OKGE:3TERM40
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04346	102.5353	ROCKY POINT - SUNNYSIDE 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.5346	GEN520812 1-ANADRK5
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.5344	GEN520813 1-ANADRK6
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.5212	GEN514805 1-SOONER UNIT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04366	102.52	DELL 500 - INDEPENDENCE 500KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04340	102.518	CHICKASAW - TOTAL 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.5103	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.5085	GEN511962 2-RKYRDGW2-1 0.7000
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04340	102.4908	SUNNYSIDE (SUNNYSD3) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.4885	GEN345670 1-1RUSH G1 18.000
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	102.4874	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.4704	GEN524285 1-WILDORADO WIND GEN
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.461	GEN657749 1-YOUNG 1 GENERATOR

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.4399	GEN528361 1-MADDOX GEN #1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.4165	GEN562007 1-G11_025_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04370	102.4126	P12:138:WFEC:MSL16
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04358	102.4121	DOLET HILLS 345/230KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.4062	GEN681522 3-GENOA 3
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.4043	GEN514806 1-SOONER UNIT 2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	102.3981	P12:138:WFEC-AEPW:GOLDENSW4:CRAIGJT4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.3879	GEN587013 1-G16-002-GEN10.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.3874	4SIOUX 1 138.00 138/18.0KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.3483	GEN587113 1-G16-015-GEN10.4180
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.3385	GEN531447 1-HOLCOMB GENERATOR
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.3182	GEN587233 1-G16-037-GEN10.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.3155	GEN344895 2-1LAB G2 20.000
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.3078	GEN527882 1-CUNNINGHAM GEN #2 20 KV
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.3011	GEN562704 1-G15_020_3 0.3550
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.2983	GEN562699 1-G15_018_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.2851	GEN344896 3-1LAB G3 20.000
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.2837	GEN344897 4-1LAB G4 20.000
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.2836	GEN344894 1-1LAB G1 20.000
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.2776	GEN562942 1-G15056_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04322	102.2582	ARDMORE WEST - CARTER 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04365	102.2515	KEO EHV - WEST MEMPHIS 500 500KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.2514	GEN672321 1-SHAND GENERATOR 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.2276	GEN521103 1-BLUE CANYON WIND FARM
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.2162	GEN672306 6-BOUNDARY DAM GENERATOR 6
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.1985	GEN562710 1-G15_022_3 0.5500
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.197	GEN587253 1-G16-039-GEN10.5500
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04364	102.1724	P12:138:WFEC:MSL15
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.1634	GEN563263 1-G15092_4 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04322	102.1608	ARDMORE WEST - UNIROYAL 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.1601	GEN560183 1-REDHIL-WTG1 12.000
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.1591	GEN672311 2-POPLAR RIVER GENERATOR 2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.1297	GEN524295 1-SPNSPUR_WND10.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.1255	GEN523461 1-BLACKHAWK GEN #1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.1237	GEN523462 1-BLACKHAWK GEN #2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.1163	GEN681542 6-JP MADGETT
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.0902	GEN527164 1-MUSTANG GEN #4 22 KV
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.086	GEN563142 1-G15079_3 0.5500
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.086	GEN563151 1-G15080_2 0.5500
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04350	102.0355	CLARKSVILLE - MUSKOGEE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04350	102.0355	CLARKSVILLE - MUSKOGEE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.0196	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.0178	GEN527162 1-MUSTANG GEN #2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	102.0177	GEN527161 1-MUSTANG GEN #1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.9842	GEN511853 1-COMANCHE #3
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04322	101.9701	SUNNYSIDE - UNIROYAL 138KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.9593	GEN511852 1-COMANCHE #2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.9355	GEN562756 1-G15031_7 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.9127	GEN520811 1-ANADRK4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.8681	P12:138:WFEC:MSL09
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.8591	GEN661015 1-COYOTE
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.8531	GEN563262 1-G15092_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.8254	GEN562483 1-G13_027_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.8147	GEN527163 1-MUSTANG GEN #3 22 KV
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.8071	GEN562688 1-G15_014_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.7463	GEN657748 1-YOUNG 2 GENERATOR
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04320	101.7212	SUNNYSIDE (SUNNYSD5) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.7182	GEN620315 1-BIG STONE GEN
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.7168	GEN636641 1-LOUISA UNIT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.7138	GEN563042 1-G15068_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04352	101.6973	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04352	101.6973	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.6288	BIG STONE 230/24.0KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.6256	GEN527902 1-HOBBS PLANT #2 (CT)
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.6255	GEN527901 1-HOBBS PLANT #1 (CT)
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04540	101.6012	PITTSBURG - VALLIANT 345KV CKT 1
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04540	101.6012	PITTSBURG - VALLIANT 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04073	101.5879	HUGO - VALLIANT 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04073	101.5879	HUGO - VALLIANT 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	101.578	GEN525561 1-TOLK GEN #1 24 KV

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.5017	GEN600006 1-AS KING
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.4922	GEN600004 2-PRAIRIE ISLAND G2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.489	GEN600003 1-PRAIRIE ISLAND G1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.4807	GEN563043 1-G15068_4 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.3904	GEN635213 3-NEAL UNIT 3
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.3435	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.3349	GEN511851 1-COMANCHE #1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.3221	GEN587393 1-G16-058-GEN10.5500
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.3081	GEN526331 1-JONES GEN #1 22 KV
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.301	GEN600005 1-MONTICELLO
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04186	101.2889	GEN509403 1-PIRKEY GENERATION
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04171	101.2126	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.2013	GEN526332 1-JONES GEN #2 21 KV
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04545	101.157	GEN509416 1-TURK GENERATION
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08411	101.1447	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08411	101.1447	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.1392	GEN527166 1-MUSTANG_6 118.000
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04346	101.1371	LYDIA - WELSH 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04346	101.1371	LYDIA - WELSH 345KV CKT 1
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04186	101.1212	GEN509416 1-TURK GENERATION
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04531	101.1164	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.1054	GEN615001 1-COAL CREEK
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.0705	GEN600001 2-SHERBURNE CNTY G2
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.0538	GEN562655 1-G14_074_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	101.0038	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04360	100.9936	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.9644	GEN600000 1-SHERBURNECNTY G1
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04179	100.9418	PITTSBURG - VALLIANT 345KV CKT 1
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04179	100.9418	PITTSBURG - VALLIANT 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.8901	GEN587423 1-G16-062-GEN10.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.8886	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04171	100.8874	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.8678	GEN527903 1-HOBBS PLANT #3 (ST)
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04531	100.8105	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.8031	GEN511848 1-SOUTHWESTERN STATION #3
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.7184	GEN562590 1-G14_057_3 0.6900
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04171	100.7145	917X
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.6993	GEN562269 1-G12-020-1 0.6900
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04749	100.6928	P12:138:WFEC:MSL03
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04324	100.6862	JOHNSON COUNTY (JOHNCO) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.6585	GEN635214 4-NEAL UNIT 4
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04531	100.6198	917X
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.5601	GEN525844 1-ELK_1 118.000
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.5472	GEN562270 1-G12-020-2 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.538	GEN587373 1-G16-056-GEN10.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.5263	GEN562762 1-G15033_3 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.3962	GEN600002 3-SHERBURNE CNTY G3
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04545	100.389	GEN501801 1-DOLET HILLS UNIT1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.3337	GEN635023 3-WALTER SCOTT UNIT 3
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.3038	GEN560105 1-G08-22 0.6900
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04337	100.2279	LYDIA - VALLIANT 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04337	100.2279	LYDIA - VALLIANT 345KV CKT 1
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04377	100.1947	P12:138:WFEC:MSL03
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04186	100.1736	GEN501801 1-DOLET HILLS UNIT1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	100.1632	GEN562550 1-G14_040_3 0.6900
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04383	100.154	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	99.9	GEN635024 4-WALTER SCOTT UNIT 4
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	99.4	GEN523971 1-HARRINGTON GEN #1 24 KV
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	99.4	GEN523972 1-HARRINGTON GEN #2 24 KV
2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	99.4	GEN523973 1-HARRINGTON GEN #3 24 KV
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04545	99.3	GEN509404 1-WELSH #1
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04545	99.3	GEN509406 1-WELSH #3
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04528	99.3	ARCADIA - NORTHWEST 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03679	99.2	JOHNSON COUNTY - PITTSBURG 345KV CKT 1
2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03679	99.2	JOHNSON COUNTY - PITTSBURG 345KV CKT 1
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04186	99.2	GEN509404 1-WELSH #1
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04186	99.2	GEN509406 1-WELSH #3
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04161	99.2	ARCADIA - NORTHWEST 345KV CKT 1
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04545	99.1	GEN336153 1-WATERFORD UNIT#3
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04537	99.1	CLEVELAND - TULSA NORTH 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04537	99.1	CLEVELAND - TULSA NORTH 345KV CKT 1
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04503	99.1	ARCADIA - SEMINOLE 345KV CKT 1
2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04383	99	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04186	99	GEN336821 1-GRAND GULF UNIT
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04177	99	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04177	99	CLEVELAND - TULSA NORTH 345KV CKT 1
2	16WP	G15_033	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.29321	106.376	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G15_033	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.26939	102.3425	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G15_033	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.29321	101.9464	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14358	125.3293	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14358	125.3293	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11131	121.2944	GEN526333 1-JONES GEN #3 21 KV
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11131	120.8816	GEN526334 1-JONES_4 116.500
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12903	114.0091	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11193	107.098	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11193	107.098	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10530	106.8942	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10530	106.8942	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14121	104.8862	P12:345:SPS:J15.1.XRDS.TOLK
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11339	104.5606	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11339	104.5481	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11339	104.5174	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11339	104.5174	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11131	103.4092	GEN587373 1-G16-056-GEN10.6900
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11588	103.2676	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11588	103.2676	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11588	103.2676	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11588	103.2676	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11940	103.1516	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11940	103.1516	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12602	102.5939	P12:345:SPS:J15.1.XRDS.TOLK
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11131	102.3409	GEN526331 1-JONES GEN #1 22 KV
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11131	102.3328	GEN526332 1-JONES GEN #2 21 KV
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11771	100.5338	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
2	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10802	100.313	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10802	100.313	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11363	99.7	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11363	99.7	P12:345:SPS:J14.1.EDDY.XRDS
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11363	99.6	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11363	99.6	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11465	99.2	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G15_033	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.03969	100.1473	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G15_033	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.03969	100.1473	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	1022.0	1124.0	0.35160	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.21506	-	CIMARRON - MINCO 345KV CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.21506	-	GRACEMONT - MINCO 345KV CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	1792.0	1792.0	0.18086	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.14592	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.13941	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.13941	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	16WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.13244	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	987.2	1082.8	0.12731	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	1330.0	1940.0	0.11962	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	1330.0	1940.0	0.11962	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	987.16	1082.77	0.11305	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	956.09	1051.7	0.11305	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	859.0	956.0	0.10433	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	560.0	560.0	0.10433	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	1420.0	1775.0	0.07270	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	439.0	439.0	0.05144	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	450.0	450.0	0.05144	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.04795	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	16WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.04795	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.45937	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1022.0	1124.0	0.34361	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.20888	-	CIMARRON - MINCO 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.20888	-	GRACEMONT - MINCO 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1022.0	1124.0	0.18913	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1792.0	1792.0	0.16922	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	717.0	789.0	0.16041	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G15_033	-	Non-Converged Contingency	717.0	789.0	0.16041	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.13914	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.13914	-	GEN509403 1-PIRKEY GENERATION
2	17G	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.13914	-	GEN509404 1-WELSH #1
2	17G	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.13914	-	GEN509406 1-WELSH #3
2	17G	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.13914	-	GEN509416 1-TURK GENERATION
2	17G	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.13914	-	GEN511848 1-SOUTHWESTERN STATION #3
2	17G	G15_033	-	Non-Converged Contingency	1792.0	1792.0	0.13292	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1792.0	1792.0	0.13292	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
2	17G	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.13292	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.13292	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	17G	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.12601	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	717.0	789.0	0.12183	-	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	956.1	1051.7	0.11683	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1330.0	1940.0	0.11329	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1330.0	1940.0	0.11329	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	956.09	1051.7	0.10189	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	956.09	1051.7	0.10189	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.08568	-	ARCADIA - NORTHWEST 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1561.0	1793.0	0.08082	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1561.0	1793.0	0.08082	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G15_033	-	Non-Converged Contingency	1420.0	1775.0	0.07206	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1420.0	1775.0	0.07206	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1420.0	1775.0	0.07206	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.07117	-	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.06639	-	GEN520947 1-HUGO1
2	17G	G15_033	-	Non-Converged Contingency	1192.0	1192.0	0.06591	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	956.0	956.0	0.06591	-	G15063_T 345.00 - WOODRING 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1532.0	1793.0	0.06134	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1532.0	1793.0	0.06134	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	G15_033	-	Non-Converged Contingency	1532.0	1793.0	0.06134	-	G1524G1525 345.00 - WICHITA 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1532.0	1793.0	0.06134	-	G1524G1525 345.00 - WICHITA 345KV CKT 2
2	17G	G15_033	-	Non-Converged Contingency	1532.0	1793.0	0.06134	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	G15_033	-	Non-Converged Contingency	1039.0	1195.0	0.06073	-	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.05933	-	CIMARRON - DRAPER LAKE 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1793.0	1793.0	0.05919	-	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1793.0	1793.0	0.05919	-	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	318.7	350.57	0.05660	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	878.0	956.0	0.05307	-	BENTON - WICHITA 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	478.0	502.0	0.05070	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	717.1	717.1	0.05051	-	HOLCOMB - SETAB 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	785.0	785.0	0.04985	-	MINGO - RED WILLOW 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	762.5	762.5	0.04964	-	MINGO - SETAB 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	439.0	439.0	0.04751	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	450.0	450.0	0.04751	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_033	-	Non-Converged Contingency	478.0	502.0	0.04657	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1035.0	1035.0	0.04560	-	G14_001T 345.00 - WICHITA 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1141.0	1195.0	0.04554	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1141.0	1195.0	0.04554	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1505.0	1793.0	0.04498	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1505.0	1793.0	0.04498	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1505.0	1793.0	0.04498	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1504.0	1792.0	0.04374	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1504.0	1792.0	0.04374	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1792.0	1792.0	0.04312	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1792.0	1792.0	0.04312	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
2	17G	G15_033	-	Non-Converged Contingency	1793.0	1793.0	0.04312	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1716.0	1793.0	0.04312	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	G15_033	-	Non-Converged Contingency	1793.0	1793.0	0.04312	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1716.0	1793.0	0.04312	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G15_033	-	Non-Converged Contingency	1793.0	1793.0	0.04312	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1716.0	1793.0	0.04312	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G15_033	-	Non-Converged Contingency	1792.0	1792.0	0.04312	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1792.0	1792.0	0.04312	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 2
2	17G	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.04252	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.04252	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	318.7	350.57	0.04165	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	318.7	350.6	0.03931	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	318.7	350.6	0.03931	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	726.6	726.6	0.03881	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G15_033	-	Non-Converged Contingency	1413.0	1517.0	0.03881	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	560.0	644.0	0.03814	-	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G15_033	-	Non-Converged Contingency	1022.0	1143.0	0.03714	-	PITTSBURG - VALLIANT 345KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	501.95	501.95	0.03681	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_033	-	Non-Converged Contingency	560.0	644.0	0.03317	-	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_033	-	Non-Converged Contingency	318.7	350.57	0.03167	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17SP	G15_033	-	Non-Converged Contingency	956.0	1042.0	0.34699	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20L	G15_033	-	Non-Converged Contingency	1022.0	1124.0	0.18139	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G15_033	-	Non-Converged Contingency	1022.0	1124.0	0.33866	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.19647	-	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G15_033	-	Non-Converged Contingency	1792.0	1792.0	0.18152	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20WP	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.13275	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	20WP	G15_033	-	Non-Converged Contingency	1792.0	1972.0	0.13275	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	20WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.12542	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	20WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.12527	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	20WP	G15_033	-	Non-Converged Contingency	987.2	1082.8	0.12196	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G15_033	-	Non-Converged Contingency	987.16	1082.77	0.10899	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20WP	G15_033	-	Non-Converged Contingency	1584.0	2098.0	0.10103	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	20WP	G15_033	-	Non-Converged Contingency	1584.0	2098.0	0.10103	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	20WP	G15_033	-	Non-Converged Contingency	439.0	439.0	0.04596	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	20WP	G15_033	-	Non-Converged Contingency	450.0	450.0	0.04596	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	20WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.04130	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	20WP	G15_033	-	Non-Converged Contingency	1195.0	1195.0	0.04130	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	25SP	G15_033	-	Non-Converged Contingency	0.0	0.0	0.38217	-	P12:345:SPS:J02.1.TOLK.EDDY
2	25SP	G15_033	-	Non-Converged Contingency	343.79	343.79	0.11131	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G15_033	-	Non-Converged Contingency	0.0	0.0	0.05195	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
2	25SP	G15_033	-	Non-Converged Contingency	0.0	0.0	0.03902	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
2	25SP	G15_033	-	Non-Converged Contingency	0.0	0.0	0.03136	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
2	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04929	118.4343	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04929	118.4343	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04929	110.1693	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04929	110.1693	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04929	118.4343	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04929	110.1693	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04929	118.4343	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04929	110.1693	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03434	104.3654	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05275	144.4934	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05275	144.4934	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02995	137.1427	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05275	134.4786	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05275	134.4786	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02995	129.3082	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05288	120.8492	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04470	118.9192	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03953	118.1075	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03953	118.1075	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04222	117.7839	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04222	117.7769	P12:345:SPS:J14.1.EDDY.XRDS
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04222	117.6291	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04222	117.6291	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04470	117.3285	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04470	116.2274	P12:115:SPS:V15.1.TUCO.INDANA
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04470	116.0899	INDIANA SUB - STANTON SUB 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03872	115.6785	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03872	115.6785	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03872	115.6666	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03872	115.6661	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05288	115.4472	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04470	114.7388	P12:115:SPS:V15.1.TUCO.INDANA
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04470	114.6065	INDIANA SUB - STANTON SUB 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03953	113.7131	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03953	113.7131	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04222	113.0062	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04222	113.0011	P12:345:SPS:J14.1.EDDY.XRDS
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04222	112.9322	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04222	112.9322	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03872	112.7143	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03872	112.7143	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03872	112.7076	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03872	112.7073	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04470	112.061	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04222	111.1621	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04470	110.71	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04132	110.415	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04470	110.2477	P12:115:SPS:V62.1.CRLSLE.INDANA
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04470	110.1605	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	109.1582	GEN527166 1-MUSTANG_6 118.000
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04132	109.1208	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04470	108.9848	P12:115:SPS:V62.1.CRLSLE.INDANA
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04470	108.9006	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04222	108.7096	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	108.213	GEN525561 1-TOLK GEN #1 24 KV
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04132	108.0206	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	107.4183	GEN527903 1-HOBBS PLANT #3 (ST)
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04132	106.9044	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	106.7493	GEN527166 1-MUSTANG_6 118.000
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03872	106.5686	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04061	106.5477	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04061	106.5477	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04038	106.2139	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04038	106.2139	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	106.0422	GEN525561 1-TOLK GEN #1 24 KV
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	105.8779	GEN527901 1-HOBBS PLANT #1 (CT)
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03929	105.6662	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03800	105.4458	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03800	105.4458	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	105.333	GEN527902 1-HOBBS PLANT #2 (CT)
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03839	105.266	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	105.2508	GEN527903 1-HOBBS PLANT #3 (ST)
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	104.8952	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04061	104.7704	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04061	104.7704	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04709	104.6651	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04709	104.6651	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04038	104.4379	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04038	104.4379	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04395	104.3027	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03836	104.3015	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03836	104.3015	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03822	104.2591	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03780	104.2335	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03780	104.2335	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03872	104.2011	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03796	104.1825	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03796	104.1825	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	103.8402	GEN527901 1-HOBBS PLANT #1 (CT)
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	103.803	GEN563132 1-G15078_3 0.3570
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03703	103.7037	P12:115:LCEC:W56.1.HOBBG.LE-LVN
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03929	103.6436	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	103.5632	GEN563102 1-G15075_3 0.5500
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	103.5544	GEN562812 1-G15040_3 0.3570
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03800	103.5109	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03800	103.5109	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03822	103.4154	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03822	103.3584	LYNTEGAR REC-CLAUENE - LYNTEGAR REC-LEVELLAND 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	103.3269	GEN527902 1-HOBBS PLANT #2 (CT)
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03839	103.2934	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03800	103.2931	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	103.1602	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04709	102.5443	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04709	102.5443	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04395	102.5246	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03796	102.3289	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03796	102.3289	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03780	102.2594	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03780	102.2594	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03822	102.2268	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	101.8778	GEN563132 1-G15078_3 0.3570
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03836	101.7585	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03836	101.7585	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	101.7397	GEN563102 1-G15075_3 0.5500
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03703	101.6804	P12:115:LCEC:W56.1.HOBBG.LE-LVN
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	101.6694	GEN562812 1-G15040_3 0.3570
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03800	101.5451	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03822	101.5439	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	101.4978	BASE CASE
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	99.7	BASE CASE
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03704	99.3	P12:115:SPS:V80.1.DC_STH.LE-WAIT
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03734	99.2	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03734	99.2	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03717	99.1	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	99.1	P12:115:SPS:V49.1.YOAKUM.SHLCO2
3	17G	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34049	219.0037	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34049	218.7841	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31124	212.6842	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31124	212.3523	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33805	206.7258	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33805	206.6	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35346	198.5451	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35346	197.214	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.10100	191.4449	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34512	191.0186	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.10100	189.1503	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34512	188.8782	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34317	182.2433	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34317	180.1336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.16271	177.7676	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.16271	176.0572	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35547	128.2336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35547	124.1314	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.40719	205.8094	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.38666	191.8466	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.41142	182.1676	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.18535	175.8259	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.41045	170.544	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.40534	165.6022	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.42044	158.3084	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.27699	157.2462	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.42021	130.4315	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G15_033	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08633	102.99	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G15_033	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08633	102.3933	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04207	107.5511	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04368	103.3829	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03889	100	PITTSBURG - SEMINOLE 345KV CKT 1
3	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03889	100	PITTSBURG - SEMINOLE 345KV CKT 1
3	25SP	G15_033	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03592	113.6961	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_033	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03592	113.6922	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14340	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14340	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11120	119.248	GEN526333 1-JONES GEN #3 21 KV
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11120	118.8723	GEN526334 1-JONES_4 116.500
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12888	114.4952	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11113	112.8126	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11113	112.8111	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13379	111.8354	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11186	106.8773	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11186	106.8773	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12359	105.5745	P12:345:SPS:J02.1.TOLK.EDDY
3	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10464	104.0964	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10464	104.0964	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11328	103.9995	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11328	103.984	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11328	103.976	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11328	103.976	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11120	103.6041	GEN587373 1-G16-056-GEN10.6900
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11576	103.2394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11576	103.2394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11576	103.2394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11576	103.2394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11929	103.2214	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11929	103.2214	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12555	102.9873	P12:345:SPS:J15.1.XRDS.TOLK
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11120	102.4114	GEN526331 1-JONES GEN #1 22 KV
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11120	102.4061	GEN526332 1-JONES GEN #2 21 KV
3	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.13889	100.4251	P12:345:SPS:J15.1.XRDS.TOLK
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11756	100.2458	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11454	99.6	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11355	99	P12:345:SPS:J14.1.EDDY.XRDS
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11249	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11249	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	150.821	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	150.8177	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03512	118.3664	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03512	118.3017	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03512	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03512	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03512	101.1875	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03512	101.1522	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03512	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03512	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	99	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	99	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.7208	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
3	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6974	P12:230:LPL:K26.1.JONES.LP-HOLLY
3	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6461	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6461	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	17G	G15_033	-	Non-Converged Contingency	3975.0	4570.0	0.33643	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	20L	G15_033	-	Non-Converged Contingency	3975.0	4570.0	0.28575	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	25SP	G15_033	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.04676	100.3388	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
3	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04913	119.1308	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04913	119.1308	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04913	111.3452	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04913	111.3452	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04913	119.1308	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04913	119.1308	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04913	111.3452	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04913	111.3452	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03433	104.1799	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05274	144.3473	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05274	144.3473	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02994	137.0001	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05274	134.2951	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05274	134.2951	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02994	129.1788	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05286	120.7509	P12:345:SPS:J15.1.XRDS.TOLK
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04469	118.7631	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03952	117.9922	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03952	117.9922	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04221	117.6369	P12:345:SPS:J14.1.EDDY.XRDS
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04221	117.6297	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04221	117.5133	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04221	117.5133	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04469	117.1805	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04469	116.0713	P12:115:SPS:V15.1.TUCO.INDANA
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04469	115.9345	INDIANA SUB - STANTON SUB 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03871	115.5382	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03871	115.5382	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03871	115.5264	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03871	115.5258	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05286	115.3543	P12:345:SPS:J15.1.XRDS.TOLK
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04469	114.5907	P12:115:SPS:V15.1.TUCO.INDANA
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04469	114.4591	INDIANA SUB - STANTON SUB 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03952	113.6006	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03952	113.6006	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04221	112.9068	P12:345:SPS:J14.1.EDDY.XRDS
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04221	112.9055	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04221	112.8216	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04221	112.8216	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03871	112.5803	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03871	112.5803	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03871	112.5736	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03871	112.5733	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04469	111.9044	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04221	111.0786	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04469	110.562	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04131	110.2877	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04469	110.0919	P12:115:SPS:V62.1.CRLSLE.INDANA
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04469	110.0021	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	109.0227	GEN527166 1-MUSTANG_6 118.000
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04131	108.9921	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04469	108.8363	P12:115:SPS:V62.1.CRLSLE.INDANA
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04469	108.75	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04221	108.6147	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	108.0446	GEN525561 1-TOLK GEN #1 24 KV
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04131	107.8983	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	107.2728	GEN527903 1-HOBBS PLANT #3 (ST)
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04131	106.7811	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	106.6173	GEN527166 1-MUSTANG_6 118.000
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03871	106.4273	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04060	106.3985	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04060	106.3985	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04037	106.0654	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04037	106.0654	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	105.882	GEN525561 1-TOLK GEN #1 24 KV
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	105.7366	GEN527901 1-HOBBS PLANT #1 (CT)
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03928	105.5353	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03799	105.3151	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03799	105.3151	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	105.193	GEN527902 1-HOBBS PLANT #2 (CT)
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03838	105.1276	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	105.1102	GEN527903 1-HOBBS PLANT #3 (ST)
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03748	104.8676	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04060	104.6279	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04060	104.6279	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04708	104.4941	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04708	104.4941	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04037	104.2961	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04037	104.2961	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04394	104.186	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03835	104.172	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03835	104.172	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03821	104.1266	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03779	104.1012	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03779	104.1012	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03871	104.0659	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03795	104.0459	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03795	104.0459	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	103.7047	GEN527901 1-HOBBS PLANT #1 (CT)
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	103.6678	GEN563132 1-G15078_3 0.3570
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03702	103.5707	P12:115:LCEC:W56.1.HOBBG.LE-LVN
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03928	103.5182	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	103.4298	GEN563102 1-G15075_3 0.5500
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	103.4173	GEN562812 1-G15040_3 0.3570
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03799	103.3859	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03799	103.3859	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03821	103.2829	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03821	103.226	LYNTEGAR REC-CLAUENE - LYNTEGAR REC-LEVELLAND 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	103.1927	GEN527902 1-HOBBS PLANT #2 (CT)
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03838	103.1622	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03799	103.1622	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03748	103.135	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04394	102.4108	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04708	102.3817	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04708	102.3817	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03795	102.198	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03795	102.198	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03779	102.132	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03779	102.132	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03821	102.1	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	101.7486	GEN563132 1-G15078_3 0.3570
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03835	101.6351	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03835	101.6351	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	101.6107	GEN563102 1-G15075_3 0.5500
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03702	101.5527	P12:115:LCEC:W56.1.HOBBG.LE-LVN
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	101.5378	GEN562812 1-G15040_3 0.3570
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03799	101.4202	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03821	101.417	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	101.3635	BASE CASE
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	99.6	BASE CASE
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03703	99.2	P12:115:SPS:V80.1.DC_STH.LE-WAIT
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03733	99.1	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03733	99.1	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03716	99	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
4	17G	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34017	219.2477	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34017	218.9034	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31090	212.5533	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31090	212.4877	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33762	206.5319	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33762	206.4431	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35310	198.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35310	197.0767	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.10108	191.5691	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34475	191.0175	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.10108	189.0637	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34475	188.7404	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34274	181.83	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34274	179.8003	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.16277	177.5857	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.16277	175.8792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35501	128.3207	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35501	124.1778	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.40714	205.5105	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.38660	191.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.41135	182.0402	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.18537	175.8195	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.41037	170.4128	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.40526	165.4035	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.42037	158.2063	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.27699	157.178	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.42012	130.4862	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G15_033	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08634	103.0572	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G15_033	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08634	102.4534	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04237	106.5541	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04394	102.5873	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03911	100.4169	PITTSBURG - SEMINOLE 345KV CKT 1
4	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03911	100.4169	PITTSBURG - SEMINOLE 345KV CKT 1
4	25SP	G15_033	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03592	113.6646	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_033	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03592	113.6599	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14337	125.0569	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14337	125.0569	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11118	119.0612	GEN526333 1-JONES GEN #3 21 KV
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11118	118.6856	GEN526334 1-JONES_4 116.500
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12886	114.2489	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11111	112.5996	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11111	112.5946	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13376	111.5567	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11184	106.7476	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11184	106.7476	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12358	105.4545	P12:345:SPS:J02.1.TOLK.EDDY
4	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10462	104.0099	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10462	104.0099	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11326	103.8244	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11326	103.8052	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11326	103.7969	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11326	103.7969	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11118	103.416	GEN587373 1-G16-056-GEN10.6900
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11927	103.2672	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11927	103.2672	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11574	103.0315	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11574	103.0315	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11574	103.0315	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11574	103.0315	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12552	102.755	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11118	102.1709	GEN526331 1-JONES GEN #1 22 KV
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11118	102.1659	GEN526332 1-JONES GEN #2 21 KV
4	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.13884	100.3275	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11754	100	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11452	99.4	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	150.9857	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	150.9823	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03511	118.304	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03511	118.2713	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03511	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03511	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03511	101.1568	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03511	101.1421	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03511	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03511	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	99.3	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	99.3	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6999	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
4	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6899	P12:230:LPL:K26.1.JONES.LP-HOLLY
4	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6243	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6243	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	17G	G15_033	-	Non-Converged Contingency	3975.0	4570.0	0.33289	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	20L	G15_033	-	Non-Converged Contingency	3975.0	4570.0	0.28245	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	25SP	G15_033	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.04675	100	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
4	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04910	118.9394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04910	118.9394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04910	111.1562	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04910	111.1562	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04910	118.9394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04910	118.9394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04910	111.1562	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04910	111.1562	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03430	104.0718	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05263	144.4574	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05263	144.4574	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02990	136.9029	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05263	134.4484	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05263	134.4484	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02990	129.0847	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05274	120.8826	P12:345:SPS:J15.1.XRDS.TOLK
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04461	118.9077	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03946	118.0957	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03946	118.0957	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04213	117.7364	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04213	117.7295	P12:345:SPS:J14.1.EDDY.XRDS
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04213	117.6065	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04213	117.6065	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04461	117.3219	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04461	116.2161	P12:115:SPS:V15.1.TUCO.INDANA
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04461	116.0797	INDIANA SUB - STANTON SUB 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03863	115.6714	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03863	115.6714	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03863	115.6595	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03863	115.659	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05274	115.4973	P12:345:SPS:J15.1.XRDS.TOLK
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04461	114.7323	P12:115:SPS:V15.1.TUCO.INDANA
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04461	114.601	INDIANA SUB - STANTON SUB 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03946	113.7016	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03946	113.7016	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04213	113.008	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04213	113.0029	P12:345:SPS:J14.1.EDDY.XRDS
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04213	112.9186	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04213	112.9186	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03863	112.7108	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03863	112.7108	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03863	112.7041	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03863	112.7038	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04461	112.0513	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04213	111.2325	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04461	110.7049	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04124	110.4071	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04461	110.2372	P12:115:SPS:V62.1.CRLSLE.INDANA
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04461	110.151	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	109.1161	GEN527166 1-MUSTANG_6 118.000
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04124	109.1131	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04461	108.9787	P12:115:SPS:V62.1.CRLSLE.INDANA
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04461	108.8955	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04213	108.7622	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	108.0981	GEN525561 1-TOLK GEN #1 24 KV
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04124	108.0164	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	107.3888	GEN527903 1-HOBBS PLANT #3 (ST)
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04124	106.9004	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	106.7139	GEN527166 1-MUSTANG_6 118.000
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03863	106.5611	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04051	106.5417	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04051	106.5417	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04029	106.2078	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04029	106.2078	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	105.9363	GEN525561 1-TOLK GEN #1 24 KV
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	105.8492	GEN527901 1-HOBBS PLANT #1 (CT)
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03921	105.6613	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03792	105.4393	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03792	105.4393	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	105.3071	GEN527902 1-HOBBS PLANT #2 (CT)
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	105.2567	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	105.2255	GEN527903 1-HOBBS PLANT #3 (ST)
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03744	105.0133	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04051	104.7692	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04051	104.7692	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04698	104.6524	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04698	104.6524	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04029	104.4366	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04029	104.4366	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04387	104.3044	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03828	104.2923	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03828	104.2923	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	104.2517	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03771	104.2259	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03771	104.2259	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03863	104.1972	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03788	104.1752	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03788	104.1752	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	103.8156	GEN527901 1-HOBBS PLANT #1 (CT)
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	103.7876	GEN563132 1-G15078_3 0.3570
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03695	103.6971	P12:115:LCEC:W56.1.HOBBG.LE-LVN
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03921	103.6423	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	103.5553	GEN563102 1-G15075_3 0.5500
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	103.5392	GEN562812 1-G15040_3 0.3570
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03792	103.508	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03792	103.508	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	103.4088	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	103.3519	LYNTEGAR REC-CLAUENE - LYNTEGAR REC-LEVELLAND 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	103.3051	GEN527902 1-HOBBS PLANT #2 (CT)
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	103.2901	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03792	103.2874	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03744	103.2795	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04698	102.5361	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04698	102.5361	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04387	102.5275	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03788	102.3252	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03788	102.3252	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03771	102.2557	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03771	102.2557	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	102.2229	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	101.8662	GEN563132 1-G15078_3 0.3570
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03828	101.7528	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03828	101.7528	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	101.7347	GEN563102 1-G15075_3 0.5500
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03695	101.6773	P12:115:LCEC:W56.1.HOBBG.LE-LVN
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	101.658	GEN562812 1-G15040_3 0.3570
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03792	101.5435	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	101.5408	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	101.492	BASE CASE
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	99.7	BASE CASE
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03695	99.3	P12:115:SPS:V80.1.DC_STH.LE-WAIT
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03725	99.2	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03725	99.2	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	99.1	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
5	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03708	99.1	P12:115:SPS:V49.1.YOAKUM.SHLCO2
5	17G	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33823	217.7095	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33823	216.9825	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30943	211.2861	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30943	210.7754	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33569	204.8525	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33569	204.7326	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35099	196.7495	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35099	195.2293	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.10176	189.9854	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34276	189.7734	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.10176	187.4536	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34276	187.2532	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34078	180.5705	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34078	178.2726	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.16356	176.2821	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.16356	174.3386	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35291	127.7475	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.35291	123.5792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.40654	204.5119	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.38617	190.5492	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.41071	181.3291	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.18559	175.1034	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.40973	169.7873	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.40464	164.743	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.41973	157.4925	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.27718	156.5482	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.41943	130.3275	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_033	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08636	103.0311	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	16WP	G15_033	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08636	102.4344	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04319	104.9988	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
5	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04494	100.4581	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
5	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03998	100.0891	PITTSBURG - SEMINOLE 345KV CKT 1
5	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03998	100.0891	PITTSBURG - SEMINOLE 345KV CKT 1
5	25SP	G15_033	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03592	113.6714	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_033	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03592	113.6673	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14324	124.8975	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14324	124.8975	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11110	118.9383	GEN526333 1-JONES GEN #3 21 KV
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11110	118.5628	GEN526334 1-JONES_4 116.500
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12875	114.1042	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11102	112.5331	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11102	112.531	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13364	111.409	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11179	106.6731	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11179	106.6731	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12351	105.3409	P12:345:SPS:J02.1.TOLK.EDDY
5	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10446	104.1015	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10446	104.1015	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11318	103.707	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11318	103.6946	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11318	103.6865	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11318	103.6865	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11110	103.2876	GEN587373 1-G16-056-GEN10.6900
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11919	103.1458	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11919	103.1458	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11564	102.9044	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11564	102.9044	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11564	102.9044	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11564	102.9044	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12540	102.6383	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11110	102.0561	GEN526331 1-JONES GEN #1 22 KV
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11110	102.051	GEN526332 1-JONES GEN #2 21 KV
5	16WP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.13851	100.4572	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11745	99.9	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
5	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11444	99.3	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	150.9628	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	150.9601	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03511	118.3008	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03511	118.268	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03511	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03511	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03511	101.1553	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03511	101.1406	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03511	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03511	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	99.2	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	99.2	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6972	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
5	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6738	P12:230:LPL:K26.1.JONES.LP-HOLLY
5	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6217	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6217	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_033	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.04670	99.9	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
5	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04898	118.7651	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04898	118.7651	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04898	110.9825	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04898	110.9825	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04898	118.7651	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04898	118.7651	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04898	110.9825	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04898	110.9825	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03404	103.7131	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02959	136.613	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02959	128.8535	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03265	122.2386	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03265	122.2386	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03265	117.1192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03265	117.1192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03620	103.228	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
6	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03620	101.4423	CRAWFISH_DR 345.00 - YOAKUM_345 345.00 345KV CKT 1
6	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03620	101.3468	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
6	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03620	99.7	CRAWFISH_DR 345.00 - YOAKUM_345 345.00 345KV CKT 1
6	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02959	99.7	P12:345:SPS:J02.1.TOLK.EDDY
6	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04316	104.9586	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
6	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04316	104.9586	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
6	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04300	100.6431	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
6	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03934	100	PITTSBURG - SEMINOLE 345KV CKT 1
6	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03934	100	PITTSBURG - SEMINOLE 345KV CKT 1
6	25SP	G15_033	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03591	113.5161	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14210	124.2902	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
6	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11033	118.5502	GEN526333 1-JONES GEN #3 21 KV
6	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11033	118.1772	GEN526334 1-JONES_4 116.500
6	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12773	113.6007	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11025	111.9176	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13153	110.107	CRAWFISH_DR 345.00 - YOAKUM_345 345.00 345KV CKT 1
6	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11173	106.564	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
6	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11241	103.2173	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11241	103.216	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
6	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11033	102.8608	GEN587373 1-G16-056-GEN10.6900
6	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11840	102.7727	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
6	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11478	102.4925	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11478	102.4925	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11033	101.6462	GEN526331 1-JONES GEN #1 22 KV
6	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11033	101.6414	GEN526332 1-JONES GEN #2 21 KV
6	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11587	99.4	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
6	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03591	151.3756	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03510	118.1734	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03510	118.1275	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
6	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03510	101.1279	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03510	101.1113	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03591	100.0897	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03077	110.6217	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
6	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03077	110.5253	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04807	118.3723	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.04807	110.6287	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04807	118.3724	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.04807	110.6287	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	20WP	G15_038	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.27067	116.0597	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	20L	G15_038	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.29407	114.2537	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	16WP	G15_038	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.28491	108.5156	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	20SP	G15_038	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.27028	101.8434	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	17SP	G15_038	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.28056	101.0434	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	17G	G15_038	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.29275	100.6367	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	20WP	G15_038	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.21880	113.1187	CIMARRON - NORTHWEST 345KV CKT 1
0	20L	G15_038	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.24392	111.0109	CIMARRON - NORTHWEST 345KV CKT 1
0	16WP	G15_038	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.23812	104.3356	CIMARRON - NORTHWEST 345KV CKT 1
2	20WP	G15_038	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.27100	115.4637	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	20L	G15_038	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.29434	113.8729	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	16WP	G15_038	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.28525	108.0239	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	20SP	G15_038	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.27061	101.4726	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	17SP	G15_038	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.28090	100.6881	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	17G	G15_038	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.29307	100.1359	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	20WP	G15_038	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.21919	112.711	CIMARRON - NORTHWEST 345KV CKT 1
2	20L	G15_038	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.24421	110.7311	CIMARRON - NORTHWEST 345KV CKT 1
2	16WP	G15_038	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.23847	103.9763	CIMARRON - NORTHWEST 345KV CKT 1
0	17SP	G15_039	FROM->TO	BUSHLAND INTERCHANGE - HILLSIDE 115KV CKT 1	159.0	160.0	0.20456	110.7716	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_039	FROM->TO	BUSHLAND INTERCHANGE - HILLSIDE 115KV CKT 1	159.0	160.0	0.20456	110.7716	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G15_039	FROM->TO	BUSHLAND INTERCHANGE - HILLSIDE 115KV CKT 1	159.0	160.0	0.20089	106.885	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G15_039	FROM->TO	BUSHLAND INTERCHANGE - HILLSIDE 115KV CKT 1	159.0	160.0	0.20089	106.885	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_039	FROM->TO	BUSHLAND INTERCHANGE (WH 7001795) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.20456	110.1162	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_039	FROM->TO	BUSHLAND INTERCHANGE (WH 7001795) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.20456	110.1162	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_039	FROM->TO	BUSHLAND INTERCHANGE (WH 7001795) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.20456	107.5247	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_039	FROM->TO	BUSHLAND INTERCHANGE (WH 7001795) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.20456	107.5247	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G15_039	FROM->TO	BUSHLAND INTERCHANGE (WH 7001795) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.20089	106.3824	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G15_039	FROM->TO	BUSHLAND INTERCHANGE (WH 7001795) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.20089	106.3824	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G15_039	FROM->TO	BUSHLAND INTERCHANGE (WH 7001795) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.20089	104.0594	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G15_039	FROM->TO	BUSHLAND INTERCHANGE (WH 7001795) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.20089	104.0594	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_039	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05178	107.5416	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_039	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05178	107.5416	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_039	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.03486	102.9062	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_039	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.03486	102.9062	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_039	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.03585	99.4	P12:345:SPS:J15.1.XRDS.TOLK
0	17SP	G15_039	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06213	111.2423	BASE CASE
0	20SP	G15_039	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.05866	106.965	BASE CASE
0	17G	G15_039	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06552	104.3555	BASE CASE
0	20WP	G15_039	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06306	100.6452	BASE CASE
0	16WP	G15_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22525	117.2755	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G15_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.19597	113.9417	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G15_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22525	112.5386	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G15_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.20833	107.9528	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17SP	G15_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.20833	103.4902	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G15_039	TO->FROM	COULTER INTERCHANGE - HILLSIDE 115KV CKT 1	159.0	159.0	0.20456	104.0218	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_039	TO->FROM	COULTER INTERCHANGE - HILLSIDE 115KV CKT 1	159.0	159.0	0.20456	104.0218	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	COULTER INTERCHANGE - HILLSIDE 115KV CKT 1	159.0	159.0	0.20089	99.4	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	COULTER INTERCHANGE - HILLSIDE 115KV CKT 1	159.0	159.0	0.20089	99.4	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G15_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20832	197.2146	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20832	189.9362	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G15_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22268	115.1329	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G15_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22268	114.7364	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.63258	129.6424	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.63047	126.1509	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.62128	125.5353	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61370	123.3498	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.57386	121.7472	P12:115:SPS:T04.1.DFSMTH.CASTRO
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61581	121.5541	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61614	121.3598	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59472	119.4985	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.62657	118.7637	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.62657	118.7637	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.57047	118.1396	P12:115:SPS:T04.1.DFSMTH.CASTRO
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	117.8449	BASE CASE
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61710	117.6575	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59472	117.4009	DEAF SMITH REC-#20 - PARMER COUNTY SUB 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59472	116.7897	DEAF SMITH REC-#24 - PARMER COUNTY SUB 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61878	116.4438	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59207	116.129	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61974	115.5368	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59472	115.0665	CARGILL SUB - DEAF SMITH REC-#24 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59472	114.9571	P12:115:SPS:T59.1.CARGIL.CURRY
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59207	114.0289	DEAF SMITH REC-#20 - PARMER COUNTY SUB 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.62425	113.898	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.62425	113.898	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	113.6626	BASE CASE
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59207	113.4462	DEAF SMITH REC-#24 - PARMER COUNTY SUB 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61789	113.2775	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59472	113.2441	CARGILL SUB - FRIONA SUB 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.62236	113.1797	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.62236	113.1797	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	112.9457	GEN523973 1-HARRINGTON GEN #3 24 KV
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	112.9319	GEN523972 1-HARRINGTON GEN #2 24 KV
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	112.929	GEN523971 1-HARRINGTON GEN #1 24 KV
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61657	112.8097	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61657	112.8097	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61581	112.2111	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	112.2044	P12:230:SPS:CL.1.BSHLND.WLDRDO
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59207	111.7399	CARGILL SUB - DEAF SMITH REC-#24 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59207	111.67	P12:115:SPS:T59.1.CARGIL.CURRY
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59472	111.6057	DEAF SMITH REC-#6 - FRIONA SUB 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61393	111.4768	P12:115:SPS:T66.1.RNDALL.HAPPY
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61463	111.4722	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61393	111.3127	PALO DURO SUB - RANDALL COUNTY INTERCHANGE 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61463	111.1749	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61393	111.0986	HAPPY INTERCHANGE - PALO DURO SUB 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61560	111.0704	CIMARRON - MINCO 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61560	110.6006	GRACEMONT - MINCO 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59472	110.5631	DEAF SMITH REC-#6 - HEREFORD INTERCHANGE 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59472	110.4699	P12:115:SPS:T58.1.HERFRD.CARGIL
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61412	110.3776	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61412	110.3776	PLANT X STATION (WH ALM20171) 230/115/13.2KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61373	110.3045	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61373	110.2991	P12:230:SPS:K37.1.TOLK.LAMB
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61373	110.2981	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61373	110.2981	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61490	110.2268	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61490	110.2258	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61490	110.2258	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61490	110.2253	P12:345:SPS:J14.1.EDDY.XRDS
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61505	110.0838	P12:345:SPS:J02.1.TOLK.EDDY
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61496	110.0181	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61496	110.0179	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61513	109.895	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	109.8701	BORDER 7345.00 345/13.2KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61513	109.7725	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59207	109.7657	CARGILL SUB - FRIONA SUB 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	109.7189	GEN524023 1-NICHOLS GEN #3 22 KV
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61855	109.7079	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61855	109.7079	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61370	109.6966	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61476	109.4097	PLANT X STATION - SPGLAKE_TP3 115.00 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61426	109.3903	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61393	109.2426	KRESS INTERCHANGE - TULIA TAP 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61581	109.0843	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61393	109.0734	HAPPY INTERCHANGE - TULIA TAP 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61393	108.9998	P12:115:SPS:T67.1.HAPPY.KRESS
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61476	108.9733	LAMB COUNTY REC-SOUTH OLTON - SPGLAKE_TP3 115.00 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	108.8464	GEN523462 1-BLACKHAWK GEN #2
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	108.8214	GEN523461 1-BLACKHAWK GEN #1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	108.7225	GEN562550 1-G14_040_3 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	108.7105	GEN524022 1-NICHOLS GEN #2
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	108.6893	P12:230:SPS:CL.1.BSHLND.WLDRDO
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	108.5656	GEN524285 1-WILDORADO WIND GEN
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	108.5402	OKLAUNION 345/13.2KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61366	108.4628	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61366	108.4437	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61366	108.4437	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	108.4427	GEN524021 1-NICHOLS GEN #1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61159	108.4076	CHISHOLM7 345.00 () 345/230/13.2KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61476	108.3438	P12:115:SPS:T28.1.LAMTON.PLANTX
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61175	108.2658	P12:115:SPS:T66.1.RNDALL.HAPPY
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	108.2222	GEN524295 1-SPNSPUR_WND10.6900
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	108.1996	P12:115:LCEC:W56.1.HOBBG.LE-LVN
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59207	108.1827	DEAF SMITH REC-#6 - FRIONA SUB 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61460	108.1816	HALE CO INTERCHANGE - PLANT X STATION 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61460	108.1816	HALE CO INTERCHANGE - PLANT X STATION 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61175	108.1593	PALO DURO SUB - RANDALL COUNTY INTERCHANGE 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61344	108.0555	CIMARRON - MINCO 345KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61344	107.9972	GRACEMONT - MINCO 345KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	107.989	GEN523973 1-HARRINGTON GEN #3 24 KV
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	107.9752	GEN523972 1-HARRINGTON GEN #2 24 KV
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	107.9727	GEN523971 1-HARRINGTON GEN #1 24 KV
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.62045	107.8794	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.62045	107.8794	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61175	107.8782	HAPPY INTERCHANGE - PALO DURO SUB 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59207	107.1756	P12:115:SPS:T58.1.HERFRD.CARGIL
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59207	107.162	DEAF SMITH REC-#6 - HEREFORD INTERCHANGE 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	107.1225	2109-BUSHLAND INTERCHANGE
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	107.1225	803-OKLAUNION
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61271	106.7677	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61271	106.7674	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61156	106.7117	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61156	106.7064	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61156	106.7064	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61156	106.7063	P12:230:SPS:K37.1.TOLK.LAMB
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61129	106.327	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61129	106.327	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61288	106.2488	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61199	106.2433	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61288	106.2025	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61332	106.1757	P12:115:SPS:V04A.1.EPLANT.RNDALL
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61345	106.1657	P12:115:SPS:V43.1.EPLANT.OSAGE
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61240	106.0883	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61240	106.0883	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61233	106.0642	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61233	106.0642	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61334	106.054	P12:115:SPS:W54.1.KISER.KRESS
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61136	106.0521	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	106.0504	GEN528332 1-WILDCAT_WND134.500
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61251	106.0189	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61251	106.0189	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61175	106.0172	KRESS INTERCHANGE - TULIA TAP 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61251	106.0159	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61251	106.0131	P12:345:SPS:J14.1.EDDY.XRDS
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61136	106.0094	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61136	106.0094	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61595	106.0068	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61595	106.0068	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61331	106.0022	P12:115:SPS:V03.1.NICHLS.EPLANT
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	105.9495	GEN560363 1-ASGI-10-20 0.6900
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61344	105.945	P12:115:SPS:T25.1.MOOREW.DUMAS19
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61334	105.9422	P12:115:SPS:W05.1.DALLAM.LASLEY
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61349	105.9335	P12:115:SPS:V02.1.NICHLS.PNTX_S
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	105.9112	GEN562538 1-G14_035_3 0.3420
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	105.8583	OKLAUNION 345/13.2KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	105.8554	GEN587473 1-G16-069-GEN10.5500
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	105.8495	P12:115:SPS:T64.1.RNDALL.PULLMN
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61324	105.8472	P12:115:SPS:W29.1.OCLTRE.SPRMN
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60634	105.8351	BC-KELLEY 3115.00 - CASTRO COUNTY INTERCHANGE 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61319	105.8033	P12:115:SPS:T70.1.COLTR.S_GORG

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61351	105.7892	P12:115:SPS:V01.1.MOOREW.RVRVIEW
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61265	105.7287	P12:345:SPS:J02.1.TOLK.EDDY
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61024	105.6913	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61024	105.6913	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61303	105.6792	P12:115:SPS:T54.1.KIRBY.SHM(520)
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61303	105.6792	P12:115:SPS-AEPW:KIRBY3:SHAM3WT
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61175	105.6467	HAPPY INTERCHANGE - TULIA TAP 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61335	105.6198	P12:115:SPS:W24.1.MOOREE.LASLEY
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61274	105.592	P12:115:SPS:T53.1.NICHLS.KIRBY
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61338	105.5785	P12:115:SPS:T73.1.S_GORG.AMASTH
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60713	105.5746	COULTER INTERCHANGE - HILLSIDE 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61344	105.4872	P12:115:SPS:T27.1.NICHLS.DUMAS19
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60634	105.4855	P12:115:SPS:V37.1.CASTRO.PLANTX
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61247	105.462	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61247	105.462	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	105.436	GEN563102 1-G15075_3 0.5500
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61175	105.3409	P12:115:SPS:T67.1.HAPPY.KRESS
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	105.3361	GEN562756 1-G15031_7 0.6900
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	105.3324	GEN524023 1-NICHOLS GEN #3 22 KV
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61251	105.3294	PLANT X STATION - SPGLAKE_TP3 115.00 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	105.322	GEN562559 1-G14_047_3 0.4800
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61352	105.3193	P12:115:SPS:T47.1.MOOREE.DALHRT
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	105.2405	GEN587253 1-G16-039-GEN10.5500
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	105.2404	GEN562710 1-G15_022_3 0.5500
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60981	105.2345	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60713	105.1975	BUSHLAND INTERCHANGE - HILLSIDE 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60981	105.182	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	105.182	GEN562812 1-G15040_3 0.3570
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	105.1778	GEN563132 1-G15078_3 0.3570
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61352	105.1748	P12:115:SPS:V79.1.RVRVIEW.HUTCH
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60713	105.1432	BUSHLAND INTERCHANGE (WH 7001795) 230/115/13.2KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60713	105.1432	BUSHLAND INTERCHANGE (WH 7001795) 230/115/13.2KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	105.1389	GEN526678 1-CIRRUS_WND 10.6900
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59479	105.1163	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	105.0743	GEN562962 1-G15058_3 0.4180
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	105.0708	TUCO INTERCHANGE 230/13.0KV TRANSFORMER CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61160	105.0517	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61160	105.0517	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61247	104.985	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61247	104.985	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61330	104.9473	P12:115:SPS:V44.1.COLTR.OWENS
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61251	104.9455	LAMB COUNTY REC-SOUTH OLTON - SPGLAKE_TP3 115.00 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59879	104.8712	DEAF SMITH COUNTY INTERCHANGE (SIEMT0012691) 230/115/13.2KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59879	104.8712	DEAF SMITH COUNTY INTERCHANGE (SIEMT0012691) 230/115/13.2KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	104.8356	GEN562007 1-G11_025_3 0.6900
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59764	104.8286	DEAF SMITH COUNTY INTERCHANGE (LIKE LUBBKS) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59764	104.8286	DEAF SMITH COUNTY INTERCHANGE (LIKE LUBBKS) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61347	104.7833	P12:115:SPS:V38.1.NICHLS.RVRVIEW
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61385	104.703	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61352	104.6949	P12:115:SPS:V64.1.ETTER.DALLAM
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61320	104.6467	P12:115:SPS:T37.1.SUNSET.COLTR
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	104.6157	GEN524285 1-WILDORADO WIND GEN
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61221	104.5853	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61221	104.5853	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61221	104.5853	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61221	104.5853	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	104.5758	GEN523462 1-BLACKHAWK GEN #2
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	104.5517	GEN523461 1-BLACKHAWK GEN #1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61505	104.5479	P12:345:SPS:J15.1.XRDS.TOLK
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60529	104.5291	P12:230:AEPW:ELKCITY6:SWEETWT6
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60991	104.522	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60991	104.522	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61216	104.4568	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61216	104.4568	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60365	104.4375	CASTRO COUNTY INTERCHANGE - NEWHART 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60365	104.4375	CASTRO COUNTY INTERCHANGE - NEWHART 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61203	104.4285	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61490	104.4053	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61490	104.4048	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61490	104.4048	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	104.3514	GEN528361 1-MADDOX GEN #1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	104.3367	GEN525493 1-PLANT X GEN #3
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	104.3095	GEN524021 1-NICHOLS GEN #1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	104.286	GEN562531 1-G14_033_3 0.3420
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	104.286	GEN562535 1-G14_034_3 0.3420
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60842	104.2627	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60842	104.2627	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	104.2389	GEN562699 1-G15_018_3 0.6900
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	104.2379	GEN524485 1-CAPROCK WIND GEN
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60713	104.1926	P12:115:SPS:V52.1.COLTR.BSHLND
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	104.1491	GEN562550 1-G14_040_3 0.6900
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60816	103.8689	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60816	103.8689	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	103.805	GEN562655 1-G14_074_3 0.6900
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	103.7958	GEN562762 1-G15033_3 0.6900
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60991	103.66	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60991	103.66	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	103.5731	GEN527884 1-CUNNINGHAM GEN #4 22 KV
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	103.4557	GEN563042 1-G15068_3 0.6900
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59479	103.3729	CANYON E_TP3115.00 - CANYON WEST SUB 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	103.3249	GEN587113 1-G16-015-GEN10.4180
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	103.1958	GEN527165 1-Mustang Gen #5
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	103.1865	GEN562704 1-G15_020_3 0.3550
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	103.1568	GEN527164 1-MUSTANG GEN #4 22 KV
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	103.0149	GEN527161 1-MUSTANG GEN #1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	103.0149	GEN527162 1-MUSTANG GEN #2
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	102.9516	GEN563043 1-G15068_4 0.6900
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60774	102.8195	P12:345:SPS:J07.1.FINN.HITCH
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60774	102.813	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60774	102.813	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61789	102.7197	PLANT X STATION - TOLK STATION EAST 230KV CKT 2
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61789	102.7197	PLANT X STATION - TOLK STATION EAST 230KV CKT 2
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61787	102.7197	PLANT X STATION - TOLK STATION WEST 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61787	102.7197	PLANT X STATION - TOLK STATION WEST 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	102.6749	GEN527163 1-MUSTANG GEN #3 22 KV
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	102.5733	GEN562942 1-G15056_3 0.6900
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60464	102.365	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60464	102.363	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	102.3612	GEN525844 1-ELK_1 118.000
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60464	102.3611	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	102.3601	GEN525845 1-ELK_2 1 18.000
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61107	102.3026	P12:115:SPS:W54.1.KISER.KRESS
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61117	102.2857	P12:115:SPS:T25.1.MOOREW.DUMAS19
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59451	102.2541	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61098	102.2211	P12:115:SPS:W29.1.OCLTRE.SPRMN
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	102.2135	GEN563142 1-G15079_3 0.5500
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	102.2135	GEN563151 1-G15080_2 0.5500
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61122	102.1891	P12:115:SPS:V02.1.NICHLS.PNTX_S
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61124	102.1702	P12:115:SPS:V01.1.MOOREW.RVRVIEW
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61107	102.1474	P12:115:SPS:W05.1.DALLAM.LASLEY
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61074	102.1399	P12:115:SPS:T54.1.KIRBY.SHM(520)
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61074	102.1399	P12:115:SPS-AEPW:KIRBY3:SHAM3WT
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	102.1321	GEN524892 1-SNJN-WTG13 10.6000
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	102.1282	GEN524890 1-SNJN-WTGA1 10.6000
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	102.1131	GEN524896 1-SNJN-WTG21 10.6000
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	102.1113	GEN524898 1-SNJN-WTG22 10.6000
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	102.0966	P12:115:SPS:T64.1.RNDALL.PULLMN
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61046	102.0916	P12:115:SPS:T53.1.NICHLS.KIRBY
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	102.081	GEN524894 1-SNJN-WTG15 10.6000
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	102.0229	GEN524902 1-SNJN-WTG12 10.6000
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	102.0198	GEN528332 1-WILDCAT_WND134.500
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61108	102.0156	P12:115:SPS:W24.1.MOOREE.LASLEY
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61088	102.0055	P12:115:SPS:T70.1.COLTR.S_GORG
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61006	101.961	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61006	101.961	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60464	101.9382	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61117	101.9278	P12:115:SPS:T27.1.NICHLS.DUMAS19
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	101.9182	GEN560363 1-ASGI-10-20 0.6900
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	101.855	GEN562538 1-G14_035_3 0.3420
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59479	101.8215	CANYON WEST SUB - DAWN SUB 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	101.788	GEN587473 1-G16-069-GEN10.5500
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60460	101.7808	COULTER INTERCHANGE - HILLSIDE 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61112	101.7521	P12:115:SPS:T73.1.S_GORG.AMASTH
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	101.7438	GEN527901 1-HOBBS PLANT #1 (CT)
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	101.7438	GEN527902 1-HOBBS PLANT #2 (CT)
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59479	101.6511	P12:115:SPS:V05.1.OSAGE.WCANYON
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59605	101.6108	DEAF SMITH COUNTY INTERCHANGE (LIKE LUBBKS) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59605	101.6108	DEAF SMITH COUNTY INTERCHANGE (LIKE LUBBKS) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61006	101.6022	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61006	101.6022	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61125	101.5842	P12:115:SPS:T47.1.MOOREE.DALHRT
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60586	101.4817	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60586	101.4817	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59479	101.4486	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59716	101.4322	DEAF SMITH COUNTY INTERCHANGE (SIEMT0012691) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59716	101.4322	DEAF SMITH COUNTY INTERCHANGE (SIEMT0012691) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61125	101.4312	P12:115:SPS:V79.1.RVRVIEW.HUTCH
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60460	101.4018	BUSHLAND INTERCHANGE - HILLSIDE 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60460	101.3745	BUSHLAND INTERCHANGE (WH 7001795) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60460	101.3745	BUSHLAND INTERCHANGE (WH 7001795) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60739	101.3162	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60739	101.3162	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61102	101.2919	P12:115:SPS:V44.1.COLTR.OWENS
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60401	101.2854	BC-KELLEY 3115.00 - CASTRO COUNTY INTERCHANGE 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	101.2281	GEN563102 1-G15075_3 0.5500
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	101.1909	GEN562559 1-G14_047_3 0.4800
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	101.1809	GEN562688 1-G15_014_3 0.6900
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61265	101.0591	P12:345:SPS:J15.1.XRDS.TOLK
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61120	101.0524	P12:115:SPS:V38.1.NICHLS.RVRVIEW
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	101.0384	GEN562812 1-G15040_3 0.3570
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61094	101.0312	P12:115:SPS:T37.1.SUNSET.COLTR
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	101.0226	GEN563132 1-G15078_3 0.3570
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59479	100.9621	DEAF SMITH COUNTY INTERCHANGE - Panda Energy Substation Hereford 115KV CKT 1
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	100.9288	GEN527166 1-MUSTANG_6 118.000
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61125	100.9203	P12:115:SPS:V64.1.ETTER.DALLAM
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61251	100.9124	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61251	100.9118	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61251	100.9118	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60401	100.896	P12:115:SPS:V37.1.CASTRO.PLANTX
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	100.8735	GEN526678 1-CIRRUS_WND 10.6900
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	100.8327	GEN562962 1-G15058_3 0.4180
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	100.7744	GEN562756 1-G15031_7 0.6900
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	100.7538	GEN587373 1-G16-056-GEN10.6900
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	100.7117	GEN587253 1-G16-039-GEN10.5500
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	100.7116	GEN562710 1-G15_022_3 0.5500
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	100.7071	GEN562269 1-G12-020-1 0.6900
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	100.6771	GEN527882 1-CUNNINGHAM GEN #2 20 KV
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60097	100.5985	CASTRO COUNTY INTERCHANGE - NEWHART 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60097	100.5985	CASTRO COUNTY INTERCHANGE - NEWHART 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59451	100.5158	CANYON E_TP3115.00 - CANYON WEST SUB 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	100.4764	GEN562007 1-G11_025_3 0.6900
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	100.4582	GEN526332 1-JONES GEN #2 21 KV
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60460	100.3954	P12:115:SPS:V52.1.COLTR.BSHLND
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	100.2965	GEN562270 1-G12-020-2 0.6900
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	100.1753	GEN562483 1-G13_027_3 0.6900
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60233	100.1411	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60233	100.1254	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.60233	100.1211	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	100	GEN524485 1-CAPROCK WIND GEN
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	100	GEN528361 1-MADDOX GEN #1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	100	GEN562531 1-G14_033_3 0.3420
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	100	GEN562535 1-G14_034_3 0.3420
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	100	GEN562699 1-G15_018_3 0.6900
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59479	100	P12:115:SPS:W40.1.WCANYON.DFSMTH
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	99.9	GEN587393 1-G16-058-GEN10.5500
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	99.8	GEN526331 1-JONES GEN #1 22 KV
0	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61353	99.5	GEN527903 1-HOBBS PLANT #3 (ST)
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.59451	99.1	CANYON WEST SUB - DAWN SUB 115KV CKT 1
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	99	GEN562655 1-G14_074_3 0.6900
0	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61126	99	GEN562762 1-G15033_3 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G15_039	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.08473	117.1249	BASE CASE
0	20WP	G15_039	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.10763	109.9811	BASE CASE
0	16WP	G15_039	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11720	108.8041	BASE CASE
0	17G	G15_039	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11504	107.5286	BASE CASE
0	20L	G15_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08473	131.0896	BASE CASE
0	20WP	G15_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10763	123.9661	BASE CASE
0	16WP	G15_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11720	122.9494	BASE CASE
0	17G	G15_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11504	120.973	BASE CASE
0	17SP	G15_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11153	106.8776	BASE CASE
0	16WP	G15_039	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.22525	106.6944	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G15_039	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.19597	103.5122	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G15_039	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.22525	102.1214	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G15_039	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.08211	104.9056	BASE CASE
0	20SP	G15_039	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.08134	103.3041	BASE CASE
0	17G	G15_039	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.06095	102.2178	BASE CASE
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07664	124.4658	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06976	112.9438	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06976	112.9438	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06976	112.9086	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06976	112.9086	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	112.5354	GEN526331 1-JONES GEN #1 22 KV
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	112.3468	GEN526332 1-JONES GEN #2 21 KV
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07696	111.3346	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07696	111.3053	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.06002	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.06002	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07250	107.3472	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	107	GEN527884 1-CUNNINGHAM GEN #4 22 KV
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	106.0884	GEN563142 1-G15079_3 0.5500
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	106.0884	GEN563151 1-G15080_2 0.5500
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07250	106.0791	P12:115:SPS:V15.1.TUCO.INDANA
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07250	106.0442	INDIANA SUB - STANTON SUB 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07158	106.0084	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07158	105.974	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07074	105.4304	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.03866	105.4088	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.03866	105.4088	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06525	105.2063	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07074	105.1732	P12:345:SPS:J14.1.EDDY.XRDS
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06525	105.1386	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07187	105.0982	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07187	105.0934	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06960	105.0723	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06960	104.9891	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	104.8526	GEN527883 1-CUNNINGHAM GEN #3 22 KV
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06972	104.7091	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07100	104.6771	P12:345:SPS:J15.1.XRDS.TOLK
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06972	104.6596	P12:230:SPS:K37.1.TOLK.LAMB
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	104.4479	TUCO INTERCHANGE 230/13.0KV TRANSFORMER CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07043	104.442	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06922	104.1602	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06972	104.149	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06922	104.1458	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06972	104.0778	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07250	103.9914	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07043	103.9739	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07008	103.9293	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07008	103.8823	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07074	103.6702	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07074	103.6636	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07290	103.5765	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07290	103.5559	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	103.5169	GEN563132 1-G15078_3 0.3570
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06999	103.4535	LUBBOCK SOUTH INTERCHANGE - SOUTH PLAINS REC-WOODROW INTERCHANGE 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	103.4314	GEN587113 1-G16-015-GEN10.4180
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	103.3789	GEN563102 1-G15075_3 0.5500
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07233	103.2873	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07158	103.1846	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.03917	103.1673	P12:345:SPS:J15.1.XRDS.TOLK
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07043	103.1627	P12:115:SPS:W54.1.KISER.KRESS

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07158	103.1541	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07043	103.0555	KISER 3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07250	103.0022	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06898	102.9892	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07250	102.9593	P12:115:SPS:V62.1.CRLSLE.INDANA
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	102.8077	GEN562812 1-G15040_3 0.3570
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06974	102.7303	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06350	102.7134	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06350	102.6722	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06898	102.6695	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	102.6062	GEN526678 1-CIRRUS_WND 10.6900
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07052	102.5983	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07188	102.2565	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07233	102.2379	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08641	102.2143	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.03400	102.1679	GEN527166 1-MUSTANG_6 118.000
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06779	102.0607	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07290	101.9931	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07290	101.9797	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	101.5877	GEN525845 1-ELK_2 1 18.000
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06960	101.5349	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06960	101.5158	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.03811	101.3882	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.03811	101.3882	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06999	101.1826	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06999	101.0304	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	100.5597	BASE CASE
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	100.5354	BASE CASE
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06173	100.5005	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06173	100.4984	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.03400	100.4324	GEN527903 1-HOBBS PLANT #3 (ST)
0	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.03469	100.3914	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.03469	100.3671	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.03469	100.3647	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.03469	100.3647	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06921	100.1483	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	100.1357	GEN562270 1-G12-020-2 0.6900
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07158	100.0549	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06997	99.8	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06953	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06929	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06929	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07158	99.5	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04562	99.4	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	99.3	GEN562762 1-G15033_3 0.6900
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06980	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06980	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06980	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06980	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07038	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07038	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	99.2	GEN300024 1-1CHOTST6 16.000
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	99.2	GEN300031 1-CHOUTEAU CTG 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06926	99.2	P12:115:SPS:V56.1.COCHRAN.SUNDWN
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07158	99.1	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	99.1	GEN300001 1-THOMAS HILL UNIT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	99.1	GEN300017 1-1G2GPDEL 18.000
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	99.1	GEN511938 1-OEC STEAM # 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	99.1	GEN511941 1-OEC STEAM # 2
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	99.1	GEN562517 1-G14_021_S2 0.6900
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	99.1	GEN562691 1-G15_015_3 0.6900
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	99.1	GEN645041 1-CASS COUNTY 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	99	GEN300016 1-1G1GPDEL 18.000
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	99	GEN549893 2-SOUTHWEST 2
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	99	GEN562023 1-G11_020_3 0.6900
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	99	GEN562026 1-G11_019_3 0.6900
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	99	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06922	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06922	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G15_039	TO->FROM	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	1011.0	1176.0	0.16083	101.3643	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G15_039	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.05178	100	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_039	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.05178	100	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	987.2	1082.8	0.19018	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	1330.0	1940.0	0.17955	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	1330.0	1940.0	0.17955	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.17351	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.16891	-	CIMARRON - MINCO 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.16891	-	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.16402	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	1022.0	1124.0	0.15649	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	1022.0	1124.0	0.15649	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	987.16	1082.77	0.14877	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	956.09	1051.7	0.14877	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.14247	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.14247	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	1420.0	1775.0	0.11050	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	1420.0	1775.0	0.11050	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	1420.0	1775.0	0.11050	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.09754	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.09754	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	16WP	G15_039	-	Non-Converged Contingency	859.0	956.0	0.08245	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	560.0	560.0	0.08245	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	439.0	439.0	0.07547	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.07060	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	439.0	439.0	0.06943	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	16WP	G15_039	-	Non-Converged Contingency	450.0	450.0	0.06943	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	17G	G15_039	-	Non-Converged Contingency	0.0	0.0	0.07368	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	17G	G15_039	-	Non-Converged Contingency	0.0	0.0	0.05294	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	17G	G15_039	-	Non-Converged Contingency	0.0	0.0	0.03923	-	P12:138:WFEC-AEPW:WASHITA4:CLINTJC4
0	17G	G15_039	-	Non-Converged Contingency	0.0	0.0	0.03623	-	P12:138:AEPW:REDROCKRD4:WTH_JCT4
0	17G	G15_039	-	Non-Converged Contingency	0.0	0.0	0.03564	-	P12:138:AEPW:HOB-JCT4:ELKCTY-4
0	17G	G15_039	-	Non-Converged Contingency	0.0	0.0	0.03196	-	P12:138:AEPW:WTHWF4:WTH_SE4
0	17G	G15_039	-	Non-Converged Contingency	0.0	0.0	0.03076	-	P12:138:AEPW:S.W.S.-4:HOB-JCT4
0	17SP	G15_039	-	Non-Converged Contingency	318.7	350.6	0.61126	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	17SP	G15_039	-	Non-Converged Contingency	478.0	502.0	0.40404	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_039	-	Non-Converged Contingency	956.1	1051.7	0.23020	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17SP	G15_039	-	Non-Converged Contingency	956.09	1051.7	0.16960	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G15_039	-	Non-Converged Contingency	956.0	1042.0	0.16083	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17SP	G15_039	-	Non-Converged Contingency	956.0	1042.0	0.16083	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G15_039	-	Non-Converged Contingency	1330.0	1940.0	0.15035	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17SP	G15_039	-	Non-Converged Contingency	1330.0	1940.0	0.15035	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17SP	G15_039	-	Non-Converged Contingency	956.09	1051.7	0.14337	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.11999	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.11680	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.11528	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	17SP	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.11528	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	17SP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.11375	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	G15_039	-	Non-Converged Contingency	1420.0	1775.0	0.10955	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G15_039	-	Non-Converged Contingency	353.0	353.0	0.09873	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17SP	G15_039	-	Non-Converged Contingency	318.7	350.57	0.08211	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	17SP	G15_039	-	Non-Converged Contingency	478.0	502.0	0.04126	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	318.7	350.6	0.59725	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	478.0	502.0	0.38371	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	478.0	502.0	0.38371	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	478.0	502.0	0.38371	-	BUSHLAND INTERCHANGE 230KV SWITCHED SHUNT
0	20L	G15_039	-	Non-Converged Contingency	318.7	350.57	0.32903	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	318.7	350.57	0.32903	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	0.0	0.0	0.22002	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G15_039	-	Non-Converged Contingency	0.0	0.0	0.18019	-	P12:345:SPS:J15.1.XRDS.TOLK
0	20L	G15_039	-	Non-Converged Contingency	956.1	1051.7	0.15433	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	956.1	1051.7	0.15433	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	560.0	560.0	0.14352	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_039	-	Non-Converged Contingency	560.0	560.0	0.14352	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.14056	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.13069	-	CIMARRON - MINCO 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.13069	-	GRACEMONT - MINCO 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1584.0	2098.0	0.12764	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1584.0	2098.0	0.12764	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.12031	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.12031	-	GEN509403 1-PIRKEY GENERATION

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.12031	-	GEN509416 1-TURK GENERATION
0	20L	G15_039	-	Non-Converged Contingency	956.09	1051.7	0.11665	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	956.09	1051.7	0.11665	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	0.0	0.0	0.11584	-	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
0	20L	G15_039	-	Non-Converged Contingency	1022.0	1124.0	0.11462	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1022.0	1124.0	0.11462	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1022.0	1124.0	0.11462	-	OKLAUNION 345KV SWITCHED SHUNT
0	20L	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.11288	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.11288	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	560.0	560.0	0.10866	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_039	-	Non-Converged Contingency	560.0	560.0	0.10866	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_039	-	Non-Converged Contingency	560.0	560.0	0.10866	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G15_039	-	Non-Converged Contingency	0.0	0.0	0.10850	-	P12:230:AEPW:ELKCITY6:SWEETWT6
0	20L	G15_039	-	Non-Converged Contingency	956.09	1051.7	0.10337	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	956.09	1051.7	0.10337	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	956.09	1051.7	0.10337	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	956.09	1051.7	0.10337	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	717.0	789.0	0.08473	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	717.0	789.0	0.08473	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	717.0	789.0	0.08473	-	GEN515040 1-SEMINOLE 1G
0	20L	G15_039	-	Non-Converged Contingency	0.0	0.0	0.08389	-	P12:138:WFEC:MSL03
0	20L	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.07945	-	ARCADIA - NORTHWEST 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.07535	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.07535	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
0	20L	G15_039	-	Non-Converged Contingency	1793.0	1793.0	0.07535	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1716.0	1793.0	0.07535	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	G15_039	-	Non-Converged Contingency	1793.0	1793.0	0.07535	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1716.0	1793.0	0.07535	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	G15_039	-	Non-Converged Contingency	1793.0	1793.0	0.07535	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1716.0	1793.0	0.07535	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.07400	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
0	20L	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.07399	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.07399	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.07399	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20L	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.07399	-	BORDER 7345.00 345KV SWITCHED SHUNT
0	20L	G15_039	-	Non-Converged Contingency	1561.0	1793.0	0.06741	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1561.0	1793.0	0.06741	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1561.0	1793.0	0.06741	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_039	-	Non-Converged Contingency	1561.0	1793.0	0.06741	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_039	-	Non-Converged Contingency	1420.0	1775.0	0.06725	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1420.0	1775.0	0.06725	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G15_039	-	Non-Converged Contingency	1420.0	1775.0	0.06725	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1420.0	1775.0	0.06725	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_039	-	Non-Converged Contingency	1420.0	1775.0	0.06725	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1420.0	1775.0	0.06725	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G15_039	-	Non-Converged Contingency	0.0	0.0	0.06566	-	P12:345:SPS:J02.1.TOLK.EDDY
0	20L	G15_039	-	Non-Converged Contingency	1192.0	1192.0	0.06221	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	956.0	956.0	0.06221	-	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	560.0	560.0	0.05960	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_039	-	Non-Converged Contingency	501.95	501.95	0.05908	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	501.95	501.95	0.05908	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	421.0	439.0	0.05792	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	348.58	381.24	0.05792	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	500.0	723.0	0.05792	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	0.0	0.0	0.05622	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	20L	G15_039	-	Non-Converged Contingency	1532.0	1793.0	0.05493	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1532.0	1793.0	0.05493	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20L	G15_039	-	Non-Converged Contingency	1532.0	1793.0	0.05493	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	G15_039	-	Non-Converged Contingency	560.0	644.0	0.05371	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_039	-	Non-Converged Contingency	560.0	644.0	0.05371	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_039	-	Non-Converged Contingency	560.0	644.0	0.05371	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G15_039	-	Non-Converged Contingency	560.0	644.0	0.05371	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G15_039	-	Non-Converged Contingency	785.0	785.0	0.05303	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	785.0	785.0	0.05303	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	762.5	762.5	0.05251	-	MINGO - SETAB 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	762.5	762.5	0.05251	-	MINGO - SETAB 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	717.1	717.1	0.05180	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	717.1	717.1	0.05180	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	318.7	350.57	0.05157	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	318.7	350.57	0.05157	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.05114	-	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	439.0	439.0	0.05058	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	450.0	450.0	0.05058	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G15_039	-	Non-Converged Contingency	450.0	450.0	0.05058	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.04990	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	318.7	350.57	0.04913	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	318.7	350.57	0.04913	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	318.7	350.57	0.04840	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	318.7	350.57	0.04840	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	726.6	726.6	0.04795	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	726.6	726.6	0.04795	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1413.0	1517.0	0.04795	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1413.0	1517.0	0.04795	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1505.0	1793.0	0.04325	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1505.0	1793.0	0.04325	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1505.0	1793.0	0.04325	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	0.0	0.0	0.04318	-	917X
0	20L	G15_039	-	Non-Converged Contingency	1504.0	1792.0	0.04297	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1504.0	1792.0	0.04297	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	0.0	0.0	0.04148	-	P12:138:WFEC:MSL14
0	20L	G15_039	-	Non-Converged Contingency	956.0	956.0	0.04134	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	0.0	0.0	0.04116	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	20L	G15_039	-	Non-Converged Contingency	0.0	0.0	0.03744	-	P12:115:SPS:W08.1.HITCH.LASLEY
0	20L	G15_039	-	Non-Converged Contingency	0.0	0.0	0.03502	-	P12:230:SPS:K43.1.PRNGLE.HARR_E
0	20L	G15_039	-	Non-Converged Contingency	1141.0	1195.0	0.03462	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1141.0	1195.0	0.03462	-	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	1141.0	1195.0	0.03462	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20L	G15_039	-	Non-Converged Contingency	0.0	0.0	0.03429	-	P12:345:SPS:J02.1.TOLK.EDDY
0	20L	G15_039	-	Non-Converged Contingency	478.0	502.0	0.03401	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G15_039	-	Non-Converged Contingency	956.1	1051.7	0.23115	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20SP	G15_039	-	Non-Converged Contingency	956.0	1042.0	0.15486	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20SP	G15_039	-	Non-Converged Contingency	956.0	1042.0	0.15486	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.11420	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20SP	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.11420	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	G15_039	-	Non-Converged Contingency	987.2	1082.8	0.18605	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.16989	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	560.0	560.0	0.16183	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	1584.0	2098.0	0.15607	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	1584.0	2098.0	0.15607	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.14704	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.14501	-	CIMARRON - MINCO 345KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.14501	-	GRACEMONT - MINCO 345KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	987.16	1082.77	0.14444	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	1022.0	1124.0	0.14171	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	1022.0	1124.0	0.14171	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.13531	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.13531	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	956.09	1051.7	0.12848	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	987.16	1082.77	0.12848	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	717.0	789.0	0.10763	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.09081	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.09081	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	G15_039	-	Non-Converged Contingency	421.0	439.0	0.07208	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	439.0	439.0	0.06306	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	450.0	450.0	0.06306	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.06295	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	329.05	360.92	0.06105	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G15_039	-	Non-Converged Contingency	329.05	360.92	0.06070	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	25SP	G15_039	-	Non-Converged Contingency	0.0	0.0	0.23600	-	P12:345:SPS:J02.1.TOLK.EDDY
0	25SP	G15_039	-	Non-Converged Contingency	478.05	501.95	0.09977	-	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	25SP	G15_039	-	Non-Converged Contingency	343.79	343.79	0.06983	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G15_039	-	Non-Converged Contingency	0.0	0.0	0.05105	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
0	25SP	G15_039	-	Non-Converged Contingency	0.0	0.0	0.03870	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
0	25SP	G15_039	-	Non-Converged Contingency	478.0	502.0	0.03619	-	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G15_039	-	Non-Converged Contingency	0.0	0.0	0.03242	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	20WP	G15_039	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26660	105.3963	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G15_039	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26660	105.3963	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G15_039	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31880	103.6263	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	20WP	G15_039	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22115	100.9647	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G15_039	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22115	100.9647	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G15_039	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26660	100.7065	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G15_039	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26660	100.7065	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G15_039	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31880	99.1	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
2	16WP	G15_039	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.03613	101.4541	P12:345:SPS:J15.1.XRDS.TOLK
2	17SP	G15_039	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06820	113.9867	BASE CASE
2	20SP	G15_039	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06473	110.7777	BASE CASE
2	17G	G15_039	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06552	104.3556	BASE CASE
2	20WP	G15_039	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06308	99.1	BASE CASE
2	17SP	G15_039	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.26534	103.9462	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20SP	G15_039	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.25926	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G15_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22530	117.0258	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G15_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.19608	112.9654	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G15_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22530	112.441	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	G15_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.19608	108.3696	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17SP	G15_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22001	108.1247	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17SP	G15_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22001	103.6738	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.62580	110.2573	P12:345:SPS:J15.1.XRDS.TOLK
2	17SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.62359	105.9012	P12:345:SPS:J15.1.XRDS.TOLK
2	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.62464	105.0019	P12:345:SPS:J02.1.TOLK.EDDY
2	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61202	103.0047	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20SP	G15_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.61309	101.7283	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	16WP	G15_039	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08333	102.4471	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	16WP	G15_039	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08333	101.7764	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	20WP	G15_039	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.10766	109.7093	BASE CASE
2	16WP	G15_039	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11721	108.7418	BASE CASE
2	17G	G15_039	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11504	107.5286	BASE CASE
2	20WP	G15_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10766	123.7856	BASE CASE
2	16WP	G15_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11721	122.9306	BASE CASE
2	17G	G15_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11504	120.973	BASE CASE
2	17SP	G15_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11342	105.8511	BASE CASE
2	16WP	G15_039	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.22530	106.376	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G15_039	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.19608	102.3425	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G15_039	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.22530	101.9464	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G15_039	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.06095	102.2178	BASE CASE
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08689	125.3293	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08689	125.3293	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07185	121.2944	GEN526333 1-JONES GEN #3 21 KV
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07185	120.8816	GEN526334 1-JONES_4 116.500
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07899	114.0091	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08780	107.098	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08780	107.098	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05925	106.8942	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05925	106.8942	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.03985	104.8862	P12:345:SPS:J15.1.XRDS.TOLK
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07391	104.5606	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07391	104.5481	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07391	104.5174	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07391	104.5174	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07185	103.4092	GEN587373 1-G16-056-GEN10.6900
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07208	103.2676	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07208	103.2676	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07208	103.2676	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07208	103.2676	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07896	103.1516	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07896	103.1516	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07186	102.5939	P12:345:SPS:J15.1.XRDS.TOLK
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07185	102.3409	GEN526331 1-JONES GEN #1 22 KV
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07185	102.3328	GEN526332 1-JONES GEN #2 21 KV
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07402	100.5338	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
2	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.03547	100.313	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.03547	100.313	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07434	99.7	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07434	99.7	P12:345:SPS:J14.1.EDDY.XRDS
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07434	99.6	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07434	99.6	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07448	99.2	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	987.2	1082.8	0.19021	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	1330.0	1940.0	0.17958	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	1330.0	1940.0	0.17958	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.17354	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.16895	-	CIMARRON - MINCO 345KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.16895	-	GRACEMONT - MINCO 345KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.16406	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	1022.0	1124.0	0.15652	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	1022.0	1124.0	0.15652	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	987.16	1082.77	0.14880	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	956.09	1051.7	0.14880	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.14249	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.14249	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	1420.0	1775.0	0.11051	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.09756	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.09756	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	16WP	G15_039	-	Non-Converged Contingency	859.0	956.0	0.08690	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	560.0	560.0	0.08690	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.07064	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	439.0	439.0	0.06944	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	16WP	G15_039	-	Non-Converged Contingency	450.0	450.0	0.06944	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_039	-	Non-Converged Contingency	318.7	350.6	0.59953	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	478.0	502.0	0.39278	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	318.7	350.57	0.33735	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	956.1	1051.7	0.17973	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1330.0	1940.0	0.17325	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1330.0	1940.0	0.17325	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.16677	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.16677	-	GEN509403 1-PIRKEY GENERATION
2	17G	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.16677	-	GEN509404 1-WELSH #1
2	17G	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.16677	-	GEN509406 1-WELSH #3
2	17G	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.16677	-	GEN509416 1-TURK GENERATION
2	17G	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.16677	-	GEN511848 1-SOUTHWESTERN STATION #3
2	17G	G15_039	-	Non-Converged Contingency	560.0	560.0	0.16672	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.16278	-	CIMARRON - MINCO 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.16278	-	GRACEMONT - MINCO 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.15242	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1022.0	1124.0	0.14853	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1022.0	1124.0	0.14853	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	956.09	1051.7	0.13764	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	956.09	1051.7	0.13764	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.13706	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.13706	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	560.0	560.0	0.12629	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_039	-	Non-Converged Contingency	560.0	560.0	0.12629	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G15_039	-	Non-Converged Contingency	717.0	789.0	0.11504	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	717.0	789.0	0.11504	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1420.0	1775.0	0.10988	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1420.0	1775.0	0.10988	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1420.0	1775.0	0.10988	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1561.0	1793.0	0.09150	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1561.0	1793.0	0.09150	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.09107	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.09107	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
2	17G	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.09107	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.09107	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	17G	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.08894	-	ARCADIA - NORTHWEST 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.08782	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.08782	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
2	17G	G15_039	-	Non-Converged Contingency	1793.0	1793.0	0.08782	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1716.0	1793.0	0.08782	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	G15_039	-	Non-Converged Contingency	1793.0	1793.0	0.08782	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1716.0	1793.0	0.08782	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G15_039	-	Non-Converged Contingency	1793.0	1793.0	0.08782	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1716.0	1793.0	0.08782	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.08782	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.08782	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 2
2	17G	G15_039	-	Non-Converged Contingency	1532.0	1793.0	0.07665	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1532.0	1793.0	0.07665	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	G15_039	-	Non-Converged Contingency	1532.0	1793.0	0.07665	-	G1524G1525 345.00 - WICHITA 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1532.0	1793.0	0.07665	-	G1524G1525 345.00 - WICHITA 345KV CKT 2
2	17G	G15_039	-	Non-Converged Contingency	1532.0	1793.0	0.07665	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	G15_039	-	Non-Converged Contingency	439.0	439.0	0.07200	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	502.0	502.0	0.07200	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G15_039	-	Non-Converged Contingency	500.0	723.0	0.07200	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	560.0	644.0	0.07142	-	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G15_039	-	Non-Converged Contingency	501.95	501.95	0.06899	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	878.0	956.0	0.06779	-	BENTON - WICHITA 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.06589	-	CIMARRON - DRAPER LAKE 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	560.0	560.0	0.06569	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_039	-	Non-Converged Contingency	439.0	439.0	0.06552	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	450.0	450.0	0.06552	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.06421	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1793.0	1793.0	0.06223	-	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1793.0	1793.0	0.06223	-	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	560.0	644.0	0.06213	-	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_039	-	Non-Converged Contingency	717.1	717.1	0.06208	-	HOLCOMB - SETAB 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	502.0	502.0	0.06117	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	318.7	350.57	0.06095	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	726.6	726.6	0.06068	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1413.0	1517.0	0.06068	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	762.5	762.5	0.06063	-	MINGO - SETAB 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	785.0	785.0	0.05970	-	MINGO - RED WILLOW 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	318.7	350.57	0.05946	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	560.0	644.0	0.05870	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_039	-	Non-Converged Contingency	560.0	644.0	0.05870	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G15_039	-	Non-Converged Contingency	478.05	547.36	0.05748	-	NEWHART 230 - PLANT X STATION 230KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	685.0	796.0	0.05397	-	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
2	17G	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.05337	-	GEN520947 1-HUGO1
2	17G	G15_039	-	Non-Converged Contingency	1505.0	1793.0	0.05268	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1505.0	1793.0	0.05268	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1505.0	1793.0	0.05268	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1192.0	1192.0	0.05262	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	956.0	956.0	0.05262	-	G15063_T 345.00 - WOODRING 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1039.0	1195.0	0.05161	-	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.04875	-	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1504.0	1792.0	0.04866	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1504.0	1792.0	0.04866	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1035.0	1035.0	0.04778	-	G14_001T 345.00 - WICHITA 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1141.0	1195.0	0.04718	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1141.0	1195.0	0.04718	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.04332	-	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	478.0	502.0	0.03795	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_039	-	Non-Converged Contingency	1022.0	1143.0	0.03785	-	PITTSBURG - VALLIANT 345KV CKT 1
2	17SP	G15_039	-	Non-Converged Contingency	956.0	1042.0	0.15201	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G15_039	-	Non-Converged Contingency	987.2	1082.8	0.18613	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G15_039	-	Non-Converged Contingency	1792.0	1792.0	0.16999	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20WP	G15_039	-	Non-Converged Contingency	1584.0	2098.0	0.15612	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	20WP	G15_039	-	Non-Converged Contingency	1584.0	2098.0	0.15612	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	20WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.14710	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	20WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.14510	-	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G15_039	-	Non-Converged Contingency	987.16	1082.77	0.14451	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20WP	G15_039	-	Non-Converged Contingency	1022.0	1124.0	0.14178	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G15_039	-	Non-Converged Contingency	1022.0	1124.0	0.14178	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.13535	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	20WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.13535	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.09087	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	20WP	G15_039	-	Non-Converged Contingency	1792.0	1972.0	0.09087	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	20WP	G15_039	-	Non-Converged Contingency	439.0	439.0	0.06308	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	20WP	G15_039	-	Non-Converged Contingency	450.0	450.0	0.06308	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	20WP	G15_039	-	Non-Converged Contingency	1195.0	1195.0	0.06304	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	25SP	G15_039	-	Non-Converged Contingency	0.0	0.0	0.13963	-	P12:345:SPS:J02.1.TOLK.EDDY
2	25SP	G15_039	-	Non-Converged Contingency	343.79	343.79	0.07185	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G15_039	-	Non-Converged Contingency	0.0	0.0	0.05109	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
2	25SP	G15_039	-	Non-Converged Contingency	0.0	0.0	0.03869	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
2	25SP	G15_039	-	Non-Converged Contingency	0.0	0.0	0.03237	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
2	20WP	G15_039	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26679	101.3194	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	20WP	G15_039	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26679	101.3194	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	20WP	G15_039	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31898	99.9	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
3	16WP	G15_039	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08331	102.99	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G15_039	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08331	102.3933	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	25SP	G15_039	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03581	113.6961	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_039	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03581	113.6922	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08759	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08759	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07235	119.248	GEN526333 1-JONES GEN #3 21 KV
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07235	118.8723	GEN526334 1-JONES_4 116.500
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07961	114.4952	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07227	112.8126	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07227	112.8111	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08356	111.8354	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08819	106.8773	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08819	106.8773	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07399	105.5745	P12:345:SPS:J02.1.TOLK.EDDY
3	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05944	104.0964	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05944	104.0964	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07441	103.9995	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07441	103.984	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07441	103.976	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07441	103.976	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07235	103.6041	GEN587373 1-G16-056-GEN10.6900
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07265	103.2394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07265	103.2394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07265	103.2394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07265	103.2394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07946	103.2214	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07946	103.2214	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07277	102.9873	P12:345:SPS:J15.1.XRDS.TOLK
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07235	102.4114	GEN526331 1-JONES GEN #1 22 KV
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07235	102.4061	GEN526332 1-JONES GEN #2 21 KV
3	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04023	100.4251	P12:345:SPS:J15.1.XRDS.TOLK
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07457	100.2458	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07499	99.6	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07485	99	P12:345:SPS:J14.1.EDDY.XRDS
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07409	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07409	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03581	150.821	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03581	150.8177	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	118.3664	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	118.3017	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	101.1875	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	101.1522	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03581	99	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03581	99	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03043	110.7208	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
3	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03043	110.6974	P12:230:LPL:K26.1.JONES.LP-HOLLY
3	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03043	110.6461	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03043	110.6461	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	17G	G15_039	-	Non-Converged Contingency	3975.0	4570.0	0.30165	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	20L	G15_039	-	Non-Converged Contingency	3975.0	4570.0	0.24665	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	16WP	G15_039	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08331	103.0572	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G15_039	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08331	102.4534	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	25SP	G15_039	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03581	113.6646	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_039	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03581	113.6599	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08761	125.0569	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08761	125.0569	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07236	119.0612	GEN526333 1-JONES GEN #3 21 KV
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07236	118.6856	GEN526334 1-JONES_4 116.500
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07962	114.2489	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07229	112.5996	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07229	112.5946	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08357	111.5567	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08820	106.7476	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08820	106.7476	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07400	105.4545	P12:345:SPS:J02.1.TOLK.EDDY
4	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05945	104.0099	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05945	104.0099	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07443	103.8244	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07443	103.8052	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07443	103.7969	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07443	103.7969	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07236	103.416	GEN587373 1-G16-056-GEN10.6900
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07947	103.2672	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07947	103.2672	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07266	103.0315	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07266	103.0315	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07266	103.0315	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07266	103.0315	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07279	102.755	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07236	102.1709	GEN526331 1-JONES GEN #1 22 KV
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07236	102.1659	GEN526332 1-JONES GEN #2 21 KV
4	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04025	100.3275	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07458	100	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07500	99.4	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03581	150.9857	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03581	150.9823	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	118.304	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	118.2713	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	101.1568	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	101.1421	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03581	99.3	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03581	99.3	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03043	110.6999	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
4	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03043	110.6899	P12:230:LPL:K26.1.JONES.LP-HOLLY
4	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03043	110.6243	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03043	110.6243	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	17G	G15_039	-	Non-Converged Contingency	3975.0	4570.0	0.29701	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	20L	G15_039	-	Non-Converged Contingency	3975.0	4570.0	0.24199	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
5	16WP	G15_039	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08331	103.0311	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	16WP	G15_039	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08331	102.4344	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	25SP	G15_039	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03581	113.6714	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_039	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03581	113.6673	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08765	124.8975	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08765	124.8975	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07239	118.9383	GEN526333 1-JONES GEN #3 21 KV
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07239	118.5628	GEN526334 1-JONES_4 116.500
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07966	114.1042	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07231	112.5331	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07231	112.531	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08361	111.409	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08822	106.6731	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08822	106.6731	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07403	105.3409	P12:345:SPS:J02.1.TOLK.EDDY
5	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05947	104.1015	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05947	104.1015	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07445	103.707	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07445	103.6946	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07445	103.6865	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07445	103.6865	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07239	103.2876	GEN587373 1-G16-056-GEN10.6900
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07950	103.1458	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07950	103.1458	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07269	102.9044	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07269	102.9044	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07269	102.9044	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07269	102.9044	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07284	102.6383	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07239	102.0561	GEN526331 1-JONES GEN #1 22 KV
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07239	102.051	GEN526332 1-JONES GEN #2 21 KV
5	16WP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04028	100.4572	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07461	99.9	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
5	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07503	99.3	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03581	150.9628	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03581	150.9601	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	118.3008	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	118.268	P12:230:LPL:K57.1.LP-WADS.LUBBE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	101.1553	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	101.1406	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03461	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03581	99.2	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03581	99.2	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03043	110.6972	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
5	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03043	110.6738	P12:230:LPL:K26.1.JONES.LP-HOLLY
5	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03043	110.6217	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03043	110.6217	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_039	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03581	113.5161	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08847	124.2902	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
6	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07298	118.5502	GEN526333 1-JONES GEN #3 21 KV
6	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07298	118.1772	GEN526334 1-JONES_4 116.500
6	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08040	113.6007	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07290	111.9176	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08402	110.107	CRAWFISH_DR 345.00 - YOAKUM_345 345.00 345KV CKT 1
6	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08873	106.564	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
6	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07504	103.2173	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07504	103.216	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
6	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07298	102.8608	GEN587373 1-G16-056-GEN10.6900
6	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08011	102.7727	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
6	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07333	102.4925	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07333	102.4925	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07298	101.6462	GEN526331 1-JONES GEN #1 22 KV
6	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07298	101.6414	GEN526332 1-JONES GEN #2 21 KV
6	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07504	99.4	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
6	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03581	151.3756	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03462	118.1734	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03462	118.1275	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03462	101.1279	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03462	101.1113	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03581	100.0897	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03043	110.6217	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
6	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03043	110.5253	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
0	17SP	G15_040	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06305	111.2423	BASE CASE
0	20SP	G15_040	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06003	106.965	BASE CASE
0	17G	G15_040	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06339	104.3555	BASE CASE
0	20WP	G15_040	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06124	100.6452	BASE CASE
0	16WP	G15_040	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24768	117.2755	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G15_040	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21959	113.9417	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G15_040	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24768	112.5386	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G15_040	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24631	107.9528	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17SP	G15_040	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24631	103.4902	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29879	197.2146	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29879	189.9362	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31315	115.1329	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31315	114.7364	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.04884	111.7808	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.04884	107.7227	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.34541	213.0015	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.35739	134.0852	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.09369	123.3294	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.23709	119.8072	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.24746	109.6936	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17G	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.04896	107.108	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_040	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.10888	117.8449	BASE CASE
0	17SP	G15_040	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.10570	113.6626	BASE CASE
0	20L	G15_040	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.09682	117.1249	BASE CASE
0	20WP	G15_040	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11972	109.9811	BASE CASE
0	16WP	G15_040	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12922	108.8041	BASE CASE
0	17G	G15_040	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12707	107.5286	BASE CASE
0	20L	G15_040	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09682	131.0896	BASE CASE
0	20WP	G15_040	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11972	123.9661	BASE CASE
0	16WP	G15_040	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12922	122.9494	BASE CASE
0	17G	G15_040	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12707	120.973	BASE CASE
0	17SP	G15_040	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12924	106.8776	BASE CASE
0	20SP	G15_040	TO->FROM	G15039_T 230.00 - PLANT X STATION 230KV CKT 1	318.7	350.6	0.10888	101.2007	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G15_040	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24768	106.6944	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G15_040	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.21959	103.5122	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G15_040	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24768	102.1214	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G15_040	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04289	104.9056	BASE CASE
0	20SP	G15_040	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04310	103.3041	BASE CASE
0	17G	G15_040	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03655	102.2178	BASE CASE
0	25SP	G15_040	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.03130	106.0084	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G15_040	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.03130	105.974	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G15_040	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.03130	103.1846	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G15_040	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.03130	103.1541	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G15_040	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.02951	102.2565	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	25SP	G15_040	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04791	100.5005	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_040	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04791	100.4984	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_040	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.03130	100.0549	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G15_040	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.03130	99.5	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	25SP	G15_040	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.03130	99.1	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	17SP	G15_040	TO->FROM	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	1011.0	1176.0	0.21726	101.3643	BASE CASE
0	16WP	G15_040	-	Non-Converged Contingency	1022.0	1124.0	0.20102	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	1022.0	1124.0	0.20102	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.19882	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.19012	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.18557	-	CIMARRON - MINCO 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.18557	-	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.18483	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	1330.0	1940.0	0.17621	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	1330.0	1940.0	0.17621	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	987.2	1082.8	0.16568	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.14875	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.14875	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	16WP	G15_040	-	Non-Converged Contingency	987.16	1082.77	0.13309	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	956.09	1051.7	0.13309	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	1420.0	1775.0	0.09931	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	1420.0	1775.0	0.09931	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	1420.0	1775.0	0.09931	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.09144	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.09144	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	439.0	439.0	0.06730	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	450.0	450.0	0.06730	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	16WP	G15_040	-	Non-Converged Contingency	439.0	439.0	0.04468	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17G	G15_040	-	Non-Converged Contingency	0.0	0.0	0.07237	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	17G	G15_040	-	Non-Converged Contingency	0.0	0.0	0.05870	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	17G	G15_040	-	Non-Converged Contingency	0.0	0.0	0.03616	-	P12:138:AEPW:REDROCKRD4:WTH_JCT4
0	17G	G15_040	-	Non-Converged Contingency	0.0	0.0	0.03419	-	P12:138:WFEC-AEPW:WASHITA4:CLINTJC4
0	17G	G15_040	-	Non-Converged Contingency	0.0	0.0	0.03294	-	P12:138:AEPW:HOB-JCT4:ELKCTY-4
0	17G	G15_040	-	Non-Converged Contingency	0.0	0.0	0.03189	-	P12:138:AEPW:WTHWF4:WTH_SE4
0	17SP	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.29062	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G15_040	-	Non-Converged Contingency	956.0	1042.0	0.21726	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17SP	G15_040	-	Non-Converged Contingency	956.0	1042.0	0.21726	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.17824	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.17532	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	17SP	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.17532	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	17SP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.17239	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	G15_040	-	Non-Converged Contingency	1330.0	1940.0	0.15873	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17SP	G15_040	-	Non-Converged Contingency	1330.0	1940.0	0.15873	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17SP	G15_040	-	Non-Converged Contingency	956.1	1051.7	0.15714	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17SP	G15_040	-	Non-Converged Contingency	956.09	1051.7	0.13798	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G15_040	-	Non-Converged Contingency	478.0	502.0	0.11892	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_040	-	Non-Converged Contingency	956.09	1051.7	0.11662	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	G15_040	-	Non-Converged Contingency	318.7	350.6	0.10570	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	17SP	G15_040	-	Non-Converged Contingency	318.7	350.6	0.10570	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	17SP	G15_040	-	Non-Converged Contingency	478.0	502.0	0.10151	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_040	-	Non-Converged Contingency	1420.0	1775.0	0.09178	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G15_040	-	Non-Converged Contingency	353.0	353.0	0.04939	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17SP	G15_040	-	Non-Converged Contingency	318.7	350.57	0.04289	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.27710	-	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.20100	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	0.0	0.0	0.19078	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.16536	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.16470	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1022.0	1124.0	0.15882	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G15_040	-	Non-Converged Contingency	1022.0	1124.0	0.15882	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1022.0	1124.0	0.15882	-	OKLAUNION 345KV SWITCHED SHUNT
0	20L	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.14858	-	CIMARRON - MINCO 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.14858	-	GRACEMONT - MINCO 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.14710	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.14710	-	GEN509403 1-PIRKEY GENERATION
0	20L	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.14710	-	GEN509416 1-TURK GENERATION
0	20L	G15_040	-	Non-Converged Contingency	956.1	1051.7	0.13014	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	956.1	1051.7	0.13014	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1584.0	2098.0	0.12584	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1584.0	2098.0	0.12584	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.12434	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.12434	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
0	20L	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.12434	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.12434	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20L	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.12434	-	BORDER 7345.00 345KV SWITCHED SHUNT
0	20L	G15_040	-	Non-Converged Contingency	0.0	0.0	0.11308	-	P12:345:SPS:J15.1.XRDS.TOLK
0	20L	G15_040	-	Non-Converged Contingency	956.09	1051.7	0.10117	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	956.09	1051.7	0.10117	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	717.0	926.0	0.09756	-	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	717.0	789.0	0.09682	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	717.0	789.0	0.09682	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	717.0	789.0	0.09682	-	GEN515040 1-SEMINOLE 1G
0	20L	G15_040	-	Non-Converged Contingency	0.0	0.0	0.09159	-	P12:138:WFEC:MSL03
0	20L	G15_040	-	Non-Converged Contingency	956.09	1051.7	0.08961	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	956.09	1051.7	0.08961	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	956.09	1051.7	0.08961	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	956.09	1051.7	0.08961	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	497.0	547.0	0.08919	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.08092	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.07852	-	ARCADIA - NORTHWEST 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	560.0	560.0	0.07849	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_040	-	Non-Converged Contingency	560.0	560.0	0.07849	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_040	-	Non-Converged Contingency	478.0	502.0	0.07727	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	478.0	502.0	0.07727	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	478.0	502.0	0.07727	-	BUSHLAND INTERCHANGE 230KV SWITCHED SHUNT
0	20L	G15_040	-	Non-Converged Contingency	0.0	0.0	0.07626	-	P12:230:AEPW:ELKCITY6:SWEETWT6
0	20L	G15_040	-	Non-Converged Contingency	318.7	350.6	0.06969	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	318.7	350.6	0.06969	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	478.0	502.0	0.06918	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	478.0	502.0	0.06781	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	318.7	350.57	0.06730	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	318.7	350.57	0.06730	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1561.0	1793.0	0.06663	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1561.0	1793.0	0.06663	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1561.0	1793.0	0.06663	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_040	-	Non-Converged Contingency	1561.0	1793.0	0.06663	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_040	-	Non-Converged Contingency	1192.0	1192.0	0.06561	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	956.0	956.0	0.06561	-	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.06312	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.06312	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1420.0	1775.0	0.05913	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1420.0	1775.0	0.05913	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G15_040	-	Non-Converged Contingency	1420.0	1775.0	0.05913	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1420.0	1775.0	0.05913	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_040	-	Non-Converged Contingency	1420.0	1775.0	0.05913	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1420.0	1775.0	0.05913	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G15_040	-	Non-Converged Contingency	0.0	0.0	0.05563	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	20L	G15_040	-	Non-Converged Contingency	0.0	0.0	0.05500	-	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
0	20L	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.05272	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.05272	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
0	20L	G15_040	-	Non-Converged Contingency	1793.0	1793.0	0.05272	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1716.0	1793.0	0.05272	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	G15_040	-	Non-Converged Contingency	1793.0	1793.0	0.05272	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1716.0	1793.0	0.05272	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	G15_040	-	Non-Converged Contingency	1793.0	1793.0	0.05272	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1716.0	1793.0	0.05272	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_040	-	Non-Converged Contingency	1532.0	1793.0	0.05117	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1532.0	1793.0	0.05117	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20L	G15_040	-	Non-Converged Contingency	1532.0	1793.0	0.05117	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.04959	-	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	785.0	785.0	0.04915	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	785.0	785.0	0.04915	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	439.0	439.0	0.04876	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	450.0	450.0	0.04876	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G15_040	-	Non-Converged Contingency	450.0	450.0	0.04876	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G15_040	-	Non-Converged Contingency	762.5	762.5	0.04822	-	MINGO - SETAB 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	762.5	762.5	0.04822	-	MINGO - SETAB 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	717.1	717.1	0.04745	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	717.1	717.1	0.04745	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	0.0	0.0	0.04684	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	20L	G15_040	-	Non-Converged Contingency	0.0	0.0	0.04330	-	P12:138:WFEC:MSL14
0	20L	G15_040	-	Non-Converged Contingency	0.0	0.0	0.04298	-	P12:115:SPS:V80.1.DC_STH.LE-WAIT
0	20L	G15_040	-	Non-Converged Contingency	0.0	0.0	0.04171	-	917X
0	20L	G15_040	-	Non-Converged Contingency	1504.0	1792.0	0.04144	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1504.0	1792.0	0.04144	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	560.0	644.0	0.04136	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_040	-	Non-Converged Contingency	560.0	644.0	0.04136	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_040	-	Non-Converged Contingency	560.0	644.0	0.04136	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G15_040	-	Non-Converged Contingency	560.0	644.0	0.04136	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G15_040	-	Non-Converged Contingency	1505.0	1793.0	0.04073	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1505.0	1793.0	0.04073	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1505.0	1793.0	0.04073	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	501.95	501.95	0.04019	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	501.95	501.95	0.04019	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	726.6	726.6	0.03852	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	726.6	726.6	0.03852	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1413.0	1517.0	0.03852	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1413.0	1517.0	0.03852	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	956.0	956.0	0.03827	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	560.0	560.0	0.03698	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_040	-	Non-Converged Contingency	318.7	350.57	0.03538	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	318.7	350.57	0.03538	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1141.0	1195.0	0.03439	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1141.0	1195.0	0.03439	-	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1141.0	1195.0	0.03439	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.03252	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20L	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.03252	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20SP	G15_040	-	Non-Converged Contingency	956.0	1042.0	0.21060	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20SP	G15_040	-	Non-Converged Contingency	956.0	1042.0	0.21060	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.17280	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20SP	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.17280	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20SP	G15_040	-	Non-Converged Contingency	956.1	1051.7	0.15951	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.19403	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	1022.0	1124.0	0.18591	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	1022.0	1124.0	0.18591	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.17841	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.17384	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.16291	-	CIMARRON - MINCO 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.16291	-	GRACEMONT - MINCO 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	987.2	1082.8	0.16186	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	1584.0	2098.0	0.15426	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	1584.0	2098.0	0.15426	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.14116	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.14116	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	G15_040	-	Non-Converged Contingency	987.16	1082.77	0.12896	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	717.0	789.0	0.11972	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	956.09	1051.7	0.11471	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	987.16	1082.77	0.11471	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	560.0	560.0	0.09681	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.08555	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.08555	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	439.0	439.0	0.06124	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	450.0	450.0	0.06124	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	329.05	360.92	0.04486	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	421.0	439.0	0.04166	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20WP	G15_040	-	Non-Converged Contingency	329.05	360.92	0.03664	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	25SP	G15_040	-	Non-Converged Contingency	501.55	501.55	0.08198	-	MUSTANG STATION - SEMINOLE 230KV CKT 1
0	25SP	G15_040	-	Non-Converged Contingency	0.0	0.0	0.04999	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
0	25SP	G15_040	-	Non-Converged Contingency	0.0	0.0	0.03657	-	P12:230:LPL:K57.1.LP-WADS.LUBBE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G15_040	-	Non-Converged Contingency	0.0	0.0	0.03391	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	17SP	G15_040	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	442.0	752.0	0.07094	100.8893	BASE CASE
0	17SP	G15_040	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	442.0	752.0	0.07199	100.8893	BASE CASE
0	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06513	124.7909	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06513	124.786	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06513	115.0714	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06513	115.0634	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
0	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07717	111.9358	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
0	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07717	111.9358	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
0	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06603	107.3832	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
0	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06603	107.3819	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
0	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07717	105.1726	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
0	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07717	105.1726	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.08340	103.0727	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.08340	103.0727	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
0	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06603	101.5323	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
0	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06603	101.531	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06582	126.0072	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06582	125.9954	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06582	116.4451	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06582	116.4329	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07797	113.0696	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07797	113.0696	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
0	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06673	107.7076	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
0	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06673	107.7062	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07797	106.4288	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07797	106.4288	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.08426	104.1311	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.08426	104.1311	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
0	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06673	102.369	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
0	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06673	102.3676	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05262	104.4482	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
0	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05262	104.4482	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
0	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05262	101.3069	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
0	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05262	101.3069	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
0	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05461	108.4104	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05461	108.4104	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05461	105.2739	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05461	105.2739	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G15_040	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06603	113.9867	BASE CASE
2	20SP	G15_040	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06291	110.7777	BASE CASE
2	17G	G15_040	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06339	104.3556	BASE CASE
2	20WP	G15_040	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06126	99.1	BASE CASE
2	17SP	G15_040	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.30674	103.9462	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_040	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.03074	99.7	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20SP	G15_040	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.30093	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20L	G15_040	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.03395	99.3	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G15_040	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24773	117.0258	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G15_040	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21969	112.9654	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G15_040	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24773	112.441	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	G15_040	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21969	108.3696	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17SP	G15_040	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24273	108.1247	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17SP	G15_040	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24273	103.6738	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.19539	112.2087	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.19539	110.2344	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.04884	108.0357	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.04884	106.4735	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17SP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.25078	126.3303	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20SP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.24094	117.4113	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20L	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.09369	115.1136	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.23713	110.5121	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.24748	105.6091	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G15_040	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11975	109.7093	BASE CASE
2	16WP	G15_040	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12924	108.7418	BASE CASE
2	17G	G15_040	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12707	107.5286	BASE CASE
2	20WP	G15_040	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11975	123.7856	BASE CASE
2	16WP	G15_040	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12924	122.9306	BASE CASE
2	17G	G15_040	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12707	120.973	BASE CASE
2	17SP	G15_040	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12559	105.8511	BASE CASE
2	16WP	G15_040	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24773	106.376	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20WP	G15_040	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.21969	102.3425	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G15_040	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24773	101.9464	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G15_040	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03655	102.2178	BASE CASE
2	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18275	106.6532	MUSTANG STATION - SEMINOLE 230KV CKT 1
2	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18275	106.6532	MUSTANG STATION - SEMINOLE 230KV CKT 1
2	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18275	101.2891	MUSTANG STATION - SEMINOLE 230KV CKT 1
2	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18275	101.2891	MUSTANG STATION - SEMINOLE 230KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	1022.0	1124.0	0.20105	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	1022.0	1124.0	0.20105	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.19885	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.19016	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.18561	-	CIMARRON - MINCO 345KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.18561	-	GRACEMONT - MINCO 345KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.18487	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	1330.0	1940.0	0.17623	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	1330.0	1940.0	0.17623	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	987.2	1082.8	0.16571	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.14877	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.14877	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	16WP	G15_040	-	Non-Converged Contingency	987.16	1082.77	0.13312	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	956.09	1051.7	0.13312	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	1420.0	1775.0	0.09933	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.09146	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.09146	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	439.0	439.0	0.06731	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	16WP	G15_040	-	Non-Converged Contingency	450.0	450.0	0.06731	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.35130	-	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.22831	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1022.0	1124.0	0.19306	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1022.0	1124.0	0.19306	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.19208	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.19208	-	GEN509403 1-PIRKEY GENERATION
2	17G	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.19208	-	GEN509404 1-WELSH #1
2	17G	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.19208	-	GEN509406 1-WELSH #3
2	17G	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.19208	-	GEN509416 1-TURK GENERATION
2	17G	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.19208	-	GEN511848 1-SOUTHWESTERN STATION #3
2	17G	G15_040	-	Non-Converged Contingency	414.0	414.0	0.18427	-	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.17943	-	CIMARRON - MINCO 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.17943	-	GRACEMONT - MINCO 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.17852	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.17844	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1330.0	1940.0	0.16991	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1330.0	1940.0	0.16991	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	956.1	1051.7	0.15523	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	318.7	350.57	0.14677	-	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.14228	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.14228	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
2	17G	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.14228	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.14228	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	17G	G15_040	-	Non-Converged Contingency	717.0	789.0	0.12707	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	717.0	789.0	0.12707	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	956.09	1051.7	0.12196	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	956.09	1051.7	0.12196	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	717.0	926.0	0.10677	-	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1420.0	1775.0	0.09870	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1420.0	1775.0	0.09870	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1420.0	1775.0	0.09870	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	560.0	560.0	0.09471	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1561.0	1793.0	0.08958	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1561.0	1793.0	0.08958	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.08854	-	ARCADIA - NORTHWEST 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.08603	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.08603	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	478.0	502.0	0.08227	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	497.0	547.0	0.08073	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	318.7	350.6	0.07290	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	318.7	350.6	0.07290	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	318.7	350.57	0.07257	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	478.0	502.0	0.07200	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1532.0	1793.0	0.07191	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G15_040	-	Non-Converged Contingency	1532.0	1793.0	0.07191	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	G15_040	-	Non-Converged Contingency	1532.0	1793.0	0.07191	-	G1524G1525 345.00 - WICHITA 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1532.0	1793.0	0.07191	-	G1524G1525 345.00 - WICHITA 345KV CKT 2
2	17G	G15_040	-	Non-Converged Contingency	1532.0	1793.0	0.07191	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	G15_040	-	Non-Converged Contingency	478.05	547.36	0.07065	-	NEWHART 230 - PLANT X STATION 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	343.79	343.79	0.06823	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	318.7	350.57	0.06693	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.06511	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.06511	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
2	17G	G15_040	-	Non-Converged Contingency	1793.0	1793.0	0.06511	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1716.0	1793.0	0.06511	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	G15_040	-	Non-Converged Contingency	1793.0	1793.0	0.06511	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1716.0	1793.0	0.06511	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G15_040	-	Non-Converged Contingency	1793.0	1793.0	0.06511	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1716.0	1793.0	0.06511	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.06511	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.06511	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 2
2	17G	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.06479	-	CIMARRON - DRAPER LAKE 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	439.0	439.0	0.06339	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	450.0	450.0	0.06339	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_040	-	Non-Converged Contingency	878.0	956.0	0.06306	-	BENTON - WICHITA 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1793.0	1793.0	0.06162	-	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1793.0	1793.0	0.06162	-	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	717.1	717.1	0.05735	-	HOLCOMB - SETAB 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1192.0	1192.0	0.05734	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	956.0	956.0	0.05734	-	G15063_T 345.00 - WOODRING 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.05695	-	GEN520947 1-HUGO1
2	17G	G15_040	-	Non-Converged Contingency	762.5	762.5	0.05616	-	MINGO - SETAB 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	785.0	785.0	0.05575	-	MINGO - RED WILLOW 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1039.0	1195.0	0.05489	-	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.05466	-	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	560.0	644.0	0.05184	-	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G15_040	-	Non-Converged Contingency	726.6	726.6	0.05073	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1413.0	1517.0	0.05073	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	501.95	501.95	0.05002	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1505.0	1793.0	0.04992	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1505.0	1793.0	0.04992	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1505.0	1793.0	0.04992	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1035.0	1035.0	0.04733	-	G14_001T 345.00 - WICHITA 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1504.0	1792.0	0.04700	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1504.0	1792.0	0.04700	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1141.0	1195.0	0.04686	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1141.0	1195.0	0.04686	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	560.0	644.0	0.04510	-	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_040	-	Non-Converged Contingency	318.7	350.57	0.04310	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	439.0	439.0	0.04122	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	502.0	502.0	0.04122	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	500.0	723.0	0.04122	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	1022.0	1143.0	0.03790	-	PITTSBURG - VALLIANT 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	318.7	350.57	0.03655	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	717.0	789.0	0.03572	-	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	502.0	502.0	0.03523	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	560.0	644.0	0.03504	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_040	-	Non-Converged Contingency	560.0	644.0	0.03504	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G15_040	-	Non-Converged Contingency	560.0	560.0	0.03320	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_040	-	Non-Converged Contingency	478.0	502.0	0.03307	-	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
2	17G	G15_040	-	Non-Converged Contingency	560.0	560.0	0.03141	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_040	-	Non-Converged Contingency	560.0	560.0	0.03141	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 2
2	17SP	G15_040	-	Non-Converged Contingency	956.0	1042.0	0.19694	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G15_040	-	Non-Converged Contingency	1792.0	1792.0	0.19412	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20WP	G15_040	-	Non-Converged Contingency	1022.0	1124.0	0.18598	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G15_040	-	Non-Converged Contingency	1022.0	1124.0	0.18598	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.17850	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	20WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.17389	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	20WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.16300	-	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G15_040	-	Non-Converged Contingency	987.2	1082.8	0.16195	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G15_040	-	Non-Converged Contingency	1584.0	2098.0	0.15432	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	20WP	G15_040	-	Non-Converged Contingency	1584.0	2098.0	0.15432	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	20WP	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.14121	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	20WP	G15_040	-	Non-Converged Contingency	1792.0	1972.0	0.14121	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20WP	G15_040	-	Non-Converged Contingency	987.16	1082.77	0.12903	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.08559	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	20WP	G15_040	-	Non-Converged Contingency	1195.0	1195.0	0.08559	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G15_040	-	Non-Converged Contingency	439.0	439.0	0.06126	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	20WP	G15_040	-	Non-Converged Contingency	450.0	450.0	0.06126	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	25SP	G15_040	-	Non-Converged Contingency	0.0	0.0	0.04998	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
2	25SP	G15_040	-	Non-Converged Contingency	0.0	0.0	0.03662	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
2	25SP	G15_040	-	Non-Converged Contingency	0.0	0.0	0.03390	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
2	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06524	124.7096	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06524	124.7096	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06524	115.1852	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06524	115.1852	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
2	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07771	111.4342	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
2	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07771	111.4342	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
2	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06614	107.2388	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
2	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06614	107.2388	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
2	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07771	104.6966	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
2	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07771	104.6966	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.08401	102.2492	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.08401	102.2492	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
2	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06614	101.385	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
2	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06614	101.385	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06593	125.9204	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06593	125.9204	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06593	116.5495	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06593	116.5495	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07852	112.5618	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07852	112.5617	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
2	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06684	107.5508	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
2	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06684	107.5508	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07852	105.9464	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07852	105.9464	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.08489	103.3031	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.08489	103.3031	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
2	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06684	102.2139	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
2	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06684	102.2139	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05169	105.3246	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
2	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05169	105.3246	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
2	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05169	102.18	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
2	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05169	102.18	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
2	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05365	109.3367	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05365	109.3367	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05365	106.1965	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05365	106.1965	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07116	99.2	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07116	99.2	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1
3	17G	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30123	219.0037	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30123	218.7841	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27112	212.6842	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27112	212.3523	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29787	206.7258	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29787	206.6	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31420	198.5451	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31420	197.214	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.06088	191.4449	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31225	191.0186	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.06088	189.1503	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31225	188.8782	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30299	182.2433	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30299	180.1336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03113	177.7676	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03113	176.0572	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31530	128.2336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31530	124.1314	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.32599	205.8094	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30412	191.8466	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33999	182.1676	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.10282	175.8259	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.32780	170.544	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.32270	165.6022	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.33924	158.3084	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.05890	157.2462	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33756	130.4315	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G15_040	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03574	113.6961	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_040	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03574	113.6922	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_040	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.03031	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G15_040	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.03031	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03574	150.821	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03574	150.8177	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	118.3664	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	118.3017	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	101.1875	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	101.1522	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03574	99	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03574	99	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18273	106.2515	MUSTANG STATION - SEMINOLE 230KV CKT 1
3	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18273	106.2515	MUSTANG STATION - SEMINOLE 230KV CKT 1
3	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18273	101.5469	MUSTANG STATION - SEMINOLE 230KV CKT 1
3	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18273	101.5469	MUSTANG STATION - SEMINOLE 230KV CKT 1
3	17G	G15_040	-	Non-Converged Contingency	3975.0	4570.0	0.37595	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	20L	G15_040	-	Non-Converged Contingency	3975.0	4570.0	0.32191	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06523	124.9055	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06523	124.9055	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06523	115.418	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06523	115.418	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
3	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07771	111.3887	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
3	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07771	111.3887	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
3	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06613	106.5243	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
3	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06613	106.5243	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
3	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07771	104.6587	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
3	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07771	104.6587	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.08401	102.2206	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.08401	102.2206	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
3	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06613	101.0533	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
3	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06613	101.0533	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06592	126.1351	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06592	126.1351	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06592	116.8035	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06592	116.8035	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07852	112.5166	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07852	112.5166	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
3	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06683	107.5904	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
3	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06683	107.5904	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07852	105.9088	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07852	105.9088	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.08489	103.2769	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.08489	103.2769	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
3	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06683	102.2338	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
3	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06683	102.2338	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05175	105.8757	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
3	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05175	105.8757	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
3	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05175	102.7299	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
3	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05175	102.7299	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
3	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05372	109.9136	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05372	109.9136	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05372	106.7808	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05372	106.7808	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07122	99.7	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07122	99.7	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1
4	17G	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30084	219.2477	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30084	218.9034	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27069	212.5533	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27069	212.4877	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29735	206.5319	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29735	206.4431	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31378	198.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	16WP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31378	197.0767	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.06087	191.5691	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31181	191.0175	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.06087	189.0637	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31181	188.7404	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30248	181.83	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30248	179.8003	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03112	177.5857	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03112	175.8792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31475	128.3207	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31475	124.1778	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.32593	205.5105	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30405	191.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33990	182.0402	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.10282	175.8195	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.32770	170.4128	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.32259	165.4035	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.33917	158.2063	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.05890	157.178	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33746	130.4862	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G15_040	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03574	113.6646	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_040	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03574	113.6599	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03574	150.9857	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03574	150.9823	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	118.304	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	118.2713	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	101.1568	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	101.1421	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03574	99.3	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03574	99.3	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18273	106.2198	MUSTANG STATION - SEMINOLE 230KV CKT 1
4	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18273	106.2198	MUSTANG STATION - SEMINOLE 230KV CKT 1
4	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18273	101.5376	MUSTANG STATION - SEMINOLE 230KV CKT 1
4	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18273	101.5376	MUSTANG STATION - SEMINOLE 230KV CKT 1
4	17G	G15_040	-	Non-Converged Contingency	3975.0	4570.0	0.37172	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	20L	G15_040	-	Non-Converged Contingency	3975.0	4570.0	0.31776	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06523	124.9079	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06523	124.9079	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06523	115.4245	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06523	115.4245	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
4	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07771	111.3807	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
4	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07771	111.3807	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
4	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06613	106.5186	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
4	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06613	106.5186	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
4	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07771	104.6512	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
4	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07771	104.6512	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.08401	102.231	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.08401	102.231	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
4	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06613	101.0476	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
4	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06613	101.0476	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06592	126.1304	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06592	126.1304	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06592	116.8009	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06592	116.8009	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
4	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07852	112.5085	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
4	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07852	112.5085	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
4	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06683	107.5846	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
4	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06683	107.5846	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
4	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07852	105.9011	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
4	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07852	105.9011	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.08489	103.2671	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.08489	103.2671	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
4	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06683	102.228	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
4	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06683	102.228	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
4	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05175	105.9136	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
4	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05175	105.9136	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05175	102.7665	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
4	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05175	102.7665	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
4	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05372	109.9346	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
4	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05372	109.9346	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
4	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05372	106.7928	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
4	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05372	106.7928	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
4	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07122	99.7	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1
4	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07122	99.7	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1
5	17G	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29852	217.7095	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29852	216.9825	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26885	211.2861	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26885	210.7754	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29506	204.8525	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29506	204.7326	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31128	196.7495	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31128	195.2293	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.06118	189.9854	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30945	189.7734	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.06118	187.4536	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30945	187.2532	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30014	180.5705	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30014	178.2726	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03139	176.2821	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03139	174.3386	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31228	127.7475	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31228	123.5792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.32521	204.5119	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30350	190.5492	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33915	181.3291	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.10292	175.1034	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.32694	169.7873	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.32185	164.743	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.33840	157.4925	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.05897	156.5482	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33665	130.3275	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G15_040	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03574	113.6714	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_040	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03574	113.6673	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03574	150.9628	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03574	150.9601	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	118.3008	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	118.268	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	101.1553	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	101.1406	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03356	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03574	99.2	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03574	99.2	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18273	106.218	MUSTANG STATION - SEMINOLE 230KV CKT 1
5	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18273	106.218	MUSTANG STATION - SEMINOLE 230KV CKT 1
5	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18273	101.5352	MUSTANG STATION - SEMINOLE 230KV CKT 1
5	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18273	101.5352	MUSTANG STATION - SEMINOLE 230KV CKT 1
5	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06523	124.9051	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06523	124.9051	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06523	115.4216	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06523	115.4216	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
5	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07771	111.3811	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
5	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07771	111.3811	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
5	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06613	106.5191	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
5	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06613	106.5191	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
5	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07771	104.6515	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
5	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07771	104.6515	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.08401	102.2137	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.08401	102.2137	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
5	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06613	101.048	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
5	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06613	101.048	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06592	126.1262	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06592	126.1262	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06592	116.7961	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06592	116.7961	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
5	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07852	112.5089	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
5	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07852	112.5089	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
5	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06683	107.5849	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
5	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06683	107.5849	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
5	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07852	105.9014	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
5	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07852	105.9014	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.08489	103.2698	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.08489	103.2698	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
5	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06683	102.2283	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
5	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06683	102.2283	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
5	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05176	105.9051	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
5	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05176	105.9051	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
5	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05176	102.7583	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
5	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.05176	102.7583	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
5	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05372	109.9258	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
5	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05372	109.9258	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
5	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05372	106.7843	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
5	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05372	106.7843	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
5	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07122	99.7	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1
5	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07122	99.7	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G15_040	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03574	113.5161	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03574	151.3756	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03355	118.1734	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03355	118.1275	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03355	101.1279	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03355	101.1113	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03574	100.0897	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18248	105.4974	MUSTANG STATION - SEMINOLE 230KV CKT 1
6	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.18248	101.4719	MUSTANG STATION - SEMINOLE 230KV CKT 1
6	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06508	124.6587	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06508	115.4561	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
6	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06948	114.0661	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
6	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06948	114.0661	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
6	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06595	107.1738	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
6	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06595	107.1738	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
6	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06948	107.0815	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
6	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06948	107.0815	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
6	16WP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07604	105.8709	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
6	16WP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07604	105.8709	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
6	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06595	101.7433	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
6	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.06595	101.7433	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
6	16WP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07604	101.723	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
6	16WP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.07604	101.723	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06577	125.8905	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06577	116.8396	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
6	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07021	115.2225	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
6	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07021	115.2225	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
6	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07021	108.3624	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
6	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07021	108.3624	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
6	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06664	107.4326	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
6	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06664	107.4326	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
6	16WP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07683	106.9356	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
6	16WP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07683	106.9356	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
6	16WP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07683	102.8778	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
6	16WP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.07683	102.8778	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
6	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06664	102.4278	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
6	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.06664	102.4278	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
6	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.03020	112.5263	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
6	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.03020	112.5263	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
6	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.03020	108.6458	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
6	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.03020	108.6458	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2
6	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.03136	116.8478	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
6	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.03136	116.8478	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
6	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.03136	112.9658	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
6	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.03136	112.9658	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
6	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05148	105.0149	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1
6	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05148	105.0149	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1
6	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05148	102.9009	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1
6	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150.0	150.0	0.05148	102.9009	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03264	132.0544	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03264	131.9956	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.04441	115.7084	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.15495	107.5416	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.15495	107.5416	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.09500	102.9062	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.09500	102.9062	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.08574	99.4	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.07957	155.1081	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.07957	155.1081	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.07957	144.4695	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.07957	144.4695	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03835	139.4948	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03835	131.8853	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06459	127.6091	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05741	126.2169	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06459	125.8663	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05440	125.7356	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05440	125.7356	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06459	125.0574	P12:115:SPS:V15.1.TUCO.INDANA
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06459	124.7606	INDIANA SUB - STANTON SUB 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	124.1537	GEN527166 1-MUSTANG_6 118.000
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05673	123.8128	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05673	123.805	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05673	123.805	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05673	123.7915	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06459	123.4175	P12:115:SPS:V15.1.TUCO.INDANA
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06459	123.1351	INDIANA SUB - STANTON SUB 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06459	120.6969	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	120.4581	GEN527903 1-HOBBS PLANT #3 (ST)
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05673	120.0848	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05673	120.0727	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05673	120.0727	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05673	120.0649	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06459	119.2123	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05440	119.1722	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05440	119.1722	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06459	119.009	P12:115:SPS:V62.1.CRLSLE.INDANA
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06459	118.803	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05741	118.7443	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05755	118.1529	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06459	117.6066	P12:115:SPS:V62.1.CRLSLE.INDANA
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06459	117.4069	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	117.2761	GEN527166 1-MUSTANG_6 118.000
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05755	116.756	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05661	116.4793	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05661	116.4781	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05661	116.4781	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	115.6905	GEN527901 1-HOBBS PLANT #1 (CT)
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05564	115.6871	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	115.2235	GEN527902 1-HOBBS PLANT #2 (CT)
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.07196	115.1773	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.07196	115.1773	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	115.1175	GEN527903 1-HOBBS PLANT #3 (ST)
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06015	114.5086	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06015	114.5086	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05755	114.1373	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05977	114.1158	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05977	114.1158	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05673	114.0543	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05755	113.1643	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05526	112.9092	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05526	112.9092	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05497	112.7464	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05497	112.7464	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06015	112.5646	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06015	112.5646	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05661	112.5047	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05661	112.504	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05661	112.504	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.07196	112.3162	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.07196	112.3162	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	112.2121	GEN527901 1-HOBBS PLANT #1 (CT)
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05977	112.1714	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05977	112.1714	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05564	112.17	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05478	112.1355	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05478	112.1355	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05632	112.0698	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05559	112.0434	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05423	112.0254	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05423	112.0254	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	111.7033	GEN527902 1-HOBBS PLANT #2 (CT)
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05421	111.623	P12:115:LCEC:W56.1.HOBBG.LE-LVN
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05555	111.6034	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05555	111.6034	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05673	111.4117	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05458	111.3793	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	111.3765	GEN563132 1-G15078_3 0.3570
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05439	111.3545	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05526	111.3093	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05526	111.3093	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05521	111.1809	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	111.0984	GEN562812 1-G15040_3 0.3570
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.07206	111.0009	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.07206	111.0009	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05574	110.953	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	110.9228	GEN587423 1-G16-062-GEN10.6900
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05439	110.6552	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	110.6408	GEN563102 1-G15075_3 0.5500
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	110.5718	GEN587393 1-G16-058-GEN10.5500
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05533	110.5074	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05533	110.5074	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05521	110.3889	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05526	109.9687	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05526	109.9687	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05478	109.9541	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05478	109.9541	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05423	109.9463	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05423	109.9463	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05632	109.9346	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05555	109.5101	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05555	109.5101	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05559	109.4641	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05439	109.278	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	109.1786	GEN563132 1-G15078_3 0.3570
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.07206	108.9863	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.07206	108.9863	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05574	108.9825	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	108.9435	GEN562812 1-G15040_3 0.3570
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05521	108.9182	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05497	108.8881	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05497	108.8881	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05458	108.8335	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	108.8246	GEN587423 1-G16-062-GEN10.6900
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05526	108.7503	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05526	108.7503	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05439	108.6249	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05421	108.6053	P12:115:LCEC:W56.1.HOBBG.LE-LVN
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	108.5854	2074-CARLISLE INTERCHANGE
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	108.5854	BASE CASE
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	108.5748	GEN563102 1-G15075_3 0.5500
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	108.4473	GEN587393 1-G16-058-GEN10.5500
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05575	106.7761	P12:230:AEPW:ELKCITY6:SWEETWT6
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	106.76	GEN640009 1-COOPER NUCLEAR STATION
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	106.6432	BASE CASE
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05420	106.5195	P12:115:SPS:V80.1.DC_STH.LE-WAIT
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05571	106.4543	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05437	106.3694	P12:115:SPS:V49.1.YOAKUM.SHLCO2
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05462	106.2682	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05462	106.2662	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04351	105.5965	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04351	105.5965	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	105.4944	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05575	104.8547	P12:230:AEPW:ELKCITY6:SWEETWT6
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05420	104.7649	P12:115:SPS:V80.1.DC_STH.LE-WAIT
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05437	104.6722	P12:115:SPS:V49.1.YOAKUM.SHLCO2
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05571	104.5349	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06430	104.5133	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05435	104.3074	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05462	104.3049	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05462	104.3025	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05436	103.7299	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04351	103.7208	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04351	103.7208	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05435	102.9725	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06430	102.577	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05435	102.2329	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05435	102.144	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05435	101.0487	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05435	100.9839	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	17SP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05707	100.868	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05435	99.4	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05435	99.4	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	17SP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05707	99.4	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	20SP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03776	99.1	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	17G	G15_041	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.02986	102.1239	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	G15_041	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.16655	111.7808	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_041	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.16655	107.7227	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17G	G15_041	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23353	102.2735	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_041	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.26617	123.3294	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17G	G15_041	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.36482	107.108	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G15_041	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03741	109.6733	CIMARRON - MINCO 345KV CKT 1
0	16WP	G15_041	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03741	104.4902	GRACEMONT - MINCO 345KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.15275	124.4658	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13596	112.9438	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13596	112.9438	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13596	112.9086	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13596	112.9086	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	112.5354	GEN526331 1-JONES GEN #1 22 KV
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	112.3468	GEN526332 1-JONES GEN #2 21 KV
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13827	111.3346	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13827	111.3053	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14420	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14420	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13339	107.3472	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	107	GEN527884 1-CUNNINGHAM GEN #4 22 KV
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	106.0884	GEN563142 1-G15079_3 0.5500
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	106.0884	GEN563151 1-G15080_2 0.5500
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13339	106.0791	P12:115:SPS:V15.1.TUCO.INDANA
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13339	106.0442	INDIANA SUB - STANTON SUB 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13048	106.0084	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13048	105.974	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12970	105.4304	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.16069	105.4088	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.16069	105.4088	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14685	105.2063	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12970	105.1732	P12:345:SPS:J14.1.EDDY.XRDS
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14685	105.1386	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12927	105.0982	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12927	105.0934	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12987	105.0723	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12987	104.9891	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	104.8526	GEN527883 1-CUNNINGHAM GEN #3 22 KV
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12925	104.7091	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13091	104.6771	P12:345:SPS:J15.1.XRDS.TOLK
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12925	104.6596	P12:230:SPS:K37.1.TOLK.LAMB
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	104.4479	TUCO INTERCHANGE 230/13.0KV TRANSFORMER CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12903	104.442	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13100	104.1602	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12925	104.149	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13100	104.1458	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12925	104.0778	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13339	103.9914	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12903	103.9739	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13020	103.9293	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13020	103.8823	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12970	103.6702	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12970	103.6636	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13007	103.5765	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13007	103.5559	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	103.5169	GEN563132 1-G15078_3 0.3570
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12956	103.4535	LUBBOCK SOUTH INTERCHANGE - SOUTH PLAINS REC-WOODROW INTERCHANGE 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	103.4314	GEN587113 1-G16-015-GEN10.4180
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	103.3789	GEN563102 1-G15075_3 0.5500
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12960	103.2873	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13048	103.1846	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.15145	103.1673	P12:345:SPS:J15.1.XRDS.TOLK
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12903	103.1627	P12:115:SPS:W54.1.KISER.KRESS
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13048	103.1541	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12903	103.0555	KISER 3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13339	103.0022	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13072	102.9892	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13339	102.9593	P12:115:SPS:V62.1.CRLSLE.INDANA
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	102.8077	GEN562812 1-G15040_3 0.3570
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13143	102.7303	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12944	102.7134	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12944	102.6722	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13072	102.6695	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	102.6062	GEN526678 1-CIRRUS_WND 10.6900
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13084	102.5983	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13156	102.2565	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12960	102.2379	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12954	102.2143	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14408	102.1679	GEN527166 1-MUSTANG_6 118.000
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13217	102.0607	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13007	101.9931	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13007	101.9797	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	101.5877	GEN525845 1-ELK_2 1 18.000
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12987	101.5349	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12987	101.5158	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.15471	101.3882	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.15471	101.3882	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12956	101.1826	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12956	101.0304	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	100.5597	BASE CASE
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	100.5354	BASE CASE
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12401	100.5005	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12401	100.4984	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14408	100.4324	GEN527903 1-HOBBS PLANT #3 (ST)
0	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14731	100.3914	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14731	100.3671	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14731	100.3647	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14731	100.3647	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13092	100.1483	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	100.1357	GEN562270 1-G12-020-2 0.6900
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13048	100.0549	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12679	99.8	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13073	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13073	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13010	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13048	99.5	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.15203	99.4	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	99.3	GEN562762 1-G15033_3 0.6900
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12567	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12567	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12567	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12567	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12996	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12996	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	99.2	GEN300024 1-1CHOTST6 16.000
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	99.2	GEN300031 1-CHOUTEAU CTG 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12913	99.2	P12:115:SPS:V56.1.COCHRAN.SUNDWN
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13048	99.1	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	99.1	GEN300001 1-THOMAS HILL UNIT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	99.1	GEN300017 1-1G2GPDEL 18.000
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	99.1	GEN511938 1-OEC STEAM # 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	99.1	GEN511941 1-OEC STEAM # 2
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	99.1	GEN562517 1-G14_021_S2 0.6900
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	99.1	GEN562691 1-G15_015_3 0.6900
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	99.1	GEN645041 1-CASS COUNTY 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	99	GEN300016 1-1G1GPDEL 18.000
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	99	GEN549893 2-SOUTHWEST 2
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	99	GEN562023 1-G11_020_3 0.6900
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	99	GEN562026 1-G11_019_3 0.6900
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	99	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12862	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12862	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G15_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	159.0	175.0	0.03264	106.2038	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	159.0	175.0	0.03264	106.1228	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G15_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.15495	100	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.15495	100	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G15_041	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.05903	107.6192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_041	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.05903	107.6192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G15_041	-	Non-Converged Contingency	859.0	956.0	0.06930	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G15_041	-	Non-Converged Contingency	560.0	560.0	0.06930	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	17G	G15_041	-	Non-Converged Contingency	1792.0	1972.0	0.06686	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	17G	G15_041	-	Non-Converged Contingency	1792.0	1972.0	0.06686	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	17G	G15_041	-	Non-Converged Contingency	1022.0	1124.0	0.06012	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17G	G15_041	-	Non-Converged Contingency	1022.0	1124.0	0.06012	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17G	G15_041	-	Non-Converged Contingency	1195.0	1195.0	0.03540	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17G	G15_041	-	Non-Converged Contingency	1792.0	1792.0	0.03415	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_041	-	Non-Converged Contingency	1792.0	1972.0	0.05636	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20L	G15_041	-	Non-Converged Contingency	1792.0	1972.0	0.05636	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20L	G15_041	-	Non-Converged Contingency	1195.0	1195.0	0.05529	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G15_041	-	Non-Converged Contingency	1022.0	1124.0	0.05117	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20L	G15_041	-	Non-Converged Contingency	1022.0	1124.0	0.05117	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_041	-	Non-Converged Contingency	1022.0	1124.0	0.05117	-	OKLAUNION 345KV SWITCHED SHUNT
0	20L	G15_041	-	Non-Converged Contingency	1195.0	1195.0	0.03285	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	25SP	G15_041	-	Non-Converged Contingency	0.0	0.0	0.18989	-	P12:345:SPS:J02.1.TOLK.EDDY
0	25SP	G15_041	-	Non-Converged Contingency	343.79	343.79	0.12948	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G15_041	-	Non-Converged Contingency	478.0	502.0	0.10289	-	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G15_041	-	Non-Converged Contingency	0.0	0.0	0.05235	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
0	25SP	G15_041	-	Non-Converged Contingency	0.0	0.0	0.03926	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
0	25SP	G15_041	-	Non-Converged Contingency	0.0	0.0	0.03088	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	25SP	G15_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.05309	104.2168	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G15_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.05309	104.166	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G15_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03830	104.0555	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G15_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03830	104.0254	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.06819	123.2708	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.06819	123.2144	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.06819	113.833	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.06819	113.7617	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.06819	123.2144	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.06819	113.7617	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.06819	123.2708	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.06819	113.833	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03548	104.6153	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.08409	101.4541	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05560	148.7448	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05560	148.7448	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05560	138.4514	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05560	138.4514	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03119	135.8101	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03119	128.2279	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05596	124.8306	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04678	122.6788	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04111	121.377	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04111	121.377	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04678	121.1426	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04678	119.9963	P12:115:SPS:V15.1.TUCO.INDANA
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04678	119.8657	INDIANA SUB - STANTON SUB 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05596	119.3497	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04075	119.2999	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04075	119.2999	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04075	119.2885	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04075	119.2878	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04678	118.5642	P12:115:SPS:V15.1.TUCO.INDANA
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04678	118.4407	INDIANA SUB - STANTON SUB 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04111	116.51	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04111	116.51	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04075	116.2765	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04075	116.2765	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04075	116.2702	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04075	116.2698	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04678	115.8497	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04412	115.4574	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04678	114.5544	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04318	114.0895	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04678	114.0383	P12:115:SPS:V62.1.CRLSLE.INDANA
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04678	113.9569	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	113.1778	GEN527166 1-MUSTANG_6 118.000
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04678	112.8286	P12:115:SPS:V62.1.CRLSLE.INDANA
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04678	112.7492	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04318	112.3517	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04412	112.213	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	111.5706	GEN525561 1-TOLK GEN #1 24 KV
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04318	111.2902	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	110.5402	GEN527903 1-HOBBS PLANT #3 (ST)
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04288	110.4485	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04288	110.4485	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04075	110.118	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04318	110.1009	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04264	110.0808	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04264	110.0808	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	109.998	GEN527166 1-MUSTANG_6 118.000
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	109.0035	GEN527901 1-HOBBS PLANT #1 (CT)
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04121	108.9977	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04040	108.7584	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04956	108.7391	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04956	108.7391	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04288	108.7343	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04288	108.7343	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03989	108.7267	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03989	108.7267	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	108.6747	GEN525561 1-TOLK GEN #1 24 KV
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04022	108.4955	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04022	108.4955	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	108.4823	GEN527902 1-HOBBS PLANT #2 (CT)
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04264	108.365	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04264	108.365	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	108.3162	GEN527903 1-HOBBS PLANT #3 (ST)
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04075	107.7349	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03993	107.6267	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03993	107.6267	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	107.6044	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	107.6044	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04012	107.5467	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03897	107.0768	P12:115:LCEC:W56.1.HOBBG.LE-LVN
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	107.07	GEN563132 1-G15078_3 0.3570
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04121	106.9711	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	106.9469	GEN527901 1-HOBBS PLANT #1 (CT)
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	106.9155	GEN563102 1-G15075_3 0.5500
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	106.8288	GEN562812 1-G15040_3 0.3570
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03989	106.7917	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03989	106.7917	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04040	106.7846	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03994	106.7777	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04012	106.7234	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04956	106.6426	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04956	106.6426	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	106.4754	GEN527902 1-HOBBS PLANT #2 (CT)
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03993	105.7829	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03993	105.7829	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	105.627	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	105.627	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04012	105.5141	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04022	105.2708	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04022	105.2708	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	105.1522	GEN563132 1-G15078_3 0.3570
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	105.0805	GEN563102 1-G15075_3 0.5500
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03897	105.0284	P12:115:LCEC:W56.1.HOBBG.LE-LVN
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03994	105.0255	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	104.952	GEN562812 1-G15040_3 0.3570
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	104.8889	BASE CASE
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	103.1547	BASE CASE
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04379	102.7497	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03898	102.7066	P12:115:SPS:V80.1.DC_STH.LE-WAIT
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03929	102.5953	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03929	102.5935	P12:LPL:SPS:K64.1.LP-SE.LUBBS
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	102.5287	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03910	102.4879	P12:115:SPS:V49.1.YOAKUM.SHLCO2
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	102.2946	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	102.2946	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03898	101.1371	P12:115:SPS:V80.1.DC_STH.LE-WAIT
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04379	101.0098	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03910	100.9742	P12:115:SPS:V49.1.YOAKUM.SHLCO2
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	100.9236	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03929	100.8352	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03929	100.8335	P12:LPL:SPS:K64.1.LP-SE.LUBBS
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	100.6116	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	100.6116	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03935	100.5827	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
2	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03935	99.4	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
2	17G	G15_041	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.05598	99.7	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20L	G15_041	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.04976	99.3	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_041	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.02986	104.9454	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17G	G15_041	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.02986	100.1043	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20L	G15_041	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.16655	108.0357	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20L	G15_041	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.16655	106.4735	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20L	G15_041	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.26617	115.1136	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G15_041	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08568	102.4471	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	16WP	G15_041	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08568	101.7764	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14740	125.3293	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14740	125.3293	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11400	121.2944	GEN526333 1-JONES GEN #3 21 KV
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11400	120.8816	GEN526334 1-JONES_4 116.500
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13239	114.0091	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11376	107.098	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11376	107.098	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10877	106.8942	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10877	106.8942	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14741	104.8862	P12:345:SPS:J15.1.XRDS.TOLK
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11608	104.5606	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11608	104.5481	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11608	104.5174	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11608	104.5174	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11400	103.4092	GEN587373 1-G16-056-GEN10.6900
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11894	103.2676	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11894	103.2676	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11894	103.2676	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11894	103.2676	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12211	103.1516	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12211	103.1516	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12942	102.5939	P12:345:SPS:J15.1.XRDS.TOLK
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11400	102.3409	GEN526331 1-JONES GEN #1 22 KV
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11400	102.3328	GEN526332 1-JONES GEN #2 21 KV
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12070	100.5338	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
2	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.11298	100.313	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.11298	100.313	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11621	99.7	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11621	99.7	P12:345:SPS:J14.1.EDDY.XRDS
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11621	99.6	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11621	99.6	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11736	99.2	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G15_041	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.04119	100.1473	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G15_041	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.04119	100.1473	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G15_041	-	Non-Converged Contingency	859.0	956.0	0.10386	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G15_041	-	Non-Converged Contingency	560.0	560.0	0.10386	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_041	-	Non-Converged Contingency	1022.0	1124.0	0.06012	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20L	G15_041	-	Non-Converged Contingency	1022.0	1124.0	0.05117	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	25SP	G15_041	-	Non-Converged Contingency	0.0	0.0	0.37991	-	P12:345:SPS:J02.1.TOLK.EDDY
2	25SP	G15_041	-	Non-Converged Contingency	343.79	343.79	0.11400	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G15_041	-	Non-Converged Contingency	0.0	0.0	0.05200	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
2	25SP	G15_041	-	Non-Converged Contingency	0.0	0.0	0.03902	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
2	25SP	G15_041	-	Non-Converged Contingency	0.0	0.0	0.03130	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
2	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05316	118.4343	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05316	118.4343	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05316	110.1693	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05316	110.1693	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05316	118.4343	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05316	110.1693	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05316	118.4343	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05316	110.1693	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03498	104.3654	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05414	144.4934	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05414	144.4934	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03065	137.1427	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05414	134.4786	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05414	134.4786	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03065	129.3082	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05412	120.8492	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04573	118.9192	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04032	118.1075	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04032	118.1075	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04316	117.7839	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04316	117.7769	P12:345:SPS:J14.1.EDDY.XRDS
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04316	117.6291	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04316	117.6291	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04573	117.3285	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04573	116.2274	P12:115:SPS:V15.1.TUCO.INDANA
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04573	116.0899	INDIANA SUB - STANTON SUB 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	115.6785	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	115.6785	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	115.6666	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	115.6661	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05412	115.4472	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04573	114.7388	P12:115:SPS:V15.1.TUCO.INDANA
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04573	114.6065	INDIANA SUB - STANTON SUB 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04032	113.7131	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04032	113.7131	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04316	113.0062	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04316	113.0011	P12:345:SPS:J14.1.EDDY.XRDS
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04316	112.9322	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04316	112.9322	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	112.7143	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	112.7143	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	112.7076	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	112.7073	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04573	112.061	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04316	111.1621	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04573	110.71	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04224	110.415	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04573	110.2477	P12:115:SPS:V62.1.CRLSLE.INDANA
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04573	110.1605	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	109.1582	GEN527166 1-MUSTANG_6 118.000
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04224	109.1208	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04573	108.9848	P12:115:SPS:V62.1.CRLSLE.INDANA
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04573	108.9006	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04316	108.7096	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	108.213	GEN525561 1-TOLK GEN #1 24 KV
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04224	108.0206	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	107.4183	GEN527903 1-HOBBS PLANT #3 (ST)
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04224	106.9044	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	106.7493	GEN527166 1-MUSTANG_6 118.000
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	106.5686	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04173	106.5477	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04173	106.5477	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04149	106.2139	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04149	106.2139	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	106.0422	GEN525561 1-TOLK GEN #1 24 KV
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	105.8779	GEN527901 1-HOBBS PLANT #1 (CT)
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04024	105.6662	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03894	105.4458	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03894	105.4458	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	105.333	GEN527902 1-HOBBS PLANT #2 (CT)
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03938	105.266	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	105.2508	GEN527903 1-HOBBS PLANT #3 (ST)
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	104.8952	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04173	104.7704	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04173	104.7704	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04829	104.6651	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04829	104.6651	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04149	104.4379	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04149	104.4379	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04661	104.3027	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03928	104.3015	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03928	104.3015	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03916	104.2591	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03875	104.2335	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03875	104.2335	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	104.2011	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03894	104.1825	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03894	104.1825	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	103.8402	GEN527901 1-HOBBS PLANT #1 (CT)
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	103.803	GEN563132 1-G15078_3 0.3570
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03799	103.7037	P12:115:LCEC:W56.1.HOBBG.LE-LVN
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04024	103.6436	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	103.5632	GEN563102 1-G15075_3 0.5500
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	103.5544	GEN562812 1-G15040_3 0.3570
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03894	103.5109	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03894	103.5109	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03916	103.4154	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03916	103.3584	LYNTEGAR REC-CLAUENE - LYNTEGAR REC-LEVELLAND 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	103.3269	GEN527902 1-HOBBS PLANT #2 (CT)
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03938	103.2934	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03894	103.2931	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	103.1602	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04829	102.5443	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04829	102.5443	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04661	102.5246	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03894	102.3289	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03894	102.3289	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03875	102.2594	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03875	102.2594	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03916	102.2268	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	101.8778	GEN563132 1-G15078_3 0.3570
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03928	101.7585	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03928	101.7585	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	101.7397	GEN563102 1-G15075_3 0.5500
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03799	101.6804	P12:115:LCEC:W56.1.HOBBG.LE-LVN
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	101.6694	GEN562812 1-G15040_3 0.3570
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03894	101.5451	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03916	101.5439	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	101.4978	BASE CASE
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	99.7	BASE CASE
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03800	99.3	P12:115:SPS:V80.1.DC_STH.LE-WAIT
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	99.2	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	99.2	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03813	99.1	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	99.1	P12:115:SPS:V49.1.YOAKUM.SHLCO2
3	20L	G15_041	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.17664	191.4449	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_041	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.17664	189.1503	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_041	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24314	177.7676	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_041	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24314	176.0572	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_041	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.27382	175.8259	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_041	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.37217	157.2462	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G15_041	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08597	102.99	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G15_041	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08597	102.3933	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	25SP	G15_041	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03592	113.6961	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_041	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03592	113.6922	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14565	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14565	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11279	119.248	GEN526333 1-JONES GEN #3 21 KV
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11279	118.8723	GEN526334 1-JONES_4 116.500
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13086	114.4952	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11271	112.8126	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11271	112.8111	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13593	111.8354	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11293	106.8773	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11293	106.8773	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12505	105.5745	P12:345:SPS:J02.1.TOLK.EDDY
3	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10670	104.0964	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10670	104.0964	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11487	103.9995	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11487	103.984	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11487	103.976	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11487	103.976	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11279	103.6041	GEN587373 1-G16-056-GEN10.6900
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11755	103.2394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11755	103.2394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11755	103.2394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11755	103.2394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12089	103.2214	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12089	103.2214	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12741	102.9873	P12:345:SPS:J15.1.XRDS.TOLK
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11279	102.4114	GEN526331 1-JONES GEN #1 22 KV
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11279	102.4061	GEN526332 1-JONES GEN #2 21 KV
3	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14232	100.4251	P12:345:SPS:J15.1.XRDS.TOLK
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11933	100.2458	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11614	99.6	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11506	99	P12:345:SPS:J14.1.EDDY.XRDS
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11406	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11406	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	150.821	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	150.8177	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	118.3664	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	118.3017	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	101.1875	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	101.1522	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	99	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	99	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.7208	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
3	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6974	P12:230:LPL:K26.1.JONES.LP-HOLLY
3	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6461	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6461	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.04767	100.3388	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
3	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05141	119.1308	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05141	119.1308	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05141	111.3452	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05141	111.3452	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05141	119.1308	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05141	119.1308	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05141	111.3452	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05141	111.3452	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03498	104.1799	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05413	144.3473	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05413	144.3473	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03064	137.0001	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05413	134.2951	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05413	134.2951	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03064	129.1788	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05411	120.7509	P12:345:SPS:J15.1.XRDS.TOLK
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04572	118.7631	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04031	117.9922	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04031	117.9922	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04315	117.6369	P12:345:SPS:J14.1.EDDY.XRDS
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04315	117.6297	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04315	117.5133	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04315	117.5133	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04572	117.1805	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04572	116.0713	P12:115:SPS:V15.1.TUCO.INDANA
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04572	115.9345	INDIANA SUB - STANTON SUB 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	115.5382	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	115.5382	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	115.5264	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	115.5258	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05411	115.3543	P12:345:SPS:J15.1.XRDS.TOLK
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04572	114.5907	P12:115:SPS:V15.1.TUCO.INDANA
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04572	114.4591	INDIANA SUB - STANTON SUB 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04031	113.6006	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04031	113.6006	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04315	112.9068	P12:345:SPS:J14.1.EDDY.XRDS
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04315	112.9055	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04315	112.8216	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04315	112.8216	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	112.5803	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	112.5803	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	112.5736	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	112.5733	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04572	111.9044	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04315	111.0786	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04572	110.562	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04224	110.2877	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04572	110.0919	P12:115:SPS:V62.1.CRLSLE.INDANA
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04572	110.0021	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	109.0227	GEN527166 1-MUSTANG_6 118.000
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04224	108.9921	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04572	108.8363	P12:115:SPS:V62.1.CRLSLE.INDANA
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04572	108.75	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04315	108.6147	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	108.0446	GEN525561 1-TOLK GEN #1 24 KV
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04224	107.8983	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	107.2728	GEN527903 1-HOBBS PLANT #3 (ST)
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04224	106.7811	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	106.6173	GEN527166 1-MUSTANG_6 118.000
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	106.4273	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04172	106.3985	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04172	106.3985	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04149	106.0654	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04149	106.0654	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	105.882	GEN525561 1-TOLK GEN #1 24 KV
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	105.7366	GEN527901 1-HOBBS PLANT #1 (CT)
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04024	105.5353	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03893	105.3151	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03893	105.3151	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	105.193	GEN527902 1-HOBBS PLANT #2 (CT)
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03937	105.1276	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	105.1102	GEN527903 1-HOBBS PLANT #3 (ST)
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	104.8676	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04172	104.6279	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04172	104.6279	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04828	104.4941	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04828	104.4941	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04149	104.2961	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04149	104.2961	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04661	104.186	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03928	104.172	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03928	104.172	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03915	104.1266	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03875	104.1012	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03875	104.1012	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03972	104.0659	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03893	104.0459	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03893	104.0459	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	103.7047	GEN527901 1-HOBBS PLANT #1 (CT)
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	103.6678	GEN563132 1-G15078_3 0.3570
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03799	103.5707	P12:115:LCEC:W56.1.HOBBG.LE-LVN
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04024	103.5182	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	103.4298	GEN563102 1-G15075_3 0.5500
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	103.4173	GEN562812 1-G15040_3 0.3570
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03893	103.3859	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03893	103.3859	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03915	103.2829	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03915	103.226	LYNTEGAR REC-CLAUENE - LYNTEGAR REC-LEVELLAND 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	103.1927	GEN527902 1-HOBBS PLANT #2 (CT)
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03937	103.1622	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03893	103.1622	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03911	103.135	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04661	102.4108	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04828	102.3817	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04828	102.3817	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03893	102.198	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03893	102.198	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03875	102.132	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03875	102.132	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03915	102.1	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	101.7486	GEN563132 1-G15078_3 0.3570
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03928	101.6351	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03928	101.6351	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	101.6107	GEN563102 1-G15075_3 0.5500
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03799	101.5527	P12:115:LCEC:W56.1.HOBBG.LE-LVN
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	101.5378	GEN562812 1-G15040_3 0.3570
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03893	101.4202	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03915	101.417	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	101.3635	BASE CASE
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	99.6	BASE CASE
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03799	99.2	P12:115:SPS:V80.1.DC_STH.LE-WAIT
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	99.1	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	99.1	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	99	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
4	20L	G15_041	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.17668	191.5691	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_041	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.17668	189.0637	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_041	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24318	177.5857	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_041	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24318	175.8792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_041	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.27383	175.8195	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_041	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.37216	157.178	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G15_041	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08598	103.0572	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G15_041	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08598	102.4534	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	25SP	G15_041	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03592	113.6646	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_041	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03592	113.6599	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14563	125.0569	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14563	125.0569	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11278	119.0612	GEN526333 1-JONES GEN #3 21 KV
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11278	118.6856	GEN526334 1-JONES_4 116.500
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13085	114.2489	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11270	112.5996	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11270	112.5946	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13592	111.5567	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11292	106.7476	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11292	106.7476	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12504	105.4545	P12:345:SPS:J02.1.TOLK.EDDY
4	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10669	104.0099	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10669	104.0099	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11486	103.8244	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11486	103.8052	P12:230:LPL:K39.1.CRLSLE.LP-MLWK

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11486	103.7969	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11486	103.7969	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11278	103.416	GEN587373 1-G16-056-GEN10.6900
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12088	103.2672	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12088	103.2672	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11754	103.0315	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11754	103.0315	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11754	103.0315	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11754	103.0315	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12740	102.755	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11278	102.1709	GEN526331 1-JONES GEN #1 22 KV
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11278	102.1659	GEN526332 1-JONES GEN #2 21 KV
4	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14228	100.3275	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11932	100	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11613	99.4	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	150.9857	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	150.9823	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	118.304	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	118.2713	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	101.1568	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	101.1421	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	99.3	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	99.3	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6999	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
4	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6899	P12:230:LPL:K26.1.JONES.LP-HOLLY
4	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6243	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6243	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.04766	100	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
4	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05140	118.9394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05140	118.9394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05140	111.1562	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05140	111.1562	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05140	118.9394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05140	118.9394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05140	111.1562	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05140	111.1562	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03495	104.0718	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05404	144.4574	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05404	144.4574	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03061	136.9029	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05404	134.4484	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05404	134.4484	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03061	129.0847	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05400	120.8826	P12:345:SPS:J15.1.XRDS.TOLK
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04566	118.9077	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04026	118.0957	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04026	118.0957	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04309	117.7364	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04309	117.7295	P12:345:SPS:J14.1.EDDY.XRDS
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04309	117.6065	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04309	117.6065	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04566	117.3219	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04566	116.2161	P12:115:SPS:V15.1.TUCO.INDANA
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04566	116.0797	INDIANA SUB - STANTON SUB 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03965	115.6714	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03965	115.6714	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03965	115.6595	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03965	115.659	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05400	115.4973	P12:345:SPS:J15.1.XRDS.TOLK
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04566	114.7323	P12:115:SPS:V15.1.TUCO.INDANA
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04566	114.601	INDIANA SUB - STANTON SUB 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04026	113.7016	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04026	113.7016	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04309	113.008	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04309	113.0029	P12:345:SPS:J14.1.EDDY.XRDS
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04309	112.9186	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04309	112.9186	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03965	112.7108	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03965	112.7108	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03965	112.7041	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03965	112.7038	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04566	112.0513	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04309	111.2325	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04566	110.7049	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04218	110.4071	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04566	110.2372	P12:115:SPS:V62.1.CRLSLE.INDANA
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04566	110.151	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	109.1161	GEN527166 1-MUSTANG_6 118.000
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04218	109.1131	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04566	108.9787	P12:115:SPS:V62.1.CRLSLE.INDANA
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04566	108.8955	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04309	108.7622	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	108.0981	GEN525561 1-TOLK GEN #1 24 KV
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04218	108.0164	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	107.3888	GEN527903 1-HOBBS PLANT #3 (ST)
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04218	106.9004	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	106.7139	GEN527166 1-MUSTANG_6 118.000
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03965	106.5611	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04165	106.5417	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04165	106.5417	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04142	106.2078	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04142	106.2078	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	105.9363	GEN525561 1-TOLK GEN #1 24 KV
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	105.8492	GEN527901 1-HOBBS PLANT #1 (CT)
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04018	105.6613	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03887	105.4393	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03887	105.4393	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	105.3071	GEN527902 1-HOBBS PLANT #2 (CT)
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03931	105.2567	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	105.2255	GEN527903 1-HOBBS PLANT #3 (ST)
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03908	105.0133	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04165	104.7692	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04165	104.7692	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04820	104.6524	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04820	104.6524	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04142	104.4366	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04142	104.4366	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04656	104.3044	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03922	104.2923	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03922	104.2923	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03909	104.2517	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03869	104.2259	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03869	104.2259	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03965	104.1972	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03887	104.1752	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03887	104.1752	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	103.8156	GEN527901 1-HOBBS PLANT #1 (CT)
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	103.7876	GEN563132 1-G15078_3 0.3570
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03793	103.6971	P12:115:LCEC:W56.1.HOBBG.LE-LVN
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04018	103.6423	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	103.5553	GEN563102 1-G15075_3 0.5500
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	103.5392	GEN562812 1-G15040_3 0.3570
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03887	103.508	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03887	103.508	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03909	103.4088	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03909	103.3519	LYNTEGAR REC-CLAUENE - LYNTEGAR REC-LEVELLAND 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	103.3051	GEN527902 1-HOBBS PLANT #2 (CT)
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03931	103.2901	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03887	103.2874	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03908	103.2795	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04820	102.5361	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04820	102.5361	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04656	102.5275	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03887	102.3252	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03887	102.3252	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03869	102.2557	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03869	102.2557	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03909	102.2229	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	101.8662	GEN563132 1-G15078_3 0.3570
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03922	101.7528	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03922	101.7528	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	101.7347	GEN563102 1-G15075_3 0.5500
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03793	101.6773	P12:115:LCEC:W56.1.HOBBG.LE-LVN
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	101.658	GEN562812 1-G15040_3 0.3570
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03887	101.5435	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03909	101.5408	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	101.492	BASE CASE
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	99.7	BASE CASE
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03793	99.3	P12:115:SPS:V80.1.DC_STH.LE-WAIT
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03824	99.2	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03824	99.2	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	99.1	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
5	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03806	99.1	P12:115:SPS:V49.1.YOAKUM.SHLCO2
5	20L	G15_041	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.17717	189.9854	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_041	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.17717	187.4536	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_041	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24379	176.2821	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_041	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24379	174.3386	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_041	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.27399	175.1034	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_041	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.37231	156.5482	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_041	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08600	103.0311	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	16WP	G15_041	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08600	102.4344	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	25SP	G15_041	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03592	113.6714	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_041	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03592	113.6673	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14553	124.8975	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14553	124.8975	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11271	118.9383	GEN526333 1-JONES GEN #3 21 KV
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11271	118.5628	GEN526334 1-JONES_4 116.500
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13076	114.1042	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11263	112.5331	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11263	112.531	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13582	111.409	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11287	106.6731	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11287	106.6731	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12498	105.3409	P12:345:SPS:J02.1.TOLK.EDDY
5	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10656	104.1015	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10656	104.1015	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11479	103.707	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11479	103.6946	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11479	103.6865	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11479	103.6865	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11271	103.2876	GEN587373 1-G16-056-GEN10.6900
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12081	103.1458	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12081	103.1458	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11746	102.9044	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11746	102.9044	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11746	102.9044	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11746	102.9044	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12729	102.6383	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11271	102.0561	GEN526331 1-JONES GEN #1 22 KV
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11271	102.051	GEN526332 1-JONES GEN #2 21 KV
5	16WP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.14199	100.4572	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11924	99.9	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
5	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11606	99.3	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	150.9628	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	150.9601	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	118.3008	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	118.268	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	101.1553	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	101.1406	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03513	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	99.2	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	99.2	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6972	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6738	P12:230:LPL:K26.1.JONES.LP-HOLLY
5	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6217	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6217	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.04762	99.9	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
5	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05130	118.7651	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05130	118.7651	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05130	110.9825	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05130	110.9825	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05130	118.7651	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05130	118.7651	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05130	110.9825	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05130	110.9825	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03474	103.7131	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03033	136.613	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03033	128.8535	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03363	122.2386	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03363	122.2386	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03363	117.1192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03363	117.1192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03714	103.228	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
6	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03714	101.4423	CRAWFISH_DR 345.00 - YOAKUM_345 345.00 345KV CKT 1
6	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03714	101.3468	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
6	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03714	99.7	CRAWFISH_DR 345.00 - YOAKUM_345 345.00 345KV CKT 1
6	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03025	99.7	P12:345:SPS:J02.1.TOLK.EDDY
6	25SP	G15_041	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03592	113.5161	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.14445	124.2902	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
6	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11198	118.5502	GEN526333 1-JONES GEN #3 21 KV
6	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11198	118.1772	GEN526334 1-JONES_4 116.500
6	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12980	113.6007	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11191	111.9176	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13363	110.107	CRAWFISH_DR 345.00 - YOAKUM_345 345.00 345KV CKT 1
6	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11289	106.564	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
6	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11406	103.2173	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11406	103.216	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
6	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11198	102.8608	GEN587373 1-G16-056-GEN10.6900
6	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12007	102.7727	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
6	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11664	102.4925	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11664	102.4925	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11198	101.6462	GEN526331 1-JONES GEN #1 22 KV
6	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11198	101.6414	GEN526332 1-JONES GEN #2 21 KV
6	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11766	99.4	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
6	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	151.3756	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03512	118.1734	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03512	118.1275	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03512	101.1279	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03512	101.1113	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03592	100.0897	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.6217	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
6	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03078	110.5253	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05038	118.3723	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.05038	110.6287	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05038	118.3724	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.05038	110.6287	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_078	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06305	111.2423	BASE CASE
0	20SP	G15_078	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06004	106.965	BASE CASE
0	17G	G15_078	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06342	104.3555	BASE CASE
0	20WP	G15_078	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06125	100.6452	BASE CASE
0	16WP	G15_078	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24741	117.2755	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G15_078	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21950	113.9417	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G15_078	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24741	112.5386	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G15_078	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24590	107.9528	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17SP	G15_078	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24590	103.4902	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29952	197.2146	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29952	189.9362	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31388	115.1329	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31388	114.7364	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.05005	111.7808	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.05005	107.7227	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.34662	213.0015	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.35860	134.0852	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.09529	123.3294	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.23868	119.8072	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.24564	109.6936	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17G	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.05413	107.108	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_078	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.10836	117.8449	BASE CASE
0	17SP	G15_078	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.10598	113.6626	BASE CASE
0	20SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05506	110.841	MUSTANG STATION - SEMINOLE 230KV CKT 1
0	20SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05506	110.8385	MUSTANG STATION - SEMINOLE 230KV CKT 1
0	17SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05590	106.2599	MUSTANG STATION - SEMINOLE 230KV CKT 1
0	17SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05590	106.2599	MUSTANG STATION - SEMINOLE 230KV CKT 1
0	20L	G15_078	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.09678	117.1249	BASE CASE
0	20WP	G15_078	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11967	109.9811	BASE CASE
0	16WP	G15_078	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12907	108.8041	BASE CASE
0	17G	G15_078	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12691	107.5286	BASE CASE
0	20L	G15_078	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09678	131.0896	BASE CASE
0	20WP	G15_078	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11967	123.9661	BASE CASE
0	16WP	G15_078	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12907	122.9494	BASE CASE
0	17G	G15_078	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12691	120.973	BASE CASE
0	17SP	G15_078	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12904	106.8776	BASE CASE
0	20SP	G15_078	TO->FROM	G15039_T 230.00 - PLANT X STATION 230KV CKT 1	318.7	350.6	0.10836	101.2007	BASE CASE
0	16WP	G15_078	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24741	106.6944	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G15_078	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.21950	103.5122	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G15_078	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24741	102.1214	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G15_078	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04333	104.9056	BASE CASE
0	20SP	G15_078	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04323	103.3041	BASE CASE
0	17G	G15_078	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03680	102.2178	BASE CASE
0	25SP	G15_078	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.03535	100.5005	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_078	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.03535	100.4984	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_078	TO->FROM	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	1011.0	1176.0	0.21662	101.3643	BASE CASE
0	16WP	G15_078	-	Non-Converged Contingency	1022.0	1124.0	0.20044	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	1022.0	1124.0	0.20044	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.19861	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.18983	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.18536	-	CIMARRON - MINCO 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.18536	-	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.18529	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	1330.0	1940.0	0.17628	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	1330.0	1940.0	0.17628	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	987.2	1082.8	0.16609	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.14816	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.14816	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	16WP	G15_078	-	Non-Converged Contingency	987.16	1082.77	0.13328	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	956.09	1051.7	0.13328	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	1420.0	1775.0	0.09946	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	1420.0	1775.0	0.09946	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	1420.0	1775.0	0.09946	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.09213	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.09213	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	439.0	439.0	0.06733	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	450.0	450.0	0.06733	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	16WP	G15_078	-	Non-Converged Contingency	439.0	439.0	0.04500	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17G	G15_078	-	Non-Converged Contingency	0.0	0.0	0.07239	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	17G	G15_078	-	Non-Converged Contingency	0.0	0.0	0.05862	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	17G	G15_078	-	Non-Converged Contingency	0.0	0.0	0.03616	-	P12:138:AEPW:REDROCKRD4:WTH_JCT4
0	17G	G15_078	-	Non-Converged Contingency	0.0	0.0	0.03426	-	P12:138:WFEC-AEPW:WASHITA4:CLINTJC4
0	17G	G15_078	-	Non-Converged Contingency	0.0	0.0	0.03298	-	P12:138:AEPW:HOB-JCT4:ELKCTY-4
0	17G	G15_078	-	Non-Converged Contingency	0.0	0.0	0.03189	-	P12:138:AEPW:WTHWF4:WTH_SE4
0	17SP	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.28050	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G15_078	-	Non-Converged Contingency	956.0	1042.0	0.21662	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17SP	G15_078	-	Non-Converged Contingency	956.0	1042.0	0.21662	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.17762	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.17470	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	17SP	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.17470	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	17SP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.17178	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	G15_078	-	Non-Converged Contingency	1330.0	1940.0	0.15866	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17SP	G15_078	-	Non-Converged Contingency	1330.0	1940.0	0.15866	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17SP	G15_078	-	Non-Converged Contingency	956.1	1051.7	0.15789	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17SP	G15_078	-	Non-Converged Contingency	956.09	1051.7	0.13832	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G15_078	-	Non-Converged Contingency	478.0	502.0	0.11955	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_078	-	Non-Converged Contingency	956.09	1051.7	0.11690	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G15_078	-	Non-Converged Contingency	318.7	350.6	0.10598	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	17SP	G15_078	-	Non-Converged Contingency	318.7	350.6	0.10598	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	17SP	G15_078	-	Non-Converged Contingency	478.0	502.0	0.10203	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_078	-	Non-Converged Contingency	1420.0	1775.0	0.09197	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G15_078	-	Non-Converged Contingency	353.0	353.0	0.04993	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17SP	G15_078	-	Non-Converged Contingency	318.7	350.57	0.04333	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.25639	-	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.19400	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	0.0	0.0	0.19088	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.16531	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.16463	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1022.0	1124.0	0.15864	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1022.0	1124.0	0.15864	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1022.0	1124.0	0.15864	-	OKLAUNION 345KV SWITCHED SHUNT
0	20L	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.14852	-	CIMARRON - MINCO 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.14852	-	GRACEMONT - MINCO 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.14703	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.14703	-	GEN509403 1-PIRKEY GENERATION
0	20L	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.14703	-	GEN509416 1-TURK GENERATION
0	20L	G15_078	-	Non-Converged Contingency	0.0	0.0	0.13674	-	P12:115:SPS:V80.1.DC_STH.LE-WAIT
0	20L	G15_078	-	Non-Converged Contingency	0.0	0.0	0.13275	-	P12:345:SPS:J15.1.XRDS.TOLK
0	20L	G15_078	-	Non-Converged Contingency	956.1	1051.7	0.13024	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	956.1	1051.7	0.13024	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1584.0	2098.0	0.12586	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1584.0	2098.0	0.12586	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.12418	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.12418	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
0	20L	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.12418	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.12418	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20L	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.12418	-	BORDER 7345.00 345KV SWITCHED SHUNT
0	20L	G15_078	-	Non-Converged Contingency	717.0	926.0	0.10292	-	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	956.09	1051.7	0.10122	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	956.09	1051.7	0.10122	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	717.0	789.0	0.09678	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	717.0	789.0	0.09678	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	717.0	789.0	0.09678	-	GEN515040 1-SEMINOLE 1G
0	20L	G15_078	-	Non-Converged Contingency	497.0	547.0	0.09558	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	0.0	0.0	0.09156	-	P12:138:WFEC:MSL03
0	20L	G15_078	-	Non-Converged Contingency	956.09	1051.7	0.08965	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	956.09	1051.7	0.08965	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	956.09	1051.7	0.08965	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	956.09	1051.7	0.08965	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.08087	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.07852	-	ARCADIA - NORTHWEST 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	478.0	502.0	0.07709	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	478.0	502.0	0.07709	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	478.0	502.0	0.07709	-	BUSHLAND INTERCHANGE 230KV SWITCHED SHUNT
0	20L	G15_078	-	Non-Converged Contingency	0.0	0.0	0.07638	-	P12:230:AEPW:ELKCITY6:SWEETWT6
0	20L	G15_078	-	Non-Converged Contingency	560.0	560.0	0.07391	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_078	-	Non-Converged Contingency	560.0	560.0	0.07391	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_078	-	Non-Converged Contingency	478.0	502.0	0.06936	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	318.7	350.6	0.06912	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	318.7	350.6	0.06912	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	478.0	502.0	0.06816	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	318.7	350.57	0.06718	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	318.7	350.57	0.06718	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1561.0	1793.0	0.06664	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1561.0	1793.0	0.06664	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1561.0	1793.0	0.06664	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_078	-	Non-Converged Contingency	1561.0	1793.0	0.06664	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_078	-	Non-Converged Contingency	1192.0	1192.0	0.06560	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	956.0	956.0	0.06560	-	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.06330	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.06330	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1420.0	1775.0	0.05916	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1420.0	1775.0	0.05916	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G15_078	-	Non-Converged Contingency	1420.0	1775.0	0.05916	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1420.0	1775.0	0.05916	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_078	-	Non-Converged Contingency	1420.0	1775.0	0.05916	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1420.0	1775.0	0.05916	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G15_078	-	Non-Converged Contingency	0.0	0.0	0.05563	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	20L	G15_078	-	Non-Converged Contingency	0.0	0.0	0.05521	-	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
0	20L	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.05280	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.05280	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
0	20L	G15_078	-	Non-Converged Contingency	1793.0	1793.0	0.05280	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1716.0	1793.0	0.05280	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	G15_078	-	Non-Converged Contingency	1793.0	1793.0	0.05280	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1716.0	1793.0	0.05280	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	G15_078	-	Non-Converged Contingency	1793.0	1793.0	0.05280	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1716.0	1793.0	0.05280	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_078	-	Non-Converged Contingency	1532.0	1793.0	0.05118	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1532.0	1793.0	0.05118	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20L	G15_078	-	Non-Converged Contingency	1532.0	1793.0	0.05118	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.04960	-	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	785.0	785.0	0.04916	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	785.0	785.0	0.04916	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	439.0	439.0	0.04877	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	450.0	450.0	0.04877	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G15_078	-	Non-Converged Contingency	450.0	450.0	0.04877	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G15_078	-	Non-Converged Contingency	762.5	762.5	0.04823	-	MINGO - SETAB 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	762.5	762.5	0.04823	-	MINGO - SETAB 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	560.0	644.0	0.04812	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_078	-	Non-Converged Contingency	560.0	644.0	0.04812	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_078	-	Non-Converged Contingency	560.0	644.0	0.04812	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G15_078	-	Non-Converged Contingency	560.0	644.0	0.04812	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G15_078	-	Non-Converged Contingency	717.1	717.1	0.04746	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	717.1	717.1	0.04746	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	0.0	0.0	0.04681	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	20L	G15_078	-	Non-Converged Contingency	0.0	0.0	0.04330	-	P12:138:WFEC:MSL14
0	20L	G15_078	-	Non-Converged Contingency	560.0	560.0	0.04284	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G15_078	-	Non-Converged Contingency	0.0	0.0	0.04172	-	917X
0	20L	G15_078	-	Non-Converged Contingency	1504.0	1792.0	0.04144	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1504.0	1792.0	0.04144	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1505.0	1793.0	0.04074	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1505.0	1793.0	0.04074	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1505.0	1793.0	0.04074	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	501.95	501.95	0.04024	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	501.95	501.95	0.04024	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	726.6	726.6	0.03855	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	726.6	726.6	0.03855	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1413.0	1517.0	0.03855	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1413.0	1517.0	0.03855	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	956.0	956.0	0.03828	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	318.7	350.57	0.03542	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	318.7	350.57	0.03542	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1141.0	1195.0	0.03439	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1141.0	1195.0	0.03439	-	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1141.0	1195.0	0.03439	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.03237	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20L	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.03237	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20SP	G15_078	-	Non-Converged Contingency	956.0	1042.0	0.21039	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20SP	G15_078	-	Non-Converged Contingency	956.0	1042.0	0.21039	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.17262	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20SP	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.17262	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20SP	G15_078	-	Non-Converged Contingency	956.1	1051.7	0.15973	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.19396	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	1022.0	1124.0	0.18573	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	1022.0	1124.0	0.18573	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.17836	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.17376	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.16284	-	CIMARRON - MINCO 345KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.16284	-	GRACEMONT - MINCO 345KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	987.2	1082.8	0.16196	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	1584.0	2098.0	0.15428	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	1584.0	2098.0	0.15428	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.14100	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.14100	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	G15_078	-	Non-Converged Contingency	987.16	1082.77	0.12901	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	717.0	789.0	0.11967	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	956.09	1051.7	0.11476	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G15_078	-	Non-Converged Contingency	987.16	1082.77	0.11476	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	560.0	560.0	0.09223	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.08572	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.08572	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	439.0	439.0	0.06125	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	450.0	450.0	0.06125	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	329.05	360.92	0.04490	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	421.0	439.0	0.04176	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20WP	G15_078	-	Non-Converged Contingency	329.05	360.92	0.03672	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	25SP	G15_078	-	Non-Converged Contingency	0.0	0.0	0.04978	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
0	25SP	G15_078	-	Non-Converged Contingency	0.0	0.0	0.03639	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
0	25SP	G15_078	-	Non-Converged Contingency	0.0	0.0	0.03405	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	17SP	G15_078	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	442.0	752.0	0.06903	100.8893	BASE CASE
0	17SP	G15_078	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	442.0	752.0	0.07001	100.8893	BASE CASE
2	25SP	G15_078	TO->FROM	ALLRED TAP - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03035	107.5225	P12:115:LCEC:W56.1.HOBBG.LE-LVN
2	25SP	G15_078	TO->FROM	ALLRED TAP - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03035	105.8242	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
2	17SP	G15_078	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06606	113.9867	BASE CASE
2	20SP	G15_078	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06292	110.7777	BASE CASE
2	17G	G15_078	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06342	104.3556	BASE CASE
2	20WP	G15_078	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06127	99.1	BASE CASE
2	17SP	G15_078	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.30637	103.9462	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_078	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.03113	99.7	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20SP	G15_078	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.30081	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20L	G15_078	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.03384	99.3	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G15_078	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24745	117.0258	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G15_078	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21961	112.9654	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G15_078	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24745	112.441	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	G15_078	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21961	108.3696	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17SP	G15_078	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24246	108.1247	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17SP	G15_078	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24246	103.6738	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.05005	108.0357	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.05005	106.4735	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17SP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.24945	126.3303	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20SP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.24253	117.4113	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20L	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.09529	115.1136	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.23872	110.5121	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.24565	105.6091	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05394	148.0282	MUSTANG STATION - SEMINOLE 230KV CKT 1
2	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05394	148.0282	MUSTANG STATION - SEMINOLE 230KV CKT 1
2	20SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05525	110.6252	MUSTANG STATION - SEMINOLE 230KV CKT 1
2	20SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05525	110.6252	MUSTANG STATION - SEMINOLE 230KV CKT 1
2	17SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05673	105.5441	MUSTANG STATION - SEMINOLE 230KV CKT 1
2	17SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05673	105.5441	MUSTANG STATION - SEMINOLE 230KV CKT 1
2	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SHELL C2 SUB 115KV CKT 1	159.0	175.0	0.03035	121.0159	P12:115:LCEC:W56.1.HOBBG.LE-LVN
2	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SHELL C2 SUB 115KV CKT 1	159.0	175.0	0.03035	119.1721	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
2	20WP	G15_078	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11971	109.7093	BASE CASE
2	16WP	G15_078	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12909	108.7418	BASE CASE
2	17G	G15_078	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12691	107.5286	BASE CASE
2	20WP	G15_078	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11971	123.7856	BASE CASE
2	16WP	G15_078	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12909	122.9306	BASE CASE
2	17G	G15_078	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12691	120.973	BASE CASE
2	17SP	G15_078	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12545	105.8511	BASE CASE
2	16WP	G15_078	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24745	106.376	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G15_078	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.21961	102.3425	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G15_078	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24745	101.9464	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G15_078	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03680	102.2178	BASE CASE
2	16WP	G15_078	-	Non-Converged Contingency	1022.0	1124.0	0.20047	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G15_078	-	Non-Converged Contingency	1022.0	1124.0	0.20047	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.19864	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	16WP	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.18987	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.18540	-	CIMARRON - MINCO 345KV CKT 1
2	16WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.18540	-	GRACEMONT - MINCO 345KV CKT 1
2	16WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.18533	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	16WP	G15_078	-	Non-Converged Contingency	1330.0	1940.0	0.17631	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	16WP	G15_078	-	Non-Converged Contingency	1330.0	1940.0	0.17631	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	16WP	G15_078	-	Non-Converged Contingency	987.2	1082.8	0.16612	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.14818	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	16WP	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.14818	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	16WP	G15_078	-	Non-Converged Contingency	987.16	1082.77	0.13331	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	16WP	G15_078	-	Non-Converged Contingency	956.09	1051.7	0.13331	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G15_078	-	Non-Converged Contingency	1420.0	1775.0	0.09947	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.09214	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	16WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.09214	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G15_078	-	Non-Converged Contingency	439.0	439.0	0.06734	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	16WP	G15_078	-	Non-Converged Contingency	450.0	450.0	0.06734	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.32029	-	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.21523	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1022.0	1124.0	0.19248	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1022.0	1124.0	0.19248	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.19186	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.19186	-	GEN509403 1-PIRKEY GENERATION
2	17G	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.19186	-	GEN509404 1-WELSH #1
2	17G	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.19186	-	GEN509406 1-WELSH #3
2	17G	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.19186	-	GEN509416 1-TURK GENERATION
2	17G	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.19186	-	GEN511848 1-SOUTHWESTERN STATION #3
2	17G	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.17923	-	CIMARRON - MINCO 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.17923	-	GRACEMONT - MINCO 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.17889	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.17823	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1330.0	1940.0	0.16998	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1330.0	1940.0	0.16998	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	956.1	1051.7	0.15564	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	414.0	414.0	0.14343	-	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.14169	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.14169	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
2	17G	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.14169	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.14169	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	17G	G15_078	-	Non-Converged Contingency	318.7	350.57	0.12940	-	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	717.0	789.0	0.12691	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	717.0	789.0	0.12691	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	956.09	1051.7	0.12215	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	956.09	1051.7	0.12215	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	717.0	926.0	0.11399	-	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1420.0	1775.0	0.09884	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1420.0	1775.0	0.09884	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1420.0	1775.0	0.09884	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	560.0	560.0	0.09230	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1561.0	1793.0	0.08961	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1561.0	1793.0	0.08961	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.08855	-	ARCADIA - NORTHWEST 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	497.0	547.0	0.08786	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.08671	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.08671	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	478.0	502.0	0.08258	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	343.79	343.79	0.07770	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	318.7	350.57	0.07287	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	318.7	350.6	0.07286	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	318.7	350.6	0.07286	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	478.0	502.0	0.07238	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1532.0	1793.0	0.07197	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1532.0	1793.0	0.07197	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	G15_078	-	Non-Converged Contingency	1532.0	1793.0	0.07197	-	G1524G1525 345.00 - WICHITA 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1532.0	1793.0	0.07197	-	G1524G1525 345.00 - WICHITA 345KV CKT 2
2	17G	G15_078	-	Non-Converged Contingency	1532.0	1793.0	0.07197	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	G15_078	-	Non-Converged Contingency	478.05	547.36	0.07038	-	NEWHART 230 - PLANT X STATION 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	318.7	350.57	0.06724	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.06538	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.06538	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
2	17G	G15_078	-	Non-Converged Contingency	1793.0	1793.0	0.06538	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1716.0	1793.0	0.06538	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	G15_078	-	Non-Converged Contingency	1793.0	1793.0	0.06538	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1716.0	1793.0	0.06538	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G15_078	-	Non-Converged Contingency	1793.0	1793.0	0.06538	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1716.0	1793.0	0.06538	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.06538	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.06538	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 2
2	17G	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.06480	-	CIMARRON - DRAPER LAKE 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	439.0	439.0	0.06342	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	450.0	450.0	0.06342	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G15_078	-	Non-Converged Contingency	878.0	956.0	0.06312	-	BENTON - WICHITA 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G15_078	-	Non-Converged Contingency	1793.0	1793.0	0.06163	-	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1793.0	1793.0	0.06163	-	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	717.1	717.1	0.05741	-	HOLCOMB - SETAB 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1192.0	1192.0	0.05728	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	956.0	956.0	0.05728	-	G15063_T 345.00 - WOODRING 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.05691	-	GEN520947 1-HUGO1
2	17G	G15_078	-	Non-Converged Contingency	762.5	762.5	0.05621	-	MINGO - SETAB 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	785.0	785.0	0.05580	-	MINGO - RED WILLOW 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1039.0	1195.0	0.05485	-	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.05458	-	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	560.0	644.0	0.05202	-	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G15_078	-	Non-Converged Contingency	726.6	726.6	0.05085	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1413.0	1517.0	0.05085	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	501.95	501.95	0.05018	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1505.0	1793.0	0.04995	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1505.0	1793.0	0.04995	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1505.0	1793.0	0.04995	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1035.0	1035.0	0.04733	-	G14_001T 345.00 - WICHITA 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1504.0	1792.0	0.04702	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1504.0	1792.0	0.04702	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1141.0	1195.0	0.04686	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1141.0	1195.0	0.04686	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	560.0	644.0	0.04525	-	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_078	-	Non-Converged Contingency	560.0	644.0	0.04371	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_078	-	Non-Converged Contingency	560.0	644.0	0.04371	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G15_078	-	Non-Converged Contingency	318.7	350.57	0.04323	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	478.0	502.0	0.04164	-	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	439.0	439.0	0.04153	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	502.0	502.0	0.04153	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	500.0	723.0	0.04153	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	560.0	560.0	0.04075	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_078	-	Non-Converged Contingency	1022.0	1143.0	0.03790	-	PITTSBURG - VALLIANT 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	318.7	350.57	0.03680	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	502.0	502.0	0.03549	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	717.0	789.0	0.03542	-	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
2	17G	G15_078	-	Non-Converged Contingency	560.0	560.0	0.03173	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G15_078	-	Non-Converged Contingency	560.0	560.0	0.03173	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 2
2	17SP	G15_078	-	Non-Converged Contingency	956.0	1042.0	0.19639	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G15_078	-	Non-Converged Contingency	1792.0	1792.0	0.19405	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20WP	G15_078	-	Non-Converged Contingency	1022.0	1124.0	0.18580	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G15_078	-	Non-Converged Contingency	1022.0	1124.0	0.18580	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.17845	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	20WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.17382	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	20WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.16293	-	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G15_078	-	Non-Converged Contingency	987.2	1082.8	0.16205	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G15_078	-	Non-Converged Contingency	1584.0	2098.0	0.15434	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	20WP	G15_078	-	Non-Converged Contingency	1584.0	2098.0	0.15434	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	20WP	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.14105	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	20WP	G15_078	-	Non-Converged Contingency	1792.0	1972.0	0.14105	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	20WP	G15_078	-	Non-Converged Contingency	987.16	1082.77	0.12909	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.08577	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	20WP	G15_078	-	Non-Converged Contingency	1195.0	1195.0	0.08577	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G15_078	-	Non-Converged Contingency	439.0	439.0	0.06127	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	20WP	G15_078	-	Non-Converged Contingency	450.0	450.0	0.06127	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	25SP	G15_078	-	Non-Converged Contingency	0.0	0.0	0.04978	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
2	25SP	G15_078	-	Non-Converged Contingency	0.0	0.0	0.03644	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
2	25SP	G15_078	-	Non-Converged Contingency	0.0	0.0	0.03405	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
2	25SP	G15_078	FROM->TO	SAN_ANDS_TP3115.00 - SEMINOLE 115KV CKT 1	159.0	160.0	0.05394	125.773	MUSTANG STATION - SEMINOLE 230KV CKT 1
2	25SP	G15_078	FROM->TO	SAN_ANDS_TP3115.00 - SEMINOLE 115KV CKT 1	159.0	160.0	0.05394	125.773	MUSTANG STATION - SEMINOLE 230KV CKT 1
2	25SP	G15_078	FROM->TO	SHELL C2 SUB - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03035	110.5553	P12:115:LCEC:W56.1.HOBBG.LE-LVN
2	25SP	G15_078	FROM->TO	SHELL C2 SUB - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03035	108.8272	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
3	25SP	G15_078	TO->FROM	ALLRED TAP - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03035	104.5576	P12:115:LCEC:W56.1.HOBBG.LE-LVN
3	25SP	G15_078	TO->FROM	ALLRED TAP - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03035	103.4961	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
3	17G	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30031	219.0037	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30031	218.7841	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27252	212.6842	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27252	212.3523	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29927	206.7258	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29927	206.6	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31328	198.5451	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31328	197.214	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.06229	191.4449	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31169	191.0186	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.06229	189.1503	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31169	188.8782	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30439	182.2433	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30439	180.1336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03430	177.7676	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03430	176.0572	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31670	128.2336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31670	124.1314	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.32434	205.8094	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30587	191.8466	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33884	182.1676	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.10456	175.8259	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.32954	170.544	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.32443	165.6022	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.33758	158.3084	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.06419	157.2462	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33930	130.4315	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05394	142.8396	MUSTANG STATION - SEMINOLE 230KV CKT 1
3	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05394	142.8396	MUSTANG STATION - SEMINOLE 230KV CKT 1
3	20SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05524	110.5661	MUSTANG STATION - SEMINOLE 230KV CKT 1
3	20SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05524	110.5661	MUSTANG STATION - SEMINOLE 230KV CKT 1
3	17SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05671	105.3513	MUSTANG STATION - SEMINOLE 230KV CKT 1
3	17SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05671	105.3513	MUSTANG STATION - SEMINOLE 230KV CKT 1
3	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SHELL C2 SUB 115KV CKT 1	159.0	175.0	0.03035	117.7029	P12:115:LCEC:W56.1.HOBBG.LE-LVN
3	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SHELL C2 SUB 115KV CKT 1	159.0	175.0	0.03035	116.5657	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
3	25SP	G15_078	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03568	113.6961	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_078	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03568	113.6922	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03568	150.821	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03568	150.8177	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	118.3664	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	118.3017	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	101.1875	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	101.1522	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03568	99	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03568	99	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	17G	G15_078	-	Non-Converged Contingency	3975.0	4570.0	0.37511	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	20L	G15_078	-	Non-Converged Contingency	3975.0	4570.0	0.32168	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	25SP	G15_078	FROM->TO	SAN_ANDS_TP3115.00 - SEMINOLE 115KV CKT 1	159.0	160.0	0.05394	121.0804	MUSTANG STATION - SEMINOLE 230KV CKT 1
3	25SP	G15_078	FROM->TO	SAN_ANDS_TP3115.00 - SEMINOLE 115KV CKT 1	159.0	160.0	0.05394	121.0804	MUSTANG STATION - SEMINOLE 230KV CKT 1
3	25SP	G15_078	FROM->TO	SHELL C2 SUB - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03035	107.5108	P12:115:LCEC:W56.1.HOBBG.LE-LVN
3	25SP	G15_078	FROM->TO	SHELL C2 SUB - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03035	106.4346	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
4	25SP	G15_078	TO->FROM	ALLRED TAP - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03035	104.4889	P12:115:LCEC:W56.1.HOBBG.LE-LVN
4	25SP	G15_078	TO->FROM	ALLRED TAP - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03035	103.4341	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
4	17G	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29993	219.2477	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29993	218.9034	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27210	212.5533	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27210	212.4877	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29876	206.5319	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29876	206.4431	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31286	198.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31286	197.0767	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.06228	191.5691	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31125	191.0175	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.06228	189.0637	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31125	188.7404	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30388	181.83	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30388	179.8003	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03429	177.5857	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03429	175.8792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31615	128.3207	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31615	124.1778	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.32427	205.5105	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30579	191.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	17SP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33876	182.0402	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.10456	175.8195	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.32944	170.4128	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.32433	165.4035	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.33751	158.2063	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.06419	157.178	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33919	130.4862	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05394	142.6828	MUSTANG STATION - SEMINOLE 230KV CKT 1
4	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05394	142.6828	MUSTANG STATION - SEMINOLE 230KV CKT 1
4	20SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05524	110.5593	MUSTANG STATION - SEMINOLE 230KV CKT 1
4	20SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05524	110.5593	MUSTANG STATION - SEMINOLE 230KV CKT 1
4	17SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05671	105.3341	MUSTANG STATION - SEMINOLE 230KV CKT 1
4	17SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05671	105.3341	MUSTANG STATION - SEMINOLE 230KV CKT 1
4	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SHELL C2 SUB 115KV CKT 1	159.0	175.0	0.03035	117.627	P12:115:LCEC:W56.1.HOBBG.LE-LVN
4	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SHELL C2 SUB 115KV CKT 1	159.0	175.0	0.03035	116.4967	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
4	25SP	G15_078	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03568	113.6646	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_078	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03568	113.6599	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03568	150.9857	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03568	150.9823	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	118.304	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	118.2713	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	101.1568	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	101.1421	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03568	99.3	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03568	99.3	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	17G	G15_078	-	Non-Converged Contingency	3975.0	4570.0	0.37087	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	20L	G15_078	-	Non-Converged Contingency	3975.0	4570.0	0.31753	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	25SP	G15_078	FROM->TO	SAN_ANDS_TP3115.00 - SEMINOLE 115KV CKT 1	159.0	160.0	0.05394	120.9378	MUSTANG STATION - SEMINOLE 230KV CKT 1
4	25SP	G15_078	FROM->TO	SAN_ANDS_TP3115.00 - SEMINOLE 115KV CKT 1	159.0	160.0	0.05394	120.9378	MUSTANG STATION - SEMINOLE 230KV CKT 1
4	25SP	G15_078	FROM->TO	SHELL C2 SUB - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03035	107.4406	P12:115:LCEC:W56.1.HOBBG.LE-LVN
4	25SP	G15_078	FROM->TO	SHELL C2 SUB - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03035	106.371	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
5	25SP	G15_078	TO->FROM	ALLRED TAP - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03035	104.4908	P12:115:LCEC:W56.1.HOBBG.LE-LVN
5	25SP	G15_078	TO->FROM	ALLRED TAP - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03035	103.4356	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
5	17G	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29759	217.7095	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29759	216.9825	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27026	211.2861	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27026	210.7754	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29646	204.8525	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29646	204.7326	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31035	196.7495	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31035	195.2293	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.06258	189.9854	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30889	189.7734	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.06258	187.4536	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30889	187.2532	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30155	180.5705	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30155	178.2726	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03456	176.2821	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03456	174.3386	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31368	127.7475	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31368	123.5792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.32355	204.5119	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30524	190.5492	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33800	181.3291	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.10466	175.1034	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.32868	169.7873	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.32359	164.743	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.33674	157.4925	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.06426	156.5482	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33839	130.3275	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05393	142.6824	MUSTANG STATION - SEMINOLE 230KV CKT 1
5	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05393	142.6824	MUSTANG STATION - SEMINOLE 230KV CKT 1
5	20SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05524	110.5594	MUSTANG STATION - SEMINOLE 230KV CKT 1
5	20SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05524	110.5594	MUSTANG STATION - SEMINOLE 230KV CKT 1
5	17SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05671	105.3367	MUSTANG STATION - SEMINOLE 230KV CKT 1
5	17SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05671	105.3367	MUSTANG STATION - SEMINOLE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SHELL C2 SUB 115KV CKT 1	159.0	175.0	0.03035	117.6293	P12:115:LCEC:W56.1.HOBBG.LE-LVN
5	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SHELL C2 SUB 115KV CKT 1	159.0	175.0	0.03035	116.4985	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
5	25SP	G15_078	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03568	113.6714	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_078	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03568	113.6673	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03568	150.9628	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03568	150.9601	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	118.3008	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	118.268	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	101.1553	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	101.1406	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03342	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03568	99.2	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03568	99.2	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G15_078	FROM->TO	SAN_ANDS_TP3115.00 - SEMINOLE 115KV CKT 1	159.0	160.0	0.05393	120.9365	MUSTANG STATION - SEMINOLE 230KV CKT 1
5	25SP	G15_078	FROM->TO	SAN_ANDS_TP3115.00 - SEMINOLE 115KV CKT 1	159.0	160.0	0.05393	120.9365	MUSTANG STATION - SEMINOLE 230KV CKT 1
5	25SP	G15_078	FROM->TO	SHELL C2 SUB - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03035	107.4426	P12:115:LCEC:W56.1.HOBBG.LE-LVN
5	25SP	G15_078	FROM->TO	SHELL C2 SUB - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03035	106.3726	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
6	25SP	G15_078	TO->FROM	ALLRED TAP - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03037	101.9607	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
6	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05407	137.7551	MUSTANG STATION - SEMINOLE 230KV CKT 1
6	20SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05534	110.7176	MUSTANG STATION - SEMINOLE 230KV CKT 1
6	17SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05534	110.7176	MUSTANG STATION - SEMINOLE 230KV CKT 1
6	17SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05443	105.8733	MUSTANG STATION - SEMINOLE 230KV CKT 1
6	17SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159.0	160.0	0.05443	105.8733	MUSTANG STATION - SEMINOLE 230KV CKT 1
6	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SHELL C2 SUB 115KV CKT 1	159.0	175.0	0.03037	114.8841	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
6	25SP	G15_078	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03568	113.5161	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03568	151.3756	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03341	118.1734	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03341	118.1275	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03341	101.1279	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03341	101.1113	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03568	100.0897	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G15_078	FROM->TO	SAN_ANDS_TP3115.00 - SEMINOLE 115KV CKT 1	159.0	160.0	0.05407	116.2925	MUSTANG STATION - SEMINOLE 230KV CKT 1
6	25SP	G15_078	FROM->TO	SHELL C2 SUB - SHELL C3 TAP 115KV CKT 1	179.0	179.0	0.03037	104.8669	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
0	20L	G15_082	TO->FROM	CIMARRON RIVER PLANT - WALKEMEYER 115KV CKT 1	119.5	148.2	0.03236	130.2484	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_082	TO->FROM	CIMARRON RIVER PLANT - WALKEMEYER 115KV CKT 1	119.5	148.2	0.03236	130.2484	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_082	TO->FROM	CIMARRON RIVER PLANT - WALKEMEYER 115KV CKT 1	119.5	148.2	0.03236	125.6979	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_082	TO->FROM	CIMARRON RIVER PLANT - WALKEMEYER 115KV CKT 1	119.5	148.2	0.03236	125.6979	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	17SP	G15_082	TO->FROM	CLINTON JUNCTION - ELK CITY 138KV CKT 1	136.0	152.0	0.03727	107.1886	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17G	G15_082	TO->FROM	CLINTON JUNCTION - ELK CITY 138KV CKT 1	181.0	189.0	0.03677	102.3209	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17G	G15_082	TO->FROM	CLINTON JUNCTION - ELK CITY 138KV CKT 1	181.0	189.0	0.03677	99.4	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17G	G15_082	FROM->TO	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1	956.09	1051.7	0.18216	99.2	BASE CASE
0	17G	G15_082	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	133.0	153.0	0.06694	112.6139	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G15_082	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	133.0	153.0	0.06694	111.021	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G15_082	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	133.0	153.0	0.05376	100.9711	WOODWARD (WOODWRD2) 138/69/13.2KV TRANSFORMER CKT 1
0	17G	G15_082	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	133.0	153.0	0.05786	100	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17G	G15_082	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	133.0	153.0	0.05284	99.9	P12:230:AEPW:ELKCITY6:SWEETWT6
0	17G	G15_082	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	133.0	153.0	0.04199	99.9	BASE CASE
0	17G	G15_082	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	133.0	153.0	0.05700	99.7	IODINE - WOODWARD EHV 138KV CKT 1
0	20WP	G15_082	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.59794	105.2154	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	G15_082	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.58884	103.7367	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	16WP	G15_082	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.59519	100.2952	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20WP	G15_082	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.59794	105.2154	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	G15_082	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.58884	103.7367	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	16WP	G15_082	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.59519	100.2952	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11841	109.6733	CIMARRON - MINCO 345KV CKT 1
0	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07734	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07734	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07303	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07303	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10292	107.0835	CIMARRON - MINCO 345KV CKT 1
0	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08366	104.4987	BASE CASE
0	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11841	104.4902	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09483	104.3491	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09052	103.6936	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07825	103.443	BASE CASE
0	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10292	102.1688	GRACEMONT - MINCO 345KV CKT 1
0	17G	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11845	101.6233	CIMARRON - MINCO 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08366	101.4903	GEN587433 1-G16-063-GEN10.6900
0	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07825	100.7184	GEN587433 1-G16-063-GEN10.6900
0	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08229	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08229	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08366	99.9	GEN509416 1-TURK GENERATION
0	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08517	99.8	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08517	99.5	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09017	99.3	P12:138:WFEC:MSL03
0	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08517	99.3	917X
0	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07987	99.3	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07825	99.3	GEN509403 1-PIRKEY GENERATION
0	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07825	99.1	GEN509416 1-TURK GENERATION
0	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08366	99	GEN501801 1-DOLET HILLS UNIT1
0	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07987	99	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G15_082	FROM->TO	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.03778	100.6447	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.60096	123.1957	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20SP	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.60485	108.1483	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	17SP	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.58903	104.3861	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	17G	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.63273	99.6	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20WP	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.60096	123.1957	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20SP	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.60485	108.1483	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	17SP	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.58903	104.3861	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	17G	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.63273	99.6	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20WP	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.60701	126.6254	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.59777	124.6416	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	16WP	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.60397	121.7059	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20SP	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.61094	111.3855	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17SP	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.59491	107.6482	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.63892	103.4359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.65189	102.8359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20WP	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.60701	126.6254	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.59777	124.6416	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.60397	121.7059	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20SP	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.61094	111.3855	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.59491	107.6482	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.63892	103.4359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.65189	102.8359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G15_082	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.06257	109.0517	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	16WP	G15_082	-	Non-Converged Contingency	1793.0	1793.0	0.31999	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	16WP	G15_082	-	Non-Converged Contingency	1716.0	1793.0	0.31999	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	16WP	G15_082	-	Non-Converged Contingency	987.16	1082.77	0.19336	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.19336	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G15_082	-	Non-Converged Contingency	1420.0	1775.0	0.18870	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G15_082	-	Non-Converged Contingency	1420.0	1775.0	0.18870	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_082	-	Non-Converged Contingency	1420.0	1775.0	0.18870	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	1793.0	1793.0	0.31606	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	1716.0	1793.0	0.31606	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	17G	G15_082	-	Non-Converged Contingency	1793.0	1793.0	0.31606	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	1716.0	1793.0	0.31606	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	17G	G15_082	-	Non-Converged Contingency	1793.0	1793.0	0.31606	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	1716.0	1793.0	0.31606	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G15_082	-	Non-Converged Contingency	1420.0	1775.0	0.24367	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	1420.0	1775.0	0.18794	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	1420.0	1775.0	0.18794	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	1420.0	1775.0	0.18794	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.18216	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.18216	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.16895	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.16895	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	1792.0	1792.0	0.12466	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	1561.0	1793.0	0.12015	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	1561.0	1793.0	0.12015	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G15_082	-	Non-Converged Contingency	1195.0	1195.0	0.11594	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	1330.0	1940.0	0.11188	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	1330.0	1940.0	0.11188	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	956.1	1051.7	0.10577	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	726.6	726.6	0.08603	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	1413.0	1517.0	0.08603	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	717.1	717.1	0.07801	-	HOLCOMB - SETAB 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	762.5	762.5	0.07582	-	MINGO - SETAB 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G15_082	-	Non-Converged Contingency	1022.0	1124.0	0.04295	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	1022.0	1124.0	0.04295	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	478.0	502.0	0.03448	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G15_082	-	Non-Converged Contingency	478.0	502.0	0.03424	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.20595	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.17379	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_082	-	Non-Converged Contingency	0.0	0.0	0.33233	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G15_082	-	Non-Converged Contingency	1793.0	1793.0	0.31723	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	G15_082	-	Non-Converged Contingency	1716.0	1793.0	0.31723	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	G15_082	-	Non-Converged Contingency	0.0	0.0	0.31126	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.17620	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.17620	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.16466	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.16466	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.15613	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.15613	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.15613	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.15613	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.19282	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G15_082	-	Non-Converged Contingency	987.16	1082.77	0.19020	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.16914	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G15_082	-	Non-Converged Contingency	987.16	1082.77	0.16914	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.19562	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.17379	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	25SP	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.17379	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G15_082	-	Non-Converged Contingency	1792.0	1792.0	0.08639	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	25SP	G15_082	-	Non-Converged Contingency	497.0	547.0	0.03327	-	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_082	-	Non-Converged Contingency	478.0	502.0	0.03056	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G15_082	-	Non-Converged Contingency	478.0	502.0	0.02988	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G15_082	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.13164	116.9587	BASE CASE
0	25SP	G15_082	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.11941	115.2466	BASE CASE
0	20L	G15_082	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06149	120.6857	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_082	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06149	120.6857	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_082	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06149	115.6758	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_082	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06149	115.6758	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06149	123.8299	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06149	123.8299	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06149	123.7513	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06149	123.7513	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06149	119.2914	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06149	119.2914	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06149	118.9527	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06149	118.9527	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	17SP	G15_082	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03266	106.2349	BENTON - WICHITA 345KV CKT 1
0	17SP	G15_082	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03266	103.6589	BENTON - WICHITA 345KV CKT 1
0	17SP	G15_082	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03759	122.279	BENTON - WICHITA 345KV CKT 1
0	17SP	G15_082	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03759	119.3224	BENTON - WICHITA 345KV CKT 1
0	20SP	G15_082	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03144	102.8246	BENTON - WICHITA 345KV CKT 1
0	20SP	G15_082	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03144	100.6352	BENTON - WICHITA 345KV CKT 1
2	17G	G15_082	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.59264	102.7205	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	G15_082	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.59264	102.7205	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07293	107.6126	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07293	107.6126	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10255	103.713	CIMARRON - MINCO 345KV CKT 1
2	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09038	102.7167	CIMARRON - DRAPER LAKE 345KV CKT 1
2	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07807	102.2733	BASE CASE
2	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07807	99.5	GEN587433 1-G16-063-GEN10.6900
2	17G	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.59566	120.3583	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	16WP	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.60266	114.6083	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17SP	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.60144	106.8903	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.59566	120.3583	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	16WP	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.60266	114.6083	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17SP	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.60144	106.8903	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.60170	123.543	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	16WP	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.60877	117.8517	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17SP	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.60754	110.1187	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.64872	101.8646	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.60170	123.543	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.60877	117.8517	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17SP	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.60754	110.1187	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.64872	101.8646	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G15_082	-	Non-Converged Contingency	987.2	1082.8	0.19768	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	16WP	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.16391	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	G15_082	-	Non-Converged Contingency	987.2	1082.8	0.16391	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.18604	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	17G	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.16921	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	17G	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.15377	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.15377	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17SP	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.19977	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	17G	G15_082	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.12247	112.9939	BASE CASE
2	17G	G15_082	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06955	133.4281	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G15_082	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06955	133.4281	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G15_082	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06955	128.3522	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G15_082	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06955	128.3522	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06955	137.6407	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06955	137.6407	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06955	137.6277	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06955	137.6277	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06955	132.2146	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06955	132.2146	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06955	131.6923	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06955	131.6923	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17SP	G15_082	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03217	119.734	BENTON - WICHITA 345KV CKT 1
2	17SP	G15_082	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03217	116.7168	BENTON - WICHITA 345KV CKT 1
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07887	110.2643	PITTSBURG - SEMINOLE 345KV CKT 1
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07887	110.2643	PITTSBURG - SEMINOLE 345KV CKT 1
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11375	109.7241	CIMARRON - MINCO 345KV CKT 1
3	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07884	108.6486	PITTSBURG - SEMINOLE 345KV CKT 1
3	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07884	108.6486	PITTSBURG - SEMINOLE 345KV CKT 1
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09645	105.873	CIMARRON - DRAPER LAKE 345KV CKT 1
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08417	105.7261	BASE CASE
3	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11347	105.6012	CIMARRON - MINCO 345KV CKT 1
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11375	104.9933	GRACEMONT - MINCO 345KV CKT 1
3	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09638	103.7964	CIMARRON - DRAPER LAKE 345KV CKT 1
3	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08406	103.4473	BASE CASE
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08417	102.8263	GEN587433 1-G16-063-GEN10.6900
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08579	101.4146	CLEVELAND - G15066_T 345.00 345KV CKT 1
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08417	101.3944	GEN509403 1-PIRKEY GENERATION
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08417	101.3624	GEN509416 1-TURK GENERATION
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08297	101.2064	PITTSBURG - VALLIANT 345KV CKT 1
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08297	101.2064	PITTSBURG - VALLIANT 345KV CKT 1
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08579	101.0921	G15066_T 345.00 - SOONER 345KV CKT 1
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08579	100.9133	917X
3	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11347	100.8175	GRACEMONT - MINCO 345KV CKT 1
3	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08406	100.5911	GEN587433 1-G16-063-GEN10.6900
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09040	100.5297	P12:138:WFEC:MSL03
3	20L	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10851	100.3827	CIMARRON - MINCO 345KV CKT 1
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08417	100.2734	GEN501801 1-DOLET HILLS UNIT1
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09460	99.5	ARCADIA - NORTHWEST 345KV CKT 1
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08417	99.4	GEN509404 1-WELSH #1
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08417	99.4	GEN509406 1-WELSH #3
3	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08287	99.3	PITTSBURG - VALLIANT 345KV CKT 1
3	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08287	99.3	PITTSBURG - VALLIANT 345KV CKT 1
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08525	99.3	CLEVELAND - TULSA NORTH 345KV CKT 1
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08525	99.3	CLEVELAND - TULSA NORTH 345KV CKT 1
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08417	99.2	GEN336821 1-GRAND GULF UNIT
3	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08417	99.1	GEN336153 1-WATERFORD UNIT#3
3	20WP	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.51571	100.96	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
3	20L	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.50557	99	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
3	20WP	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.51571	100.96	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
3	20L	G15_082	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.50557	99	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
3	20WP	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.52243	104.4778	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	20L	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.51216	102.4888	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	17G	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.51755	102.1788	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	20WP	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.52243	104.4778	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	20L	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.51216	102.4888	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	17G	G15_082	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.51755	102.1788	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	16WP	G15_082	-	Non-Converged Contingency	987.2	1082.8	0.18066	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	16WP	G15_082	-	Non-Converged Contingency	1195.0	1195.0	0.13892	-	GEN525561 1-TOLK GEN #1 24 KV
3	20L	G15_082	-	Non-Converged Contingency	0.0	0.0	0.30108	-	P12:345:SPS:J07.1.FINN.HITCH

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20L	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.15963	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	20L	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.15963	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	20L	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.14146	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.14146	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.14146	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G15_082	-	Non-Converged Contingency	956.09	1051.7	0.14146	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20WP	G15_082	-	Non-Converged Contingency	987.16	1082.77	0.17369	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	25SP	G15_082	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.09470	109.7172	BASE CASE
3	17G	G15_082	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.09792	104.9495	BASE CASE
3	17G	G15_082	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06114	119.9794	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G15_082	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06114	119.9794	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G15_082	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06114	115.1123	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	17G	G15_082	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06114	115.1123	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G15_082	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.05412	108.7819	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G15_082	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.05412	108.7819	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G15_082	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.05412	103.7748	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G15_082	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.05412	103.7748	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	17G	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06114	125.7845	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06114	125.7845	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06114	125.5571	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06114	125.5571	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06114	120.5936	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	17G	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06114	120.5936	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	17G	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06114	120.5316	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	17G	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06114	120.5316	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.05412	113.3155	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.05412	113.3155	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.05412	113.298	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.05412	113.298	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.05412	108.9672	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.05412	108.9672	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.05412	108.8001	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G15_082	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.05412	108.8001	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	17SP	G15_082	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03083	119.4605	BENTON - WICHITA 345KV CKT 1
3	17SP	G15_082	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03083	116.446	BENTON - WICHITA 345KV CKT 1
3	20SP	G15_082	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03003	102.4889	BENTON - WICHITA 345KV CKT 1
3	20SP	G15_082	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03003	100.2987	BENTON - WICHITA 345KV CKT 1
4	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07344	109.6577	PITTSBURG - SEMINOLE 345KV CKT 1
4	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07344	109.6577	PITTSBURG - SEMINOLE 345KV CKT 1
4	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10595	108.8731	CIMARRON - MINCO 345KV CKT 1
4	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07363	108.1191	PITTSBURG - SEMINOLE 345KV CKT 1
4	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07363	108.1191	PITTSBURG - SEMINOLE 345KV CKT 1
4	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09096	105.2626	CIMARRON - DRAPER LAKE 345KV CKT 1
4	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07897	105.133	BASE CASE
4	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10600	104.7537	CIMARRON - MINCO 345KV CKT 1
4	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10595	104.0842	GRACEMONT - MINCO 345KV CKT 1
4	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09111	103.2531	CIMARRON - DRAPER LAKE 345KV CKT 1
4	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07908	102.9054	BASE CASE
4	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07897	102.2906	GEN587433 1-G16-063-GEN10.6900
4	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07897	100.8637	GEN509403 1-PIRKEY GENERATION
4	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08054	100.8283	CLEVELAND - G15066_T 345.00 345KV CKT 1
4	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07897	100.796	GEN509416 1-TURK GENERATION
4	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07770	100.6442	PITTSBURG - VALLIANT 345KV CKT 1
4	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07770	100.6442	PITTSBURG - VALLIANT 345KV CKT 1
4	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08054	100.5068	G15066_T 345.00 - SOONER 345KV CKT 1
4	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08054	100.3304	917X
4	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07908	100.1097	GEN587433 1-G16-063-GEN10.6900
4	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10600	100	GRACEMONT - MINCO 345KV CKT 1
4	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08482	99.9	P12:138:WFEC:MSL03
4	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07897	99.8	GEN501801 1-DOLET HILLS UNIT1
4	16WP	G15_082	-	Non-Converged Contingency	1195.0	1195.0	0.12214	-	GEN525561 1-TOLK GEN #1 24 KV
4	25SP	G15_082	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.08516	108.6242	BASE CASE
4	17G	G15_082	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.08877	102.851	BASE CASE
4	17SP	G15_082	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03358	119.7604	BENTON - WICHITA 345KV CKT 1
4	17SP	G15_082	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03358	116.7204	BENTON - WICHITA 345KV CKT 1
4	20SP	G15_082	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03310	102.7706	BENTON - WICHITA 345KV CKT 1
4	20SP	G15_082	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03310	100.512	BENTON - WICHITA 345KV CKT 1
5	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07344	109.6577	PITTSBURG - SEMINOLE 345KV CKT 1
5	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07363	108.1191	PITTSBURG - SEMINOLE 345KV CKT 1
5	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07897	105.133	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	16WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07908	102.9054	BASE CASE
5	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07770	100.6442	PITTSBURG - VALLIANT 345KV CKT 1
5	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08054	100.3304	917X
5	20WP	G15_082	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08482	99.9	P12:138:WFEC:MSL03
5	25SP	G15_082	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.08516	108.6241	BASE CASE
5	17G	G15_082	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.08877	102.851	BASE CASE
6	17SP	G15_082	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03358	116.7132	BENTON - WICHITA 345KV CKT 1
6	20SP	G15_082	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03310	100.5062	BENTON - WICHITA 345KV CKT 1
0	20SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120.0	120.0	0.03028	117.2618	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	20SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120.0	120.0	0.03028	117.197	BLOOMFIELD - GAVINS POINT 115KV CKT 1
0	25SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120.0	120.0	0.03029	115.0749	BLOOMFIELD - GAVINS POINT 115KV CKT 1
0	25SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120.0	120.0	0.03029	114.8341	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	20SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120.0	120.0	0.04178	108.2198	RASMUSN - UTICA JCT 230KV CKT 1
0	20SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120.0	120.0	0.03028	100.7576	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
0	20SP	G15_089	TO->FROM	BLOOMFIELD - GAVINS POINT 115KV CKT 1	120.0	120.0	0.03050	100.9542	RASMUSN - UTICA JCT 230KV CKT 1
0	20SP	G15_089	TO->FROM	EAGLE 4 230.00 - PAHOJA 230KV CKT 1	372.9	372.9	0.04802	102.2459	RASMUSN - UTICA JCT 230KV CKT 1
0	20SP	G15_089	FROM->TO	FT RANDAL - SIOUX CITY 230KV CKT 1	320.0	320.0	0.05070	101.8819	RASMUSN - UTICA JCT 230KV CKT 1
0	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03028	144.5887	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03028	144.0798	BLOOMFIELD - GAVINS POINT 115KV CKT 1
0	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03029	143.2074	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03029	143.1245	BLOOMFIELD - GAVINS POINT 115KV CKT 1
0	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.04178	134.3609	RASMUSN - UTICA JCT 230KV CKT 1
0	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03028	127.5036	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
0	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03029	124.0972	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
0	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03441	119.1067	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03441	118.5789	BLOOMFIELD - GAVINS POINT 115KV CKT 1
0	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03571	116.3506	UTICA JCT - VFODNES 230KV CKT 1
0	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03572	115.6532	UTICA JCT - VFODNES 230KV CKT 1
0	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03624	106.0019	FT RANDAL - UTICA JCT 230KV CKT 1
0	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03131	104.0366	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
0	20WP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	132.0	0.03030	103.6093	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03133	102.6026	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
0	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03441	102.2415	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
0	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03102	100	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
0	20WP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	132.0	0.04188	100	RASMUSN - UTICA JCT 230KV CKT 1
0	20WP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	132.0	0.04188	99	RASMUSN - SIOUX CITY 230KV CKT 1
0	20SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.12625	112.4465	RASMUSN - UTICA JCT 230KV CKT 1
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.07794	111.5188	BERSFORD - SIOUX FALLS 115KV CKT 1
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08426	110.9324	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08426	110.1146	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08426	110.0716	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08568	109.2696	BASE CASE
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08568	109.2681	BASE CASE
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08583	106.3461	CLEARWATER - ONEILL 115KV CKT 1
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.12061	105.9313	UTICA JCT - VFODNES 230KV CKT 1
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08583	105.9106	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08583	105.3812	CLEARWATER - NELIGH 115KV CKT 1
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08742	104.5832	SIOUX CITY - TWIN CHURCH 230KV CKT 1
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08568	104.1608	GEN652577 3-GAVINS POINT
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08568	104.0714	GEN652575 1-GAVINS POINT
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08568	104.0714	GEN652576 2-GAVINS POINT
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.07794	103.7182	BERSFORD - MANNING 115KV CKT 1
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.10827	103.496	SIOUX FALLS - VFODNES 230KV CKT 1
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08568	103.4413	GEN587153 1-G16-021-GEN10.6900
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08580	103.3112	PAHOJA - SIOUX FALLS 230KV CKT 1
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08516	102.2112	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08516	102.2112	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08580	102.1956	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08576	101.8373	GRANT - MITCHELL 115KV CKT 1
0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08576	101.8373	GRANT - MITCHELL 115KV CKT 1
0	20SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.07709	99.6	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
0	20SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.09405	99.3	FT RANDAL - SPENCER 115KV CKT 1
0	20SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.09346	99.2	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03363	125.3767	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.05113	119.4472	RASMUSN - UTICA JCT 230KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03545	119.0015	HOSKINS - SHELL CREEK 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03308	118.8608	FT RANDAL - SPENCER 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03308	118.5806	ONEILL - SPENCER 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03414	117.2354	RAUN - SIOUX CITY 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03308	115.9301	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03308	115.9301	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.04025	115.0167	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03304	114.8592	GAVINS POINT - HARTINGTON 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03176	114.7909	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03151	114.7435	CLEARWATER - ONEILL 115KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03581	114.4231	HOSKINS - SHELL CREEK 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03155	114.3925	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	114.3176	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03241	114.2255	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03151	114.1448	CLEARWATER - NELIGH 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02973	114.1116	FT RANDAL - WHITE SWAN 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	114.0689	GEN336153 1-WATERFORD UNIT#3
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03155	114.0622	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03304	114.0402	BELDEN - HARTINGTON 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02973	114.0006	TYNDALL - WHITE SWAN 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	113.8959	GEN335831 1-RIVERBEND UNIT#1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03278	113.8126	BLOOMFIELD - GAVINS POINT 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03278	113.7984	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	113.7362	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03414	113.5579	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02972	113.4527	TYNDALL - WHITE SWAN 115KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03308	113.3374	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03308	113.3374	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03304	113.3121	BELDEN - HARTINGTON 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03024	113.2266	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03226	113.182	DIXONCO 230.00 - HOSKINS 230KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.04755	113.1631	UTICA JCT - VFODNES 230KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03223	113.1583	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03603	113.0888	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03024	113.0759	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03277	113.0663	BLOOMFIELD - GAVINS POINT 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03231	113.0565	SIOUX CITY - TWIN CHURCH 230KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03603	112.9448	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03185	112.9444	DENISON - SIOUX CITY 230KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03277	112.8609	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.04756	112.5661	UTICA JCT - VFODNES 230KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	112.3233	GEN542951 5-HAWTHORN UNIT #5
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03175	112.183	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03151	112.129	MCCOOL - MOORE 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03144	112.1108	GRAND ISLAND - MCCOOL 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.04025	111.9104	GAVINS POINT - YANKON JCT 115KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03184	111.8711	DENISON - SIOUX CITY 230KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03225	111.8482	DIXONCO 230.00 - HOSKINS 230KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03223	111.8122	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03230	111.7207	SIOUX CITY - TWIN CHURCH 230KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	111.5658	BASE CASE
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03151	111.4155	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03116	111.3707	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03240	111.3409	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03190	111.2897	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03130	111.1223	AS KING - EAU CLAIRE 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03772	111.0683	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03170	110.9365	SUB 3454 - WAGENER 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03156	110.908	GRIMES - LEHIGH 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03242	110.8618	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03160	110.7327	CLEARWATER - ONEILL 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03146	110.7	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03160	110.6248	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03143	110.5569	COOPER - MOORE 345KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03722	110.3671	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03603	110.3288	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03603	110.3288	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03603	110.3213	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02973	110.2882	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02973	110.2882	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02973	110.2882	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03413	110.2141	RAUN - SIOUX CITY 345KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03160	110.1904	CLEARWATER - NELIGH 115KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	110.1372	BASE CASE
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03024	110.127	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	110.1051	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03289	110.0616	MT VERN - STORLA 115KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02960	110.0546	FT RANDAL - WHITE SWAN 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03071	110.0323	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03281	110.0308	GREGORY - WINNER 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	109.9505	GEN652546 1-FT RANDAL
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03223	109.9494	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02960	109.9407	TYNDALL - WHITE SWAN 115KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03281	109.8629	BONESTEEL - FT RANDAL 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03281	109.8335	WINNER - WITTEN 115KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03024	109.8126	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03333	109.7883	GAVINS POINT - HARTINGTON 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03128	109.7762	KELLY (KELLY T1) 230/115/13.2KV TRANSFORMER CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03128	109.7668	COLUMBUS - KELLY 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	109.7092	GEN660016 1-B_H WIND 0.7000
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	109.588	GEN652548 5-FT RANDAL
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	109.588	GEN652549 7-FT RANDAL
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	109.5781	GEN652547 3-FT RANDAL
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	109.5597	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	109.5452	GEN600045 4-ANSON
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03170	109.507	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03167	109.4768	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03289	109.3195	MT VERN - STORLA 115KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03281	109.2546	GREGORY - WINNER 115KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02960	109.1982	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02960	109.1982	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02960	109.1982	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.04024	109.1975	GAVINS POINT - YANKON JCT 115KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.04768	109.008	UTICA JCT - VFODNES 230KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03300	108.9921	BLOOMFIELD - GAVINS POINT 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03121	108.9794	COLUMEAST - KELLY 230KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03121	108.9766	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03300	108.9571	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02960	108.8937	TYNDALL - YANKON JCT 115KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03333	108.8878	BELDEN - HARTINGTON 115KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03232	108.8059	DIXONCO 230.00 - HOSKINS 230KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03191	108.7667	DENISON - SIOUX CITY 230KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03071	108.7474	COLUMEAST - SHELL CREEK 345KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03118	108.7378	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03233	108.6936	SIOUX CITY - TWIN CHURCH 230KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03771	108.6017	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03229	108.5907	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03229	108.5907	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03125	108.5628	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03151	108.5386	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03190	108.4659	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	108.462	BASE CASE
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03178	108.4486	KELLY - SHELL CREEK 230KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03115	108.4459	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03128	108.4439	COLUMBUS - KELLY 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03178	108.4252	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	108.4235	GEN652546 1-FT RANDAL
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03128	108.4076	KELLY (KELLY T1) 230/115/13.2KV TRANSFORMER CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	108.4	GEN600005 1-MONTICELLO
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03156	108.3454	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03130	108.1768	AS KING - EAU CLAIRE 345KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	108.0279	GEN652548 5-FT RANDAL
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	108.0279	GEN652549 7-FT RANDAL
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	108.0096	GEN652547 3-FT RANDAL
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03603	107.6828	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03603	107.6828	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03603	107.6757	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20WP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03027	107.6479	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03121	107.6291	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02972	107.6079	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02972	107.6079	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02972	107.6079	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03121	107.6024	COLUMEAST - KELLY 230KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	107.5249	GEN645063 W-PR BRZ1W 0.6900
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	107.5249	GEN645064 W-PR BRZ2W 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03243	107.3913	MENNO JCT - UTICA 115KV CKT 1
0	20WP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03027	107.3689	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	107.2613	BASE CASE
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	107.2603	BASE CASE
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03223	107.2477	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	107.1016	GEN659111 2-LELAND OLDS UNIT2
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03281	106.8625	P12:115:UMZW:# 172 #: WI IN SD.
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	106.738	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	106.738	GEN659107 2-ANTELOPE VALLEY UNIT2
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03128	106.6397	P13:115-230:NPPD:COLMBUS4:T1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	106.5847	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	106.549	GEN563232 1-G15089_3 0.6900
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03177	106.5031	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03177	106.5031	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03150	106.451	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03282	106.3904	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03269	106.3901	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKE
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03269	106.3033	BONESTEEL - GREGORY 115KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03148	106.3015	COOPER - MOORE 345KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	106.2085	GEN600045 4-ANSON
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	106.1544	GEN587133 1-G16-017-GEN10.6900
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03115	106.0581	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	106.0199	GEN645063 W-PR BRZ1W 0.6900
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	106.0199	GEN645064 W-PR BRZ2W 0.6900
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03073	105.9523	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	105.9475	GEN659125 1-COVEY
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	105.8794	GEN587293 1-G16-044-GEN10.6900
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03121	105.8684	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	105.8204	BASE CASE
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03305	105.7486	MT VERN - STORLA 115KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	105.6346	GEN652546 1-FT RANDAL
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03269	105.5719	GREGORY - WINNER 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	105.5455	GEN615001 1-COAL CREEK
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03135	105.5229	P13:115-230:NPPD:COLMBUS4:T1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03135	105.5225	KELLY (KELLY T1) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03135	105.5112	COLUMBUS - KELLY 115KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	105.5004	GEN615002 2-COAL CREEK
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	105.4283	GEN659111 2-LELAND OLDS UNIT2
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	105.4258	GEN660016 1-B_H WIND 0.7000
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03466	105.3729	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03269	105.3402	P12:115:UMZW:# 172 #: WI IN SD.
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03178	105.2291	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	105.2223	GEN652548 5-FT RANDAL
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	105.2223	GEN652549 7-FT RANDAL
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	105.2043	GEN652547 3-FT RANDAL
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03269	105.0919	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03269	105.0861	WINNER - WITTEN 115KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	105.0842	GEN659103 1-ANTELOPE VALLEY UNIT1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	105.0842	GEN659107 2-ANTELOPE VALLEY UNIT2
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03269	105.0666	MISSION - WITTEN 115KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	105.0299	GEN563232 1-G15089_3 0.6900
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03170	104.933	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03128	104.7476	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03128	104.7475	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03128	104.73	COLUMEAST - KELLY 230KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	104.6693	GEN652907 1-G09_007IS_3 0.6900
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	104.6058	GEN587133 1-G16-017-GEN10.6900
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	104.5794	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	104.4717	GEN600004 2-PRAIRIE ISLAND G2
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	104.4669	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	104.4054	GEN562528 1-G14_031_2 0.6900
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	104.3341	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03281	104.2728	P12:115:UMZW:# 172 #: WI IN SD.
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03193	104.2643	KELLY - SHELL CREEK 230KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03193	104.2501	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03193	104.25	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	104.2273	GEN587293 1-G16-044-GEN10.6900
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	104.2193	GEN600006 1-AS KING
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	104.1984	GEN659125 1-COVEY
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03309	104.1962	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	104.0272	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03128	103.9921	P13:115-230:NPPD:COLMBUS4:T1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03281	103.8477	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	20WP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03491	103.8322	FT RANDAL - SIOUX CITY 230KV CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	103.8248	GEN615001 1-COAL CREEK
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	103.7035	GEN600005 1-MONTICELLO
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03121	103.2392	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	103.228	GEN645063 W-PR BRZ1W 0.6900
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	103.228	GEN645064 W-PR BRZ2W 0.6900
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03141	103.1426	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	103.0914	GEN600000 1-SHERBURNECNTY G1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	102.9442	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03177	102.8993	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	102.8393	GEN562528 1-G14_031_2 0.6900
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	102.6002	GEN659111 2-LELAND OLDS UNIT2
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.04291	102.5658	FT RANDAL - LAKE PLATT 230KV CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	102.3625	GEN563232 1-G15089_3 0.6900
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	102.2475	GEN600001 2-SHERBURNE CNTY G2
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	102.2449	GEN659103 1-ANTELOPE VALLEY UNIT1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	102.2449	GEN659107 2-ANTELOPE VALLEY UNIT2
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	102.1597	GEN600002 3-SHERBURNE CNTY G3
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	102.029	GEN620315 1-BIG STONE GEN
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	101.6918	GEN587133 1-G16-017-GEN10.6900
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	101.5039	GEN659125 1-COVEY
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	101.4532	GEN587293 1-G16-044-GEN10.6900
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	101.1195	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	101.1031	GEN615001 1-COAL CREEK
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	101.035	GEN615002 2-COAL CREEK
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	100.4371	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03140	100.1781	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	100.0918	GEN562528 1-G14_031_2 0.6900
0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	100	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	16WP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03502	99.8	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.04321	99.8	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.04291	99.8	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20WP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.05231	99.2	RASMUSN - UTICA JCT 230KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.09735	151.8526	FT RANDAL - WHITE SWAN 115KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.09735	150.223	TYNDALL - WHITE SWAN 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.14989	146.5125	RASMUSN - UTICA JCT 230KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.09735	141.4245	TYNDALL - YANKON JCT 115KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.09735	140.8928	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.09735	140.8928	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.09735	140.8928	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10331	138.6082	TYNDALL - WHITE SWAN 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10334	136.9064	FT RANDAL - WHITE SWAN 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10334	135.2489	TYNDALL - WHITE SWAN 115KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10147	130.3986	BERSFORD - SIOUX FALLS 115KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10331	128.9167	TYNDALL - YANKON JCT 115KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11487	128.7804	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10634	127.919	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10334	127.29	TYNDALL - YANKON JCT 115KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10634	127.1541	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10634	127.0166	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.14655	126.6128	UTICA JCT - VFODNES 230KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	123.5959	GEN652577 3-GAVINS POINT
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	123.5315	GEN652575 1-GAVINS POINT
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	123.5315	GEN652576 2-GAVINS POINT
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10743	123.4781	PAHOJA - SIOUX FALLS 230KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10870	122.6896	SIOUX CITY - TWIN CHURCH 230KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.13221	122.5517	SIOUX FALLS - VFODNES 230KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10743	122.1221	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	121.7851	GEN587153 1-G16-021-GEN10.6900
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10738	121.3638	GRANT - MITCHELL 115KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10738	121.3638	GRANT - MITCHELL 115KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10708	120.2678	HOSKINS - RAUN 345KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10708	120.2678	HOSKINS - RAUN 345KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10334	120.2536	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10334	120.2536	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10334	120.2536	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10734	120.2519	CLEARWATER - ONEILL 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10754	120.1753	NOBLES - SPLIT ROCK 345KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10734	119.9472	CLEARWATER - NELIGH 115KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10734	119.7631	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10147	119.7547	BERSFORD - MANNING 115KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10728	119.607	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10738	119.5725	CHERRY CREEK - GRANT 115KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10691	119.4804	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10691	119.4804	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10865	119.0476	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	119.0364	GEN337653 1-WHITE BLUFF UNIT #2
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10865	119.0359	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10865	119.0358	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	119.0269	GEN337652 1-WHITE BLUFF UNIT #1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10331	119.0071	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10331	119.0071	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10331	119.0071	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	119.0065	GEN338146 1-INDEPENDENCE UNIT #2
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	118.9292	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	118.6518	GEN640418 1-ELKHORN RIDGE WIND
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	118.6274	GEN501801 1-DOLET HILLS UNIT1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10074	118.4702	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10078	117.7862	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11387	116.228	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.15168	116.2063	UTICA JCT - VFODNES 230KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	115.4163	BASE CASE
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	115.415	BASE CASE
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11240	115.1948	GEN659116 1-SPIRIT MOUND UNIT1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	115.0042	GEN659116 1-SPIRIT MOUND UNIT1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11240	113.6589	GEN659117 2-SPIRIT MOUND UNIT2
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	113.3218	GEN659117 2-SPIRIT MOUND UNIT2
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11153	113.1032	LETCHER - SIOUX FALLS 230KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.15171	113.0725	UTICA JCT - VFODNES 230KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10682	112.7212	COLUMEAST - SHELL CREEK 345KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10668	112.6673	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10668	112.6672	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10694	112.6665	ALBION - PETERSBURG 115KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10694	112.4097	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10694	112.3615	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10619	112.2421	HOSKINS - SHELL CREEK 345KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11240	112.231	GEN652575 1-GAVINS POINT
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11240	112.231	GEN652576 2-GAVINS POINT
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11240	112.1795	GEN652577 3-GAVINS POINT
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11257	111.8365	PAHOJA - SIOUX FALLS 230KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11387	111.7452	SIOUX CITY - TWIN CHURCH 230KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11240	111.724	GEN587153 1-G16-021-GEN10.6900
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10876	111.5978	LETCHER (LET KV3A) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11254	111.4849	GRANT - MITCHELL 115KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10586	111.4414	BELDEN - TWIN CHURCH 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	111.4125	GEN652575 1-GAVINS POINT
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	111.4125	GEN652576 2-GAVINS POINT
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11262	111.3984	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	111.3648	GEN652577 3-GAVINS POINT
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11392	111.0501	SIOUX CITY - TWIN CHURCH 230KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10965	111.0151	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10965	111.0151	MITCHELL - MITCHELL NW 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.12041	110.8967	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11257	110.4144	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	110.2178	GEN600000 1-SHERBURNECNTY G1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	110.0554	GEN587153 1-G16-021-GEN10.6900
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11261	109.9737	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10965	109.9536	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10965	109.9535	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.12036	109.8406	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11269	109.6117	FT RANDAL - SPENCER 115KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11173	109.5417	MT VERN - STORLA 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11258	109.4916	GRANT - MITCHELL 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11269	109.4442	ONEILL - SPENCER 115KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	109.2414	GEN600001 2-SHERBURNE CNTY G2
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	109.152	GEN659103 1-ANTELOPE VALLEY UNIT1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	109.152	GEN659107 2-ANTELOPE VALLEY UNIT2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	109.1451	GEN600002 3-SHERBURNE CNTY G3
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	108.9385	GEN587133 1-G16-017-GEN10.6900
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11234	108.8677	AINSWORTH - VALENTINE 115KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11191	108.6251	GREGORY - WINNER 115KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11256	108.5932	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	108.5535	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	108.5416	GEN620315 1-BIG STONE GEN
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11387	108.4857	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11206	108.3121	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	108.2704	GEN659125 1-COVEY
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11248	108.1609	CLEARWATER - ONEILL 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	108.0922	GEN336153 1-WATERFORD UNIT#3
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	108.0766	GEN587293 1-G16-044-GEN10.6900
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11237	107.9876	GRAND ISLAND - MCCOOL 345KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10327	107.9615	BELDEN - HOSKINS 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	107.8512	GEN335831 1-RIVERBEND UNIT#1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	107.8358	GEN615001 1-COAL CREEK
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.13740	107.8301	SIOUX FALLS - VFODNES 230KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	107.7646	GEN615002 2-COAL CREEK
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11189	107.7586	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11231	107.736	HOSKINS - RAUN 345KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11248	107.7109	CLEARWATER - NELIGH 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	107.496	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11211	107.4453	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11189	107.3986	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	107.3283	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10147	107.105	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11009	107.0846	BERSFORD - SIOUX FALLS 115KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	106.6356	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11383	105.9713	RAUN - SIOUX CITY 345KV CKT 1
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.09862	105.8025	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11185	105.43	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11240	105.1116	BASE CASE
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11221	105.0904	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11234	105.0385	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11185	104.7488	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11234	104.613	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11246	104.438	HANKINSON - WAHPETON 230KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	104.3187	BASE CASE
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11268	104.2296	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11258	103.9192	GRANT - MITCHELL 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11269	103.8994	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11269	103.8994	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11240	103.8729	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11230	103.6694	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11242	103.1668	HANKINSON - WAHPETON 230KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11237	103.1572	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11217	102.8708	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11264	102.7358	NOBLES - SPLIT ROCK 345KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11230	102.5946	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11196	102.4975	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11258	102.4	CHERRY CREEK - GRANT 115KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11265	102.3977	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11265	102.3977	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11254	102.3654	GRANT - MITCHELL 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11262	102.3174	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11211	101.984	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11233	101.858	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11384	101.8434	LETCHER (LET KV3A) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11236	101.695	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11200	101.4194	COLUMEAST - SHELL CREEK 345KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11240	101.1314	GEN600006 1-AS KING
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11188	101.0566	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11227	100.9875	HOSKINS - RAUN 345KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11206	100.8731	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11388	100.8704	LETCHER (LET KV3A) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11254	100.842	CHERRY CREEK - GRANT 115KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11240	100.8101	GEN659141 1-K10215A
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11467	100.6912	MITCHELL - MITCHELL NW 115KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11258	100.6227	RAUN - SUB 3451 FT CAL 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11141	100.4253	HOSKINS - SHELL CREEK 345KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11124	100.3765	BELDEN - TWIN CHURCH 115KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11240	100.3699	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11002	100.3231	BERSFORD - MANNING 115KV CKT 1
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11240	100.2209	GEN652353 2-GR PRAIRIEG 0.6900
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11240	100.2073	GEN652173 1-G09_001IS_2 0.6900
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11472	100	MITCHELL - MITCHELL NW 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	99.9	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11240	99.9	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	99.9	GEN600005 1-MONTICELLO
0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	99.8	GEN660016 1-B_H WIND 0.7000
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	99.7	GEN652173 1-G09_001IS_2 0.6900
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	99.7	GEN652353 2-GR PRAIRIEG 0.6900
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11240	99.7	GEN587033 1-G16-004-GEN10.6900
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	99.6	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11472	99.3	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	99.3	GEN587033 1-G16-004-GEN10.6900
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11128	99.3	BELDEN - TWIN CHURCH 115KV CKT 1
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	99.2	BASE CASE
0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11240	99.2	GEN587653 1-J526-GEN1 0.6900
0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	99	GEN587653 1-J526-GEN1 0.6900
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.09735	151.6143	FT RANDAL - WHITE SWAN 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.09735	149.985	TYNDALL - WHITE SWAN 115KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.14989	146.2928	RASMUSN - UTICA JCT 230KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.09735	141.1489	TYNDALL - YANKON JCT 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.09735	140.624	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.09735	140.624	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.09735	140.624	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10331	138.3205	TYNDALL - WHITE SWAN 115KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10334	136.625	FT RANDAL - WHITE SWAN 115KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10334	134.9688	TYNDALL - WHITE SWAN 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10147	130.1837	BERSFORD - SIOUX FALLS 115KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10331	128.6012	TYNDALL - YANKON JCT 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11487	128.5103	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10634	127.6783	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10334	126.9772	TYNDALL - YANKON JCT 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10634	126.9135	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10634	126.7717	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.14655	126.3898	UTICA JCT - VFODNES 230KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	123.3923	GEN652577 3-GAVINS POINT
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	123.3297	GEN652575 1-GAVINS POINT
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	123.3297	GEN652576 2-GAVINS POINT
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10743	123.2433	PAHOJA - SIOUX FALLS 230KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10870	122.4704	SIOUX CITY - TWIN CHURCH 230KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.13221	122.316	SIOUX FALLS - VFODNES 230KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10743	121.8884	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	121.5514	GEN587153 1-G16-021-GEN10.6900
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10738	121.1147	GRANT - MITCHELL 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10738	121.1146	GRANT - MITCHELL 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10708	120.0394	HOSKINS - RAUN 345KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10708	120.0394	HOSKINS - RAUN 345KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10734	120.0111	CLEARWATER - ONEILL 115KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10334	119.9565	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10334	119.9565	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10334	119.9565	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10754	119.9351	NOBLES - SPLIT ROCK 345KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10734	119.7036	CLEARWATER - NELIGH 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10147	119.526	BERSFORD - MANNING 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10734	119.5195	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10728	119.3644	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10738	119.3318	CHERRY CREEK - GRANT 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10691	119.2479	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10691	119.2479	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10865	118.7972	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	118.7904	GEN337653 1-WHITE BLUFF UNIT #2
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10865	118.7856	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10865	118.7856	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	118.7808	GEN337652 1-WHITE BLUFF UNIT #1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	118.7603	GEN338146 1-INDEPENDENCE UNIT #2
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10331	118.711	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10331	118.711	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10331	118.711	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	118.685	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	118.4278	GEN640418 1-ELKHORN RIDGE WIND
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	118.4086	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	118.382	GEN501801 1-DOLET HILLS UNIT1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10074	118.2073	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	118.106	GEN336252 1-NINEMILE POINT UNIT#5
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	118.0319	GEN344897 4-1LAB G4 20.000
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	118.0278	GEN344894 1-1LAB G1 20.000
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	118.0273	GEN344896 3-1LAB G3 20.000
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10698	117.8789	AINSWORTH - STUART 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	117.5519	GEN501813 1-RODEMACHER UNIT 3
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10078	117.5254	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	117.4122	GEN344895 2-1LAB G2 20.000
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.15168	115.9408	UTICA JCT - VFODNES 230KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11387	115.938	RAUN - SIOUX CITY 345KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	115.1834	BASE CASE
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	115.1821	BASE CASE
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	114.918	GEN659116 1-SPIRIT MOUND UNIT1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	114.725	GEN659116 1-SPIRIT MOUND UNIT1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	113.3773	GEN659117 2-SPIRIT MOUND UNIT2
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	113.039	GEN659117 2-SPIRIT MOUND UNIT2
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.15171	112.8038	UTICA JCT - VFODNES 230KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11153	112.7968	LETCHER - SIOUX FALLS 230KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10682	112.4791	COLUMEAST - SHELL CREEK 345KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10694	112.4254	ALBION - PETERSBURG 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10668	112.4252	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10668	112.4252	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10694	112.1701	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10694	112.1203	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10619	111.9938	HOSKINS - SHELL CREEK 345KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	111.9752	GEN652575 1-GAVINS POINT
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	111.9752	GEN652576 2-GAVINS POINT
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	111.9244	GEN652577 3-GAVINS POINT
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11257	111.5595	PAHOJA - SIOUX FALLS 230KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11387	111.4783	SIOUX CITY - TWIN CHURCH 230KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	111.4441	GEN587153 1-G16-021-GEN10.6900
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10876	111.3641	LETCHER (LET KV3A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10586	111.208	BELDEN - TWIN CHURCH 115KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11254	111.1858	GRANT - MITCHELL 115KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	111.1603	GEN652575 1-GAVINS POINT
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	111.1603	GEN652576 2-GAVINS POINT
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	111.1134	GEN652577 3-GAVINS POINT
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11262	111.1042	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11392	110.7836	SIOUX CITY - TWIN CHURCH 230KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10965	110.7834	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10965	110.7834	MITCHELL - MITCHELL NW 115KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.12041	110.5904	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11257	110.136	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	109.9784	GEN600000 1-SHERBURNECNTY G1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	109.7788	GEN587153 1-G16-021-GEN10.6900
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10965	109.72	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10965	109.7199	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11261	109.694	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	109.6379	GEN542951 5-HAWTHORN UNIT #5
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.12036	109.5384	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11269	109.3289	FT RANDAL - SPENCER 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	109.3139	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11173	109.2368	MT VERN - STORLA 115KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11258	109.197	GRANT - MITCHELL 115KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11269	109.162	ONEILL - SPENCER 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	109.0001	GEN600001 2-SHERBURNE CNTY G2
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	108.9153	GEN659103 1-ANTELOPE VALLEY UNIT1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	108.9153	GEN659107 2-ANTELOPE VALLEY UNIT2
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	108.9036	GEN600002 3-SHERBURNE CNTY G3
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	108.7022	GEN587133 1-G16-017-GEN10.6900
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11234	108.5715	AINSWORTH - VALENTINE 115KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11191	108.3234	GREGORY - WINNER 115KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11256	108.3144	LAKEFIELD 3 - NOBLES 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	108.3038	GEN620315 1-BIG STONE GEN
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	108.2585	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11387	108.2117	RAUN - SIOUX CITY 345KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	108.034	GEN659125 1-COVEY
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11002	107.8985	BERSFORD - SIOUX FALLS 115KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11248	107.8693	CLEARWATER - ONEILL 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	107.8394	GEN587293 1-G16-044-GEN10.6900
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	107.7991	GEN336153 1-WATERFORD UNIT#3
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11283	107.7513	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10327	107.7274	BELDEN - HOSKINS 115KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11237	107.6895	GRAND ISLAND - MCCOOL 345KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	107.5978	GEN615001 1-COAL CREEK
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	107.5564	GEN335831 1-RIVERBEND UNIT#1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.13740	107.5407	SIOUX FALLS - VFODNES 230KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	107.5264	GEN615002 2-COAL CREEK
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11189	107.4815	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11231	107.462	HOSKINS - RAUN 345KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11248	107.4229	CLEARWATER - NELIGH 115KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	107.394	GEN640009 1-COOPER NUCLEAR STATION
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11231	107.2902	SIDNEY - STEGALL 345KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	107.2018	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11211	107.1654	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11189	107.1212	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	107.0857	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10147	106.8397	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11009	106.7924	BERSFORD - SIOUX FALLS 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	106.3927	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11383	105.6948	RAUN - SIOUX CITY 345KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.09862	105.5624	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11185	105.1527	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	104.8178	BASE CASE
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11221	104.7972	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11234	104.7452	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11185	104.4714	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11234	104.3248	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11246	104.1462	HANKINSON - WAHPETON 230KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	104.0285	BASE CASE
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11268	103.9468	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11258	103.6334	GRANT - MITCHELL 115KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11269	103.6294	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11269	103.6294	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	103.5859	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11230	103.3748	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11242	102.8748	HANKINSON - WAHPETON 230KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11237	102.8734	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11217	102.5782	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11241	102.5371	AS KING - EAU CLAIRE 345KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11264	102.45	NOBLES - SPLIT ROCK 345KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11230	102.3099	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11265	102.1289	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11265	102.1289	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11258	102.1157	CHERRY CREEK - GRANT 115KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11254	102.08	GRANT - MITCHELL 115KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11262	102.0484	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11233	101.5751	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11384	101.5472	LETCHER (LET KV3A) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11238	101.4475	BLAIR - GRANITE FALLS 230KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11236	101.4098	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11233	101.3647	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11237	101.3619	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11200	101.1191	COLUMEAST - SHELL CREEK 345KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	101.0689	GEN659296 2-SDPRAIRWND1W0.6900
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	100.8363	GEN600006 1-AS KING
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11188	100.7552	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	100.7429	GEN659110 1-LELAND OLDS UNIT1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11227	100.7243	HOSKINS - RAUN 345KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	100.6715	GEN 11123 1-G736-GEN1 0.6900
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	100.6605	GEN 11133 1-J442-GEN1 0.6900
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	100.6535	GEN659453 1-GI1414GEN W0.6900
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11206	100.601	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11388	100.579	LETCHER (LET KV3A) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11254	100.5581	CHERRY CREEK - GRANT 115KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	100.5209	GEN659141 1-K10215A
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11467	100.3961	MITCHELL - MITCHELL NW 115KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11258	100.354	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	100.2865	GEN659296 2-SDPRAIRWND1W0.6900
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	100.1293	GEN659453 1-GI1414GEN W0.6900
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11141	100.1156	HOSKINS - SHELL CREEK 345KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	100.0829	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11124	100.0762	BELDEN - TWIN CHURCH 115KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	100	GEN659141 1-K10215A
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11002	100	BERSFORD - MANNING 115KV CKT 1
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	99.9	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	99.9	GEN652353 2-GR PRAIRIEG 0.6900
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11472	99.7	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	99.6	GEN660016 1-B_H WIND 0.7000
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	99.6	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	99.6	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	99.6	GEN600005 1-MONTICELLO
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	99.5	GEN652353 2-GR PRAIRIEG 0.6900
0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11240	99.5	GEN587033 1-G16-004-GEN10.6900
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	99.4	GEN652173 1-G09_001IS_2 0.6900
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	99.3	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11472	99	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	99	GEN587033 1-G16-004-GEN10.6900
0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11128	99	BELDEN - TWIN CHURCH 115KV CKT 1
0	16WP	G15_089	-	Non-Converged Contingency	0.0	0.0	0.08800	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	17G	G15_089	-	Non-Converged Contingency	0.0	0.0	0.07287	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17G	G15_089	-	Non-Converged Contingency	720.0	720.0	0.06885	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	17G	G15_089	-	Non-Converged Contingency	720.0	720.0	0.06885	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	17G	G15_089	-	Non-Converged Contingency	0.0	0.0	0.04858	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	17SP	G15_089	-	Non-Converged Contingency	720.0	720.0	0.07037	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	17SP	G15_089	-	Non-Converged Contingency	720.0	720.0	0.07037	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	25SP	G15_089	-	Non-Converged Contingency	956.09	1051.7	0.04767	-	GEN525561 1-TOLK GEN #1 24 KV
0	25SP	G15_089	-	Non-Converged Contingency	956.09	1051.7	0.04767	-	GEN525562 1-TOLK GEN #2 24 KV
0	20SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04802	124.3474	RASMUSN - UTICA JCT 230KV CKT 1
0	20SP	G15_089	TO->FROM	PLYMOUTH - SIOUX CITY 161KV CKT 1	444.0	444.0	0.08663	118.5371	RAUN - SIOUX CITY 345KV CKT 1
0	20SP	G15_089	TO->FROM	PLYMOUTH - SIOUX CITY 161KV CKT 1	444.0	444.0	0.08663	113.7777	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G15_089	TO->FROM	PLYMOUTH - SIOUX CITY 161KV CKT 1	444.0	444.0	0.08657	107.3742	RAUN - SIOUX CITY 345KV CKT 1
0	20SP	G15_089	FROM->TO	RASMUSN - SIOUX CITY 230KV CKT 1	320.0	352.0	0.24658	102.3278	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G15_089	FROM->TO	RASMUSN - SIOUX CITY 230KV CKT 1	320.0	352.0	0.24467	100.313	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20SP	G15_089	FROM->TO	RASMUSN - SIOUX CITY 230KV CKT 1	320.0	352.0	0.23857	99.7	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20SP	G15_089	FROM->TO	RASMUSN - SIOUX CITY 230KV CKT 1	320.0	352.0	0.23857	99.5	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20SP	G15_089	TO->FROM	RASMUSN - UTICA JCT 230KV CKT 1	376.0	376.0	0.24658	100.3353	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G15_089	FROM->TO	SIOUX CITY (SC KV1A) 230/161/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.05600	99.8	SIOUX CITY (SC KV5A) 230/161/13.8KV TRANSFORMER CKT 1
0	20SP	G15_089	FROM->TO	SIOUX CITY (SC KV5A) 230/161/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.05611	100	SIOUX CITY (SC KV1A) 230/161/13.8KV TRANSFORMER CKT 1
2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08568	109.387	BASE CASE
2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08583	106.0038	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08516	102.2471	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08576	101.8657	GRANT - MITCHELL 115KV CKT 1
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03160	110.6862	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03722	110.4081	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03167	109.4369	GRIMES - LEHIGH 345KV CKT 1
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02960	109.1749	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02960	109.1749	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02960	109.1749	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03229	108.6123	PLYMOUTH - SIOUX CITY 161KV CKT 1
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03470	107.7057	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03243	107.4613	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	107.3314	BASE CASE
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03177	106.5063	SUB 3454 - WAGENER 345KV CKT 1
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03269	106.4162	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKEI
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03135	105.5406	P13:115-230:NPPD:COLMBUS4:T1
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03269	105.378	P12:115:UMZW:# 172 #: WI IN SD.
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03269	105.1134	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03128	104.7725	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	104.5817	ALMA 161 161/24.0KV TRANSFORMER CKT 1
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03193	104.0083	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03004	100.84	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	16WP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03004	100.6272	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	100.4397	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03145	100	BIG STONE 230/24.0KV TRANSFORMER CKT 1
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.09735	140.8656	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.09735	140.8656	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.09735	140.8656	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11487	128.8356	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10738	121.3871	GRANT - MITCHELL 115KV CKT 1
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10708	120.3007	HOSKINS - RAUN 345KV CKT 1
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10754	120.2626	NOBLES - SPLIT ROCK 345KV CKT 1
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10728	120.0768	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10734	119.8405	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10738	119.6168	CHERRY CREEK - GRANT 115KV CKT 1
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10728	119.5846	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10691	119.5121	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10865	119.1024	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10865	119.066	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10683	118.9972	HIGHLND 3 345.00 - RAUN 345KV CKT 1
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	115.5103	BASE CASE
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10668	112.6389	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10694	112.4149	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10965	111.0566	MITCHELL - MITCHELL NW 115KV CKT 1
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10965	109.9747	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	107.3305	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10729	106.619	BIG STONE 230/24.0KV TRANSFORMER CKT 1
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.09735	140.5966	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.09735	140.5966	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.09735	140.5966	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11487	128.5664	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10738	121.1382	GRANT - MITCHELL 115KV CKT 1
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10708	120.0724	HOSKINS - RAUN 345KV CKT 1
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10754	120.0212	NOBLES - SPLIT ROCK 345KV CKT 1
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10728	119.8342	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10734	119.5972	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10738	119.3755	CHERRY CREEK - GRANT 115KV CKT 1
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10728	119.3416	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10691	119.2808	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10865	118.8513	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10865	118.8156	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10683	118.7523	HIGHLND 3 345.00 - RAUN 345KV CKT 1
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10721	118.5757	BYRON - PLEASANT VALLEY 345KV CKT 1
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10725	117.9246	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	115.2771	BASE CASE
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10668	112.3981	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10694	112.1748	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10965	110.8246	MITCHELL - MITCHELL NW 115KV CKT 1
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10965	109.7416	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	107.0879	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10729	106.3764	BIG STONE 230/24.0KV TRANSFORMER CKT 1
2	16WP	G15_089	-	Non-Converged Contingency	0.0	0.0	0.08289	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17SP	G15_089	-	Non-Converged Contingency	956.0	1007.0	0.08851	-	RAUN - SIOUX CITY 345KV CKT 1
2	17SP	G15_089	-	Non-Converged Contingency	139.6	153.5	0.08568	-	GAVINS POINT - YANKON JCT 115KV CKT 1
2	17SP	G15_089	-	Non-Converged Contingency	956.0	956.0	0.04542	-	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120.0	120.0	0.03035	112.2557	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	20SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120.0	120.0	0.03035	112.0474	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	25SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120.0	120.0	0.03036	107.4986	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	25SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120.0	120.0	0.03036	107.1572	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	20SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120.0	120.0	0.04184	103.7334	RASMUSN - UTICA JCT 230KV CKT 1
3	20SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120.0	120.0	0.04184	102.3638	RASMUSN - SIOUX CITY 230KV CKT 1
3	20SP	G15_089	TO->FROM	EAGLE 4 230.00 - PAHOJA 230KV CKT 1	372.9	372.9	0.04818	99.2	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G15_089	FROM->TO	FT RANDAL - SIOUX CITY 230KV CKT 1	320.0	320.0	0.05071	100.1075	RASMUSN - UTICA JCT 230KV CKT 1
3	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03035	139.7605	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03035	139.1847	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03036	135.9647	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03036	135.8272	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.04184	130.2592	RASMUSN - UTICA JCT 230KV CKT 1
3	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.04184	128.9221	RASMUSN - SIOUX CITY 230KV CKT 1
3	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.04185	126.1131	RASMUSN - UTICA JCT 230KV CKT 1
3	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.04185	124.7634	RASMUSN - SIOUX CITY 230KV CKT 1
3	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03035	122.8748	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
3	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03448	118.3835	BLOOMFIELD - CREIGHTON 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03448	117.9736	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03036	117.7981	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
3	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.04529	113.5871	RASMUSN - UTICA JCT 230KV CKT 1
3	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03576	112.5073	UTICA JCT - VFODNES 230KV CKT 1
3	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.04529	111.7733	RASMUSN - SIOUX CITY 230KV CKT 1
3	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03577	109.7118	UTICA JCT - VFODNES 230KV CKT 1
3	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.02951	103.9102	SIOUX CITY - TWIN CHURCH 230KV CKT 1
3	20WP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	132.0	0.03038	103.296	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03629	102.5553	FT RANDAL - UTICA JCT 230KV CKT 1
3	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03448	101.5952	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
3	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03136	100.0964	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
3	20WP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	132.0	0.04195	99.7	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03107	99.5	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
3	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120.0	120.0	0.03630	99.4	FT RANDAL - UTICA JCT 230KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.11960	124.5896	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.11960	121.9343	RASMUSN - SIOUX CITY 230KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.07804	110.5699	BERSFORD - SIOUX FALLS 115KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08440	110.3484	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08440	110.2048	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	20SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.09540	110.0636	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08719	109.759	FT RANDAL - SPENCER 115KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08719	109.3491	ONEILL - SPENCER 115KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08577	108.088	BASE CASE
3	25SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.09537	107.381	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.12635	106.335	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08594	105.9169	CLEARWATER - ONEILL 115KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.12070	105.333	UTICA JCT - VFODNES 230KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08594	104.6726	CLEARWATER - NELIGH 115KV CKT 1
3	20SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.12635	104.1438	RASMUSN - SIOUX CITY 230KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08752	104.1347	SIOUX CITY - TWIN CHURCH 230KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08725	103.4869	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08577	103.1703	GEN652575 1-GAVINS POINT
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08577	103.1703	GEN652576 2-GAVINS POINT
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08577	103.0847	GEN652577 3-GAVINS POINT
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08577	102.8463	GEN587153 1-G16-021-GEN10.6900
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.10837	102.7575	SIOUX FALLS - VFODNES 230KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08590	102.7383	PAHOJA - SIOUX FALLS 230KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.07804	102.5852	BERSFORD - MANNING 115KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08590	102.2225	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08577	101.9997	GEN635214 4-NEAL UNIT 4
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08586	101.9811	GRANT - MITCHELL 115KV CKT 1
3	25SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.12632	101.871	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08553	101.7713	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.09136	101.7529	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	25SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.09136	101.6191	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08577	101.504	GEN635213 3-NEAL UNIT 3
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08525	101.4985	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08570	101.3597	KELLY - SHELL CREEK 230KV CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08570	101.3421	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08554	101.2279	HOSKINS - RAUN 345KV CKT 1
3	20SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.09138	100.4671	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	25SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.12632	99.7	RASMUSN - SIOUX CITY 230KV CKT 1
3	20SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.09138	99	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03387	121.6621	FT RANDAL - SIOUX CITY 230KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03387	118.4663	FT RANDAL - SIOUX CITY 230KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.05136	115.8801	RASMUSN - UTICA JCT 230KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03331	115.3015	FT RANDAL - SPENCER 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.05136	115.2841	RASMUSN - SIOUX CITY 230KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03331	115.0023	ONEILL - SPENCER 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03570	114.9296	HOSKINS - SHELL CREEK 345KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.05153	114.6604	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.05153	113.7544	RASMUSN - SIOUX CITY 230KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03263	113.5937	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03120	113.5456	NUNDRWD - WAYSIDE 230KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03334	113.4602	FT RANDAL - SPENCER 115KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03608	113.451	HOSKINS - SHELL CREEK 345KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03334	113.2529	ONEILL - SPENCER 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02995	112.9828	HANLON - STORLA 230KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03436	112.9342	RAUN - SIOUX CITY 345KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.05135	112.7663	RASMUSN - UTICA JCT 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03331	112.6441	FT RANDAL - SPENCER 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03047	112.5998	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	112.5308	GEN635024 4-WALTER SCOTT UNIT 4
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03331	112.2645	ONEILL - SPENCER 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03047	112.2541	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.05135	112.1728	RASMUSN - SIOUX CITY 230KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	112.0164	GEN635023 3-WALTER SCOTT UNIT 3
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	111.9352	GEN336821 1-GRAND GULF UNIT
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03569	111.8571	HOSKINS - SHELL CREEK 345KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.04047	111.3099	GAVINS POINT - YANKON JCT 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	111.1747	GEN344225 1-1CAL G1 25.000
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03177	111.0548	PAHOJA - SIOUX FALLS 230KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03992	111.0469	GAVINS POINT - YANKON JCT 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03327	111.0087	GAVINS POINT - HARTINGTON 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03174	110.8893	CLEARWATER - ONEILL 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	110.8601	GEN336153 1-WATERFORD UNIT#3
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	110.8221	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03451	110.7022	RAUN - SIOUX CITY 345KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03263	110.6369	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	110.5026	GEN335831 1-RIVERBEND UNIT#1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03177	110.4646	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	110.3674	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03174	110.3164	CLEARWATER - NELIGH 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02995	110.1867	FT RANDAL - WHITE SWAN 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03300	110.1468	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03300	110.1416	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03327	110.0847	BELDEN - HARTINGTON 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02995	110.0799	TYNDALL - WHITE SWAN 115KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02995	110.0744	HANLON - STORLA 230KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03185	110.0447	CLEARWATER - ONEILL 115KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	109.9892	GEN635024 4-WALTER SCOTT UNIT 4
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	109.9024	GEN337653 1-WHITE BLUFF UNIT #2
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	109.8694	GEN337652 1-WHITE BLUFF UNIT #1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	109.8502	GEN338146 1-INDEPENDENCE UNIT #2
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03121	109.8441	NUNDRWD - WAYSIDE 230KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03625	109.7797	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03625	109.7724	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	109.746	GEN501801 1-DOLET HILLS UNIT1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03436	109.5613	RAUN - SIOUX CITY 345KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03207	109.5447	DENISON - SIOUX CITY 230KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03248	109.4918	DIXONCO 230.00 - HOSKINS 230KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03185	109.4772	CLEARWATER - NELIGH 115KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	109.4511	GEN635023 3-WALTER SCOTT UNIT 3
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03046	109.4407	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03245	109.4156	PLYMOUTH - SIOUX CITY 161KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.04777	109.3986	UTICA JCT - VFODNES 230KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03253	109.3656	SIOUX CITY - TWIN CHURCH 230KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03186	109.3611	PAHOJA - SIOUX FALLS 230KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02984	109.3146	FT RANDAL - WHITE SWAN 115KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	109.2517	GEN336821 1-GRAND GULF UNIT
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	109.2377	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	109.2072	GEN336153 1-WATERFORD UNIT#3
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02984	109.2072	TYNDALL - WHITE SWAN 115KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03357	109.0976	GAVINS POINT - HARTINGTON 115KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03046	109.06	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03611	109.037	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03611	109.0186	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03186	108.7859	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03166	108.6814	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.04047	108.5335	GAVINS POINT - YANKON JCT 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03173	108.4168	MCCOOL - MOORE 345KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.04792	108.379	UTICA JCT - VFODNES 230KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	108.358	GEN344225 1-1CAL G1 25.000
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03324	108.3423	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03324	108.3324	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03177	108.2201	PAHOJA - SIOUX FALLS 230KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03357	108.2124	BELDEN - HARTINGTON 115KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03326	108.2071	GAVINS POINT - HARTINGTON 115KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02984	108.1898	TYNDALL - YANKON JCT 115KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03215	108.1202	DENISON - SIOUX CITY 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	108.0642	GEN336153 1-WATERFORD UNIT#3
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	108.0517	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03174	107.9841	CLEARWATER - ONEILL 115KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03256	107.9639	DIXONCO 230.00 - HOSKINS 230KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	107.9396	BASE CASE
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03257	107.9268	SIOUX CITY - TWIN CHURCH 230KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03253	107.925	PLYMOUTH - SIOUX CITY 161KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	107.7381	GEN335831 1-RIVERBEND UNIT#1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03173	107.624	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	107.6146	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03177	107.6035	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02995	107.4847	FT RANDAL - WHITE SWAN 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03264	107.4828	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03299	107.4696	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03299	107.4609	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	107.3755	GEN635214 4-NEAL UNIT 4
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.02995	107.3624	TYNDALL - WHITE SWAN 115KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03102	107.3377	HANLON - SIOUX FALLS 230KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03174	107.3265	CLEARWATER - NELIGH 115KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03180	107.2947	MCCOOL - MOORE 345KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	107.2609	GEN337652 1-WHITE BLUFF UNIT #1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03326	107.2417	BELDEN - HARTINGTON 115KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	107.235	GEN338146 1-INDEPENDENCE UNIT #2
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	107.2315	GEN338143 1-INDEPENDENCE UNIT #1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03193	107.2175	SUB 3454 - WAGENER 345KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	107.1625	GEN337653 1-WHITE BLUFF UNIT #2
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03168	107.129	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03625	107.1111	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03625	107.1022	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03165	107.0464	COOPER - MOORE 345KV CKT 1
3	20WP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03052	107.0248	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	106.9686	GEN587153 1-G16-021-GEN10.6900
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03206	106.8949	DENISON - SIOUX CITY 230KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.04778	106.8894	UTICA JCT - VFODNES 230KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03247	106.7615	DIXONCO 230.00 - HOSKINS 230KV CKT 1
3	20WP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03052	106.7556	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03245	106.6894	PLYMOUTH - SIOUX CITY 161KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03253	106.6638	SIOUX CITY - TWIN CHURCH 230KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	106.4828	BASE CASE
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03093	106.4552	COLUMEAST - SHELL CREEK 345KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03267	106.4409	MENNO JCT - TRIPP JCT 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	106.3672	GEN652546 1-FT RANDAL
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03303	106.351	GREGORY - WINNER 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03311	106.3004	MT VERN - STORLA 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	106.2338	GEN660016 1-B_H WIND 0.7000
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03150	106.1237	KELLY (KELLY T1) 230/115/13.2KV TRANSFORMER CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03150	106.1107	COLUMBUS - KELLY 115KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03166	106.0866	GRAND ISLAND - MCCOOL 345KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03303	106.0469	WINNER - WITTEN 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	106.0029	GEN652548 5-FT RANDAL
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	106.0029	GEN652549 7-FT RANDAL
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	105.9939	GEN652547 3-FT RANDAL
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	105.9657	GEN600004 2-PRAIRIE ISLAND G2
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	105.961	GEN600003 1-PRAIRIE ISLAND G1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	105.8644	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03201	105.8309	SUB 3454 - WAGENER 345KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03174	105.819	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	105.7994	GEN659296 2-SDPRAIRWND1W0.6900
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	105.7484	GEN600006 1-AS KING
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03172	105.6372	COOPER - MOORE 345KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	105.5757	GEN652173 1-G09_001IS_2 0.6900
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	105.5665	GEN587633 1-J510-GEN1 18.000
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	105.5443	GEN600045 4-ANSON
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03201	105.4736	AINSWORTH - AINSWORTH 115KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03291	105.4565	BONESTEEL - GREGORY 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	105.4036	GEN587033 1-G16-004-GEN10.6900
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03143	105.3507	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03143	105.3464	COLUMEAST - KELLY 230KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	105.2791	BASE CASE
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03096	105.2215	COLUMEAST - SHELL CREEK 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	105.138	GEN600005 1-MONTICELLO
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	105.0907	GEN661015 1-COYOTE
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03328	105.0832	MT VERN - STORLA 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	104.9312	GEN600000 1-SHERBURNECNTY G1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	104.8837	GEN652546 1-FT RANDAL
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03291	104.7466	GREGORY - WINNER 115KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03164	104.7375	COOPER - MOORE 345KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03159	104.6971	KELLY (KELLY T1) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	104.6796	GEN660016 1-B_H WIND 0.7000
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03159	104.6716	COLUMBUS - KELLY 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03201	104.6687	KELLY - SHELL CREEK 230KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03201	104.6596	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	104.6062	GEN657748 1-YOUNG 2 GENERATOR
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	104.5138	GEN620315 1-BIG STONE GEN
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	104.5071	GEN652548 5-FT RANDAL
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	104.5071	GEN652549 7-FT RANDAL
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	104.4859	GEN652547 3-FT RANDAL
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03167	104.4832	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03192	104.3744	SUB 3454 - WAGENER 345KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03332	104.2934	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03291	104.2838	WINNER - WITTEN 115KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03291	104.2597	MISSION - WITTEN 115KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	104.1962	GEN600002 3-SHERBURNE CNTY G3
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	104.1878	GEN659111 2-LELAND OLDS UNIT2
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03332	104.0525	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03332	104.0319	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	104.026	GEN659296 2-SDPRAIRWND1W0.6900
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	104.0106	GEN652907 1-G09_007IS_3 0.6900
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.9842	GEN645063 W-PR BRZ1W 0.6900
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.9842	GEN645064 W-PR BRZ2W 0.6900
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.9662	GEN600001 2-SHERBURNE CNTY G2
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03152	103.9233	COLUMEAST - KELLY 230KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03152	103.9232	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.8677	GEN659103 1-ANTELOPE VALLEY UNIT1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.8677	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03092	103.8675	COLUMEAST - SHELL CREEK 345KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	103.8396	GEN600004 2-PRAIRIE ISLAND G2
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	103.835	GEN600003 1-PRAIRIE ISLAND G1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03302	103.7452	GREGORY - WINNER 115KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.7264	GEN652546 1-FT RANDAL
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	103.7055	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03310	103.6779	MT VERN - STORLA 115KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	103.6266	GEN600006 1-AS KING
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.6137	GEN660016 1-B_H WIND 0.7000
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03217	103.5599	KELLY - SHELL CREEK 230KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03217	103.5503	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03150	103.4468	KELLY (KELLY T1) 230/115/13.2KV TRANSFORMER CKT 1
3	20WP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03516	103.4384	FT RANDAL - SIOUX CITY 230KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03150	103.4375	COLUMBUS - KELLY 115KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03302	103.4349	WINNER - WITTEN 115KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.3656	GEN652548 5-FT RANDAL
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.3656	GEN652549 7-FT RANDAL
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.3574	GEN652547 3-FT RANDAL
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.3041	GEN600004 2-PRAIRIE ISLAND G2
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.2994	GEN600003 1-PRAIRIE ISLAND G1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.2357	GEN659296 2-SDPRAIRWND1W0.6900
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.2298	GEN587133 1-G16-017-GEN10.6900
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.1817	GEN563232 1-G15089_3 0.6900
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	103.1535	GEN600005 1-MONTICELLO
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.1216	GEN659125 1-COVEY
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.0995	GEN659407 1-ANTELPHILLSW0.6900
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.0944	GEN587293 1-G16-044-GEN10.6900
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	103.0906	GEN600006 1-AS KING
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	102.9508	GEN652173 1-G09_001IS_2 0.6900
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	102.9481	GEN615001 1-COAL CREEK
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	102.8644	GEN587633 1-J510-GEN1 18.000
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	102.8182	GEN615002 2-COAL CREEK
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	102.7325	GEN587033 1-G16-004-GEN10.6900
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03143	102.6917	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03143	102.6714	COLUMEAST - KELLY 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	102.5626	GEN600000 1-SHERBURNECNTY G1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	102.474	GEN645063 W-PR BRZ1W 0.6900
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	102.474	GEN645064 W-PR BRZ2W 0.6900
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	102.4729	GEN600005 1-MONTICELLO
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03200	102.3387	KELLY - SHELL CREEK 230KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03200	102.3292	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	102.2511	GEN600000 1-SHERBURNECNTY G1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	102.165	GEN620315 1-BIG STONE GEN
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	102.094	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03330	101.9341	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03330	101.8119	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03330	101.8	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	101.7937	GEN600001 2-SHERBURNE CNTY G2
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	101.7517	GEN659103 1-ANTELOPE VALLEY UNIT1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	101.7517	GEN659107 2-ANTELOPE VALLEY UNIT2
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	101.6699	GEN600002 3-SHERBURNE CNTY G3
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	101.6428	GEN659111 2-LELAND OLDS UNIT2
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	101.6259	GEN563232 1-G15089_3 0.6900
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	101.617	GEN600002 3-SHERBURNE CNTY G3
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	101.4812	GEN600001 2-SHERBURNE CNTY G2
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	101.4771	GEN620315 1-BIG STONE GEN
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	101.3346	GEN645063 W-PR BRZ1W 0.6900
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	101.3346	GEN645064 W-PR BRZ2W 0.6900
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	101.2874	GEN659103 1-ANTELOPE VALLEY UNIT1
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	101.2874	GEN659107 2-ANTELOPE VALLEY UNIT2
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	101.1661	GEN587133 1-G16-017-GEN10.6900
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	100.9985	GEN659125 1-COVEY
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	100.9829	GEN562528 1-G14_031_2 0.6900
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	100.9447	GEN587293 1-G16-044-GEN10.6900
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	100.6757	GEN587133 1-G16-017-GEN10.6900
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	100.6629	GEN615001 1-COAL CREEK
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	100.5765	GEN615002 2-COAL CREEK
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	100.5755	GEN659125 1-COVEY
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	100.5608	GEN563232 1-G15089_3 0.6900
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	100.5151	GEN587293 1-G16-044-GEN10.6900
3	16WP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03031	100.4214	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	16WP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03031	100.2333	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	100.2217	GEN615001 1-COAL CREEK
3	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03162	100.1945	GEN615002 2-COAL CREEK
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.04311	99.8	FT RANDAL - LAKE PLATT 230KV CKT 1
3	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03169	99.4	GEN562528 1-G14_031_2 0.6900
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.04341	99.3	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.04311	99.3	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.14493	156.0711	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.14493	152.6555	RASMUSN - SIOUX CITY 230KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.09742	150.8632	FT RANDAL - WHITE SWAN 115KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.09742	149.2436	TYNDALL - WHITE SWAN 115KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.09742	140.4657	TYNDALL - YANKON JCT 115KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.14995	138.8189	RASMUSN - UTICA JCT 230KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.14995	135.9198	RASMUSN - SIOUX CITY 230KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.14991	135.6226	RASMUSN - UTICA JCT 230KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.14991	132.7101	RASMUSN - SIOUX CITY 230KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10152	129.6514	BERSFORD - SIOUX FALLS 115KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10341	129.5387	FT RANDAL - WHITE SWAN 115KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10341	127.8912	TYNDALL - WHITE SWAN 115KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10337	127.8434	FT RANDAL - WHITE SWAN 115KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10642	127.4573	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10642	127.3243	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10337	126.0907	TYNDALL - WHITE SWAN 115KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.14659	125.26	UTICA JCT - VFODNES 230KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10881	123.2386	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	122.7408	GEN652575 1-GAVINS POINT
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	122.7408	GEN652576 2-GAVINS POINT
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	122.6886	GEN652577 3-GAVINS POINT
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10747	122.0339	PAHOJA - SIOUX FALLS 230KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10875	121.374	SIOUX CITY - TWIN CHURCH 230KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11369	121.3279	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.13225	120.9843	SIOUX FALLS - VFODNES 230KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	120.436	GEN587153 1-G16-021-GEN10.6900
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10747	120.2338	EAGLE 4 230.00 - PAHOJA 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10341	119.8172	TYNDALL - YANKON JCT 115KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10758	119.5961	FT RANDAL - SPENCER 115KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10743	119.5891	GRANT - MITCHELL 115KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10758	119.5297	ONEILL - SPENCER 115KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	119.4491	GEN635214 4-NEAL UNIT 4
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10739	118.9601	CLEARWATER - ONEILL 115KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10152	118.8121	BERSFORD - MANNING 115KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	118.8064	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	118.8052	GEN336153 1-WATERFORD UNIT#3
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10739	118.4259	CLEARWATER - NELIGH 115KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10337	118.4192	TYNDALL - YANKON JCT 115KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11365	118.3441	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10713	118.2259	HOSKINS - RAUN 345KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	118.0198	GEN335831 1-RIVERBEND UNIT#1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	118.0005	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10695	117.9646	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11168	117.4678	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11164	117.2986	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11164	117.1893	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11168	116.4321	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11168	115.9339	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11168	115.6699	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11168	115.2658	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	114.539	BASE CASE
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10084	112.6948	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10699	111.9575	ALBION - PETERSBURG 115KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10672	111.8373	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10686	111.8303	COLUMEAST - SHELL CREEK 345KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10699	111.7516	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10622	111.2728	HOSKINS - SHELL CREEK 345KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10079	111.0574	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10880	110.8789	LETCHER (LET KV3A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10591	110.487	BELDEN - TWIN CHURCH 115KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10969	110.3624	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	109.6956	GEN600000 1-SHERBURNECNTY G1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10969	109.4632	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11249	109.443	GEN659116 1-SPIRIT MOUND UNIT1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11369	108.9786	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	108.7889	GEN600001 2-SHERBURNE CNTY G2
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	108.7542	GEN600002 3-SHERBURNE CNTY G3
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	108.6692	GEN659103 1-ANTELOPE VALLEY UNIT1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	108.6692	GEN659107 2-ANTELOPE VALLEY UNIT2
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	108.4005	GEN587133 1-G16-017-GEN10.6900
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	108.0347	GEN620315 1-BIG STONE GEN
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	107.9976	GEN659116 1-SPIRIT MOUND UNIT1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	107.864	GEN659125 1-COVEY
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11392	107.6899	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	107.6498	GEN587293 1-G16-044-GEN10.6900
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11249	107.5945	GEN659117 2-SPIRIT MOUND UNIT2
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	107.4181	GEN615001 1-COAL CREEK
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	107.3424	GEN615002 2-COAL CREEK
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10331	107.2491	BELDEN - HOSKINS 115KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.15175	106.9458	UTICA JCT - VFODNES 230KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11365	106.9093	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11194	106.9072	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11239	106.6283	NUNDRWD - WAYSIDE 230KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10152	106.5548	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.15173	106.4567	UTICA JCT - VFODNES 230KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	106.1527	GEN659117 2-SPIRIT MOUND UNIT2
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11194	106.0236	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11262	105.8811	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11159	105.7307	LETCHER - SIOUX FALLS 230KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11249	105.7202	GEN652575 1-GAVINS POINT
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11249	105.7202	GEN652576 2-GAVINS POINT
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11249	105.674	GEN652577 3-GAVINS POINT
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11249	105.3229	GEN635024 4-WALTER SCOTT UNIT 4
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11388	105.1293	RAUN - SIOUX CITY 345KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11397	104.9102	SIOUX CITY - TWIN CHURCH 230KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11267	104.7728	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.09865	104.6402	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11262	104.576	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11190	104.5297	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11249	104.4014	GEN635023 3-WALTER SCOTT UNIT 3
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11226	104.341	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	104.3118	GEN652575 1-GAVINS POINT
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	104.3118	GEN652576 2-GAVINS POINT
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	104.2693	GEN635024 4-WALTER SCOTT UNIT 4
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	104.2671	GEN652577 3-GAVINS POINT
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11155	104.222	LETCHER - SIOUX FALLS 230KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11226	104.1801	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11257	104.1315	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11226	104.0047	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11249	103.7621	GEN587153 1-G16-021-GEN10.6900
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11248	103.7533	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11249	103.6657	GEN336821 1-GRAND GULF UNIT
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11190	103.6528	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11393	103.492	SIOUX CITY - TWIN CHURCH 230KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11239	103.4762	MISSION - ST FRANCIS 115KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	103.455	GEN635023 3-WALTER SCOTT UNIT 3
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11249	103.4523	GEN635214 4-NEAL UNIT 4
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11235	103.3596	NUNDRWD - WAYSIDE 230KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11274	103.2933	FT RANDAL - SPENCER 115KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11263	103.2212	GRANT - MITCHELL 115KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11263	103.1532	FT RANDAL - SIOUX CITY 230KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11274	103.1312	ONEILL - SPENCER 115KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11239	103.0942	HARMONY - ST FRANCIS 115KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11257	102.7517	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11249	102.7336	GEN344225 1-1CAL G1 25.000
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11239	102.6527	HARMONY - VALENTINE 115KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	102.3805	GEN587153 1-G16-021-GEN10.6900
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11222	102.3743	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	102.285	GEN336821 1-GRAND GULF UNIT
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11249	102.1307	GEN336153 1-WATERFORD UNIT#3
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	102.091	GEN635214 4-NEAL UNIT 4
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11249	101.9781	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.13744	101.9774	SIOUX FALLS - VFODNES 230KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11222	101.8842	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11235	101.8247	MISSION - ST FRANCIS 115KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11222	101.7544	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11269	101.7291	FT RANDAL - SPENCER 115KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11259	101.6507	GRANT - MITCHELL 115KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11235	101.4962	HARMONY - ST FRANCIS 115KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11269	101.4438	ONEILL - SPENCER 115KV CKT 1
3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11267	101.4267	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	101.2424	GEN635213 3-NEAL UNIT 3
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	101.1394	GEN344225 1-1CAL G1 25.000
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	100.6057	GEN336153 1-WATERFORD UNIT#3
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11245	100.498	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11232	100.3031	HOSKINS - RAUN 345KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11211	100.1502	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.11262	99.7	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.12744	99.6	MITCHELL - TRIPP JCT 115KV CKT 1
3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120.0	120.0	0.10733	99	GEN660016 1-B_H WIND 0.7000
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.14493	155.8844	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.14493	152.4701	RASMUSN - SIOUX CITY 230KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.09742	150.6253	FT RANDAL - WHITE SWAN 115KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.09742	149.006	TYNDALL - WHITE SWAN 115KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.09742	140.194	TYNDALL - YANKON JCT 115KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.14995	138.6144	RASMUSN - UTICA JCT 230KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.14995	135.715	RASMUSN - SIOUX CITY 230KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.14991	135.4153	RASMUSN - UTICA JCT 230KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.14991	132.5034	RASMUSN - SIOUX CITY 230KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10152	129.4357	BERSFORD - SIOUX FALLS 115KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10341	129.2671	FT RANDAL - WHITE SWAN 115KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10341	127.6199	TYNDALL - WHITE SWAN 115KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10337	127.572	FT RANDAL - WHITE SWAN 115KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10642	127.217	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10642	127.0843	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10337	125.8202	TYNDALL - WHITE SWAN 115KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.14659	125.0441	UTICA JCT - VFODNES 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10881	122.9986	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	122.5369	GEN652575 1-GAVINS POINT
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	122.5369	GEN652576 2-GAVINS POINT
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	122.4858	GEN652577 3-GAVINS POINT
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10747	121.8054	PAHOJA - SIOUX FALLS 230KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10875	121.1593	SIOUX CITY - TWIN CHURCH 230KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11369	121.0545	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.13225	120.7549	SIOUX FALLS - VFODNES 230KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	120.2095	GEN587153 1-G16-021-GEN10.6900
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10747	120.0102	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10341	119.5152	TYNDALL - YANKON JCT 115KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10758	119.3674	FT RANDAL - SPENCER 115KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10743	119.3536	GRANT - MITCHELL 115KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10758	119.3002	ONEILL - SPENCER 115KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	119.2002	GEN635214 4-NEAL UNIT 4
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	118.9266	GEN635213 3-NEAL UNIT 3
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10739	118.7238	CLEARWATER - ONEILL 115KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10152	118.5797	BERSFORD - MANNING 115KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	118.5628	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	118.5619	GEN336153 1-WATERFORD UNIT#3
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	118.3622	GEN640009 1-COOPER NUCLEAR STATION
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10739	118.1905	CLEARWATER - NELIGH 115KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10337	118.1198	TYNDALL - YANKON JCT 115KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11365	118.0762	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10713	118.0088	HOSKINS - RAUN 345KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	117.7807	GEN335831 1-RIVERBEND UNIT#1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	117.7635	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10695	117.7397	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11168	117.1615	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11164	116.9985	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11164	116.8903	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11168	116.1277	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11168	115.6279	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11168	115.3693	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11168	114.9676	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	114.3055	BASE CASE
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10084	112.4278	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10699	111.7171	ALBION - PETERSBURG 115KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10672	111.5953	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10686	111.59	COLUMEAST - SHELL CREEK 345KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10880	111.5305	LETCHER - MITCHELL 115KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10699	111.5114	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10622	111.0239	HOSKINS - SHELL CREEK 345KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10079	110.7911	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10880	110.6463	LETCHER (LET KV3A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10591	110.2508	BELDEN - TWIN CHURCH 115KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10969	110.131	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	109.4556	GEN600000 1-SHERBURNECNTY G1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10969	109.2304	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11249	109.1678	GEN659116 1-SPIRIT MOUND UNIT1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	108.7816	GEN659111 2-LELAND OLDS UNIT2
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11369	108.7096	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	108.5483	GEN600001 2-SHERBURNE CNTY G2
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	108.5121	GEN600002 3-SHERBURNE CNTY G3
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	108.4326	GEN659103 1-ANTELOPE VALLEY UNIT1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	108.4326	GEN659107 2-ANTELOPE VALLEY UNIT2
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	108.1637	GEN587133 1-G16-017-GEN10.6900
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	107.7957	GEN620315 1-BIG STONE GEN
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	107.7232	GEN659116 1-SPIRIT MOUND UNIT1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	107.626	GEN659125 1-COVEY
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11392	107.4149	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	107.4114	GEN587293 1-G16-044-GEN10.6900
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11249	107.318	GEN659117 2-SPIRIT MOUND UNIT2
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	107.1806	GEN615001 1-COAL CREEK
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10733	107.1047	GEN615002 2-COAL CREEK
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10331	107.0128	BELDEN - HOSKINS 115KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.15175	106.6903	UTICA JCT - VFODNES 230KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11365	106.6403	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11194	106.629	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11239	106.3382	NUNDRWD - WAYSIDE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.10152	106.2857	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.15173	106.2066	UTICA JCT - VFODNES 230KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	105.8767	GEN659117 2-SPIRIT MOUND UNIT2
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11194	105.7477	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11262	105.6132	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11249	105.4785	GEN652575 1-GAVINS POINT
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11249	105.4785	GEN652576 2-GAVINS POINT
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11159	105.4385	LETCHER - SIOUX FALLS 230KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11249	105.433	GEN652577 3-GAVINS POINT
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11249	105.0364	GEN635024 4-WALTER SCOTT UNIT 4
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11388	104.8539	RAUN - SIOUX CITY 345KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11397	104.6506	SIOUX CITY - TWIN CHURCH 230KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11267	104.4929	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.09865	104.4051	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11262	104.3065	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11190	104.2527	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11249	104.1202	GEN635023 3-WALTER SCOTT UNIT 3
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	104.0712	GEN652575 1-GAVINS POINT
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	104.0712	GEN652576 2-GAVINS POINT
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11226	104.0478	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	104.0272	GEN652577 3-GAVINS POINT
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	103.9855	GEN635024 4-WALTER SCOTT UNIT 4
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11155	103.9296	LETCHER - SIOUX FALLS 230KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11226	103.8853	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11257	103.864	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11226	103.7118	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11249	103.4923	GEN587153 1-G16-021-GEN10.6900
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11248	103.4669	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11249	103.3837	GEN336821 1-GRAND GULF UNIT
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11190	103.3773	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11393	103.2337	SIOUX CITY - TWIN CHURCH 230KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11239	103.1921	MISSION - ST FRANCIS 115KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	103.1714	GEN635023 3-WALTER SCOTT UNIT 3
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11249	103.1609	GEN635214 4-NEAL UNIT 4
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11235	103.0707	NUNDRWD - WAYSIDE 230KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11274	103.0241	FT RANDAL - SPENCER 115KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11263	102.9361	GRANT - MITCHELL 115KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11263	102.8729	FT RANDAL - SIOUX CITY 230KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11274	102.8605	ONEILL - SPENCER 115KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11234	102.8401	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11239	102.8107	HARMONY - ST FRANCIS 115KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11249	102.5106	GEN635213 3-NEAL UNIT 3
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11257	102.4829	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11249	102.4515	GEN344225 1-1CAL G1 25.000
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11251	102.436	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11239	102.368	HARMONY - VALENTINE 115KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	102.1111	GEN587153 1-G16-021-GEN10.6900
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11222	102.0804	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	102.0022	GEN336821 1-GRAND GULF UNIT
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11249	101.849	GEN336153 1-WATERFORD UNIT#3
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	101.7999	GEN635214 4-NEAL UNIT 4
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11249	101.6971	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.13744	101.6947	SIOUX FALLS - VFODNES 230KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11222	101.5904	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11235	101.5419	MISSION - ST FRANCIS 115KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11222	101.4621	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11269	101.462	FT RANDAL - SPENCER 115KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11259	101.3655	GRANT - MITCHELL 115KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11235	101.2134	HARMONY - ST FRANCIS 115KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11269	101.1754	ONEILL - SPENCER 115KV CKT 1
3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11267	101.1593	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11230	101.1128	G09_001IST 345.00 - GROTON 345KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	100.953	GEN635213 3-NEAL UNIT 3
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	100.8572	GEN344225 1-1CAL G1 25.000
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	100.3238	GEN336153 1-WATERFORD UNIT#3
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11245	100.2165	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11232	100	HOSKINS - RAUN 345KV CKT 1
3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120.0	120.0	0.11211	99.9	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
3	25SP	G15_089	-	Non-Converged Contingency	956.09	1051.7	0.04770	-	GEN525561 1-TOLK GEN #1 24 KV
3	20SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04818	120.7789	RASMUSN - UTICA JCT 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04818	119.822	RASMUSN - SIOUX CITY 230KV CKT 1
3	25SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04808	116.7696	RASMUSN - UTICA JCT 230KV CKT 1
3	25SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04808	115.8105	RASMUSN - SIOUX CITY 230KV CKT 1
3	17SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04908	111.9356	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04908	110.7389	RASMUSN - SIOUX CITY 230KV CKT 1
3	20SP	G15_089	TO->FROM	PLYMOUTH - SIOUX CITY 161KV CKT 1	444.0	444.0	0.08687	113.2248	RAUN - SIOUX CITY 345KV CKT 1
3	25SP	G15_089	TO->FROM	PLYMOUTH - SIOUX CITY 161KV CKT 1	444.0	444	0.08681	106.8298	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G15_089	TO->FROM	PLYMOUTH - SIOUX CITY 161KV CKT 1	444.0	444.0	0.08881	99.9	RAUN - SIOUX CITY 345KV CKT 1
3	20SP	G15_089	FROM->TO	RASMUSN - SIOUX CITY 230KV CKT 1	320.0	352.0	0.24784	99.9	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G15_089	FROM->TO	RASMUSN - SIOUX CITY 230KV CKT 1	320.0	352.0	0.24673	99.4	FT RANDAL - SIOUX CITY 230KV CKT 1
3	20SP	G15_089	FROM->TO	RASMUSN - SIOUX CITY 230KV CKT 1	320.0	352.0	0.23872	99	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	20SP	G15_089	FROM->TO	RASMUSN - SIOUX CITY 230KV CKT 1	320.0	352.0	0.23872	99	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44832	173.566	BASE CASE
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44687	171.3292	BASE CASE
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44796	171.2705	BASE CASE
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44691	167.6299	BASE CASE
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	165.7341	BASE CASE
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44863	156.7486	BASE CASE
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44945	148.2829	BASE CASE
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.41010	144.2468	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44829	143.9556	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44841	142.8916	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.48505	142.5015	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.48505	142.5009	WOODWARD - WWPAR4 138.00 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44532	142.396	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.40825	142.125	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45695	142.049	MOORELAND - PIC4 138.00 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45695	142.0142	P12:138:WFEC:MSL12
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45695	141.9482	CEDARDALE - PIC4 138.00 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45695	141.7357	CEDARDALE - OKEENE 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43534	141.6783	FAIRVIEW - OKEENE 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45570	141.0066	MOORELAND - PIC4 138.00 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45570	140.9754	P12:138:WFEC:MSL12
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44532	140.9286	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45570	140.9035	CEDARDALE - PIC4 138.00 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43921	140.7807	BUFBEAR2 - BUFFALO 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45654	140.7299	MOORELAND - PIC4 138.00 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44881	140.7174	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45570	140.7135	CEDARDALE - OKEENE 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45654	140.6915	P12:138:WFEC:MSL12
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.48284	140.6438	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.48284	140.6432	WOODWARD - WWPAR4 138.00 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45654	140.6275	CEDARDALE - PIC4 138.00 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45654	140.411	CEDARDALE - OKEENE 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44667	140.3662	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43350	140.1726	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.48459	140.0657	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.48459	140.065	WOODWARD - WWPAR4 138.00 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45859	140.0197	P12:138:WFEC:MSL14
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43640	140.0076	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43640	139.9886	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45859	139.9749	BEARCAT 138.00 - MOORELAND 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43604	139.7199	FAIRVIEW - OKEENE 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44667	139.5563	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45859	139.5359	BEARCAT 138.00 - NINE MILE 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45217	139.5134	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45217	139.3143	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43921	139.2104	BUFFALO - WEST 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45217	139.1387	IMO TAP - MEN TAP 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43883	138.9276	BUFBEAR2 - BUFFALO 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44483	138.8849	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45859	138.8008	MOREWOOD SW - NINE MILE 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45717	138.6745	P12:138:WFEC:MSL14
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45717	138.618	BEARCAT 138.00 - MOORELAND 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45830	138.5853	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43815	138.4073	BUFBEAR2 - BUFFALO 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45098	138.2999	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45576	138.1829	MOORELAND - PIC4 138.00 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45717	138.1767	BEARCAT 138.00 - NINE MILE 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45576	138.1492	P12:138:WFEC:MSL12

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45098	138.1474	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44310	138.1122	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45830	138.1057	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45576	138.0799	CEDARDALE - PIC4 138.00 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45098	137.9648	IMO TAP - MEN TAP 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44930	137.8898	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44930	137.8898	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44930	137.8898	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44930	137.8898	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45576	137.8883	CEDARDALE - OKEENE 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45823	137.878	P12:138:WFEC:MSL14
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45823	137.8302	BEARCAT 138.00 - MOORELAND 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43921	137.7929	FREEDOM - WEST 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.40986	137.7771	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45180	137.7746	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45714	137.6715	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43883	137.6646	BUFFALO - WEST 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44632	137.6031	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43312	137.5756	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45180	137.5731	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45180	137.4532	IMO TAP - MEN TAP 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44483	137.442	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45717	137.4338	MOREWOOD SW - NINE MILE 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45823	137.3876	BEARCAT 138.00 - NINE MILE 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43235	137.2673	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44504	137.2516	G15063_T 345.00 - WOODRING 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45714	137.194	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44808	137.1676	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44808	137.1676	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44808	137.1676	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44808	137.1676	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43815	137.139	BUFFALO - WEST 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.48268	136.973	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.48268	136.972	WOODWARD - WWPAR4 138.00 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45123	136.8855	DEWEY - SOUTHARD 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43921	136.8343	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45788	136.8201	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44632	136.808	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45823	136.6413	MOREWOOD SW - NINE MILE 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43883	136.6282	FREEDOM - WEST 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44310	136.5924	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45788	136.5211	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44504	136.472	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45123	136.3492	ROMAN NOSE - SOUTHARD 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.47316	136.3411	FPL SWITCH - WOODWARD 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44890	136.28	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44890	136.28	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44890	136.28	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44890	136.28	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.48282	136.2001	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.48282	136.1991	WOODWARD - WWPAR4 138.00 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43815	136.1618	FREEDOM - WEST 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43921	136.1294	FT SUPPLY - STOCKHOLM2 69.000 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45366	136.0998	DOVER SW - OKEENE 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43921	135.9955	BUFBEAR2 - STOCKHOLM2 69.000 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45608	135.9948	MOORELAND - PIC4 138.00 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45608	135.9645	P12:138:WFEC:MSL12
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45608	135.8917	CEDARDALE - PIC4 138.00 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44999	135.8491	DEWEY - SOUTHARD 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44877	135.8152	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44877	135.8152	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44734	135.7437	CLEO JCT - RINGWOOD 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44734	135.7374	CLEO CORNER - CLEO JCT 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45608	135.7007	CEDARDALE - OKEENE 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45715	135.674	P12:138:WFEC:MSL14
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44832	135.6491	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45715	135.6146	BEARCAT 138.00 - MOORELAND 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45342	135.6094	ELK CITY - RED HILLS WIND 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45342	135.6094	ELK CITY - RED HILLS WIND 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45084	135.5653	DEWEY - SOUTHARD 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43819	135.5225	BUFBEAR2 - BUFFALO 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43815	135.498	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43604	135.4703	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43604	135.4673	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44906	135.3805	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44906	135.3805	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44906	135.3649	P12:345:SPS:J07.1.FINN.HITCH
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44858	135.3064	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44858	135.3064	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44999	135.2916	ROMAN NOSE - SOUTHARD 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45084	135.2159	ROMAN NOSE - SOUTHARD 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43534	135.1926	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43534	135.1912	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45103	135.178	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45715	135.1702	BEARCAT 138.00 - NINE MILE 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43389	135.161	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44829	135.1386	CIMARRON - MINCO 345KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44865	135.12	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44796	135.1095	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44832	135.0596	GEN514805 1-SOONER UNIT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45103	135.0266	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45242	135.0081	DOVER SW - OKEENE 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43921	134.9546	ALVA - WINCH_TAP 69.000 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45936	134.9372	MOORELAND - TALOGA 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44840	134.9201	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44840	134.9201	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45342	134.9089	ELLIS 4 138.00 - MOREWOOD SW 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45103	134.9029	IMO TAP - MEN TAP 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43389	134.8766	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43389	134.7719	ALINETP2 69.000 - ALVA 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44879	134.7489	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44879	134.7489	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44814	134.7464	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44814	134.7464	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44814	134.7464	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44814	134.7464	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45327	134.713	DOVER SW - OKEENE 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44828	134.7128	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44866	134.6996	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44866	134.6996	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44866	134.6858	P12:345:SPS:J07.1.FINN.HITCH
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44841	134.6556	SOONER - SPRING CREEK 345KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44865	134.6402	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44774	134.563	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44774	134.563	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44774	134.5556	P12:345:SPS:J07.1.FINN.HITCH
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44693	134.5464	CIMARRON - MINCO 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44289	134.5307	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43539	134.4566	FAIRVIEW - OKEENE 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45722	134.4341	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45715	134.4225	MOREWOOD SW - NINE MILE 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.47114	134.4164	FPL SWITCH - WOODWARD 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43819	134.4041	BUFFALO - WEST 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43883	134.4004	FT SUPPLY - STOCKHOLM2 69.000 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43883	134.3821	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44298	134.3176	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43883	134.2226	BUFBEAR2 - STOCKHOLM2 69.000 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43815	134.1858	ALVA - WINCH_TAP 69.000 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45198	134.1557	ELK CITY - RED HILLS WIND 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45198	134.1557	ELK CITY - RED HILLS WIND 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45722	134.1465	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44828	134.1086	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44721	134.0356	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44721	134.0356	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43238	134.0139	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.40844	133.9826	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43815	133.9434	FT SUPPLY - STOCKHOLM2 69.000 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44724	133.9334	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44819	133.925	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44819	133.925	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44687	133.9165	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44790	133.9092	CIMARRON - MINCO 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43815	133.8349	BUFBEAR2 - STOCKHOLM2 69.000 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45130	133.6859	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43819	133.663	FREEDOM - WEST 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44741	133.6338	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44741	133.6338	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45306	133.612	ELK CITY - RED HILLS WIND 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45306	133.612	ELK CITY - RED HILLS WIND 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43846	133.5841	BUFBEAR2 - BUFFALO 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44696	133.567	CLEO JCT - RINGWOOD 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44696	133.5657	CLEO CORNER - CLEO JCT 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44687	133.5358	GEN514805 1-SOONER UNIT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44582	133.5333	CLEO JCT - RINGWOOD 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44582	133.5317	CLEO CORNER - CLEO JCT 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45130	133.5316	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.47273	133.5199	FPL SWITCH - WOODWARD 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45786	133.516	MOORELAND - TALOGA 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45742	133.4669	P12:138:WFEC:MSL14
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45198	133.4494	ELLIS 4 138.00 - MOREWOOD SW 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45130	133.4113	IMO TAP - MEN TAP 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45742	133.4087	BEARCAT 138.00 - MOORELAND 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44724	133.4076	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44513	133.4	G15063_T 345.00 - WOODRING 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44831	133.3962	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44831	133.3962	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44831	133.3962	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44831	133.3962	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45004	133.3207	DEWEY - SOUTHARD 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43561	133.2883	FAIRVIEW - OKEENE 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43353	133.2526	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45895	133.2169	MOORELAND - TALOGA 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44796	133.1638	GEN514805 1-SOONER UNIT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44840	133.1501	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44840	133.1501	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43297	133.12	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43353	133.0777	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	133.0618	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43353	133.0127	ALINETP2 69.000 - ALVA 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44289	132.987	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45742	132.9651	BEARCAT 138.00 - NINE MILE 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45004	132.9539	ROMAN NOSE - SOUTHARD 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45198	132.9369	CUSTER4 138.00 - ELLIS 4 138.00 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44774	132.9226	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44774	132.9226	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45306	132.9018	ELLIS 4 138.00 - MOREWOOD SW 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43297	132.8525	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43259	132.8153	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44298	132.7965	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43846	132.7787	BUFFALO - WEST 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43297	132.7463	ALINETP2 69.000 - ALVA 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44513	132.6272	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43883	132.6187	ALVA - WINCH_TAP 69.000 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45757	132.5076	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44528	132.5059	G15063_T 345.00 - WOODRING 345KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45248	132.4708	DOVER SW - OKEENE 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44691	132.3842	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44774	132.3663	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45742	132.2156	MOREWOOD SW - NINE MILE 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.48531	132.1747	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.48531	132.1741	WOODWARD - WWPAR4 138.00 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45757	132.1499	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43846	132.1425	FREEDOM - WEST 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44730	132.0667	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43819	132.0523	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44698	131.992	CIMARRON - MINCO 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.40885	131.8074	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44528	131.7276	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45033	131.6022	DEWEY - SOUTHARD 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45225	131.575	ELK CITY - RED HILLS WIND 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45225	131.575	ELK CITY - RED HILLS WIND 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44724	131.5576	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44724	131.5576	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.41038	131.5499	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44730	131.4643	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43539	131.2243	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43539	131.2153	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45033	131.2125	ROMAN NOSE - SOUTHARD 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45199	131.1462	ELK CITY - RED HILLS WIND 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45199	131.1462	ELK CITY - RED HILLS WIND 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43819	131.1098	FT SUPPLY - STOCKHOLM2 69.000 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44789	131.0882	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44789	131.0882	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43846	131.025	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43640	130.9915	CARMEN - CHEROKEE SW 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43819	130.95	BUFBEAR2 - STOCKHOLM2 69.000 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44792	130.9411	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	130.8545	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44832	130.8336	GEN520996 1-MORLND1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45278	130.811	DOVER SW - OKEENE 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44832	130.7962	GEN525561 1-TOLK GEN #1 24 KV
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43819	130.7921	ALVA - WINCH_TAP 69.000 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44832	130.7753	GEN515393 1-OGEWND2G
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44573	130.6372	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44573	130.6334	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45786	130.5825	MOORELAND - TALOGA 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44832	130.581	GEN525562 1-TOLK GEN #2 24 KV
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44573	130.5766	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44789	130.5347	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44765	130.5307	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44719	130.5208	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44586	130.4858	CLEO JCT - RINGWOOD 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44586	130.4855	CLEO CORNER - CLEO JCT 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44691	130.4811	GEN514805 1-SOONER UNIT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.47105	130.4466	FPL SWITCH - WOODWARD 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45199	130.4327	ELLIS 4 138.00 - MOREWOOD SW 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44846	130.4061	FT SUPPLY - IODINE 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44748	130.272	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44748	130.272	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43561	130.2543	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43561	130.2515	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44755	130.2413	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43300	130.2369	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42487	130.1127	HELENA TAP - SALINE 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43300	130.0683	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43846	130.0148	ALVA - WINCH_TAP 69.000 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43300	130.0014	ALINETP2 69.000 - ALVA 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.47316	129.8892	FPL SWITCH - MOORELAND 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44727	129.8806	CIMARRON - MINCO 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44755	129.6398	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43604	129.6338	CARMEN - CHEROKEE SW 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44572	129.5231	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	129.509	GEN514805 1-SOONER UNIT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.29163	129.4809	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44705	129.4686	IODINE - MOORELAND 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42487	129.4015	CZYCRVT2 69.000 - SALINE 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45885	129.3793	P12:138:WFEC:MSL14
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45885	129.3415	BEARCAT 138.00 - MOORELAND 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44642	129.2653	917X
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44755	129.233	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44832	129.2013	GEN515389 1-TLGWND-WTG1 0.7000
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44609	129.1982	CLEO JCT - RINGWOOD 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44609	129.1967	CLEO CORNER - CLEO JCT 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43846	129.1895	FT SUPPLY - STOCKHOLM2 69.000 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44642	129.1696	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44745	129.1382	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44536	129.0991	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.47123	129.0969	FPL SWITCH - WOODWARD 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44536	129.0963	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44536	129.089	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44687	129.0863	GEN560217 1-G07_062_6 0.6900
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44687	129.0772	GEN515611 1-NBUFFRG1 0.6900
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43846	129.074	BUFBEAR2 - STOCKHOLM2 69.000 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44642	129.0464	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44687	128.9892	GEN520996 1-MORLND1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44796	128.9729	GEN515393 1-OGEWND2G
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44796	128.97	GEN525562 1-TOLK GEN #2 24 KV
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44942	128.9563	P12:230:AEPW:ELKCITY6:SWEETWT6
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44942	128.9414	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44942	128.9043	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44942	128.9043	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45885	128.9025	BEARCAT 138.00 - NINE MILE 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45812	128.8988	MOORELAND - TALOGA 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44687	128.8856	GEN587023 1-G16-003-GEN10.6500
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44809	128.8728	IODINE - MOORELAND 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44687	128.8538	GEN515393 1-OGEWND2G
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44464	128.7995	P12:138:WERE:CRSW-OGE_138::
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44687	128.7923	GEN525561 1-TOLK GEN #1 24 KV
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43322	128.7839	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	128.7684	GEN514806 1-SOONER UNIT 2
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44795	128.7089	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44687	128.6516	GEN525562 1-TOLK GEN #2 24 KV
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43322	128.623	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43322	128.5643	ALINETP2 69.000 - ALVA 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45225	128.5513	ELLIS 4 138.00 - MOREWOOD SW 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44411	128.5504	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44705	128.4964	FT SUPPLY - IODINE 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44411	128.3653	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44411	128.3639	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44832	128.3459	GEN515365 1-CENT 21 0.7000
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44809	128.3017	FT SUPPLY - IODINE 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42487	128.265	CZYCRVT2 69.000 - KNOBHILL 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42452	128.1819	HELENA TAP - SALINE 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45885	128.1636	MOREWOOD SW - NINE MILE 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44832	128.1008	GEN520922 1-SLEEPING BEAR
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45729	128.0566	MOORELAND - PIC4 138.00 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42416	128.0533	HELENA TAP - SALINE 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.47114	128.0461	FPL SWITCH - MOORELAND 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45729	128.0227	P12:138:WFEC:MSL12
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45729	127.9556	CEDARDALE - PIC4 138.00 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44540	127.7781	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44564	127.7767	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45729	127.7519	CEDARDALE - OKEENE 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42452	127.7475	CZYCRVT2 69.000 - SALINE 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44832	127.739	GEN520997 1-MORLND2
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44687	127.4292	GEN515389 1-TLGWND-WTG1 0.7000
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44832	127.4284	GEN520998 1-MORLND3
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44796	127.4242	GEN515389 1-TLGWND-WTG1 0.7000
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42416	127.3766	CZYCRVT2 69.000 - SALINE 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44829	127.2686	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.47273	127.0656	FPL SWITCH - MOORELAND 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43954	127.025	BUFBEAR2 - BUFFALO 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44796	126.8935	GEN520997 1-MORLND2
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43380	126.7808	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44796	126.6385	GEN520998 1-MORLND3
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42452	126.6334	CZYCRVT2 69.000 - KNOBHILL 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44796	126.5659	GEN515365 1-CENT 21 0.7000
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44832	126.528	GEN515787 1-OKLA WIND ENERGY CENTER
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44687	126.523	GEN515365 1-CENT 21 0.7000
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44469	126.5017	P12:138:OKGE:3TERM7
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44823	126.4894	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42372	126.4774	ALVA - ALVA 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44823	126.4743	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44823	126.4743	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44644	126.4649	G15066_T 345.00 - SOONER 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42308	126.4447	ALVA - ALVA 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44564	126.3479	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44644	126.3442	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44687	126.3421	GEN520922 1-SLEEPING BEAR
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44412	126.3242	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43640	126.309	ALVA - CHEROKEE SW 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44796	126.3078	GEN520922 1-SLEEPING BEAR
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44691	126.3074	GEN562973 1-G15060_4 0.6900
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42416	126.2855	CZYCRVT2 69.000 - KNOBHILL 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44691	126.1845	GEN560217 1-G07_062_6 0.6900
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44691	126.1751	GEN515611 1-NBUFFRG1 0.6900
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44691	126.0539	GEN525561 1-TOLK GEN #1 24 KV
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.29164	126.0121	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44412	125.9918	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44412	125.9908	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44691	125.9757	GEN525562 1-TOLK GEN #2 24 KV
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44691	125.975	GEN587023 1-G16-003-GEN10.6500
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44691	125.971	GEN515393 1-OGEWND2G
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44469	125.9668	P12:138:WERE:CRSW-OGE_138::
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44708	125.8996	IODINE - MOORELAND 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45249	125.8544	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45249	125.7318	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44687	125.6763	GEN520997 1-MORLND2
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43954	125.5861	BUFFALO - WEST 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45249	125.5643	IMO TAP - MEN TAP 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.26054	125.53	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44841	125.5292	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42418	125.374	HELENA TAP - SALINE 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44708	125.3711	FT SUPPLY - IODINE 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44687	125.343	GEN520998 1-MORLND3
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44701	125.1449	G15063_T 345.00 - WOODRING 345KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.47344	125.1181	FPL SWITCH - WOODWARD 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44669	124.9831	917X
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44432	124.9722	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42418	124.9454	CZYCRVT2 69.000 - SALINE 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44668	124.9418	CRESWELL - MIDLTNT4 138.00 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43671	124.9355	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43671	124.9313	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44669	124.8836	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	124.8553	GEN562973 1-G15060_4 0.6900
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44796	124.8052	GEN515787 1-OKLA WIND ENERGY CENTER
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44687	124.7627	GEN515787 1-OKLA WIND ENERGY CENTER
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44669	124.752	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44492	124.7484	P12:138:OKGE:3TERM7
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	124.7336	GEN560217 1-G07_062_6 0.6900
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	124.7242	GEN515611 1-NBUFFRG1 0.6900
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	124.7214	GEN525561 1-TOLK GEN #1 24 KV
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43534	124.7162	ALVA - CHEROKEE SW 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44432	124.5912	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44432	124.5888	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44691	124.5694	GEN515389 1-TLGWND-WTG1 0.7000
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	124.528	GEN587023 1-G16-003-GEN10.6500
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	124.5217	GEN515393 1-OGEWND2G
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42334	124.4679	ALVA - ALVA 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44732	124.4036	IODINE - MOORELAND 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44701	124.3696	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43604	124.3501	ALVA - CHEROKEE SW 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43954	124.3285	FREEDOM - WEST 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44125	124.3046	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44492	124.1606	P12:138:WERE:CRSW-OGE_138::
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42437	124.0912	HELENA TAP - SALINE 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.47105	124.0768	FPL SWITCH - MOORELAND 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44691	124.0331	GEN520997 1-MORLND2
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44732	123.9133	FT SUPPLY - IODINE 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44265	123.9066	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45371	123.8769	ELK CITY - RED HILLS WIND 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45371	123.8769	ELK CITY - RED HILLS WIND 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42418	123.8528	CZYCRVT2 69.000 - KNOBHILL 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45867	123.8416	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44691	123.7735	GEN520998 1-MORLND3
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45155	123.7487	DEWEY - SOUTHARD 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42437	123.6792	CZYCRVT2 69.000 - SALINE 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44691	123.6679	GEN515365 1-CENT 21 0.7000
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43954	123.4797	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44691	123.467	GEN520922 1-SLEEPING BEAR

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.40034	123.4637	ALVA - KNOBHILL 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44832	123.4615	GEN587143 1-G16-020-GEN10.6900
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44964	123.3799	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44964	123.3799	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44964	123.3799	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44964	123.3799	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44881	123.3775	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45867	123.3388	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42313	123.3027	ALVA - ALVA 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.40026	123.2107	ALVA - KNOBHILL 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45371	123.194	ELLIS 4 138.00 - MOREWOOD SW 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45155	123.1907	ROMAN NOSE - SOUTHARD 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	123.1234	GEN515389 1-TLGWND-WTG1 0.7000
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.48634	123.0847	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.48634	123.0839	WOODWARD - WWPAR4 138.00 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44242	122.8949	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44863	122.839	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	122.7789	GEN520998 1-MORLND3
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	122.7761	GEN520997 1-MORLND2
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.47123	122.7397	FPL SWITCH - MOORELAND 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45371	122.6872	CUSTER4 138.00 - ELLIS 4 138.00 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42337	122.6347	ALVA - ALVA 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45371	122.5834	CUSTER4 138.00 - RED HILLS WIND 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42437	122.5748	CZYCRVT2 69.000 - KNOBHILL 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44765	122.5564	CLEO JCT - RINGWOOD 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44765	122.5527	CLEO CORNER - CLEO JCT 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45399	122.5302	DOVER SW - OKEENE 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43954	122.4641	FT SUPPLY - STOCKHOLM2 69.000 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43419	122.3526	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45967	122.3494	MOORELAND - TALOGA 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43954	122.3373	BUFBEAR2 - STOCKHOLM2 69.000 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43539	122.3109	ALVA - CHEROKEE SW 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	122.2164	GEN515365 1-CENT 21 0.7000
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44863	122.1927	GEN514805 1-SOONER UNIT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.28860	122.128	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44910	122.079	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44910	122.079	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43419	122.0525	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	122.0243	GEN520922 1-SLEEPING BEAR
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44691	121.973	GEN515787 1-OKLA WIND ENERGY CENTER
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43419	121.9407	ALINETP2 69.000 - ALVA 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43954	121.7978	ALVA - WINCH_TAP 69.000 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44687	121.6786	GEN587143 1-G16-020-GEN10.6900
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44796	121.6504	GEN587143 1-G16-020-GEN10.6900
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44125	121.6249	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.39997	121.4544	ALVA - KNOBHILL 69KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44147	121.2641	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43561	120.9757	ALVA - CHEROKEE SW 69KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45829	120.9335	MOORELAND - PIC4 138.00 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45829	120.9166	P12:138:WFEC:MSL12
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45829	120.8287	CEDARDALE - PIC4 138.00 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45829	120.7166	CEDARDALE - OKEENE 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	120.5565	GEN515787 1-OKLA WIND ENERGY CENTER
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.26041	120.4382	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.40030	120.132	ALVA - KNOBHILL 69KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.29150	120.1031	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.25670	119.9583	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44787	119.6475	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45339	119.5396	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.40051	119.5301	ALVA - KNOBHILL 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.28860	119.482	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44555	119.4124	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45339	119.3765	IMO TAP - MEN TAP 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45339	119.3505	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44041	119.065	BUFBEAR2 - BUFFALO 69KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45983	118.9818	P12:138:WFEC:MSL14
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.29150	118.9531	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45983	118.9324	BEARCAT 138.00 - MOORELAND 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44787	118.8826	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.26067	118.8687	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.26054	118.8423	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44691	118.7899	GEN587143 1-G16-020-GEN10.6900
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43452	118.6576	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44041	118.6114	BUFFALO - WEST 69KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45983	118.5234	BEARCAT 138.00 - NINE MILE 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44147	118.4539	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.29178	118.2503	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44206	118.2076	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45023	118.1703	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45023	118.1703	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45023	118.1703	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45023	118.1703	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44041	118.1688	FREEDOM - WEST 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43671	118.1267	CARMEN - CHEROKEE SW 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44603	118.0375	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44555	118.0301	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44603	118.0289	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44603	118.0268	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44863	117.9702	GEN515393 1-OGEWND2G
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45460	117.937	ELK CITY - RED HILLS WIND 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45460	117.937	ELK CITY - RED HILLS WIND 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44863	117.9073	GEN520996 1-MORLND1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44924	117.8934	CHISHOLM7 345.00 () 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42516	117.8107	HELENA TAP - SALINE 69KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45983	117.7842	MOREWOOD SW - NINE MILE 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44877	117.426	FT SUPPLY - IODINE 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44041	117.3918	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44864	117.3741	GRACEMONT - MINCO 345KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44602	117.3611	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44715	117.3437	GEN587143 1-G16-020-GEN10.6900
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45241	117.3267	DEWEY - SOUTHARD 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43751	117.1729	FAIRVIEW - OKEENE 69KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45241	117.0985	ROMAN NOSE - SOUTHARD 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42516	117.0733	CZYCRVT2 69.000 - SALINE 69KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45983	117.0469	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44997	116.9645	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44997	116.9645	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45493	116.8456	DOVER SW - OKEENE 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.45983	116.7893	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44992	116.7733	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44992	116.7733	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44992	116.7623	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44945	116.7217	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44041	116.6956	ALVA - WINCH_TAP 69.000 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44863	116.4086	GEN515389 1-TLGWND-WTG1 0.7000
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44974	116.3726	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44974	116.1512	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44965	116.0487	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44965	116.0487	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42516	115.9629	CZYCRVT2 69.000 - KNOBHILL 69KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43751	115.5988	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43751	115.5932	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.28892	115.5611	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.25676	115.5353	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44863	115.5033	GEN515365 1-CENT 21 0.7000
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44844	115.4833	CLEO CORNER - CLEO JCT 69KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44844	115.4832	CLEO JCT - RINGWOOD 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44206	115.4295	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44952	115.362	CIMARRON - MINCO 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44945	115.333	GEN514805 1-SOONER UNIT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44863	115.2961	GEN520922 1-SLEEPING BEAR
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44966	115.2905	NORTHWEST - SPRING CREEK 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44966	115.2767	SOONER - SPRING CREEK 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43495	115.0978	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43495	115.0259	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.47441	114.9505	FPL SWITCH - WOODWARD 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44863	114.7103	GEN520997 1-MORLND2
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44863	114.388	GEN520998 1-MORLND3
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.28867	114.3403	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.25697	114.2882	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.26041	114.1794	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44863	113.8154	GEN515787 1-OKLA WIND ENERGY CENTER
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42404	113.6495	ALVA - ALVA 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.25670	113.6475	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.28867	113.3756	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43671	113.2591	ALVA - CHEROKEE SW 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.28892	113.1689	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44294	112.6298	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.26067	112.3549	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44923	111.7684	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44952	111.6631	GRACEMONT - MINCO 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42490	111.593	ALVA - ALVA 69KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44734	111.4481	P12:138:WERE:CRSW-OGE_138::
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44945	111.4306	GEN587023 1-G16-003-GEN10.6500
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44945	111.3428	GEN515393 1-OGEWND2G
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44923	111.2322	917X
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44923	111.1077	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42580	110.9703	HELENA TAP - SALINE 69KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42580	110.7892	CZYCRVT2 69.000 - SALINE 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.40066	110.7398	ALVA - KNOBHILL 69KV CKT 1
0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44863	110.6624	GEN587143 1-G16-020-GEN10.6900
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44945	110.2877	GEN525561 1-TOLK GEN #1 24 KV
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44961	110.1024	IODINE - MOORELAND 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44961	109.8217	FT SUPPLY - IODINE 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44945	109.8153	GEN515389 1-TLGWND-WTG1 0.7000
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44733	109.8006	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.42580	109.7053	CZYCRVT2 69.000 - KNOBHILL 69KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.35407	109.6789	KNOBHILL (KNOBHIL4) 138/69/13.2KV TRANSFORMER CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.25676	109.4014	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.35433	109.1816	KNOBHILL - NOEL_SW 138.00 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.43751	109.164	ALVA - CHEROKEE SW 69KV CKT 1
0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.35433	109.1613	KNOBHILL (KNOBHIL4) 138/69/13.2KV TRANSFORMER CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44945	108.9565	GEN515365 1-CENT 21 0.7000
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44945	108.7817	GEN520922 1-SLEEPING BEAR
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.47441	108.7387	FPL SWITCH - MOORELAND 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.40143	108.3972	ALVA - KNOBHILL 69KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.25697	108.0116	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.35371	107.8756	KNOBHILL (KNOBHIL4) 138/69/13.2KV TRANSFORMER CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44945	107.4315	GEN515787 1-OKLA WIND ENERGY CENTER
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.35434	106.6805	KNOBHILL - NOEL_SW 138.00 138KV CKT 1
0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.35434	106.6627	KNOBHILL (KNOBHIL4) 138/69/13.2KV TRANSFORMER CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.35447	106.4591	KNOBHILL - NOEL_SW 138.00 138KV CKT 1
0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.35447	106.4387	KNOBHILL (KNOBHIL4) 138/69/13.2KV TRANSFORMER CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44478	105.9779	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.44945	104.096	GEN587143 1-G16-020-GEN10.6900
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.26133	103.6152	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.29254	103.0964	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.26047	101.7693	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.26054	101.726	BYRON_138 138.00 - SANDY_CN_138138.00 138KV CKT 1
0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.29156	101.6791	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.29254	101.0582	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44796	117.0566	BASE CASE
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44832	116.7257	BASE CASE
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44687	116.0445	BASE CASE
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44691	114.8007	BASE CASE
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44715	112.919	BASE CASE
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44841	109.8084	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44829	109.4289	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.41010	108.7124	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.40825	107.8392	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45654	107.7991	MOORELAND - PIC4 138.00 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45654	107.7674	P12:138:WFEC:MSL12
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45654	107.7178	CEDARDALE - PIC4 138.00 138KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44881	107.6224	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45654	107.545	CEDARDALE - OKEENE 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.48505	107.5155	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.48505	107.5151	WOODWARD - WWPAR4 138.00 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44532	107.415	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43534	107.3342	FAIRVIEW - OKEENE 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.48459	107.2696	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.48459	107.2691	WOODWARD - WWPAR4 138.00 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45695	107.1578	MOORELAND - PIC4 138.00 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45695	107.1288	P12:138:WFEC:MSL12
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45570	107.1108	MOORELAND - PIC4 138.00 138KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45570	107.0846	P12:138:WFEC:MSL12
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45695	107.0779	CEDARDALE - PIC4 138.00 138KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45570	107.0291	CEDARDALE - PIC4 138.00 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45695	106.9083	CEDARDALE - OKEENE 138KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45570	106.8761	CEDARDALE - OKEENE 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43604	106.8696	FAIRVIEW - OKEENE 69KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.48284	106.8197	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.48284	106.8192	WOODWARD - WWPAR4 138.00 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43883	106.3693	BUFBEAR2 - BUFFALO 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44483	106.3191	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44532	106.2658	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43921	106.1502	BUFBEAR2 - BUFFALO 69KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45576	106.0635	MOORELAND - PIC4 138.00 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45576	106.0358	P12:138:WFEC:MSL12
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45576	105.9816	CEDARDALE - PIC4 138.00 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44667	105.8392	G15063_T 345.00 - WOODRING 345KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45576	105.8283	CEDARDALE - OKEENE 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43350	105.6602	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45859	105.5503	P12:138:WFEC:MSL14
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45823	105.5332	P12:138:WFEC:MSL14
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45859	105.5147	BEARCAT 138.00 - MOORELAND 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45823	105.495	BEARCAT 138.00 - MOORELAND 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43883	105.3858	BUFFALO - WEST 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.40986	105.3525	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43640	105.3368	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44632	105.3318	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43640	105.3247	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45180	105.3205	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43312	105.3031	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45717	105.2587	P12:138:WFEC:MSL14
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45717	105.2137	BEARCAT 138.00 - MOORELAND 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44667	105.2006	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44483	105.1853	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45859	105.1654	BEARCAT 138.00 - NINE MILE 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45180	105.1651	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45823	105.1426	BEARCAT 138.00 - NINE MILE 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.48268	105.0995	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.48268	105.0987	WOODWARD - WWPAR4 138.00 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45180	105.073	IMO TAP - MEN TAP 138KV CKT 1
0	25SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44863	105.0615	BASE CASE
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43815	105.0608	BUFBEAR2 - BUFFALO 69KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45217	104.9944	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43921	104.9226	BUFFALO - WEST 69KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45717	104.863	BEARCAT 138.00 - NINE MILE 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45217	104.8419	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45098	104.8144	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44310	104.8019	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45788	104.7298	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45217	104.7077	IMO TAP - MEN TAP 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44632	104.7038	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45098	104.6971	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45859	104.5829	MOREWOOD SW - NINE MILE 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43883	104.5714	FREEDOM - WEST 69KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45098	104.557	IMO TAP - MEN TAP 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45823	104.5491	MOREWOOD SW - NINE MILE 138KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45714	104.509	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45788	104.4897	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45830	104.4532	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45717	104.2739	MOREWOOD SW - NINE MILE 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44890	104.2501	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44890	104.2501	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44890	104.2501	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44890	104.2501	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43235	104.1433	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44504	104.141	G15063_T 345.00 - WOODRING 345KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45714	104.1268	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45830	104.0693	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43815	104.0671	BUFFALO - WEST 69KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45715	104.0667	P12:138:WFEC:MSL14
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44808	104.0535	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44808	104.0535	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44808	104.0535	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44808	104.0535	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.48282	104.0251	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.48282	104.0243	WOODWARD - WWPAR4 138.00 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45715	104.0194	BEARCAT 138.00 - MOORELAND 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43819	103.9575	BUFBEAR2 - BUFFALO 69KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45608	103.8965	MOORELAND - PIC4 138.00 138KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45608	103.872	P12:138:WFEC:MSL12
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44930	103.8493	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44930	103.8493	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44930	103.8493	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44930	103.8493	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45608	103.8148	CEDARDALE - PIC4 138.00 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43921	103.8093	FREEDOM - WEST 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45084	103.6917	DEWEY - SOUTHARD 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45715	103.666	BEARCAT 138.00 - NINE MILE 138KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45608	103.6622	CEDARDALE - OKEENE 138KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44310	103.605	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45103	103.5746	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43604	103.5732	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43604	103.57	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44504	103.5253	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45103	103.4576	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45084	103.4149	ROMAN NOSE - SOUTHARD 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45103	103.3623	IMO TAP - MEN TAP 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44814	103.3209	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44814	103.3209	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44814	103.3209	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44814	103.3209	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44796	103.3156	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43815	103.298	FREEDOM - WEST 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44840	103.1788	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44840	103.1788	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43539	103.1242	FAIRVIEW - OKEENE 69KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45722	103.1195	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43819	103.0848	BUFFALO - WEST 69KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45715	103.0721	MOREWOOD SW - NINE MILE 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43921	103.069	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45123	103.0571	DEWEY - SOUTHARD 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45327	103.03	DOVER SW - OKEENE 138KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44999	103.0113	DEWEY - SOUTHARD 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44828	102.9977	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44866	102.9927	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44866	102.9927	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44298	102.9832	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44866	102.9819	P12:345:SPS:J07.1.FINN.HITCH
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45722	102.8888	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43883	102.8028	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43815	102.7855	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43883	102.7746	FT SUPPLY - STOCKHOLM2 69.000 69KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43238	102.7573	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44289	102.6882	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.47316	102.637	FPL SWITCH - WOODWARD 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43883	102.6348	BUFBEAR2 - STOCKHOLM2 69.000 69KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45123	102.6337	ROMAN NOSE - SOUTHARD 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.40844	102.622	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44999	102.5698	ROMAN NOSE - SOUTHARD 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44828	102.5249	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43819	102.4951	FREEDOM - WEST 69KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43921	102.4609	FT SUPPLY - STOCKHOLM2 69.000 69KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45366	102.4535	DOVER SW - OKEENE 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44819	102.3858	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44819	102.3858	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44790	102.3738	CIMARRON - MINCO 345KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45242	102.3622	DOVER SW - OKEENE 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43921	102.3566	BUFBEAR2 - STOCKHOLM2 69.000 69KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44513	102.2763	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44877	102.2123	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44877	102.2123	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45004	102.1931	DEWEY - SOUTHARD 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45306	102.145	ELK CITY - RED HILLS WIND 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45306	102.145	ELK CITY - RED HILLS WIND 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44734	102.1214	CLEO JCT - RINGWOOD 69KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44734	102.1149	CLEO CORNER - CLEO JCT 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44696	102.092	CLEO JCT - RINGWOOD 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44696	102.0916	CLEO CORNER - CLEO JCT 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.47273	102.0764	FPL SWITCH - WOODWARD 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44832	102.072	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45342	102.0518	ELK CITY - RED HILLS WIND 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45342	102.0518	ELK CITY - RED HILLS WIND 138KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43846	101.9634	BUFBEAR2 - BUFFALO 69KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45130	101.922	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45004	101.9023	ROMAN NOSE - SOUTHARD 138KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43353	101.8773	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44774	101.8676	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44774	101.8676	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44906	101.863	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44906	101.863	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45742	101.8548	P12:138:WFEC:MSL14
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44906	101.8507	P12:345:SPS:J07.1.FINN.HITCH
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45895	101.8329	MOORELAND - TALOGA 138KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45742	101.8085	BEARCAT 138.00 - MOORELAND 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44858	101.8058	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44858	101.8058	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45130	101.8032	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44831	101.7858	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44831	101.7858	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44831	101.7858	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44831	101.7858	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44298	101.7822	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44796	101.7776	GEN514805 1-SOONER UNIT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44840	101.7705	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44840	101.7705	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43815	101.7556	ALVA - WINCH_TAP 69.000 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43353	101.7377	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45130	101.7109	IMO TAP - MEN TAP 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43389	101.7089	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43561	101.7073	FAIRVIEW - OKEENE 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43353	101.6813	ALINETP2 69.000 - ALVA 69KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44829	101.6764	CIMARRON - MINCO 345KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44513	101.665	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44865	101.6588	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44832	101.6032	GEN514805 1-SOONER UNIT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43921	101.5944	ALVA - WINCH_TAP 69.000 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45306	101.581	ELLIS 4 138.00 - MOREWOOD SW 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45248	101.5299	DOVER SW - OKEENE 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45936	101.5199	MOORELAND - TALOGA 138KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43815	101.5147	FT SUPPLY - STOCKHOLM2 69.000 69KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45342	101.4959	ELLIS 4 138.00 - MOREWOOD SW 138KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43389	101.4866	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44289	101.475	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45742	101.4558	BEARCAT 138.00 - NINE MILE 138KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43815	101.4298	BUFBEAR2 - STOCKHOLM2 69.000 69KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44691	101.4288	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44774	101.4283	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43883	101.4159	ALVA - WINCH_TAP 69.000 69KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43389	101.3992	ALINETP2 69.000 - ALVA 69KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44879	101.364	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44879	101.364	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43259	101.3424	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43846	101.3348	BUFFALO - WEST 69KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43819	101.2294	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44730	101.1875	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44698	101.1358	CIMARRON - MINCO 345KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45757	101.1286	GLASS MOUNTAIN - MOORELAND 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44528	101.1112	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44945	100.9714	BASE CASE
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43297	100.869	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45742	100.861	MOREWOOD SW - NINE MILE 138KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45757	100.8421	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43846	100.8329	FREEDOM - WEST 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44696	100.6751	NSAH - WAKITA 69KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43297	100.6578	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43297	100.5691	ALINETP2 69.000 - ALVA 69KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43539	100.5639	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43539	100.5557	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44528	100.4957	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45199	100.4696	ELK CITY - RED HILLS WIND 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45199	100.4696	ELK CITY - RED HILLS WIND 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43819	100.4469	FT SUPPLY - STOCKHOLM2 69.000 69KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.40885	100.4357	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45033	100.3694	DEWEY - SOUTHARD 138KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45225	100.3521	ELK CITY - RED HILLS WIND 138KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45225	100.3521	ELK CITY - RED HILLS WIND 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43819	100.3201	BUFBEAR2 - STOCKHOLM2 69.000 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44797	100.2412	FT SUPPLY (FTSUPPLY) 138/69/13.8KV TRANSFORMER CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43819	100.2367	ALVA - WINCH_TAP 69.000 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44796	100.1279	GEN560773 1-BUFBER-WTG1 0.6000
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45033	100.0607	ROMAN NOSE - SOUTHARD 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45786	100	MOORELAND - TALOGA 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44765	100	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.47105	99.9	FPL SWITCH - WOODWARD 138KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45199	99.9	ELLIS 4 138.00 - MOREWOOD SW 138KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44789	99.9	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44789	99.9	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43846	99.9	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44796	99.9	GEN562892 1-G15048_3 0.6900
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43300	99.8	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.45278	99.8	DOVER SW - OKEENE 138KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44715	99.8	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43300	99.6	ALINETP2 69.000 - ALVA 69KV CKT 1
0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43300	99.6	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
0	25SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.48531	99.6	WOODWARD - WWPAR4 138.00 138KV CKT 1
0	25SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.48531	99.6	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44789	99.5	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44755	99.3	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44748	99.3	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44748	99.3	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43561	99.3	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43561	99.3	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.43846	99.2	ALVA - WINCH_TAP 69.000 69KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44622	99.1	IMO TAP - SOUTH 4TH ST 138KV CKT 1
0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44727	99	CIMARRON - MINCO 345KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44686	99	MORISNT4 138.00 - SOONER 138KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44684	99	GRDA1 - GREC TAP5 345.00 345KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44679	99	RANCHRD7 345.00 - SOONER 345KV CKT 1
0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.44664	99	GRANTCO2 69.000 - MEDFORD 69KV CKT 1
0	17G	G16_001	FROM->TO	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1	956.09	1051.7	0.14440	99.2	BASE CASE
0	17G	G16_001	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	133.0	153.0	0.04534	99.9	BASE CASE
0	20WP	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.67323	123.1957	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20SP	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.67711	108.1483	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	17SP	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.66075	104.3861	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20WP	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.67323	123.1957	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20SP	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.67711	108.1483	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	17SP	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.66075	104.3861	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20WP	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.68000	126.6254	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.67076	124.6416	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	16WP	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.67498	121.7059	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20SP	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.68392	111.3855	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17SP	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.66734	107.6482	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20WP	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.68000	126.6254	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.67076	124.6416	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.67498	121.7059	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20SP	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.68392	111.3855	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.66734	107.6482	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_001	-	Non-Converged Contingency	1793.0	1793.0	0.35761	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	16WP	G16_001	-	Non-Converged Contingency	1716.0	1793.0	0.35761	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	16WP	G16_001	-	Non-Converged Contingency	1420.0	1775.0	0.20190	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_001	-	Non-Converged Contingency	1420.0	1775.0	0.20190	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_001	-	Non-Converged Contingency	1420.0	1775.0	0.20190	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_001	-	Non-Converged Contingency	987.16	1082.77	0.15560	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.15560	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	1793.0	1793.0	0.35368	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	1716.0	1793.0	0.35368	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	17G	G16_001	-	Non-Converged Contingency	1793.0	1793.0	0.35368	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	1716.0	1793.0	0.35368	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G16_001	-	Non-Converged Contingency	1420.0	1775.0	0.20114	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	1420.0	1775.0	0.20114	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	1420.0	1775.0	0.20114	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	1792.0	1792.0	0.15067	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.14440	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.14440	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	1561.0	1793.0	0.13501	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	1561.0	1793.0	0.13501	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G16_001	-	Non-Converged Contingency	1195.0	1195.0	0.12598	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	1330.0	1940.0	0.11136	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	1330.0	1940.0	0.11136	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	956.1	1051.7	0.08439	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	717.1	717.1	0.06885	-	HOLCOMB - SETAB 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	762.5	762.5	0.06738	-	MINGO - SETAB 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	726.6	726.6	0.05969	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	1413.0	1517.0	0.05969	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	1022.0	1124.0	0.03602	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17G	G16_001	-	Non-Converged Contingency	1022.0	1124.0	0.03602	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.16616	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.14018	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_001	-	Non-Converged Contingency	1793.0	1793.0	0.35596	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	G16_001	-	Non-Converged Contingency	1716.0	1793.0	0.35596	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	G16_001	-	Non-Converged Contingency	0.0	0.0	0.25814	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.13691	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.13691	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.12123	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.12123	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.12123	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.12123	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.15352	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_001	-	Non-Converged Contingency	987.16	1082.77	0.15091	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.13425	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G16_001	-	Non-Converged Contingency	987.16	1082.77	0.13425	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.15632	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.13889	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	25SP	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.13889	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_001	-	Non-Converged Contingency	1792.0	1792.0	0.11063	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_001	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.10363	116.9587	BASE CASE
0	25SP	G16_001	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.09077	115.2466	BASE CASE
2	17G	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.66848	120.3583	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	16WP	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.67548	114.6083	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17SP	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.67431	106.8903	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.66848	120.3583	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	16WP	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.67548	114.6083	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17SP	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.67431	106.8903	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.67526	123.543	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	16WP	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.68233	117.8517	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17SP	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.68115	110.1187	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.67526	123.543	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.68233	117.8517	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17SP	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.68115	110.1187	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_001	-	Non-Converged Contingency	987.2	1082.8	0.15701	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	16WP	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.13030	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	G16_001	-	Non-Converged Contingency	987.2	1082.8	0.13030	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.14538	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.12016	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.12016	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17SP	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.15912	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_001	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.09444	112.9939	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.60914	100.96	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
3	20L	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.59900	99	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
3	20WP	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.60914	100.96	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
3	20L	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.59900	99	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
3	20WP	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.61708	104.4778	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	20L	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.60681	102.4888	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	17G	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.61268	102.1788	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	20WP	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.61708	104.4778	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	20L	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.60681	102.4888	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	17G	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.61268	102.1788	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	16WP	G16_001	-	Non-Converged Contingency	987.2	1082.8	0.14536	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_001	-	Non-Converged Contingency	0.0	0.0	0.23671	-	P12:345:SPS:J07.1.FINN.HITCH
3	20L	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.12553	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.12553	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.11118	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.11118	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.11118	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_001	-	Non-Converged Contingency	956.09	1051.7	0.11118	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20WP	G16_001	-	Non-Converged Contingency	987.16	1082.77	0.13959	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_001	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.07369	109.7172	BASE CASE
3	17G	G16_001	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.07738	104.9495	BASE CASE
4	25SP	G16_001	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.06629	108.6242	BASE CASE
4	17G	G16_001	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.07025	102.851	BASE CASE
5	25SP	G16_001	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.06629	108.6241	BASE CASE
5	17G	G16_001	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.07025	102.851	BASE CASE
0	25SP	G16_002	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03278	115.7084	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.09897	107.5416	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.09897	107.5416	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.06031	102.9062	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.06031	102.9062	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05901	99.4	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03242	155.1081	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03242	155.1081	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03242	144.4695	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03242	144.4695	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03379	127.6091	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03379	125.8663	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03379	125.0574	P12:115:SPS:V15.1.TUCO.INDANA
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03379	124.7606	INDIANA SUB - STANTON SUB 115KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03379	123.4175	P12:115:SPS:V15.1.TUCO.INDANA
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03379	123.1351	INDIANA SUB - STANTON SUB 115KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03379	120.6969	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03379	119.2123	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03379	119.009	P12:115:SPS:V62.1.CRLSLE.INDANA
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03379	118.803	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03379	117.6066	P12:115:SPS:V62.1.CRLSLE.INDANA
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03379	117.4069	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03273	115.1773	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03273	115.1773	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03273	112.3162	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03273	112.3162	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	17SP	G16_002	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06320	111.2423	BASE CASE
0	20SP	G16_002	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.05976	106.965	BASE CASE
0	17G	G16_002	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06621	104.3555	BASE CASE
0	20WP	G16_002	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06376	100.6452	BASE CASE
0	16WP	G16_002	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22668	117.2755	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_002	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.19768	113.9417	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_002	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22668	112.5386	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G16_002	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21092	107.9528	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17SP	G16_002	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21092	103.4902	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	25SP	G16_002	TO->FROM	COX INTERCHANGE - HALE CO INTERCHANGE 115KV CKT 1	95.81	95.81	0.03236	112.723	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
0	25SP	G16_002	TO->FROM	COX INTERCHANGE - HALE CO INTERCHANGE 115KV CKT 1	95.81	95.81	0.03236	107.7113	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	20SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21635	197.2146	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21635	189.9362	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23071	115.1329	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23071	114.7364	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17G	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03497	102.2735	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_002	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.08554	117.1249	BASE CASE
0	20WP	G16_002	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.10843	109.9811	BASE CASE
0	16WP	G16_002	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11791	108.8041	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_002	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11575	107.5286	BASE CASE
0	20L	G16_002	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08554	131.0896	BASE CASE
0	20WP	G16_002	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10843	123.9661	BASE CASE
0	16WP	G16_002	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11791	122.9494	BASE CASE
0	17G	G16_002	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11575	120.973	BASE CASE
0	17SP	G16_002	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11250	106.8776	BASE CASE
0	16WP	G16_002	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.22668	106.6944	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_002	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.19768	103.5122	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_002	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.22668	102.1214	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G16_002	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.08462	104.9056	BASE CASE
0	20SP	G16_002	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.08341	103.3041	BASE CASE
0	17G	G16_002	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.06579	102.2178	BASE CASE
0	17G	G16_002	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.08698	108.3473	BASE CASE
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09084	124.4658	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07402	112.9438	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07402	112.9438	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07402	112.9086	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07402	112.9086	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	112.5354	GEN526331 1-JONES GEN #1 22 KV
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	112.3468	GEN526332 1-JONES GEN #2 21 KV
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08878	111.3346	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08878	111.3053	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07223	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07223	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08357	107.3472	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	107	GEN527884 1-CUNNINGHAM GEN #4 22 KV
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	106.0884	GEN563142 1-G15079_3 0.5500
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	106.0884	GEN563151 1-G15080_2 0.5500
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08357	106.0791	P12:115:SPS:V15.1.TUCO.INDANA
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08357	106.0442	INDIANA SUB - STANTON SUB 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07932	106.0084	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07932	105.974	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07876	105.4304	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.06514	105.4088	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.06514	105.4088	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08268	105.2063	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07876	105.1732	P12:345:SPS:J14.1.EDDY.XRDS
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08268	105.1386	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07959	105.0982	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07959	105.0934	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06709	105.0723	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06709	104.9891	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	104.8526	GEN527883 1-CUNNINGHAM GEN #3 22 KV
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07761	104.7091	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07934	104.6771	P12:345:SPS:J15.1.XRDS.TOLK
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07761	104.6596	P12:230:SPS:K37.1.TOLK.LAMB
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	104.4479	TUCO INTERCHANGE 230/13.0KV TRANSFORMER CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08255	104.442	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07464	104.1602	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07761	104.149	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07464	104.1458	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07761	104.0778	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08357	103.9914	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08255	103.9739	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07812	103.9293	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07812	103.8823	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07876	103.6702	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07876	103.6636	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08627	103.5765	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08627	103.5559	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	103.5169	GEN563132 1-G15078_3 0.3570
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07832	103.4535	LUBBOCK SOUTH INTERCHANGE - SOUTH PLAINS REC-WOODROW INTERCHANGE 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	103.4314	GEN587113 1-G16-015-GEN10.4180
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	103.3789	GEN563102 1-G15075_3 0.5500
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07970	103.2873	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07932	103.1846	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.06408	103.1673	P12:345:SPS:J15.1.XRDS.TOLK
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08255	103.1627	P12:115:SPS:W54.1.KISER.KRESS
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07932	103.1541	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08255	103.0555	KISER 3115.00 - N_PLAINVEW 3115.00 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08357	103.0022	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07751	102.9892	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08357	102.9593	P12:115:SPS:V62.1.CRLSLE.INDANA
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	102.8077	GEN562812 1-G15040_3 0.3570
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08529	102.7303	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07839	102.7134	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07839	102.6722	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07751	102.6695	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	102.6062	GEN526678 1-CIRRUS_WND 10.6900
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07900	102.5983	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07999	102.2565	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07970	102.2379	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08059	102.2143	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05835	102.1679	GEN527166 1-MUSTANG_6 118.000
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08115	102.0607	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08627	101.9931	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08627	101.9797	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	101.5877	GEN525845 1-ELK_2 1 18.000
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06709	101.5349	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06709	101.5158	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.06798	101.3882	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.06798	101.3882	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07832	101.1826	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07832	101.0304	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	100.5597	BASE CASE
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	100.5354	BASE CASE
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07010	100.5005	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07010	100.4984	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05835	100.4324	GEN527903 1-HOBBS PLANT #3 (ST)
0	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05963	100.3914	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05963	100.3671	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05963	100.3647	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05963	100.3647	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07753	100.1483	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	100.1357	GEN562270 1-G12-020-2 0.6900
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07932	100.0549	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07861	99.8	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07786	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07760	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07760	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07932	99.5	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.06819	99.4	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07827	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07827	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07827	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07827	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	99.3	GEN562762 1-G15033_3 0.6900
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07904	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07904	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	99.2	GEN300024 1-1CHOTST6 16.000
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	99.2	GEN300031 1-CHOUTEAU CTG 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07754	99.2	P12:115:SPS:V56.1.COCHRAN.SUNDWN
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07932	99.1	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	99.1	GEN300001 1-THOMAS HILL UNIT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	99.1	GEN300017 1-1G2GPDEL 18.000
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	99.1	GEN511938 1-OEC STEAM # 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	99.1	GEN511941 1-OEC STEAM # 2
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	99.1	GEN562517 1-G14_021_S2 0.6900
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	99.1	GEN562691 1-G15_015_3 0.6900
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	99.1	GEN645041 1-CASS COUNTY 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	99	GEN300016 1-1G1GPDEL 18.000
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	99	GEN549893 2-SOUTHWEST 2
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	99	GEN562023 1-G11_020_3 0.6900
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	99	GEN562026 1-G11_019_3 0.6900
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	99	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07747	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07747	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_002	TO->FROM	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	1011.0	1176.0	0.16243	101.3643	BASE CASE
0	16WP	G16_002	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.09897	100	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_002	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.09897	100	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_002	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.03596	107.6192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_002	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.03596	107.6192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	987.2	1082.8	0.17998	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	1330.0	1940.0	0.17913	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	1330.0	1940.0	0.17913	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.17000	-	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.17000	-	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.16596	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	1792.0	1792.0	0.16569	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	1022.0	1124.0	0.15823	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	1022.0	1124.0	0.15823	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	987.16	1082.77	0.14753	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	956.09	1051.7	0.14753	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.13242	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.13242	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	1420.0	1775.0	0.10956	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	1420.0	1775.0	0.10956	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	1420.0	1775.0	0.10956	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.09962	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.09962	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	16WP	G16_002	-	Non-Converged Contingency	439.0	439.0	0.08330	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	859.0	956.0	0.07620	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	560.0	560.0	0.07620	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	439.0	439.0	0.07012	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	450.0	450.0	0.07012	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.04996	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	17G	G16_002	-	Non-Converged Contingency	0.0	0.0	0.07442	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	17G	G16_002	-	Non-Converged Contingency	0.0	0.0	0.05381	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	17G	G16_002	-	Non-Converged Contingency	0.0	0.0	0.03963	-	P12:138:WFEC-AEPW:WASHITA4:CLINTJC4
0	17G	G16_002	-	Non-Converged Contingency	0.0	0.0	0.03670	-	P12:138:AEPW:REDROCKRD4:WTH_JCT4
0	17G	G16_002	-	Non-Converged Contingency	0.0	0.0	0.03563	-	P12:138:AEPW:HOB-JCT4:ELKCTY-4
0	17G	G16_002	-	Non-Converged Contingency	0.0	0.0	0.03237	-	P12:138:AEPW:WTHWF4:WTH_SE4
0	17G	G16_002	-	Non-Converged Contingency	0.0	0.0	0.03135	-	P12:138:AEPW:S.W.S.-4:HOB-JCT4
0	17SP	G16_002	-	Non-Converged Contingency	956.1	1051.7	0.21759	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17SP	G16_002	-	Non-Converged Contingency	956.09	1051.7	0.16697	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G16_002	-	Non-Converged Contingency	956.0	1042.0	0.16243	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17SP	G16_002	-	Non-Converged Contingency	956.0	1042.0	0.16243	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G16_002	-	Non-Converged Contingency	1330.0	1940.0	0.15173	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17SP	G16_002	-	Non-Converged Contingency	1330.0	1940.0	0.15173	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17SP	G16_002	-	Non-Converged Contingency	956.09	1051.7	0.14114	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	G16_002	-	Non-Converged Contingency	1792.0	1792.0	0.12222	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.11678	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	17SP	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.11678	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	17SP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.11133	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	G16_002	-	Non-Converged Contingency	1420.0	1775.0	0.10822	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_002	-	Non-Converged Contingency	353.0	353.0	0.10359	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17SP	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.09545	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G16_002	-	Non-Converged Contingency	318.7	350.57	0.08462	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	17SP	G16_002	-	Non-Converged Contingency	478.0	502.0	0.07539	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G16_002	-	Non-Converged Contingency	478.0	502.0	0.03113	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	0.0	0.0	0.21750	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G16_002	-	Non-Converged Contingency	956.1	1051.7	0.14417	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	956.1	1051.7	0.14417	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1792.0	1792.0	0.14224	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.13202	-	CIMARRON - MINCO 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.13202	-	GRACEMONT - MINCO 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	0.0	0.0	0.13066	-	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
0	20L	G16_002	-	Non-Converged Contingency	1584.0	2098.0	0.12733	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1584.0	2098.0	0.12733	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1022.0	1124.0	0.11669	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1022.0	1124.0	0.11669	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1022.0	1124.0	0.11669	-	OKLAUNION 345KV SWITCHED SHUNT
0	20L	G16_002	-	Non-Converged Contingency	0.0	0.0	0.11661	-	P12:230:AEPW:ELKCITY6:SWEETWT6
0	20L	G16_002	-	Non-Converged Contingency	956.09	1051.7	0.11532	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	956.09	1051.7	0.11532	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.11329	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.11329	-	GEN509403 1-PIRKEY GENERATION
0	20L	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.11329	-	GEN509416 1-TURK GENERATION
0	20L	G16_002	-	Non-Converged Contingency	560.0	560.0	0.10813	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_002	-	Non-Converged Contingency	560.0	560.0	0.10813	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_002	-	Non-Converged Contingency	560.0	560.0	0.10813	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G16_002	-	Non-Converged Contingency	560.0	560.0	0.10430	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.10272	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.10272	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	956.09	1051.7	0.10219	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	956.09	1051.7	0.10219	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	956.09	1051.7	0.10219	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	956.09	1051.7	0.10219	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	717.0	789.0	0.08554	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	717.0	789.0	0.08554	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	717.0	789.0	0.08554	-	GEN515040 1-SEMINOLE 1G
0	20L	G16_002	-	Non-Converged Contingency	0.0	0.0	0.08488	-	P12:138:WFEC:MSL03
0	20L	G16_002	-	Non-Converged Contingency	478.0	502.0	0.08048	-	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	478.0	502.0	0.08048	-	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	560.0	644.0	0.07952	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_002	-	Non-Converged Contingency	560.0	644.0	0.07952	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_002	-	Non-Converged Contingency	560.0	644.0	0.07952	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G16_002	-	Non-Converged Contingency	560.0	644.0	0.07952	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.07936	-	ARCADIA - NORTHWEST 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1792.0	1792.0	0.07640	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1792.0	1792.0	0.07640	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
0	20L	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.07640	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.07640	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20L	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.07640	-	BORDER 7345.00 345KV SWITCHED SHUNT
0	20L	G16_002	-	Non-Converged Contingency	478.0	502.0	0.07429	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1792.0	1792.0	0.07343	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1792.0	1792.0	0.07343	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
0	20L	G16_002	-	Non-Converged Contingency	1793.0	1793.0	0.07343	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1716.0	1793.0	0.07343	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	G16_002	-	Non-Converged Contingency	1793.0	1793.0	0.07343	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1716.0	1793.0	0.07343	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	G16_002	-	Non-Converged Contingency	1793.0	1793.0	0.07343	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1716.0	1793.0	0.07343	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_002	-	Non-Converged Contingency	318.7	350.57	0.06744	-	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	318.7	350.57	0.06744	-	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1561.0	1793.0	0.06732	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1561.0	1793.0	0.06732	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1561.0	1793.0	0.06732	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_002	-	Non-Converged Contingency	1561.0	1793.0	0.06732	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_002	-	Non-Converged Contingency	1420.0	1775.0	0.06651	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1420.0	1775.0	0.06651	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G16_002	-	Non-Converged Contingency	1420.0	1775.0	0.06651	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1420.0	1775.0	0.06651	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_002	-	Non-Converged Contingency	1420.0	1775.0	0.06651	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1420.0	1775.0	0.06651	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G16_002	-	Non-Converged Contingency	421.0	439.0	0.06533	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	348.58	381.24	0.06533	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	500.0	723.0	0.06533	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1192.0	1192.0	0.06247	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	956.0	956.0	0.06247	-	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	478.0	502.0	0.06043	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	560.0	560.0	0.05995	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_002	-	Non-Converged Contingency	560.0	560.0	0.05995	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_002	-	Non-Converged Contingency	501.95	501.95	0.05817	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	501.95	501.95	0.05817	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	0.0	0.0	0.05699	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	20L	G16_002	-	Non-Converged Contingency	318.7	350.57	0.05519	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	318.7	350.57	0.05519	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1532.0	1793.0	0.05459	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1532.0	1793.0	0.05459	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20L	G16_002	-	Non-Converged Contingency	1532.0	1793.0	0.05459	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	G16_002	-	Non-Converged Contingency	318.7	350.57	0.05296	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	318.7	350.57	0.05296	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	785.0	785.0	0.05269	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	785.0	785.0	0.05269	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	762.5	762.5	0.05214	-	MINGO - SETAB 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	762.5	762.5	0.05214	-	MINGO - SETAB 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	717.1	717.1	0.05143	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	717.1	717.1	0.05143	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	439.0	439.0	0.05128	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_002	-	Non-Converged Contingency	450.0	450.0	0.05128	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_002	-	Non-Converged Contingency	450.0	450.0	0.05128	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.05099	-	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	318.7	350.57	0.04913	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	318.7	350.57	0.04913	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	478.0	502.0	0.04873	-	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	478.0	502.0	0.04873	-	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	726.6	726.6	0.04714	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	726.6	726.6	0.04714	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1413.0	1517.0	0.04714	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1413.0	1517.0	0.04714	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	318.7	350.57	0.04446	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	318.7	350.57	0.04446	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	0.0	0.0	0.04307	-	917X
0	20L	G16_002	-	Non-Converged Contingency	1505.0	1793.0	0.04303	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1505.0	1793.0	0.04303	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1505.0	1793.0	0.04303	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1504.0	1792.0	0.04283	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1504.0	1792.0	0.04283	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	0.0	0.0	0.04257	-	P12:138:WFEC:MSL14
0	20L	G16_002	-	Non-Converged Contingency	0.0	0.0	0.04213	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	20L	G16_002	-	Non-Converged Contingency	956.0	956.0	0.04108	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	0.0	0.0	0.03936	-	P12:230:SPS:K43.1.PRNGLE.HARR_E
0	20L	G16_002	-	Non-Converged Contingency	0.0	0.0	0.03878	-	P12:345:SPS:J15.1.XRDS.TOLK
0	20L	G16_002	-	Non-Converged Contingency	0.0	0.0	0.03767	-	P12:115:SPS:W08.1.HITCH.LASLEY
0	20L	G16_002	-	Non-Converged Contingency	1141.0	1195.0	0.03460	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1141.0	1195.0	0.03460	-	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1141.0	1195.0	0.03460	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	0.0	0.0	0.03289	-	P12:115:SPS:T53.1.NICHLS.KIRBY
0	20L	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.03064	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.02959	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_002	-	Non-Converged Contingency	0.0	0.0	0.02953	-	P12:115:SPS:V29.1.NICHLS.KNGSMLL
0	20SP	G16_002	-	Non-Converged Contingency	956.1	1051.7	0.21810	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20SP	G16_002	-	Non-Converged Contingency	956.0	1042.0	0.15704	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20SP	G16_002	-	Non-Converged Contingency	956.0	1042.0	0.15704	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.11627	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20SP	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.11627	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	G16_002	-	Non-Converged Contingency	987.2	1082.8	0.17590	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	1792.0	1792.0	0.17157	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	1584.0	2098.0	0.15576	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	1584.0	2098.0	0.15576	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.14634	-	CIMARRON - MINCO 345KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.14634	-	GRACEMONT - MINCO 345KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	1022.0	1124.0	0.14377	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	1022.0	1124.0	0.14377	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	987.16	1082.77	0.14311	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.14002	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	956.09	1051.7	0.12729	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	987.16	1082.77	0.12729	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.12516	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.12516	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	717.0	789.0	0.10843	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.09321	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.09321	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	G16_002	-	Non-Converged Contingency	421.0	439.0	0.07950	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	560.0	560.0	0.07830	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	329.05	360.92	0.06526	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	439.0	439.0	0.06376	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	450.0	450.0	0.06376	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	329.05	360.92	0.05395	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.04369	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	25SP	G16_002	-	Non-Converged Contingency	0.0	0.0	0.21734	-	P12:345:SPS:J02.1.TOLK.EDDY
0	25SP	G16_002	-	Non-Converged Contingency	343.79	343.79	0.07809	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_002	-	Non-Converged Contingency	478.0	502.0	0.05325	-	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_002	-	Non-Converged Contingency	0.0	0.0	0.05130	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
0	25SP	G16_002	-	Non-Converged Contingency	478.05	501.95	0.04454	-	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	25SP	G16_002	-	Non-Converged Contingency	0.0	0.0	0.04051	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
0	25SP	G16_002	-	Non-Converged Contingency	478.0	502.0	0.04023	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_002	-	Non-Converged Contingency	0.0	0.0	0.03172	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	25SP	G16_002	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03448	104.2168	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_002	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03448	104.166	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G16_002	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03025	104.0555	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_002	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03025	104.0254	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
2	25SP	G16_002	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.02996	104.6153	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05908	101.4541	P12:345:SPS:J15.1.XRDS.TOLK
2	17SP	G16_002	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06891	113.9867	BASE CASE
2	20SP	G16_002	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06543	110.7777	BASE CASE
2	17G	G16_002	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06621	104.3556	BASE CASE
2	20WP	G16_002	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06378	99.1	BASE CASE
2	17SP	G16_002	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.25871	103.9462	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20SP	G16_002	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.25327	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_002	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22673	117.0258	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G16_002	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.19778	112.9654	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G16_002	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22673	112.441	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	G16_002	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.19778	108.3696	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17SP	G16_002	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22139	108.1247	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17SP	G16_002	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22139	103.6738	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	25SP	G16_002	TO->FROM	COX INTERCHANGE - HALE CO INTERCHANGE 115KV CKT 1	95.81	95.81	0.03219	109.8963	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
2	25SP	G16_002	TO->FROM	COX INTERCHANGE - HALE CO INTERCHANGE 115KV CKT 1	95.81	95.81	0.03219	105.6853	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
2	16WP	G16_002	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08312	102.4471	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	16WP	G16_002	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08312	101.7764	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	20WP	G16_002	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.10847	109.7093	BASE CASE
2	16WP	G16_002	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11793	108.7418	BASE CASE
2	17G	G16_002	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11575	107.5286	BASE CASE
2	20WP	G16_002	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10847	123.7856	BASE CASE
2	16WP	G16_002	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11793	122.9306	BASE CASE
2	17G	G16_002	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11575	120.973	BASE CASE
2	17SP	G16_002	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11410	105.8511	BASE CASE
2	16WP	G16_002	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.22673	106.376	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G16_002	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.19778	102.3425	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G16_002	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.22673	101.9464	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_002	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.06579	102.2178	BASE CASE
2	17G	G16_002	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.08698	108.3474	BASE CASE
2	16WP	G16_002	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.11812	99.9	HAPPY INTERCHANGE - TULIA TAP 115KV CKT 1
2	16WP	G16_002	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.11812	99.9	P12:115:SPS:T67.1.HAPPY.KRESS
2	16WP	G16_002	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.11812	99.7	KRESS INTERCHANGE - TULIA TAP 115KV CKT 1
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09366	125.3293	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09366	125.3293	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07450	121.2944	GEN526333 1-JONES GEN #3 21 KV
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07450	120.8816	GEN526334 1-JONES_4 116.500
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08582	114.0091	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08267	107.098	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08267	107.098	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05966	106.8942	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05966	106.8942	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.06424	104.8862	P12:345:SPS:J15.1.XRDS.TOLK
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07641	104.5606	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07641	104.5481	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07641	104.5174	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07641	104.5174	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07450	103.4092	GEN587373 1-G16-056-GEN10.6900
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07041	103.2676	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07041	103.2676	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07041	103.2676	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07041	103.2676	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08486	103.1516	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08486	103.1516	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07997	102.5939	P12:345:SPS:J15.1.XRDS.TOLK
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07450	102.3409	GEN526331 1-JONES GEN #1 22 KV
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07450	102.3328	GEN526332 1-JONES GEN #2 21 KV
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07774	100.5338	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
2	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04759	100.313	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04759	100.313	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07703	99.7	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07703	99.7	P12:345:SPS:J14.1.EDDY.XRDS
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07703	99.6	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07703	99.6	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07967	99.2	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	987.2	1082.8	0.18002	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	1330.0	1940.0	0.17916	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_002	-	Non-Converged Contingency	1330.0	1940.0	0.17916	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.17004	-	CIMARRON - MINCO 345KV CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.17004	-	GRACEMONT - MINCO 345KV CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.16599	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	1792.0	1792.0	0.16573	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	1022.0	1124.0	0.15826	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	1022.0	1124.0	0.15826	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	987.16	1082.77	0.14756	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	956.09	1051.7	0.14756	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.13244	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.13244	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	1420.0	1775.0	0.10958	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.09964	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.09964	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	16WP	G16_002	-	Non-Converged Contingency	859.0	956.0	0.09372	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	560.0	560.0	0.09372	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	439.0	439.0	0.07013	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	450.0	450.0	0.07013	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	16WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.04999	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	249.0	274.0	0.38429	-	HAPPY INTERCHANGE - PALO DURO SUB 115KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	251.0	251.0	0.38429	-	PALO DURO SUB - RANDALL COUNTY INTERCHANGE 115KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1330.0	1940.0	0.17283	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1330.0	1940.0	0.17283	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	956.1	1051.7	0.16954	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.16387	-	CIMARRON - MINCO 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.16387	-	GRACEMONT - MINCO 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.15921	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.15921	-	GEN509403 1-PIRKEY GENERATION
2	17G	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.15921	-	GEN509404 1-WELSH #1
2	17G	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.15921	-	GEN509406 1-WELSH #3
2	17G	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.15921	-	GEN509416 1-TURK GENERATION
2	17G	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.15921	-	GEN511848 1-SOUTHWESTERN STATION #3
2	17G	G16_002	-	Non-Converged Contingency	1792.0	1792.0	0.15409	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1022.0	1124.0	0.15028	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1022.0	1124.0	0.15028	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	956.09	1051.7	0.13639	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	956.09	1051.7	0.13639	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.12701	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.12701	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	560.0	560.0	0.12649	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_002	-	Non-Converged Contingency	560.0	560.0	0.12649	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G16_002	-	Non-Converged Contingency	717.0	789.0	0.11575	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	717.0	789.0	0.11575	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	560.0	560.0	0.11153	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1420.0	1775.0	0.10894	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1420.0	1775.0	0.10894	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1420.0	1775.0	0.10894	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	478.0	502.0	0.09940	-	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1792.0	1792.0	0.09315	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1792.0	1792.0	0.09315	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
2	17G	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.09315	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.09315	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	17G	G16_002	-	Non-Converged Contingency	1561.0	1793.0	0.09132	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1561.0	1793.0	0.09132	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.08890	-	ARCADIA - NORTHWEST 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	318.7	350.57	0.08698	-	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1792.0	1792.0	0.08605	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1792.0	1792.0	0.08605	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
2	17G	G16_002	-	Non-Converged Contingency	1793.0	1793.0	0.08605	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1716.0	1793.0	0.08605	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	G16_002	-	Non-Converged Contingency	1793.0	1793.0	0.08605	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1716.0	1793.0	0.08605	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G16_002	-	Non-Converged Contingency	1793.0	1793.0	0.08605	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1716.0	1793.0	0.08605	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_002	-	Non-Converged Contingency	1792.0	1792.0	0.08605	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1792.0	1792.0	0.08605	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 2
2	17G	G16_002	-	Non-Converged Contingency	560.0	644.0	0.08578	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_002	-	Non-Converged Contingency	560.0	644.0	0.08578	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G16_002	-	Non-Converged Contingency	560.0	560.0	0.08157	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_002	-	Non-Converged Contingency	439.0	439.0	0.07983	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_002	-	Non-Converged Contingency	502.0	502.0	0.07983	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	500.0	723.0	0.07983	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	478.0	502.0	0.07737	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1532.0	1793.0	0.07625	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1532.0	1793.0	0.07625	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	G16_002	-	Non-Converged Contingency	1532.0	1793.0	0.07625	-	G1524G1525 345.00 - WICHITA 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1532.0	1793.0	0.07625	-	G1524G1525 345.00 - WICHITA 345KV CKT 2
2	17G	G16_002	-	Non-Converged Contingency	1532.0	1793.0	0.07625	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	G16_002	-	Non-Converged Contingency	560.0	644.0	0.07431	-	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G16_002	-	Non-Converged Contingency	501.95	501.95	0.06821	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	478.0	502.0	0.06766	-	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	502.0	502.0	0.06758	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	878.0	956.0	0.06740	-	BENTON - WICHITA 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	439.0	439.0	0.06621	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	450.0	450.0	0.06621	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.06579	-	CIMARRON - DRAPER LAKE 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	318.7	350.57	0.06579	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	560.0	644.0	0.06464	-	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1793.0	1793.0	0.06219	-	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1793.0	1793.0	0.06219	-	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	717.1	717.1	0.06171	-	HOLCOMB - SETAB 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	762.5	762.5	0.06027	-	MINGO - SETAB 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	726.6	726.6	0.05990	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1413.0	1517.0	0.05990	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	785.0	785.0	0.05938	-	MINGO - RED WILLOW 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	318.7	350.57	0.05926	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	318.7	350.57	0.05406	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.05360	-	GEN520947 1-HUGO1
2	17G	G16_002	-	Non-Converged Contingency	1192.0	1192.0	0.05297	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	956.0	956.0	0.05297	-	G15063_T 345.00 - WOODRING 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1505.0	1793.0	0.05246	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1505.0	1793.0	0.05246	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1505.0	1793.0	0.05246	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	318.7	350.57	0.05230	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1039.0	1195.0	0.05187	-	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.04910	-	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1504.0	1792.0	0.04852	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1504.0	1792.0	0.04852	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1035.0	1035.0	0.04775	-	G14_001T 345.00 - WICHITA 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1141.0	1195.0	0.04716	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1141.0	1195.0	0.04716	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.04356	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1022.0	1143.0	0.03787	-	PITTSBURG - VALLIANT 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.03669	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	159.35	159.95	0.03178	-	Hansford County Switch Station - SPEARMAN INTERCHANGE 115KV CKT 1
2	17G	G16_002	-	Non-Converged Contingency	159.95	159.95	0.03178	-	HITCHLAND INTERCHANGE - Hansford County Switch Station 115KV CKT 1
2	17SP	G16_002	-	Non-Converged Contingency	956.0	1042.0	0.15364	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G16_002	-	Non-Converged Contingency	987.2	1082.8	0.17598	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G16_002	-	Non-Converged Contingency	1792.0	1792.0	0.17166	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20WP	G16_002	-	Non-Converged Contingency	1584.0	2098.0	0.15581	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	20WP	G16_002	-	Non-Converged Contingency	1584.0	2098.0	0.15581	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	20WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.14643	-	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G16_002	-	Non-Converged Contingency	1022.0	1124.0	0.14384	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G16_002	-	Non-Converged Contingency	1022.0	1124.0	0.14384	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G16_002	-	Non-Converged Contingency	987.16	1082.77	0.14318	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.14008	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	20WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.12520	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	20WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.12520	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.09327	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	20WP	G16_002	-	Non-Converged Contingency	1792.0	1972.0	0.09327	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	20WP	G16_002	-	Non-Converged Contingency	439.0	439.0	0.06378	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	20WP	G16_002	-	Non-Converged Contingency	450.0	450.0	0.06378	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	20WP	G16_002	-	Non-Converged Contingency	1195.0	1195.0	0.04378	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	25SP	G16_002	-	Non-Converged Contingency	0.0	0.0	0.25247	-	P12:345:SPS:J02.1.TOLK.EDDY
2	25SP	G16_002	-	Non-Converged Contingency	343.79	343.79	0.07450	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G16_002	-	Non-Converged Contingency	0.0	0.0	0.05122	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
2	25SP	G16_002	-	Non-Converged Contingency	0.0	0.0	0.04039	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
2	25SP	G16_002	-	Non-Converged Contingency	0.0	0.0	0.03184	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_002	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03014	104.3654	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	25SP	G16_002	TO->FROM	COX INTERCHANGE - HALE CO INTERCHANGE 115KV CKT 1	95.81	95.81	0.03195	107.4237	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_002	TO->FROM	COX INTERCHANGE - HALE CO INTERCHANGE 115KV CKT 1	95.81	95.81	0.03195	103.2705	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
3	17G	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23600	219.0037	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23600	218.7841	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20762	212.6842	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20762	212.3523	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23432	206.7258	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23432	206.6	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24897	198.5451	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24897	197.214	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24250	191.0186	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24250	188.8782	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23944	182.2433	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23944	180.1336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03068	177.7676	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03068	176.0572	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25174	128.2336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25174	124.1314	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_002	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08312	102.99	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G16_002	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08312	102.3933	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G16_002	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.11797	100.3813	P12:115:SPS:T67.1.HAPPY.KRESS
3	16WP	G16_002	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.11797	100.3501	HAPPY INTERCHANGE - TULIA TAP 115KV CKT 1
3	16WP	G16_002	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.11797	100.1308	KRESS INTERCHANGE - TULIA TAP 115KV CKT 1
3	25SP	G16_002	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03570	113.6961	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G16_002	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03570	113.6922	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09428	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09428	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07495	119.248	GEN526333 1-JONES GEN #3 21 KV
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07495	118.8723	GEN526334 1-JONES_4 116.500
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08637	114.4952	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07487	112.8126	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07487	112.8111	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08922	111.8354	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08300	106.8773	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08300	106.8773	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08175	105.5745	P12:345:SPS:J02.1.TOLK.EDDY
3	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05973	104.0964	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05973	104.0964	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07686	103.9995	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07686	103.984	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07686	103.976	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07686	103.976	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07495	103.6041	GEN587373 1-G16-056-GEN10.6900
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07093	103.2394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07093	103.2394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07093	103.2394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07093	103.2394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08531	103.2214	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08531	103.2214	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08077	102.9873	P12:345:SPS:J15.1.XRDS.TOLK
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07495	102.4114	GEN526331 1-JONES GEN #1 22 KV
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07495	102.4061	GEN526332 1-JONES GEN #2 21 KV
3	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.06432	100.4251	P12:345:SPS:J15.1.XRDS.TOLK
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07822	100.2458	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08012	99.6	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07748	99	P12:345:SPS:J14.1.EDDY.XRDS
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07627	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07627	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03570	150.821	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03570	150.8177	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	118.3664	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	118.3017	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	101.1875	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	101.1522	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03570	99	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03570	99	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03130	110.7208	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03130	110.6974	P12:230:LPL:K26.1.JONES.LP-HOLLY
3	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03130	110.6461	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03130	110.6461	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	17G	G16_002	-	Non-Converged Contingency	3975.0	4570.0	0.30455	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	20L	G16_002	-	Non-Converged Contingency	3975.0	4570.0	0.25018	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	25SP	G16_002	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03789	100.3388	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
4	25SP	G16_002	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03014	104.1799	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	25SP	G16_002	TO->FROM	COX INTERCHANGE - HALE CO INTERCHANGE 115KV CKT 1	95.81	95.81	0.03194	107.5614	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
4	25SP	G16_002	TO->FROM	COX INTERCHANGE - HALE CO INTERCHANGE 115KV CKT 1	95.81	95.81	0.03194	103.4259	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
4	17G	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23560	219.2477	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23560	218.9034	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20717	212.5533	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20717	212.4877	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23378	206.5319	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23378	206.4431	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24854	198.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24854	197.0767	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24205	191.0175	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24205	188.7404	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23890	181.83	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23890	179.8003	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03067	177.5857	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03067	175.8792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25117	128.3207	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25117	124.1778	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_002	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08312	103.0572	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G16_002	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08312	102.4534	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	25SP	G16_002	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03570	113.6646	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G16_002	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03570	113.6599	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09429	125.0569	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09429	125.0569	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07496	119.0612	GEN526333 1-JONES GEN #3 21 KV
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07496	118.6856	GEN526334 1-JONES_4 116.500
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08637	114.2489	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07488	112.5996	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07488	112.5946	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08922	111.5567	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08301	106.7476	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08301	106.7476	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08176	105.4545	P12:345:SPS:J02.1.TOLK.EDDY
4	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05974	104.0099	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05974	104.0099	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07687	103.8244	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07687	103.8052	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07687	103.7969	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07687	103.7969	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07496	103.416	GEN587373 1-G16-056-GEN10.6900
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08531	103.2672	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08531	103.2672	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07093	103.0315	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07093	103.0315	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07093	103.0315	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07093	103.0315	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08078	102.755	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07496	102.1709	GEN526331 1-JONES GEN #1 22 KV
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07496	102.1659	GEN526332 1-JONES GEN #2 21 KV
4	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.06433	100.3275	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07822	100	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08013	99.4	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03570	150.9857	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03570	150.9823	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	118.304	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	118.2713	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	101.1568	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	101.1421	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03570	99.3	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03570	99.3	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03130	110.6999	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
4	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03130	110.6899	P12:230:LPL:K26.1.JONES.LP-HOLLY
4	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03130	110.6243	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03130	110.6243	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	17G	G16_002	-	Non-Converged Contingency	3975.0	4570.0	0.30018	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	20L	G16_002	-	Non-Converged Contingency	3975.0	4570.0	0.24581	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	25SP	G16_002	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03789	100	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
5	25SP	G16_002	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03015	104.0718	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	25SP	G16_002	TO->FROM	COX INTERCHANGE - HALE CO INTERCHANGE 115KV CKT 1	95.81	95.81	0.03193	107.7762	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
5	25SP	G16_002	TO->FROM	COX INTERCHANGE - HALE CO INTERCHANGE 115KV CKT 1	95.81	95.81	0.03193	103.6397	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
5	17G	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23280	217.7095	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23280	216.9825	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20490	211.2861	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20490	210.7754	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23105	204.8525	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23105	204.7326	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24556	196.7495	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24556	195.2293	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23923	189.7734	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23923	187.2532	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23613	180.5705	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23613	178.2726	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03059	176.2821	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.03059	174.3386	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24827	127.7475	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24827	123.5792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_002	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08312	103.0311	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	16WP	G16_002	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08312	102.4344	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	16WP	G16_002	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.11818	99.2	HAPPY INTERCHANGE - TULIA TAP 115KV CKT 1
5	16WP	G16_002	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.11818	99.2	P12:115:SPS:T67.1.HAPPY.KRESS
5	16WP	G16_002	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.11818	99	KRESS INTERCHANGE - TULIA TAP 115KV CKT 1
5	25SP	G16_002	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03570	113.6714	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G16_002	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03570	113.6673	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09432	124.8975	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09432	124.8975	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07498	118.9383	GEN526333 1-JONES GEN #3 21 KV
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07498	118.5628	GEN526334 1-JONES_4 116.500
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08640	114.1042	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07490	112.5331	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07490	112.531	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08924	111.409	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08302	106.6731	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08302	106.6731	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08178	105.3409	P12:345:SPS:J02.1.TOLK.EDDY
5	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05974	104.1015	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05974	104.1015	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07689	103.707	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07689	103.6946	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07689	103.6865	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07689	103.6865	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07498	103.2876	GEN587373 1-G16-056-GEN10.6900
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08534	103.1458	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08534	103.1458	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07096	102.9044	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07096	102.9044	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07096	102.9044	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07096	102.9044	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08082	102.6383	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07498	102.0561	GEN526331 1-JONES GEN #1 22 KV
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07498	102.051	GEN526332 1-JONES GEN #2 21 KV
5	16WP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.06434	100.4572	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07824	99.9	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
5	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08015	99.3	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03570	150.9628	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03570	150.9601	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	118.3008	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	118.268	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	101.1553	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	101.1406	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03508	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03570	99.2	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03570	99.2	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03130	110.6972	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
5	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03130	110.6738	P12:230:LPL:K26.1.JONES.LP-HOLLY
5	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03130	110.6217	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03130	110.6217	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_002	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03790	99.9	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
6	25SP	G16_002	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03010	103.7131	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	25SP	G16_002	TO->FROM	COX INTERCHANGE - HALE CO INTERCHANGE 115KV CKT 1	95.81	95.81	0.03199	108.0427	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
6	25SP	G16_002	TO->FROM	COX INTERCHANGE - HALE CO INTERCHANGE 115KV CKT 1	95.81	95.81	0.03199	103.9096	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
6	25SP	G16_002	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03570	113.5161	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09410	124.2902	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
6	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07485	118.5502	GEN526333 1-JONES GEN #3 21 KV
6	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07485	118.1772	GEN526334 1-JONES_4 116.500
6	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08621	113.6007	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07477	111.9176	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08863	110.107	CRAWFISH_DR 345.00 - YOAKUM_345 345.00 345KV CKT 1
6	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08313	106.564	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
6	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07676	103.2173	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07676	103.216	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
6	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07485	102.8608	GEN587373 1-G16-056-GEN10.6900
6	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08520	102.7727	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
6	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07082	102.4925	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07082	102.4925	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07485	101.6462	GEN526331 1-JONES GEN #1 22 KV
6	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07485	101.6414	GEN526332 1-JONES GEN #2 21 KV
6	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07776	99.4	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
6	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03570	151.3756	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03507	118.1734	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03507	118.1275	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03507	101.1279	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03507	101.1113	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03570	100.0897	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03130	110.6217	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
6	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03130	110.5253	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
0	17SP	G16_003	TO->FROM	CLINTON JUNCTION - ELK CITY 138KV CKT 1	136.0	152.0	0.03597	107.1886	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11221	109.6733	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07450	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07450	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06986	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06986	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09541	107.0835	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08027	104.4987	BASE CASE
0	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11221	104.4902	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09178	104.3491	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08713	103.6936	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07438	103.443	BASE CASE
0	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09541	102.1688	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08027	101.4903	GEN587433 1-G16-063-GEN10.6900
0	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07438	100.7184	GEN587433 1-G16-063-GEN10.6900
0	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07899	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07899	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08027	99.9	GEN509416 1-TURK GENERATION
0	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08191	99.8	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08191	99.5	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08644	99.3	P12:138:WFEC:MSL03
0	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08191	99.3	917X
0	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07615	99.3	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07438	99.3	GEN509403 1-PIRKEY GENERATION
0	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07438	99.1	GEN509416 1-TURK GENERATION
0	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08027	99	GEN501801 1-DOLET HILLS UNIT1
0	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07615	99	G15066_T 345.00 - SOONER 345KV CKT 1
0	17SP	G16_003	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03299	106.2349	BENTON - WICHITA 345KV CKT 1
0	17SP	G16_003	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03299	103.6589	BENTON - WICHITA 345KV CKT 1
0	17SP	G16_003	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03797	122.279	BENTON - WICHITA 345KV CKT 1
0	17SP	G16_003	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03797	119.3224	BENTON - WICHITA 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_003	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03108	102.8246	BENTON - WICHITA 345KV CKT 1
0	20SP	G16_003	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03108	100.6352	BENTON - WICHITA 345KV CKT 1
2	17SP	G16_003	TO->FROM	CLINTON JUNCTION - ELK CITY 138KV CKT 1	136.0	152.0	0.03585	106.1497	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	17SP	G16_003	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.03639	110.325	DGRASSE4 138.00 - KNOBHILL 138KV CKT 1
2	20WP	G16_003	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.02954	108.4646	DGRASSE4 138.00 - KNOBHILL 138KV CKT 1
2	16WP	G16_003	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.03686	107.353	DGRASSE4 138.00 - KNOBHILL 138KV CKT 1
2	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06977	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06977	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11141	108.9982	CIMARRON - MINCO 345KV CKT 1
2	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07432	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07432	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09506	107.7486	CIMARRON - MINCO 345KV CKT 1
2	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08697	104.6637	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07424	104.4426	BASE CASE
2	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07998	104.1902	BASE CASE
2	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09149	104.0601	CIMARRON - DRAPER LAKE 345KV CKT 1
2	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11141	103.8546	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09506	102.8482	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07424	101.6398	GEN587433 1-G16-063-GEN10.6900
2	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07998	101.2449	GEN587433 1-G16-063-GEN10.6900
2	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07605	100.27	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07424	100.2225	GEN509403 1-PIRKEY GENERATION
2	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07424	100.1495	GEN509416 1-TURK GENERATION
2	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07605	100	G15066_T 345.00 - SOONER 345KV CKT 1
2	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07314	100	PITTSBURG - VALLIANT 345KV CKT 1
2	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07314	100	PITTSBURG - VALLIANT 345KV CKT 1
2	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07872	99.9	PITTSBURG - VALLIANT 345KV CKT 1
2	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07872	99.9	PITTSBURG - VALLIANT 345KV CKT 1
2	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07605	99.8	917X
2	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07998	99.6	GEN509416 1-TURK GENERATION
2	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08168	99.5	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07953	99.3	P12:138:WFEC:MSL03
2	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08168	99.2	G15066_T 345.00 - SOONER 345KV CKT 1
2	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07424	99.1	GEN501801 1-DOLET HILLS UNIT1
2	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08612	99	P12:138:WFEC:MSL03
2	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08168	99	917X
2	17SP	G16_003	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03181	105.9385	BENTON - WICHITA 345KV CKT 1
2	17SP	G16_003	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03181	103.1661	BENTON - WICHITA 345KV CKT 1
2	17SP	G16_003	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03661	121.9386	BENTON - WICHITA 345KV CKT 1
2	17SP	G16_003	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03661	118.7551	BENTON - WICHITA 345KV CKT 1
2	20SP	G16_003	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.02980	102.1541	BENTON - WICHITA 345KV CKT 1
2	20SP	G16_003	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.02980	99.7	BENTON - WICHITA 345KV CKT 1
3	17SP	G16_003	TO->FROM	CLINTON JUNCTION - ELK CITY 138KV CKT 1	136.0	152.0	0.03585	106.1497	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
3	17SP	G16_003	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.03639	110.325	DGRASSE4 138.00 - KNOBHILL 138KV CKT 1
3	20WP	G16_003	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.02954	108.4646	DGRASSE4 138.00 - KNOBHILL 138KV CKT 1
3	16WP	G16_003	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.03686	107.353	DGRASSE4 138.00 - KNOBHILL 138KV CKT 1
3	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06977	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
3	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06977	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
3	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11141	108.9982	CIMARRON - MINCO 345KV CKT 1
3	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07432	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
3	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07432	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
3	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09506	107.7487	CIMARRON - MINCO 345KV CKT 1
3	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08697	104.6637	CIMARRON - DRAPER LAKE 345KV CKT 1
3	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07424	104.4426	BASE CASE
3	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07998	104.1902	BASE CASE
3	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09149	104.0601	CIMARRON - DRAPER LAKE 345KV CKT 1
3	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11141	103.8546	GRACEMONT - MINCO 345KV CKT 1
3	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09506	102.8481	GRACEMONT - MINCO 345KV CKT 1
3	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07424	101.6398	GEN587433 1-G16-063-GEN10.6900
3	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07998	101.2449	GEN587433 1-G16-063-GEN10.6900
3	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07605	100.27	CLEVELAND - G15066_T 345.00 345KV CKT 1
3	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07424	100.2225	GEN509403 1-PIRKEY GENERATION
3	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07424	100.1495	GEN509416 1-TURK GENERATION
3	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07605	100	G15066_T 345.00 - SOONER 345KV CKT 1
3	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07314	100	PITTSBURG - VALLIANT 345KV CKT 1
3	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07314	100	PITTSBURG - VALLIANT 345KV CKT 1
3	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07872	99.9	PITTSBURG - VALLIANT 345KV CKT 1
3	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07872	99.9	PITTSBURG - VALLIANT 345KV CKT 1
3	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07605	99.8	917X
3	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07998	99.6	GEN509416 1-TURK GENERATION

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08168	99.5	CLEVELAND - G15066_T 345.00 345KV CKT 1
3	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07953	99.3	P12:138:WFEC:MSL03
3	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08168	99.2	G15066_T 345.00 - SOONER 345KV CKT 1
3	20WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.07424	99.1	GEN501801 1-DOLET HILLS UNIT1
3	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08612	99	P12:138:WFEC:MSL03
3	16WP	G16_003	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08168	99	917X
3	17SP	G16_003	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03181	105.9385	BENTON - WICHITA 345KV CKT 1
3	17SP	G16_003	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03181	103.1661	BENTON - WICHITA 345KV CKT 1
3	17SP	G16_003	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03661	121.9386	BENTON - WICHITA 345KV CKT 1
3	17SP	G16_003	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03661	118.7551	BENTON - WICHITA 345KV CKT 1
3	20SP	G16_003	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.02980	102.1541	BENTON - WICHITA 345KV CKT 1
3	20SP	G16_003	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.02980	99.7	BENTON - WICHITA 345KV CKT 1
4	17SP	G16_003	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.03638	110.2837	DGRASSE4 138.00 - KNOBHILL 138KV CKT 1
4	20WP	G16_003	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.02953	108.43	DGRASSE4 138.00 - KNOBHILL 138KV CKT 1
4	16WP	G16_003	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.03685	107.3118	DGRASSE4 138.00 - KNOBHILL 138KV CKT 1
4	17SP	G16_003	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03180	103.1587	BENTON - WICHITA 345KV CKT 1
4	17SP	G16_003	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03660	118.7466	BENTON - WICHITA 345KV CKT 1
4	20SP	G16_003	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.02979	99.7	BENTON - WICHITA 345KV CKT 1
0	17G	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.03634	108.4309	LELAND OLDS - WASHBURN 230KV CKT 1
0	17G	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.03634	108.3668	P12:230:UMZB:# 171 #: WB IN ND.
0	17G	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.03634	108.3668	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	17G	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.03634	108.2854	BISMARK - WASHBURN 230KV CKT 1
0	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04210	107.9985	LELAND OLDS - WASHBURN 230KV CKT 1
0	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04210	107.9388	P12:230:UMZB:# 171 #: WB IN ND.
0	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04210	107.9388	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04210	107.8567	BISMARK - WASHBURN 230KV CKT 1
0	20SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04474	103.5212	LELAND OLDS - WASHBURN 230KV CKT 1
0	20SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04474	103.3371	BISMARK - WASHBURN 230KV CKT 1
0	20SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04474	103.2451	P12:230:UMZB:# 171 #: WB IN ND.
0	20SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04474	103.2451	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04646	101.2491	BASE CASE
0	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04646	101.2487	BASE CASE
0	25SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04485	100.9432	LELAND OLDS - WASHBURN 230KV CKT 1
0	20SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04800	100.8884	BASE CASE
0	25SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04485	100.7991	BISMARK - WASHBURN 230KV CKT 1
0	25SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04485	100.6298	P12:230:UMZB:# 171 #: WB IN ND.
0	25SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04485	100.6298	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	25SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04832	100.3863	BASE CASE
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04921	120.4938	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04921	120.4888	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04921	119.5753	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04921	118.2063	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04921	117.5289	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04921	117.4937	2810X2
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04921	116.7938	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04352	110.3168	BISON - HETINGER 230KV CKT 1
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04352	109.0115	BISON - MAURINE 230KV CKT 1
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	107.2177	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	106.7773	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	106.7758	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	106.7758	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	106.7414	BROADLAND - HURON 230KV CKT 1
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	106.7412	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	106.7412	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	106.7398	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	106.2618	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04192	103.7129	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04192	103.6279	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04192	103.6233	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04024	100	BUFFALO - JAMESTOWN 345KV CKT 1
0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	99	GEN659411 1-CAMPBLCNTY W0.6900
0	17SP	G16_004	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05966	112.4929	BASE CASE
0	17SP	G16_004	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05966	112.4918	BASE CASE
0	25SP	G16_004	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05661	107.2478	BASE CASE
0	20SP	G16_004	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05658	102.072	BASE CASE
0	17SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.03099	102.646	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	17SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.03099	102.646	P12:230:UMZW:# 158 #: MH IN ND.
0	17SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.03100	100.9787	MOOREHEAD - MORRIS 230KV CKT 1
0	20SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.03163	99	MOOREHEAD - MORRIS 230KV CKT 1
0	16WP	G16_004	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.06271	110.161	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_004	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.06271	106.7158	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_004	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.06272	110.1857	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_004	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.06272	106.7465	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	108.4948	BASE CASE
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	108.494	BASE CASE
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04727	105.7759	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04727	104.5818	G13_001IST 115.00 - SUMMIT 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06082	103.6445	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06082	103.5979	2810X2
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.13095	103.5196	BASE CASE
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.13095	103.5186	BASE CASE
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06082	102.9118	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04462	102.4869	BRISTOL - GROTON 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04593	102.1422	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04462	102.1048	BRISTOL - SUMMIT 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04593	101.5283	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04593	101.3753	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04701	101.0749	GROTON - REDFIELD 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04701	101.0229	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04570	100.5038	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04570	100.5036	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	100.4606	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04629	100.4461	HURON - REDFIELD 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05049	100.4102	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05049	100.4102	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04635	100.2476	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04635	100.2476	P12:230:UMZW:# 158 #: MH IN ND.
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04635	100.1719	MOOREHEAD - MORRIS 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04520	100.1572	PRAIRIE - RAMSEY 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	100.0723	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	100.062	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	100.062	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04523	100	JAMES TOWN - WEBER 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04523	99.9	BISMARK - WEBER 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.9	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.9	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.9	G15088_T 345.00 - MOORE 345KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04961	99.8	BISMARK - WASHBURN 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04961	99.8	LELAND OLDS - WASHBURN 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04961	99.8	P12:230:UMZB:# 171 #: WB IN ND.
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04961	99.8	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04509	99.8	ELM CREEK - MONTICELLO 345KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.8	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04599	99.7	GRANITE FALLS - MORRIS 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04599	99.7	GRANITE FALLS - MORRIS 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04573	99.7	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04524	99.7	BISMARK - HILKEN 4 230.00 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04493	99.7	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04493	99.7	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04493	99.7	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04493	99.7	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04493	99.7	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.7	GEN337652 1-WHITE BLUFF UNIT #1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.7	GEN337653 1-WHITE BLUFF UNIT #2
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.7	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.7	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.7	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04926	99.6	GLENHAM - WHITLOK 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04926	99.6	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04570	99.6	REDFIELD - WEST PARK B TAP 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04557	99.6	FARGO - MOOREHEAD 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04522	99.6	AUDUBON - HUBBARD 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04513	99.6	GRAND FORKS - PICKERT 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04502	99.6	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04496	99.6	MENNO JCT - UTICA 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.6	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.6	ANSON 115/17.5KV TRANSFORMER CKT 4
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.6	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.6	GEN338146 1-INDEPENDENCE UNIT #2
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04476	99.6	FT THOMPSON - WESSINGTON 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04476	99.6	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04938	99.5	GLENHAM - L3 HAWDON 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04697	99.5	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04515	99.5	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04515	99.5	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04509	99.5	ELM CREEK - PARKERS LAKE 345KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04502	99.5	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.5	GEN300003 1-THOMAS HILL UNIT 3
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.5	GEN542962 2-IATAN UNIT #2
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.5	GEN636641 1-LOUISA UNIT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.5	GEN659353 1-DEERCREK CTG18.000
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.5	GEN659354 1-DEERCREK STG18.000
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04474	99.5	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04474	99.5	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04474	99.5	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04474	99.5	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04473	99.5	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04473	99.5	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04473	99.5	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04473	99.5	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04466	99.5	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04466	99.5	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04926	99.4	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04926	99.4	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04496	99.4	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.4	BROOKING COUNTY - J432 345.00 345KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.4	GEN344894 1-1LAB G1 20.000
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.4	GEN344895 2-1LAB G2 20.000
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.4	GEN344896 3-1LAB G3 20.000
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.4	GEN344897 4-1LAB G4 20.000
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.4	GEN501801 1-DOLET HILLS UNIT1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.4	GEN542957 1-IATAN UNIT #1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.4	GEN587583 1-J432-GEN1 0.6900
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.4	GEN645011 1-NEBRASKA CITY 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.4	GEN645012 2-NEBRASKA CITY 2
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.4	J432 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.4	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.4	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.4	YANKEE 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.4	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04481	99.4	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04926	99.3	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04926	99.3	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04656	99.3	BELFIELD - CHARLIE CREEK 345KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04566	99.3	MONTICELLO - WAITE PARK 345KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04529	99.3	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04529	99.3	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04517	99.3	BALTA - HARVEY 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04515	99.3	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04515	99.3	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04507	99.3	AS KING - CHISAGO COUNTY 345KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.3	G09_001IST 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.3	G09_001IST 345.00 345/34.5KV TRANSFORMER CKT 2
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.3	GEN334440 1-SABINE UNIT 4
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.3	GEN336251 1-NINEMILE POINT UNIT#4
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.3	GEN336252 1-NINEMILE POINT UNIT#5
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.3	GEN336831 1-BAXTER WILSON SES
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.3	GEN337041 1-GERALD ANDRUS
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.3	GEN345670 1-1RUSH G1 18.000
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.3	GEN345671 2-1RUSH G2 18.000
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.3	GEN501812 1-RODEMACHER UNIT 2
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.3	GEN501813 1-RODEMACHER UNIT 3
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.3	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.3	GEN542951 5-HAWTHORN UNIT #5
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.3	GEN542955 1-LACYGNE UNIT #1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.3	GEN587153 1-G16-021-GEN10.6900
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.3	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04483	99.3	CLEARWATER - NELIGH 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04483	99.3	CLEARWATER - ONEILL 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04478	99.3	AXTELL - SWEETWATER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04231	99.3	GROTON - ORDWAY 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04926	99.2	OAHE - SULLEY BUTTE 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04655	99.2	BOWMAN - RHAME 4 230.00 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04632	99.2	LELAND OLDS - LOGAN 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04522	99.2	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04502	99.2	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04492	99.2	MORANVILLE - ROSEAU 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04492	99.2	RICHER - ROSEAU 230KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.2	GEN300006 1-NEW MADRID UNIT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.2	GEN300007 1-NEW MADRID UNIT 2
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.2	GEN335206 1-NELSON UNIT 6
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.2	GEN509403 1-PIRKEY GENERATION
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.2	GEN509416 1-TURK GENERATION
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.2	GEN542956 2-LACYGNE UNIT #2
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.2	GEN563222 1-G15088_3 0.6900
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.2	GEN600045 4-ANSON
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.2	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.2	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.2	MEC115 - WILMARTH 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.2	MEC345 - WILMARTH 345KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04489	99.2	MEC345 345/19.5KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04485	99.2	GRANT - MITCHELL 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04485	99.2	GRANT - MITCHELL 115KV CKT 1
0	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04221	99	EDGELEY - JAMES TOWN 115KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04921	135.4445	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04921	135.4393	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04921	134.8437	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04921	132.5985	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04921	132.335	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04921	132.2989	2810X2
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04921	131.5398	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04352	124.9055	BISON - HETINGER 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04352	123.4996	BISON - MAURINE 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	121.2595	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	121.0734	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	121.0731	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	121.0731	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	121.0312	BROADLAND - HURON 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	121.0309	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	121.0309	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	121.0306	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04271	120.9294	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04192	118.5797	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04192	118.4195	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04192	118.4137	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04024	114.1341	BUFFALO - JAMESTOWN 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04012	112.5468	SPLIT ROCK - WHITE 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04012	112.5468	SPLIT ROCK - WHITE 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03969	112.271	CHISAGO COUNTY - FORBES 500KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03969	111.9821	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04103	111.8106	BOWMAN - RHAME 4 230.00 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04069	111.5792	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04069	111.5792	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04038	111.5298	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03989	111.403	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04069	111.3197	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04038	111.264	G09_001IST 345.00 - GROTON 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03966	111.1515	488489510526345.00 - BSSOUTH3 345.00 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03996	110.8139	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03952	110.7943	BROOKING COUNTY - BSSOUTH3 345.00 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04028	110.5094	CENTER - JAMESTOWN 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04103	109.997	BOWMAN - HETINGER 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03982	109.5345	BISMARK - WEBER 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03982	109.5103	BISMARK - JAMES TOWN 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03982	109.4833	JAMES TOWN - WEBER 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03864	109.2042	CENTER - SQUARE BUTTE 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04071	109.1816	HESKETT - WISHEK 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	109.1484	GEN652556 3-OAHE
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04071	109.0382	MERRCRT4 230.00 - WISHEK 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04009	108.9095	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	108.606	GEN659118 1-LARAMIE RIVER UNIT1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04192	108.5804	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04192	108.5403	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04192	108.538	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	108.4371	GEN635024 4-WALTER SCOTT UNIT 4
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03976	108.3886	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03919	108.3211	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03962	108.3078	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	107.9865	GEN336821 1-GRAND GULF UNIT
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	107.9823	GEN635023 3-WALTER SCOTT UNIT 3
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03966	107.8618	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03966	107.8618	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03966	107.8544	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03944	107.7568	FARGO - JAMES TOWN 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03943	107.677	FARGO - JAMES TOWN 230KV CKT 2
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	107.6312	GEN344225 1-1CAL G1 25.000
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	107.4778	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	107.4674	GEN336153 1-WATERFORD UNIT#3
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	107.3129	GEN635214 4-NEAL UNIT 4
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03943	107.2987	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03943	107.2987	P12:230:UMZW:# 158 #: MH IN ND.
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03943	107.2969	MOOREHEAD - MORRIS 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	107.226	GEN335831 1-RIVERBEND UNIT#1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03935	107.2198	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04034	107.2032	FT THOMPSON - HURON 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04034	107.2032	FT THOMPSON - HURON 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04034	107.2032	FT THOMPSON - HURON 230KV CKT 2
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04034	107.2032	FT THOMPSON - HURON 230KV CKT 2
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	107.1511	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03919	107.0407	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03946	107.025	HELENA - SHEAS LK3 345.00 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03911	106.8776	AS KING - EAU CLAIRE 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	106.8327	GEN337652 1-WHITE BLUFF UNIT #1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03911	106.8195	ELM CREEK - MONTICELLO 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	106.7982	GEN337653 1-WHITE BLUFF UNIT #2
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03916	106.7926	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	106.7838	GEN635213 3-NEAL UNIT 3
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	106.778	GEN338146 1-INDEPENDENCE UNIT #2
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	106.7648	GEN338143 1-INDEPENDENCE UNIT #1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03920	106.7066	AUDUBON - SHEYNNE 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03941	106.7043	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03934	106.6983	FARGO - SHEYNNE 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03934	106.6983	FARGO - SHEYNNE 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03938	106.6784	MAURINE (MA KV1A) 230/115/13.8KV TRANSFORMER CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	106.6624	GEN501801 1-DOLET HILLS UNIT1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03909	106.6493	BIG STONE - BLAIR 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03909	106.6493	BIG STONE - BLAIR 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	105.0197	BASE CASE
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03807	103.6019	LELAND OLDS - STANTON 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03807	103.6019	LELAND OLDS - STANTON 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03902	103.4024	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03952	103.3883	DICKINSON - HEBRON 4 230.00 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	103.3529	LADISH 115/13.2KV TRANSFORMER CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03913	103.2752	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03939	103.2687	FT RANDAL - UTICA JCT 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04024	103.2606	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	103.2603	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	103.2603	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	103.2219	GEN910006 1-G12_012IS_3 0.6900
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	103.1698	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	103.1673	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	103.1387	GEN659018 1-G14_003IS_3 0.6900
0	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.05904	103.1064	BISON - HETINGER 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04001	103.0855	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03908	103.0725	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03908	103.0725	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03886	103.0665	GARRISON - HILKEN 4 230.00 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03931	103.0606	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04001	103.0569	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.05904	103.0404	BISON - MAURINE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	103.0178	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04001	103.0126	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.959	GEN563342 1-G15098_3 0.6900
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03845	102.8923	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.8921	MPC02100TAP4230.00 - MPC2100WIND4230.00 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.8863	MPC2100WIND4230.00 230/34.5KV TRANSFORMER CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.8847	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.8784	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.8777	GEN563252 1-G15091_3 0.6900
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.8653	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.8653	GEN672304 4-BOUNDARY DAM GENERATOR 4
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.8653	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03994	102.8051	FT THOMPSON - OAHE 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03994	102.8051	FT THOMPSON - OAHE 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03994	102.8051	FT THOMPSON - OAHE 230KV CKT 2
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03994	102.8051	FT THOMPSON - OAHE 230KV CKT 2
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.7689	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.7679	GEN 10572 2-J290_MK10 0.6900
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03997	102.7113	FT THOMPSON - OAHE 230KV CKT 3
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03997	102.7113	FT THOMPSON - OAHE 230KV CKT 3
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03997	102.7113	FT THOMPSON - OAHE 230KV CKT 4
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03997	102.7113	FT THOMPSON - OAHE 230KV CKT 4
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.6954	LETCHER - SIOUX FALLS 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03844	102.6097	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03844	102.6097	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03845	102.6012	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03845	102.6012	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.5313	GEN659273 2-GROTON SYNC COND
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.5312	GEN659294 1-WILTONCOL9
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.5042	GEN 11104 1-J262_GEN 0.6000
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.5042	GEN 11108 1-J263_GEN 0.6000
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03779	102.4188	NUNDRWD - WAYSIDE 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.417	GEN600004 2-PRAIRIE ISLAND G2
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.4121	GEN615015 1-GRE-SPRITWDG13.200
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.4118	GEN600003 1-PRAIRIE ISLAND G1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.3973	GEN672321 1-SHAND GENERATOR 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.2606	GEN600006 1-AS KING
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.1688	GEN657745 1-MPC02100GEN90.6900
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.1653	GEN 10648 1-G830_GEN 0.6900
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	102.1452	CENTER 230/22.0KV TRANSFORMER CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03913	101.9879	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	101.8459	GEN563302 1-G15096_3 0.6900
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	101.7337	GEN659110 1-LELAND OLDS UNIT1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	101.7244	GEN652460 4-GARRISON
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	101.7244	GEN652461 5-GARRISON
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	101.5349	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	101.4576	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	101.4489	HANLON - STORLA 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03909	101.4325	FT THOMPSON - LETCHER 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03909	101.4325	FT THOMPSON - LETCHER 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	101.4274	GEN652457 1-GARRISON
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	101.4274	GEN652458 2-GARRISON
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	101.4274	GEN652459 3-GARRISON
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	101.37	GEN659403 1-NDSUNFLWR W0.6900
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	101.224	GEN620315 1-BIG STONE GEN
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03908	101.1707	STORLA - WESSINGTON 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	101.0608	GEN659453 1-GI1414GEN W0.6900
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	101.0406	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03952	100.7628	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	100.7481	GEN600000 1-SHERBURNECNTY G1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03908	100.7283	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	100.6231	GEN659141 1-K10215A
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	100.4214	GEN600005 1-MONTICELLO
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	100.3464	GEN659407 1-ANTELPHILLSW0.6900
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	100.2833	GEN659111 2-LELAND OLDS UNIT2
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	100.2744	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	100.2618	GEN657749 1-YOUNG 1 GENERATOR
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	100.098	GEN659010 4-G07_027IS_2 0.6900
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	100	GEN659366 3-WILTON 3 W0.6900
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	100	GEN672310 1-POPLAR RIVER GENERATOR 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03887	100	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	99.9	GEN600002 3-SHERBURNE CNTY G3
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03887	99.9	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	99.8	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	99.8	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	99.7	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	99.6	GEN600001 2-SHERBURNE CNTY G2
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	99.4	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03148	99.2	P12:230:UMZB:# 171 #: WB IN ND.
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03148	99.2	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03148	99	BISMARK - WASHBURN 230KV CKT 1
0	20L	G16_004	FROM->TO	GLENHAM - WHITLOK 230KV CKT 1	240.0	260.0	0.04697	102.4597	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20L	G16_004	FROM->TO	GLENHAM - WHITLOK 230KV CKT 1	240.0	260.0	0.04697	102.4502	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20L	G16_004	FROM->TO	GLENHAM - WHITLOK 230KV CKT 1	240.0	260.0	0.04697	101.9706	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20L	G16_004	FROM->TO	GLENHAM - WHITLOK 230KV CKT 1	240.0	260.0	0.04697	100.2447	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20L	G16_004	FROM->TO	GLENHAM - WHITLOK 230KV CKT 1	240.0	260.0	0.04697	100	2810X2
0	20L	G16_004	FROM->TO	GLENHAM - WHITLOK 230KV CKT 1	240.0	260.0	0.04697	100	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20L	G16_004	FROM->TO	GLENHAM - WHITLOK 230KV CKT 1	240.0	260.0	0.04697	99.4	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05364	118.4068	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05364	118.4059	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05364	117.8898	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05943	117.7724	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05943	117.7546	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05943	116.9194	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05943	116.1477	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05943	115.8286	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05943	115.3291	2810X2
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05943	115.3098	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07461	114.9074	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07461	114.8906	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07461	114.8902	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05364	113.3394	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05364	113.338	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05943	113.0011	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05943	112.9827	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05364	112.8864	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05943	112.2819	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05943	111.6166	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05943	111.3269	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06646	111.1276	BISON - HETINGER 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06646	110.9617	BISON - MAURINE 230KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05943	110.903	2810X2
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05943	110.8533	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06722	110.5587	GLENHAM - L3 HAWDON 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07461	110.4159	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07461	110.4007	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07461	110.3485	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06698	109.773	GLENHAM - WHITLOK 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06698	109.7518	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06698	109.7516	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.12446	109.7316	BASE CASE
0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.12446	109.7313	BASE CASE
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06698	109.6918	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06698	109.6918	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06698	109.6085	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06698	109.5185	OAHE - SULLEY BUTTE 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06722	109.4332	BISMARK - L3 HAWDON 230KV CKT 1
0	25SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.12240	107.1967	BASE CASE
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06267	107.0715	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06267	107.0715	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06646	107.0636	BISON - HETINGER 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06267	106.995	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06646	106.918	BISON - MAURINE 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06119	106.9044	GARRISON - JAMES TOWN 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06620	106.8083	P12:230:UMZB:# 171 #: WB IN ND.
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06620	106.8083	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06189	106.7956	HESKETT - WISHEK 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06620	106.735	LELAND OLDS - WASHBURN 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06620	106.7233	BISMARK - WASHBURN 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06189	106.6525	MERRCRT4 230.00 - WISHEK 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06722	106.6283	GLENHAM - L3 HAWDON 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06061	106.5891	BISMARK - HILKEN 4 230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05107	106.499	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05107	106.4989	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 2
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06025	106.4847	CENTER - COYOTE 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06329	106.4498	BOWMAN - RHAME 4 230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06177	106.4237	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06168	106.0299	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06070	106.0252	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05995	106.0158	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06698	105.9608	GLENHAM - WHITLOK 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06698	105.9405	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06698	105.9404	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06698	105.8919	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06698	105.8919	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06155	105.8772	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06070	105.8429	ABERDEEN JCT - ELLENDALE 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06698	105.8205	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06070	105.7646	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.12446	105.7454	BASE CASE
0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.12446	105.7451	BASE CASE
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06587	105.7449	LELAND OLDS - STANTON 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06587	105.7449	LELAND OLDS - STANTON 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06034	105.7432	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06034	105.7432	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06698	105.7409	OAHE - SULLEY BUTTE 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06074	105.7066	BISMARK - JAMES TOWN 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06073	105.6881	JAMES TOWN - WEBER 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06073	105.6768	BISMARK - WEBER 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06722	105.6672	BISMARK - L3 HAWDON 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06083	105.6334	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06075	105.6313	FARGO - JAMES TOWN 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06073	105.5995	FARGO - JAMES TOWN 230KV CKT 2
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06329	105.5348	BOWMAN - HETINGER 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06070	105.5339	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06103	105.5336	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06103	105.5336	P12:230:UMZW:# 158 #: MH IN ND.
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06103	105.5165	MOOREHEAD - MORRIS 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06138	105.4364	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06047	105.4098	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06055	105.3969	PRAIRIE - RAMSEY 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06061	105.3814	PRAIRIE - WINGER 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06118	105.3432	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06118	105.3432	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06038	105.2921	ELLENDALE - J316_SUB 230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06037	105.282	NUNDRWD - PHILIP TAP 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06124	105.2441	GROTON - REDFIELD 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	105.239	GEN635024 4-WALTER SCOTT UNIT 4
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	105.2132	GEN336821 1-GRAND GULF UNIT
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06032	105.2049	P12:115:UMZB:# 122 #: RUTH IN ND. RUTH TAP
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	105.2036	GEN635214 4-NEAL UNIT 4
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06118	105.1896	REDFIELD - WEST PARK B TAP 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06065	105.1606	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06065	105.1479	G13_001IST 115.00 - SUMMIT 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	105.1444	GEN635023 3-WALTER SCOTT UNIT 3
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06029	105.1402	P12:230:UMZW:# 166 #: PL IN SD. TAP
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06029	105.1402	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04745	105.0439	BISON - HETINGER 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.12134	104.5522	BASE CASE
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04745	104.4003	BISON - MAURINE 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	104.3823	2516-WATERTNCAP 4230.00
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	104.3823	BASE CASE
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	104.1457	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
0	25SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.12240	103.7454	BASE CASE
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06267	103.6371	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06267	103.6371	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.6291	LADISH 115/13.2KV TRANSFORMER CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06030	103.6238	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06037	103.6037	FT RANDAL - UTICA JCT 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.5914	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.5883	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06267	103.5726	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
0	20SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.12215	103.5593	BASE CASE
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.5401	GEN659273 2-GROTON SYNC COND
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.5401	GEN659294 1-WILTONCOL9
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.5133	GEN672304 4-BOUNDARY DAM GENERATOR 4
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.5133	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.5132	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.5023	GEN600005 1-MONTICELLO
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06036	103.4968	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.4843	GEN652410 3-FT PECK
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06119	103.4746	GARRISON - JAMES TOWN 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.4358	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06042	103.4236	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04647	103.4211	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06620	103.4143	P12:230:UMZB:# 171 #: WB IN ND.
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06620	103.4143	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06028	103.4046	HANLON - SIOUX FALLS 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06189	103.4032	HESKETT - WISHEK 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.3963	GEN652414 4-FT PECK
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.3963	GEN652415 5-FT PECK
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.3841	GEN615015 1-GRE-SPRITWDG13.200
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.3531	GEN600000 1-SHERBURNECNTY G1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06620	103.3513	LELAND OLDS - WASHBURN 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06620	103.3421	BISMARK - WASHBURN 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06026	103.317	STORLA - WESSINGTON 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06025	103.3056	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06025	103.3056	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.2993	GEN672392 1-NBECGT1G 18.000
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.2923	GEN 11104 1-J262_GEN 0.6000
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.2923	GEN 11108 1-J263_GEN 0.6000
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05941	103.2836	STORLA - WOONSOCKET 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06189	103.2817	MERRCRT4 230.00 - WISHEK 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.2589	J290_SUB 230.00 230/34.5KV TRANSFORMER CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.2488	GEN600001 2-SHERBURNE CNTY G2
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.2407	GEN 10572 2-J290_MK10 0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06053	103.2176	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06053	103.2148	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06061	103.188	BISMARK - HILKEN 4 230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.1747	GEN657745 1-MPC02100GEN90.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05107	103.1592	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05107	103.1589	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 2
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05941	103.1546	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05941	103.1231	HURON - WOONSOCKET 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06053	103.106	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06025	103.102	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06025	103.102	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06329	103.1009	BOWMAN - RHAME 4 230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06025	103.0952	CENTER - COYOTE 345KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04647	103.0951	G09_001IST 345.00 - GROTON 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05967	103.0653	MITCHELL - MITCHELL NW 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05967	103.0653	MITCHELL - MITCHELL NW 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06177	103.0626	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06019	103.0402	BLAIR - GRANITE FALLS 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06019	103.0402	BLAIR - GRANITE FALLS 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.0311	GEN600002 3-SHERBURNE CNTY G3
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.0165	LETCHER - SIOUX FALLS 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.9774	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.9774	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.9634	MPC02100TAP4230.00 - MPC2100WIND4230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.943	GEN659192 6-LYNN
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.9403	GEN659162 4-RED WLCK
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.9403	GEN659163 5-BLACK WDCK
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04466	102.9336	BUFFALO - JAMESTOWN 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06036	102.9079	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.8857	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06002	102.8655	FT RANDAL - LAKE PLATT 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05967	102.8511	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05967	102.8511	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.7959	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.7943	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06028	102.757	FT THOMPSON - LETCHER 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06028	102.757	FT THOMPSON - LETCHER 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06032	102.7364	HANKINSON - WAHPETON 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06168	102.7351	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06070	102.735	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05995	102.7168	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.7099	GEN910006 1-G12_012IS_3 0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06001	102.6999	FT RANDAL - FT THOMPSON 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06001	102.6999	FT RANDAL - FT THOMPSON 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06002	102.6955	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06002	102.6955	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06155	102.5967	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04767	102.5869	GLENHAM - L3 HAWDON 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.5785	GEN659010 4-G07_027IS_2 0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.578	GEN659366 3-WILTON 3 W0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06070	102.5765	ABERDEEN JCT - ELLENDALE 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.544	GEN659018 1-G14_003IS_3 0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.5384	GEN 10648 1-G830_GEN 0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06070	102.5083	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.4824	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06587	102.4801	LELAND OLDS - STANTON 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06587	102.4801	LELAND OLDS - STANTON 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.4695	GEN563252 1-G15091_3 0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06034	102.4638	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06034	102.4638	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.4596	GEN672321 1-SHAND GENERATOR 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06074	102.459	BISMARK - JAMES TOWN 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.4544	GEN563342 1-G15098_3 0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06073	102.4441	JAMES TOWN - WEBER 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.4358	GEN652461 5-GARRISON
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.4356	GEN652460 4-GARRISON
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06073	102.4338	BISMARK - WEBER 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.3951	GEN652457 1-GARRISON
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.3951	GEN652458 2-GARRISON
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.3951	GEN652459 3-GARRISON
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06075	102.3917	FARGO - JAMES TOWN 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.3903	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06083	102.3785	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06073	102.3645	FARGO - JAMES TOWN 230KV CKT 2
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06103	102.3099	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06103	102.3099	P12:230:UMZW:# 158 #: MH IN ND.
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06329	102.3091	BOWMAN - HETINGER 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06070	102.3057	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06103	102.2951	MOOREHEAD - MORRIS 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.2385	GEN672311 2-POPLAR RIVER GENERATOR 2
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06138	102.2257	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06047	102.203	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06055	102.1884	PRAIRIE - RAMSEY 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06061	102.177	PRAIRIE - WINGER 230KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04739	102.1469	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04739	102.1469	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06118	102.1423	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06118	102.1423	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.1336	GEN659403 1-NDSUNFLWR W0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06038	102.0965	ELLENDALE - J316_SUB 230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.0929	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06037	102.087	NUNDRWD - PHILIP TAP 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.0686	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06016	102.0671	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06124	102.0577	GROTON - REDFIELD 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.0533	GEN635024 4-WALTER SCOTT UNIT 4
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.0288	GEN336821 1-GRAND GULF UNIT
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04739	102.0173	GLENHAM - WHITLOK 230KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04739	101.9905	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04739	101.9874	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06025	101.9537	HANLON - STORLA 230KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04745	101.8799	BISON - HETINGER 230KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04739	101.8676	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04739	101.7195	OAHE - SULLEY BUTTE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04767	101.5896	BISMARK - L3 HAWDON 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	101.5634	STANTON 230/18.0KV TRANSFORMER CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	101.559	GEN563302 1-G15096_3 0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	101.4765	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08847	101.4112	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05364	101.3925	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05364	101.3802	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05364	101.3671	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04745	101.3153	BISON - MAURINE 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	101.3009	2560-BRDLAND-LNX3345.00
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	101.3009	2561-BRDLAND-LNX3345.00
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	101.3009	BASE CASE
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.12134	101.2968	BASE CASE
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	101.0963	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05996	101.0285	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05996	101.0255	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05996	101.0173	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06036	100.9505	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.8328	GEN659453 1-GI1414GEN W0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.7755	GEN615010 1-STANTON4
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05996	100.7566	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	20SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.12215	100.5691	BASE CASE
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.5333	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.5333	GEN672304 4-BOUNDARY DAM GENERATOR 4
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.5333	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04647	100.5323	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04408	100.5306	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06036	100.5267	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.5247	GEN600005 1-MONTICELLO
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.5114	GEN652410 3-FT PECK
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.4699	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06042	100.4638	FT RANDAL - SIOUX CITY 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06028	100.4451	HANLON - SIOUX FALLS 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.4337	GEN652414 4-FT PECK
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.4337	GEN652415 5-FT PECK
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.4177	GEN615015 1-GRE-SPRITWDG13.200
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.3932	GEN600000 1-SHERBURNECNTY G1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06026	100.3879	STORLA - WESSINGTON 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.3818	GEN657749 1-YOUNG 1 GENERATOR
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06025	100.3533	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06025	100.3533	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.3436	GEN672392 1-NBECGT1G 18.000
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05941	100.3384	STORLA - WOONSOCKET 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.337	GEN 11104 1-J262_GEN 0.6000
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.337	GEN 11108 1-J263_GEN 0.6000
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05996	100.3117	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.3061	J290_SUB 230.00 230/34.5KV TRANSFORMER CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.3014	GEN600001 2-SHERBURNE CNTY G2
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.292	GEN 10572 2-J290_MK10 0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06053	100.28	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06053	100.2753	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04647	100.235	G09_001IST 345.00 - GROTON 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.2322	GEN657745 1-MPC02100GEN90.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.2303	GEN659141 1-K10215A
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05941	100.2224	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05941	100.1954	HURON - WOONSOCKET 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06053	100.1862	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06025	100.1763	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06025	100.1763	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05967	100.1387	MITCHELL - MITCHELL NW 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05967	100.1387	MITCHELL - MITCHELL NW 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06019	100.1267	BLAIR - GRANITE FALLS 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06019	100.1267	BLAIR - GRANITE FALLS 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.1108	GEN600002 3-SHERBURNE CNTY G3
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.1064	LETCHER - SIOUX FALLS 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.0694	GEN659110 1-LELAND OLDS UNIT1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.065	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.065	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04473	100.0518	CENTER - JAMESTOWN 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.05	MPC02100TAP4230.00 - MPC2100WIND4230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06036	100	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100	GEN659162 4-RED WLCK
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100	GEN659163 5-BLACK WDCK
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100	GEN659192 6-LYNN
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06002	100	FT RANDAL - LAKE PLATT 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05967	100	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05967	100	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04466	100	BUFFALO - JAMESTOWN 345KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06032	99.9	HANKINSON - WAHPETON 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06028	99.9	FT THOMPSON - LETCHER 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06028	99.9	FT THOMPSON - LETCHER 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.9	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.9	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04359	99.9	CHISAGO COUNTY - FORBES 500KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.8	GEN910006 1-G12_012IS_3 0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06002	99.8	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06002	99.8	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06001	99.8	FT RANDAL - FT THOMPSON 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06001	99.8	FT RANDAL - FT THOMPSON 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.7	GEN 10648 1-G830_GEN 0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.7	GEN659010 4-G07_027IS_2 0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.7	GEN659018 1-G14_003IS_3 0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.7	GEN659366 3-WILTON 3 W0.6900
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04767	99.7	GLENHAM - L3 HAWDON 230KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04359	99.7	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.6	GEN563252 1-G15091_3 0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.6	GEN563342 1-G15098_3 0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.6	GEN652460 4-GARRISON
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.6	GEN652461 5-GARRISON
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.6	GEN672321 1-SHAND GENERATOR 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.6	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.5	GEN652457 1-GARRISON
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.5	GEN652458 2-GARRISON
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.5	GEN652459 3-GARRISON
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.5	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.4	GEN672311 2-POPLAR RIVER GENERATOR 2
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.3	GEN659403 1-NDSUNFLWR W0.6900
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.3	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06016	99.3	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08847	99.3	2810X2
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04739	99.3	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04739	99.3	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.2	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06025	99.2	HANLON - STORLA 230KV CKT 1
0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08847	99.2	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04739	99.2	GLENHAM - WHITLOK 230KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04739	99.2	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04739	99.2	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06079	99.1	CARPENTER - WATERTOWN 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06079	99.1	CARPENTER - WATERTOWN 230KV CKT 1
0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	99.1	GEN587033 1-G16-004-GEN10.6900
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04739	99.1	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04463	99.1	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04463	99.1	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
0	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.36984	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.33401	-	2810X2
0	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.33401	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.28237	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345KV-CKT1
0	16WP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16701	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	16WP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16701	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	16WP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16701	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.16701	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	16WP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.14118	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.14118	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	16WP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.12836	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	16WP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.12836	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	16WP	G16_004	-	Non-Converged Contingency	478.0	526.0	0.12328	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.12328	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	16WP	G16_004	-	Non-Converged Contingency	797.0	797.0	0.12328	-	BROADLAND - HURON 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_004	-	Non-Converged Contingency	400.0	400.0	0.12328	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.06999	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	16WP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.06025	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.04666	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.04666	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.65550	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.56133	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.48537	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.36403	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.36403	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.32775	-	2810X2
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.32775	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.28402	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.28402	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.28066	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.24474	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.24474	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.19749	-	2810X2
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.19749	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.18080	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16388	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16388	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16388	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.16388	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.14601	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	17G	G16_004	-	Non-Converged Contingency	720.0	792.0	0.14201	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	17G	G16_004	-	Non-Converged Contingency	720.0	792.0	0.14201	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.14033	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.14033	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.12893	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.12893	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.12253	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	17G	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12237	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12237	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	17G	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12237	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12237	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.12134	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	17G	G16_004	-	Non-Converged Contingency	478.0	526.0	0.12134	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.12134	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	17G	G16_004	-	Non-Converged Contingency	732.0	732.0	0.12134	-	BROADLAND - HURON 230KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	400.0	400.0	0.12134	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_004	-	Non-Converged Contingency	400.0	400.0	0.12134	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.09875	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.09875	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.09875	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.09875	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17G	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09736	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09736	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09214	-	FORBES - ROSEAU 500KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	1732.1	1905.3	0.09214	-	RIEL - ROSEAU 500KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09214	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09214	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	705.0	705.0	0.09144	-	CENTER - JAMESTOWN 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	705.0	705.0	0.09105	-	BUFFALO - JAMESTOWN 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	1793.0	1793.0	0.09008	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	720.0	792.0	0.08868	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.07300	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.07300	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.06240	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.06240	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	720.0	792.0	0.06126	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	17G	G16_004	-	Non-Converged Contingency	720.0	792.0	0.06126	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.06027	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	17G	G16_004	-	Non-Converged Contingency	478.0	526.0	0.06027	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.06027	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	17G	G16_004	-	Non-Converged Contingency	732.0	732.0	0.06027	-	BROADLAND - HURON 230KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	400.0	400.0	0.06027	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_004	-	Non-Converged Contingency	319.0	385.0	0.05824	-	BISON - HETINGER 230KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	400.0	400.0	0.05824	-	BISON - MAURINE 230KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	335.0	429.4	0.05281	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_004	-	Non-Converged Contingency	319.0	341.0	0.05117	-	NUNDRWD - WAYSIDE 230KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.04503	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	17G	G16_004	-	Non-Converged Contingency	1206.0	1336.0	0.04239	-	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	17G	G16_004	-	Non-Converged Contingency	1206.0	1336.0	0.04239	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	409.0	450.0	0.03607	-	FORMAN - HANKINSON 230KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	409.0	450.0	0.03355	-	FORMAN - OAKES 230KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	319.0	351.0	0.03316	-	ELLENDALE - OAKES 230KV CKT 1
0	17G	G16_004	-	Non-Converged Contingency	319.0	351.0	0.03316	-	ELLENDALE - OAKES 230KV CKT 1
0	20L	G16_004	-	Non-Converged Contingency	0.0	0.0	0.52666	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	20L	G16_004	-	Non-Converged Contingency	0.0	0.0	0.22645	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	20SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.55987	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	20SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.48861	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	20SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.38671	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	20SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.36646	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.36646	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	20SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.33309	-	2810X2
0	20SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.33309	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.27994	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.25781	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	20SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.25781	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	20SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16655	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16655	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16655	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.13997	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.13997	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	20SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12890	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	20SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12890	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12890	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12890	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	20SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12890	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	20SP	G16_004	-	Non-Converged Contingency	478.0	526.0	0.12215	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.12215	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	20SP	G16_004	-	Non-Converged Contingency	732.0	732.0	0.12215	-	BROADLAND - HURON 230KV CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	400.0	400.0	0.12215	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	400.0	400.0	0.12215	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.12070	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.12070	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09544	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09544	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	705.0	705.0	0.09156	-	CENTER - JAMESTOWN 345KV CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	705.0	705.0	0.09064	-	BUFFALO - JAMESTOWN 345KV CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.08979	-	FORBES - ROSEAU 500KV CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	1732.1	1905.3	0.08979	-	RIEL - ROSEAU 500KV CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.08979	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.08979	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	20SP	G16_004	-	Non-Converged Contingency	1206.0	1336.0	0.04176	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
0	20WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.04705	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.66613	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.56239	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.48960	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.39413	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.36720	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.36720	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.34861	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.33307	-	2810X2
0	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.33307	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.28120	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.26275	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.26275	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	25SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16653	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	25SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16653	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16653	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.16653	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.14060	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.14060	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	25SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.13138	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	25SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.13138	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.13138	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.13138	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	25SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.13138	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.12240	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	25SP	G16_004	-	Non-Converged Contingency	478.0	526.0	0.12240	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.12240	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	25SP	G16_004	-	Non-Converged Contingency	732.0	732.0	0.12240	-	BROADLAND - HURON 230KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	400.0	400.0	0.12240	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	400.0	400.0	0.12240	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.12146	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.12146	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09613	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09613	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09026	-	FORBES - ROSEAU 500KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09026	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09026	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	720.0	792.0	0.08874	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	1800.0	1980.0	0.04804	-	488489510526345.00 - BSSOUTH3 345.00 345KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	705.0	705.0	0.04131	-	CENTER - JAMESTOWN 345KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	705.0	705.0	0.04066	-	BUFFALO - JAMESTOWN 345KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	720.0	792.0	0.03933	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.03929	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.03929	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.03614	-	FORBES - ROSEAU 500KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	1732.1	1905.3	0.03614	-	RIEL - ROSEAU 500KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.03614	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.03614	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	1800.0	1980.0	0.03421	-	BROOKING COUNTY - BSSOUTH3 345.00 345KV CKT 1
0	25SP	G16_004	-	Non-Converged Contingency	720.0	792.0	0.03127	-	SPLIT ROCK - WHITE 345KV CKT 1
0	20L	G16_004	TO->FROM	OAHE - SULLEY BUTTE 230KV CKT 1	240.0	260.0	0.04697	100.0974	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20L	G16_004	TO->FROM	OAHE - SULLEY BUTTE 230KV CKT 1	240.0	260.0	0.04697	100.0913	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20L	G16_004	TO->FROM	OAHE - SULLEY BUTTE 230KV CKT 1	240.0	260.0	0.04697	99.5	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	150.2033	BASE CASE
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	146.4509	BASE CASE
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03067	142.8595	LETCHER - SIOUX FALLS 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03310	142.291	AURORA - BROOKINGS 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	141.6574	BASE CASE
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03310	141.5259	AURORA - FLANDRU 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03072	141.1086	HANLON - SIOUX FALLS 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	140.5225	GEN600045 4-ANSON
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	140.3194	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	140.2154	GEN336153 1-WATERFORD UNIT#3
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03011	140.146	FT RANDAL - UTICA JCT 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03098	140.1448	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03098	139.946	BROOKINGS - WHITE 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03199	139.888	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03202	139.8802	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03099	139.7983	GRANITE FALLS - WILLMAR 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03043	139.7561	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04434	139.6887	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	139.6727	GEN335831 1-RIVERBEND UNIT#1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04434	139.6384	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03482	139.4463	BISON - HETINGER 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03355	139.4314	AURORA - BROOKINGS 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	139.4023	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	139.3421	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	139.0916	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	139.0239	GEN640009 1-COOPER NUCLEAR STATION
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03069	138.9861	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.9577	GEN501801 1-DOLET HILLS UNIT1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03103	138.9453	G15088_T 345.00 - MOORE 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.9286	GEN337653 1-WHITE BLUFF UNIT #2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03202	138.8501	MITCHELL - MITCHELL NW 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.8484	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.8403	GEN338143 1-INDEPENDENCE UNIT #1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.8224	GEN344897 4-1LAB G4 20.000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.8196	GEN344894 1-1LAB G1 20.000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.8194	GEN344895 2-1LAB G2 20.000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.8193	GEN344896 3-1LAB G3 20.000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.8153	GEN336251 1-NINEMILE POINT UNIT#4
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.791	GEN336831 1-BAXTER WILSON SES
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.7698	GEN501813 1-RODEMACHER UNIT 3
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.7688	GEN587153 1-G16-021-GEN10.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.7428	GEN337041 1-GERALD ANDRUS
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.711	GEN345671 2-1RUSH_G2 18.000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.7059	GEN345670 1-1RUSH_G1 18.000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03095	138.6739	MCCOOL - MOORE 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.6623	GEN645012 2-NEBRASKA CITY 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.6516	GEN335206 1-NELSON UNIT 6
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03093	138.6142	GRAND ISLAND - MCCOOL 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.6138	GEN336191 1-LITTLE GYPSY UNIT#3
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.5976	GEN501812 1-RODEMACHER UNIT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.5924	GEN336252 1-NINEMILE POINT UNIT#5
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03187	138.5916	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03174	138.5605	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.5487	GEN645011 1-NEBRASKA CITY 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02962	138.5353	HANKINSON - WAHPETON 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.5213	AINSWORTH - VALENTINE 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03482	138.5079	BISON - MAURINE 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.495	GEN600020 2-ANGUS ANSON1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.4562	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.4559	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.4491	GEN334440 1-SABINE UNIT 4
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.4472	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.44	GEN338388 1-1PLUM PT U1 23.000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03090	138.4367	GRACEVT7 - MORRIS 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.4146	GEN600021 3-ANGUS ANSON2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03174	138.4043	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.3945	GEN336464 1-MICHOUD UNIT #3
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.3825	GEN335204 1-NELSON UNIT 4
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03206	138.3467	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03098	138.3415	GRANT - MITCHELL 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.3288	GEN334441 1-SABINE UNIT 5
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.3159	GEN336801 1-BAXTER WILSON UNIT #1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03661	138.291	GLENHAM - WHITLOK 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03310	138.2516	FLANDRU - SIOUX FALLS 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03126	138.2507	CANBY - GRANITE FALLS 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03661	138.207	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03072	138.1969	SIDNEY - STEGALL 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.1931	GEN335614 1-WILLOW GLENN UNIT#4
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.1839	GEN542962 2-IATAN UNIT #2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03661	138.1774	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03052	138.1683	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.1563	GEN334433 1-SABINE UNIT 3
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03661	138.1541	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03110	138.1214	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03676	138.1195	GLENHAM - L3 HAWDON 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.1153	GEN336222 1-LITTLE GYPSY UNIT#2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03355	138.0548	AURORA - FLANDRU 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03661	138.053	OAHE - SULLEY BUTTE 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	138.0278	GEN563232 1-G15089_3 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03132	138.0095	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.9907	GEN336151 1-WATERFORD UNIT#1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.9907	GEN336152 1-WATERFORD UNIT#2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03130	137.9335	GRAND FORKS - PICKERT 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.9288	GEN303007 1-1BC2 U2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	137.9249	WINNER - WITTEN 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.9204	GEN600149 W-J183 PROSEW10.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03269	137.9059	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03269	137.9059	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.9001	GEN600150 W-J183 PROSEW20.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.8974	GEN303006 1-1BC2 U1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03146	137.8656	FARGO - SHEYNNE 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03132	137.8652	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.8353	GEN303008 1-1BC2 U3
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.8233	GEN542957 1-IATAN UNIT #1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.821	GEN336170 1-GULF OXY U4
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03106	137.8064	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03107	137.8041	AXTELL - SWEETWATER 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03012	137.803	UTICA JCT - VFODNES 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03088	137.794	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.7827	GEN563222 1-G15088_3 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03132	137.7462	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03088	137.7359	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03088	137.7357	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.7286	GEN542951 5-HAWTHORN UNIT #5
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03232	137.709	HURON - WOONSOCKET 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03109	137.703	CLEARWATER - ONEILL 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03101	137.6707	RASMUSN - UTICA JCT 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03088	137.6642	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03147	137.6536	MT VERN - STORLA 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03130	137.6331	JAMES TOWN - PICKERT 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.6246	GEN501811 1-RODEMACHER UNIT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03109	137.6147	CLEARWATER - NELIGH 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.5832	GEN542955 1-LACYGNE UNIT #1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.5534	GEN345765 H-1SIOUX 2 18.000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.5367	GEN334071 1-LEWIS CREEK 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	137.533	GREGORY - WINNER 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.5317	GEN334070 1-LEWIS CREEK 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.53	GEN562003 1-G11_027_3 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03109	137.5016	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03022	137.4955	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	137.4942	FT RANDAL - WHITE SWAN 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03269	137.4922	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03113	137.4853	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	137.4822	GEN600045 4-ANSON
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.458	GEN337766 1-TRACTEBEL UNIT S1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	137.4472	TYNDALL - WHITE SWAN 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.4315	GEN336221 1-LITTLE GYPSY UNIT#1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.4301	GEN345756 H-1SIOUX 1 18.000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03105	137.4227	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03105	137.4227	FT THOMPSON - OAHE 230KV CKT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.4185	GEN501910 1-ACADIA UNIT ST1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03118	137.4183	BASSETT 7115.00 - STUART 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.3852	GEN345832 1-1TS G1 13.800
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.3849	GEN345841 2-1TS G2 13.800
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03284	137.3805	BOWMAN - RHAME 4 230.00 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03104	137.3746	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03104	137.3746	FT THOMPSON - OAHE 230KV CKT 4
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03202	137.37	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03232	137.3643	STORLA - WOONSOCKET 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.3642	GEN337757 1-DUKE HOTSPRINGS STG1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.3591	GEN336446 1-MICHOUD UNIT #2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.3341	GEN334431 1-SABINE UNIT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.334	GEN334432 1-SABINE UNIT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03140	137.3168	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.3151	GEN337764 1-TRACTEBEL UNIT C1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.3151	GEN337765 1-TRACTEBEL UNIT C2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.2862	GEN336242 1-1NMIL ST1 18.000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03206	137.2848	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.2667	GEN501823 1-TECHE UNIT 3
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03206	137.2383	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03116	137.2346	ONEILL - SPENCER 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03176	137.2292	GROTON - REDFIELD 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03154	137.1957	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03116	137.173	FT RANDAL - SPENCER 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.1405	GEN659116 1-SPIRIT MOUND UNIT1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.1373	GEN587353 1-G16-050-GEN10.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03125	137.0637	PLEZIOZO1ARC
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	137.0508	GEN659117 2-SPIRIT MOUND UNIT2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03052	137.0483	FT THOMPSON - LETCHER 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03135	137.0173	MENNO JCT - TRIPP JCT 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04443	136.978	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03122	136.9385	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03105	136.9219	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	136.7807	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	136.7048	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	136.6639	GEN660016 1-B_H WIND 0.7000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03105	136.6401	G13_001IST 115.00 - SUMMIT 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03027	136.5937	MOOREHEAD - MORRIS 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	136.4544	GEN600046 1-MECST
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	136.4072	GEN600047 1-MECCT1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03111	136.3365	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03475	136.3	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03463	136.2928	FT THOMPSON - HURON 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03463	136.2928	FT THOMPSON - HURON 230KV CKT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	136.2478	SUB 1226 - TEKAMAH 161KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03207	136.2398	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03090	136.1745	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	136.1707	GEN615031 1-PLEASANT VALLEY
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	136.1672	GEN615032 2-PLEASANT VALLEY
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	136.1613	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03113	136.1609	DIXONCO 230.00 - HOSKINS 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	136.1598	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03115	136.1219	RAUN - TEKAMAH 161KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	136.1051	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03486	136.1033	BISON - MAURINE 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03126	136.1031	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03122	136.0643	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	136.0506	GEN619954 1-HUTCHINSON
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.9921	GEN600125 2-FEP ST G 13.800
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03121	135.9816	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03097	135.9654	SIOUX CITY - TWIN CHURCH 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.9649	GEN600130 W-G586 - CWN 10.6000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.9588	GEN600131 W-G586 - CWN 20.6000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03091	135.9586	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03091	135.9586	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.9346	GEN652004 1-G13_001IS_3 0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	135.9275	GEN335206 1-NELSON UNIT 6
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03121	135.9119	COOPER - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.8878	GEN600013 3-BLACK DOG GEN 3
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	135.8586	GEN335204 1-NELSON UNIT 4
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.8137	GEN603185 1-FIBROMINN GENERATION
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.7857	GEN659289 1-DAYCNTYWND W0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.7832	GEN563312 1-G15097_3 0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03107	135.7771	GRANT - MITCHELL 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03121	135.7617	COOPER - FAIRPORT 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03145	135.7567	BUFFALO RIDGE - YANKEE 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.7502	GEN600018 S-LS POWER STEAM
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.7477	GEN659031 1-G12_014IS_4 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.7245	GEN600050 1-FEP
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03099	135.7198	HOSKINS - SHELL CREEK 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	135.6897	GEN587153 1-G16-021-GEN10.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03123	135.6782	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03089	135.6548	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	135.6205	GEN501812 1-RODEMACHER UNIT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03089	135.6154	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.6047	GEN600012 2-BLACK DOG GEN 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03021	135.5941	UTICA JCT - VFODNES 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03669	135.5929	GLENHAM - WHITLOK 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03197	135.5671	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.5508	GEN600056 W-BUFFALO RIDGE WIND GEN
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.5352	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03123	135.5343	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03123	135.5342	DENISON - EXIRA 161KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.4593	GEN652414 4-FT PECK
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.4593	GEN652415 5-FT PECK
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	135.4475	GEN334441 1-SABINE UNIT 5
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03155	135.3943	MT VERN - STORLA 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.3725	GEN600063 1-COLVILLE GEN 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.3725	GEN600064 2-COLVILLE GEN 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.3287	GEN 11143 1-J436GEN1 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.3287	GEN 11153 1-J437GEN1 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.3269	GEN659290 1-EDGECOL
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03210	135.3197	MITCHELL - MITCHELL NW 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.3112	GEN587603 1-J488&J489GN10.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.2949	GEN600014 4-BLACK DOG GEN 4
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03123	135.2658	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	135.2658	GEN542957 1-IATAN UNIT #1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03122	135.2435	COOPER - ST JOE 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03669	135.2361	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	135.2353	GEN334433 1-SABINE UNIT 3
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.2302	GEN659162 4-RED WLCK

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.2302	GEN659163 5-BLACK WDCK
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.2267	GEN587663 1-H081-GEN1 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.2267	GEN659192 6-LYNN
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.224	GEN600065 7-HIGH BRIDGE
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.224	GEN600066 8-HIGH BRIDGE
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.2195	GEN600011 5-BLACK DOG GEN 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03135	135.2173	GREGORY - WINNER 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.2157	GEN600071 10-RIVER SIDE
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.2145	GEN600070 9-RIVER SIDE
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03684	135.2012	GLENHAM - L3 HAWDON 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.1958	GEN659294 1-WILTONCOL9
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.1957	GEN659273 2-GROTON SYNC COND
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	135.1912	GEN336222 1-LITTLE GYPSY UNIT#2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.1911	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.1897	GEN660001 2-ABERDEEN SIEBRECHT
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.1896	GEN600007 7-RIVERSIDE GEN 7
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.1882	GEN600043 7-BLUE LAKE5
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.1882	GEN600044 8-BLUE LAKE6
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	135.1722	GEN600017 C-LS POWER CT
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03669	135.0803	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03210	135.0525	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03669	135.0427	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.9804	GEN336152 1-WATERFORD UNIT#2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.9803	GEN336151 1-WATERFORD UNIT#1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03126	134.9478	DENISON - SIOUX CITY 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.9439	GEN338388 1-1PLUM PT U1 23.000
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03267	134.9285	FLANDRU - SIOUX FALLS 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.9226	GEN659270 1-WEST SW
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.9189	GEN652556 2-OAHE
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.9189	GEN652557 4-OAHE
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.9189	GEN652558 6-OAHE
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.9146	GEN600020 2-ANGUS ANSON1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.9063	GEN303007 1-1BC2 U2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.8966	GEN303006 1-1BC2 U1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.8874	GEN336191 1-LITTLE GYPSY UNIT#3
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03123	134.8861	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03123	134.8782	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.8729	GEN615021 1-GRE-ER 14G 16.000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.8593	GEN562872 1-G15046_3 0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.84	GEN600021 3-ANGUS ANSON2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.8344	GEN615052 1-CAMBRIDGE GENERATING STATION
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03123	134.7686	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.762	GEN652559 1-OAHE
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03669	134.7546	OAHE - SULLEY BUTTE 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.7425	GEN652345 W-G07_023IS_2 0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.7423	GEN563222 1-G15088_3 0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.7031	BASE CASE
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.7001	GEN335614 1-WILLOW GLENN UNIT#4
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.6926	GEN336170 1-GULF OXY U4
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.6905	GEN303008 1-1BC2 U3
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.6888	GEN600067 9-HIGH BRIDGE
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03203	134.6823	HURON - WATERTOWN 230KV CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.6703	GEN563232 1-G15089_3 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.634	GEN910006 1-G12_012IS_3 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03203	134.6168	CARPENTER - WATERTOWN 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.6077	GEN600149 W-J183 PROSEW10.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.5958	GEN336464 1-MICHOUD UNIT #3
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.5814	GEN659272 2-GROTON 2G13.800
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.5804	GEN600150 W-J183 PROSEW20.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.5714	GEN336801 1-BAXTER WILSON UNIT #1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.5168	GEN501811 1-RODEMACHER UNIT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03239	134.5102	HURON - WOONSOCKET 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03278	134.5	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.4776	GEN345765 H-1SIOUX 2 18.000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.4618	GEN600069 W-YANKEE 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.4419	GEN659274 1-GROTON
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.4193	GEN600078 W-YANKEE 3
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03852	134.4088	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.4075	GEN600077 W-YANKEE 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.4075	GEN600099 W-YANKEE 4

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03183	134.3638	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.3638	GEN659411 1-CAMPBLCNTY W0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03112	134.361	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.3462	GEN 10648 1-G830_GEN 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.326	GEN 11104 1-J262_GEN 0.6000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.326	GEN 11108 1-J263_GEN 0.6000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03243	134.2849	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.2834	GEN615015 1-GRE-SPRITWDG13.200
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03030	134.2599	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.2492	GEN562003 1-G11_027_3 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03203	134.2408	CARPENTER - HURON 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03278	134.049	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03278	134.049	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03218	134.0367	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.0328	GEN659010 4-G07_027IS_2 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03310	134.0255	AURORA - BROOKINGS 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03135	134.0209	TYNDALL - YANKON JCT 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.0198	GEN659194 1-NDPRAIRWND1W0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	134.0132	GEN587353 1-G16-050-GEN10.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.0116	GEN659366 3-WILTON 3 W0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.0074	GEN652460 4-GARRISON
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	134.0042	GEN652461 5-GARRISON
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	133.9969	ANSON - SPLIT ROCK 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	133.9968	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	133.9571	GEN300006 1-NEW MADRID UNIT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	133.9548	GEN652457 1-GARRISON
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	133.9548	GEN652458 2-GARRISON
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	133.9548	GEN652459 3-GARRISON
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03130	133.9487	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03184	133.9316	CHANARANBIE - FENTON 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03133	133.9236	PLEZIOZO1ARC
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03239	133.9218	STORLA - WOONSOCKET 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	133.8911	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03184	133.8734	GROTON - REDFIELD 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	133.8685	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	133.8611	GEN659403 1-NDSUNFLWR W0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03141	133.8273	BLOOMFIELD - GAVINS POINT 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03164	133.7116	AS KING - EAU CLAIRE 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	133.6682	GEN659116 1-SPIRIT MOUND UNIT1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	133.6	GEN590010 1-ERCOT EQUIVALENCE
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	133.5835	GEN600112 W-G287 NOB2G W0.5750
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	133.5591	GEN587053 1-G16-007-GEN10.6500
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	133.5565	GEN659117 2-SPIRIT MOUND UNIT2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03112	133.5343	PAHOJA - SIOUX FALLS 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	133.5272	GEN590011 2-ERCOT EQUIVALENCE
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03182	133.5143	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	133.4654	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	133.4454	CENTER 230/22.0KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03470	133.4436	FT THOMPSON - HURON 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03470	133.4436	FT THOMPSON - HURON 230KV CKT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03310	133.3354	AURORA - FLANDRU 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	133.3335	ANSON - SPLIT ROCK 115KV CKT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	133.3328	ANSON 115/17.5KV TRANSFORMER CKT 4
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03098	133.3168	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	133.218	GEN660016 1-B_H WIND 0.7000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03205	133.1519	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	133.1013	GEN600046 1-MECST
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03201	133.091	FT RANDAL - FT THOMPSON 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	133.0749	GEN600047 1-MECCT1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	133.0713	GEN659110 1-LELAND OLDS UNIT1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	133.0526	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03123	133.0502	RAUN - TEKAMAH 161KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	133.0446	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03134	133.0435	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03215	132.9874	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	132.9438	GEN587133 1-G16-017-GEN10.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	132.907	GEN659141 1-K10215A
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03199	132.8914	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03294	132.8619	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03121	132.8586	DIXONCO 230.00 - HOSKINS 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03129	132.8431	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	132.8354	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	132.8212	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03218	132.7097	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	132.7076	GEN659353 1-DEERCREK CTG18.000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	132.6831	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03130	132.6721	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03124	132.6651	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03223	132.6613	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	132.6493	GEN659354 1-DEERCREK STG18.000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03124	132.6248	MN VALLEY TAP - PANTHER 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	132.6091	GEN615010 1-STANTON4
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	132.5996	GEN600125 2-FEP ST G 13.800
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	132.5879	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03106	132.5825	SIOUX CITY - TWIN CHURCH 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03129	132.5692	COOPER - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02969	132.5675	HANKINSON - WAHPETON 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	132.5203	GEN603185 1-FIBROMINN GENERATION
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	132.514	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	132.5022	GEN600013 3-BLACK DOG GEN 3
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03131	132.4976	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	132.4785	GEN600130 W-G586 - CWN 10.6000
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	132.4686	GEN600131 W-G586 - CWN 20.6000
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03129	132.4426	COOPER - FAIRPORT 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	132.438	GEN652004 1-G13_001IS_3 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03147	132.3942	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03131	132.3813	DENISON - EXIRA 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03131	132.3741	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	132.3594	GEN600018 S-LS POWER STEAM
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	132.3576	GEN600050 1-FEP
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	132.301	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03158	132.2933	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	132.2314	GEN600012 2-BLACK DOG GEN 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	132.1342	GEN600056 W-BUFFALO RIDGE WIND GEN
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03130	132.123	COOPER - ST JOE 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03142	132.0456	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	132.0064	GEN600063 1-COLVILLE GEN 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	132.0064	GEN600064 2-COLVILLE GEN 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03131	131.9872	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.9377	GEN600014 4-BLACK DOG GEN 4
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03134	131.9324	DENISON - SIOUX CITY 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03172	131.9251	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	131.8847	GEN587583 1-J432-GEN1 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	131.8797	GEN587033 1-G16-004-GEN10.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	131.8638	GEN600006 1-AS KING
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.8581	GEN600011 5-BLACK DOG GEN 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.8566	GEN600071 10-RIVER SIDE
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.8552	GEN600070 9-RIVER SIDE
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03117	131.8525	MCLEOD - PANTHER 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.8516	GEN600065 7-HIGH BRIDGE
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.8516	GEN600066 8-HIGH BRIDGE
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.8384	GEN600043 7-BLUE LAKE5
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.8384	GEN600044 8-BLUE LAKE6
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.8281	GEN600007 7-RIVERSIDE GEN 7
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03142	131.821	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.8195	GEN600017 C-LS POWER CT
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.8146	GEN659290 1-EDGECOL
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	131.811	GEN587623 1-J493-GEN1 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03231	131.7943	PIPESTONE - SPLIT ROCK 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.7894	GEN 11143 1-J436GEN1 0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.7894	GEN 11153 1-J437GEN1 0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.7794	GEN659162 4-RED WLCK
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.7794	GEN659163 5-BLACK WDCK
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.7769	GEN659192 6-LYNN
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.7757	GEN587603 1-J488&J489GN10.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03225	131.7643	BYRON - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.7574	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.7431	GEN659273 2-GROTON SYNC COND
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.7431	GEN659294 1-WILTONCOL9
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.7383	GEN587663 1-H081-GEN1 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03108	131.7289	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03131	131.716	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03131	131.7075	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03098	131.6609	BROOKINGS - WHITE 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.6463	GEN660001 2-ABERDEEN SIEBRECHT
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03142	131.5546	HENNING - INMANN 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.5508	GEN659270 1-WEST SW
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03108	131.5207	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.493	GEN562872 1-G15046_3 0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03131	131.4702	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03202	131.3941	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03095	131.3898	PAYNSVILLE - WILLMAR 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03763	131.3886	HELENA - SHEAS LK3 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.3706	GEN600067 9-HIGH BRIDGE
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	131.3528	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03139	131.3452	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03099	131.3218	GRANITE FALLS - WILLMAR 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03095	131.2896	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.2599	GEN910006 1-G12_012IS_3 0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.2514	GEN652345 W-G07_023IS_2 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03116	131.1947	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.192	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.1904	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03144	131.1822	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.1389	GEN659272 2-GROTON 2G13.800
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03221	131.138	BYRON - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03187	131.0241	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.0058	GEN659411 1-CAMPBLCNTY W0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	131.0028	GEN659274 1-GROTON
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03156	130.9586	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	130.9331	GEN600078 W-YANKEE 3
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	130.9314	GEN 10648 1-G830_GEN 0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	130.9067	GEN600077 W-YANKEE 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	130.9067	GEN600099 W-YANKEE 4
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	130.9003	GEN600069 W-YANKEE 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.8673	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03143	130.853	AUDUBON - SHEYNNE 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	130.8313	GEN 11104 1-J262_GEN 0.6000
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	130.8313	GEN 11108 1-J263_GEN 0.6000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.8249	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.8083	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03100	130.8075	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03183	130.7962	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03069	130.7503	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03137	130.7329	FENTON - NOBLES 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03202	130.7262	MITCHELL - MITCHELL NW 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03145	130.7106	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03090	130.692	GRACEVT7 - ORTONVILLE 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03101	130.6877	BIG STONE - HIGHWAY 12 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03852	130.669	FIELD SOUTH - WILMARTH 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.6505	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.6442	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.6442	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03104	130.6376	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.6194	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	130.6136	GEN659194 1-NDPRAIRWND1W0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	130.6129	GEN659010 4-G07_027IS_2 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03852	130.6075	FIELD NORTH - FIELD SOUTH 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	130.5997	GEN659366 3-WILTON 3 W0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03852	130.598	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	130.5952	GEN652461 5-GARRISON
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	130.5947	GEN652460 4-GARRISON
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03661	130.5863	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03661	130.5863	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03250	130.552	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	130.5329	GEN652457 1-GARRISON
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	130.5329	GEN652458 2-GARRISON
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	130.5329	GEN652459 3-GARRISON
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03135	130.5308	FENTON - NOBLES 115KV CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03062	130.4753	FT THOMPSON - LETCHER 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03101	130.4652	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	130.4406	GEN659403 1-NDSUNFLWR W0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.3584	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.353	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03148	130.3452	AUDUBON - HUBBARD 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03126	130.3309	CANBY - GRANITE FALLS 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03098	130.3265	GRANT - MITCHELL 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03146	130.2948	FARGO - SHEYNNE 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.2732	MEC345 345/19.5KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.2657	MEC345 - WILMARTH 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.2453	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	130.2259	GEN587053 1-G16-007-GEN10.6500
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03090	130.2202	GRACEVT7 - MORRIS 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.217	NOBLES 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.1939	GEN659111 2-LELAND OLDS UNIT2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.1833	MEC115 - WILMARTH 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.1832	MEC115 115/15.0KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03139	130.1531	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.1	GEN600005 1-MONTICELLO
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03149	130.0917	KARLSTAD - WINGER 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03139	130.0915	ELM CREEK - MONTICELLO 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03694	130.0728	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.0173	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	130.0115	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.9976	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03126	129.8981	AIRTECH - FEP TAP 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.8828	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.8708	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03126	129.8687	AIRTECH - WEST FARIBAULT 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.858	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.8549	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03135	129.8523	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03116	129.8255	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03116	129.8255	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.8238	GENOA 161 161/24.0KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03174	129.823	P13:230-345:NPPD:STEGALL3:KV3A
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03130	129.8137	FENTON 115/69KV TRANSFORMER CKT 5
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.8126	488489510526345.00 - J526 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.8126	J526 345.00 345/34.5KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03098	129.796	CHERRY CREEK - GRANT 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.759	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.759	GEN659107 2-ANTELOPE VALLEY UNIT2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03128	129.7533	FORT RIDGELY - FRANKLIN 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	129.753	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03149	129.7393	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03126	129.7309	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.7278	AS KING 345/20.0KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.6792	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03099	129.6622	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03099	129.6622	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03126	129.645	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03108	129.6326	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03123	129.6272	BLUE LAKE - MCLEOD 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03126	129.6239	LAWERENCE CREEK - SHAEFER 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03129	129.6223	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03232	129.6106	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03114	129.5918	PAYNESVILLE - WAKEFIELD 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03144	129.5798	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	129.5792	GEN659453 1-GI1414GEN W0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03215	129.5624	MONTICELLO - WAITE PARK 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03137	129.5569	ELM CREEK - PARKERS LAKE 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03116	129.548	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03126	129.5343	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	129.5304	GEN659110 1-LELAND OLDS UNIT1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03125	129.5225	LYON COUNTY 115/69KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.5148	NOBLES 115/34.5KV TRANSFORMER CKT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03123	129.5144	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.5107	FENTON 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03126	129.5084	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03132	129.5075	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03125	129.5017	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03096	129.4964	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03128	129.4943	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03126	129.494	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03022	129.4928	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03022	129.4928	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03109	129.4909	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03206	129.4905	HIGHLND 3 345.00 - RAUN 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	129.4817	P12:115:UMZW:# 172 #: WI IN SD.
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03133	129.4808	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03153	129.476	LYON COUNTY (8779072) 345/115/34.5KV TRANSFORMER CKT 9
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.4692	LANGDON - LANGWIN7 115.00 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.4619	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	129.4571	GEN587133 1-G16-017-GEN10.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03096	129.4519	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03129	129.4498	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03140	129.4473	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03176	129.4341	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.4334	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.4248	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03132	129.4191	ARNOLD - HAZLETON 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03124	129.4133	ARROWHEAD - FORBES 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03159	129.3746	KOSSUTH 3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03128	129.3742	FRANKLIN - REDWOOD FALLS 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03116	129.3692	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.3612	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	129.3477	GEN659141 1-K10215A
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03123	129.3396	NOBLES () 345/115/34.5KV TRANSFORMER CKT 9
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03123	129.3364	NOBLES () 345/115/34.5KV TRANSFORMER CKT 10
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03138	129.2964	BLUE LAKE - HAMPTON CORNER 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.2918	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03155	129.2786	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.2774	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.2701	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03121	129.2658	AS KING - WILLOW RIVER 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03122	129.243	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03124	129.2389	NORTH ROCHESTER (NROC TR) 345/161/34.5KV TRANSFORMER CKT 9
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.2328	GEN 11123 1-G736-GEN1 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.2289	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.2202	GEN 11133 1-J442-GEN1 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03122	129.2093	CEDRSAUK B4 345.00 - EDG BUS2 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	129.2033	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03139	129.1951	WILMARTH () 161/115/13.8KV TRANSFORMER CKT 6
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03113	129.1945	GRE-CHUBLAK3345.00 - HAMPTON CORNER 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	129.187	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03121	129.1851	GLENCOE MUNI - MCLEOD 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.1629	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03153	129.1068	BUFFALO RIDGE - YANKEE 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03109	129.0887	HELENA - SCOTTCO3 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	129.0509	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	129.0128	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	129.0047	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03126	128.8813	BLAIR - GRANITE FALLS 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	128.6554	GEN659125 1-COVEY
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	128.6357	GEN587593 1-J460-GEN1 0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	128.6302	GEN659353 1-DEERCREK CTG18.000
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	128.6274	GEN659354 1-DEERCREK STG18.000
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03027	128.5968	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03027	128.5968	P12:230:UMZW:# 158 #: MH IN ND.
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03087	128.5903	HAZEL CREEK - LYON COUNTY 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	128.5542	CENTER - COYOTE 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03147	128.5394	BREWSTER - HERON LAKE 5 SPLIT INTO HRN EAST ELK1 161KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03147	128.448	BREWSTER - ELK 161KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03108	128.4458	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04443	128.4012	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	128.3949	SUB 1226 - TEKAMAH 161KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03115	128.3771	RAUN - TEKAMAH 161KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03087	128.3747	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03087	128.354	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03122	128.3501	CARROLL COUNTY - VICTORY 161KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	128.3463	GEN587583 1-J432-GEN1 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	128.3298	NEW MADRID 161/22.0KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	128.317	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03463	128.3116	FT THOMPSON - HURON 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03463	128.3116	FT THOMPSON - HURON 230KV CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	128.3108	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	128.3093	GEN600006 1-AS KING
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03122	128.3016	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03122	128.2863	BROOKING COUNTY - YANKEE 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03122	128.2863	BROOKING COUNTY - YANKEE 115KV CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	128.2785	GEN587623 1-J493-GEN1 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	128.2657	GRE-STNYCRK7115.00 (STNYCR115-69) 115/69/12.8KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03126	128.2575	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	128.22	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03146	128.214	HILLS - MONTEZUMA 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03125	128.2056	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	128.1988	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03121	128.1962	COOPER - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	128.1885	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03121	128.1076	COOPER - FAIRPORT 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03122	128.1006	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03121	128.0328	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03169	128.0075	BIG STONE - BLAIR 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	127.9944	DONALDSON - DONALDSON PIPE 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	127.9772	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03252	127.9576	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	127.9351	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	127.9317	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	127.9277	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	127.8931	H081 345.00 - H081-TAP 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	127.8931	H081 345.00 345/34.5KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03118	127.865	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	127.8356	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	127.8243	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	127.7965	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03108	127.7534	GRIMES - LEHIGH 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	127.7402	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03147	127.6853	ELK - MAGNOLIA 5 161KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03122	127.6558	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	127.6454	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	127.6443	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	127.5738	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	127.5609	LADISH 115/13.2KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03108	127.4551	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03193	127.4344	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03191	127.4281	CHANARANBIE - FENTON 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	127.4069	CENTER 230/22.0KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03153	127.4035	BONDURANT - MONTEZUMA 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03218	127.3363	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	127.2611	ANSON - SPLIT ROCK 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	127.2609	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03355	127.2295	AURORA - BROOKINGS 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	127.1891	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03142	127.0623	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03150	127.0343	DAN JUHL - SPLIT ROCK 161KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03150	127.0264	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	126.9894	ANSON 115/17.5KV TRANSFORMER CKT 4
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	126.9855	ANSON - SPLIT ROCK 115KV CKT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03150	126.9528	LEHIGH - RAUN 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03150	126.9248	DAN JUHL - MAGNOLIA 5 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03173	126.8753	AS KING - EAU CLAIRE 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03120	126.873	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	126.8649	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	126.8034	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	126.7595	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	126.6999	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03208	126.6145	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03203	126.6008	CARPENTER - WATERTOWN 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03355	126.5967	AURORA - FLANDRU 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	126.5813	GEN615001 1-COAL CREEK

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03203	126.5808	HURON - WATERTOWN 230KV CKT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	126.5515	GEN615002 2-COAL CREEK
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	126.5502	GEN659111 2-LELAND OLDS UNIT2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	126.5169	GEN587653 1-J526-GEN1 0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03213	126.4953	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03206	126.4473	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03132	126.3941	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03132	126.366	MN VALLEY TAP - PANTHER 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	126.3463	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03156	126.2234	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03218	126.199	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	126.174	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	126.1532	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	126.1471	GEN659103 1-ANTELOPE VALLEY UNIT1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	126.1471	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03858	126.1256	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03302	126.1117	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03225	126.0809	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03150	125.7989	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	125.7528	GEN587633 1-J510-GEN1 18.000
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03167	125.6999	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03116	125.6091	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03191	125.6052	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03125	125.5723	MCLEOD - PANTHER 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	125.5456	GEN 11123 1-G736-GEN1 0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03150	125.5436	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03240	125.5387	PIPESTONE - SPLIT ROCK 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	125.5325	GEN 11133 1-J442-GEN1 0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	125.5016	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03116	125.4406	BROOKINGS - WHITE 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03116	125.3914	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	125.3709	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	125.3638	YANKEE 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03150	125.2738	HENNING - INMANN 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03103	125.2578	PAYNSVILLE - WILLMAR 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03179	125.2364	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03107	125.195	GRANITE FALLS - WILLMAR 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03197	125.1885	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03148	125.185	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03191	125.173	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	125.1725	GEN587593 1-J460-GEN1 0.6900
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	125.1575	BROOKING COUNTY - J432 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	125.1575	J432 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03103	125.1387	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03228	125.0232	BYRON - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03210	125.0086	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	124.9911	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	124.9462	GEN659125 1-COVEY
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	124.9439	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03131	124.9312	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	124.8506	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03108	124.7684	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03151	124.6797	AUDUBON - SHEYNNE 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03258	124.6644	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	124.6336	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03089	124.5815	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03109	124.5792	BIG STONE - HIGHWAY 12 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	124.5695	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03224	124.5402	BYRON - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03154	124.5369	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	124.5353	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03098	124.5154	GRACEVT7 - ORTONVILLE 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03164	124.5076	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03112	124.4988	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03129	124.4784	BURR - CANBY 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03145	124.4677	FENTON - NOBLES 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03669	124.4527	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03669	124.4527	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03078	124.4429	FT THOMPSON - WESSINGTON 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03154	124.3437	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03210	124.295	MITCHELL - MITCHELL NW 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03134	124.2803	CANBY - GRANITE FALLS 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03109	124.2715	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03143	124.2467	FENTON - NOBLES 115KV CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	124.2234	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	124.2234	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	124.2108	BURR - J493 115.00 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	124.2108	J493 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	124.137	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	124.1189	NOBLES 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03154	124.1153	FARGO - SHEYNNE 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03156	124.085	AUDUBON - HUBBARD 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	124.0798	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	124.0774	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	124.0641	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	124.0553	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.9608	NOBLES 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03107	123.9583	GRANT - MITCHELL 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.943	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03098	123.9373	GRACEVT7 - MORRIS 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.9303	488489510526345.00 - J526 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.9303	J526 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.8783	MEC345 345/19.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.8729	MEC345 - WILMARTH 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.7892	MEC115 - WILMARTH 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.7891	MEC115 115/15.0KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03147	123.7592	ELM CREEK - MONTICELLO 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03157	123.7338	KARLSTAD - WINGER 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.7234	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.715	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03148	123.7055	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03214	123.6373	HIGHLND 3 345.00 - RAUN 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.6145	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03116	123.5434	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.5264	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.5175	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03136	123.5054	FORT RIDGELY - FRANKLIN 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03133	123.5027	AIRTECH - FEP TAP 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03133	123.4769	AIRTECH - WEST FARIBAULT 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.4566	GENOA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03143	123.4547	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03157	123.4536	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03138	123.4524	FENTON 115/69KV TRANSFORMER CKT 5
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03107	123.4291	CHERRY CREEK - GRANT 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.3892	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.3805	AS KING 345/20.0KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03115	123.3728	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.3725	LANGDON - LANGWIN7 115.00 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03134	123.3451	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.34	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03130	123.3375	BLUE LAKE - MCLEOD 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.3357	FENTON 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03130	123.3198	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03122	123.3119	PAYNESVILLE - WAKEFIELD 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03182	123.302	P13:230-345:NPPD:STEGALL3:KV3A
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03134	123.2655	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03138	123.2571	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03239	123.2489	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03134	123.2463	LAWERENCE CREEK - SHAEFER 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03140	123.2421	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03124	123.2405	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03161	123.2389	LYON COUNTY (8779072) 345/115/34.5KV TRANSFORMER CKT 9
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03136	123.2366	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03223	123.2312	MONTICELLO - WAITE PARK 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03137	123.231	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03141	123.1789	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03135	123.1656	P12:115:UMZW:# 172 #: WI IN SD.
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03134	123.1653	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03145	123.1599	ELM CREEK - PARKERS LAKE 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03132	123.1554	ARROWHEAD - FORBES 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03134	123.1413	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03133	123.1305	LYON COUNTY 115/69KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.1293	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03134	123.1274	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03184	123.1228	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03136	123.1204	FRANKLIN - REDWOOD FALLS 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03142	123.0942	ARNOLD - HAZLETON 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03131	123.0916	NOBLES () 345/115/34.5KV TRANSFORMER CKT 9
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.0909	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03131	123.0878	NOBLES () 345/115/34.5KV TRANSFORMER CKT 10
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03030	123.0871	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03030	123.0841	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03148	123.0671	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03124	123.0667	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.0654	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	123.0128	GRAND MEADOW - PLEASANT VALLEY 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03130	123.002	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03129	122.9809	GLENCOE MUNI - MCLEOD 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03116	122.9638	HELENA - SCOTTCO3 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	122.9548	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03164	122.9509	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03130	122.9392	CEDRSAUK B4 345.00 - EDG BUS2 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03128	122.9349	BLUE LAKE (7000550) 345/115/13.8KV TRANSFORMER CKT 9
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	122.9333	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	122.9296	FENTON 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	122.9255	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03130	122.9184	AS KING - WILLOW RIVER 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	122.9122	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03121	122.9057	GRE-CHUBLAK3345.00 - HAMPTON CORNER 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	122.8976	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	122.8673	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	122.8673	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	122.6798	GEN587653 1-J526-GEN1 0.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	122.6533	RUNNING 230/118KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	122.3537	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	122.3482	CENTER - COYOTE 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03095	122.3337	HAZEL CREEK - LYON COUNTY 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03155	122.2406	BREWSTER - ELK 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03116	122.2222	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03129	122.1949	NEAL SOUTH - RAUN 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03129	122.1405	BROOKING COUNTY () 345/115/13.8KV TRANSFORMER CKT 10
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03129	122.1174	BROOKING COUNTY () 345/115/34.5KV TRANSFORMER CKT 9
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03095	122.1147	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03095	122.0938	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03130	122.0568	POCAHONTAS COUNTY - POMEROY 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	122.0413	P13:115-230:NPPD:NUCOR-3
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03130	122.0392	CARROLL COUNTY - VICTORY 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03123	122.0324	RAUN - TEKAMAH 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03130	122.0254	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02992	121.97	SPLIT ROCK (SPLT 11) 345/115/13.8KV TRANSFORMER CKT 11
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.9679	GRE-STNYCRK7115.00 (STNYCR115-69) 115/69/12.8KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03053	121.9638	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03134	121.9568	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02986	121.9511	SPLIT ROCK (SPLT 10) 345/115/13.8KV TRANSFORMER CKT 10
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03135	121.9386	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03470	121.9376	FT THOMPSON - HURON 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03470	121.9376	FT THOMPSON - HURON 230KV CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.9246	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03135	121.9036	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03129	121.8897	COOPER - FAIRPORT 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03130	121.8886	BROOKING COUNTY - YANKEE 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03130	121.8886	BROOKING COUNTY - YANKEE 115KV CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03129	121.8693	COOPER - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03129	121.8632	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.8494	GEN587633 1-J510-GEN1 18.000
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.8357	WINGER (WINGER) 115/69/41.6KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03132	121.8188	EDEN 345 345.00 - HCKRYCK3 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03133	121.7925	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03154	121.7844	HILLS - MONTEZUMA 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.778	THIEF RIVER FALLS (TRF) 115/69/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03129	121.7742	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03202	121.7552	ELLSBORO - LAKE YANKTON 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.7508	DONALDSON - DONALDSON PIPE 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03202	121.7291	CHANARANBIE - ELLSBORO 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03130	121.7195	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.6396	FRONTER4 230.00 (FRONTIER) 230/69/13.8KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03126	121.595	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.5673	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.5661	H081 345.00 - H081-TAP 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.5661	H081 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03700	121.5508	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.5112	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.4708	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.4617	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.453	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03155	121.4425	ELK - MAGNOLIA 5 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.4267	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03116	121.4084	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03135	121.3156	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.2834	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.2831	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.2821	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03214	121.27	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03131	121.2221	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.2078	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03858	121.1569	FIELD NORTH - FIELD SOUTH 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03858	121.1452	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03858	121.144	FIELD SOUTH - WILMARTH 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	121.1267	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03161	121.1262	BONDURANT - MONTEZUMA 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03116	121.1221	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03159	120.8101	DAN JUHL - SPLIT ROCK 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03159	120.8095	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03159	120.694	DAN JUHL - MAGNOLIA 5 161KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03128	120.6626	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03158	120.6362	LEHIGH - RAUN 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03151	120.564	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	120.5175	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03210	120.3513	CARPENTER - WATERTOWN 230KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03210	120.329	HURON - WATERTOWN 230KV CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	120.0737	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	119.2398	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	119.0905	YANKEE 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	118.906	BROOKING COUNTY - J432 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	118.906	J432 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03097	118.367	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03126	117.8398	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	117.6507	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	116.6625	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	116.6625	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03989	113.9642	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03989	113.829	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03989	113.8274	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	113.1663	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	112.9598	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03484	112.6621	NOBLES - SPLIT ROCK 345KV CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02951	111.7197	AURORA - BROOKINGS 115KV CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02951	111.7197	AURORA - BROOKINGS 115KV CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02951	111.0891	AURORA - FLANDRU 115KV CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02951	111.0891	AURORA - FLANDRU 115KV CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03989	110.6151	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03989	110.1135	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03989	110.1096	2810X2
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02970	110.0921	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03989	109.9494	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02970	109.9127	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02970	109.8955	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02970	109.864	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02970	109.8598	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03118	108.7514	BISON - HETINGER 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03281	108.7046	GLENHAM - WHITLOK 230KV CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03281	108.6621	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03281	108.6621	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03281	108.6143	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03281	108.6143	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03281	108.6139	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	108.6128	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03499	108.5693	NOBLES - SPLIT ROCK 345KV CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03297	108.552	GLENHAM - L3 HAWDON 230KV CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03281	108.4979	OAHE - SULLEY BUTTE 230KV CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03118	108.2539	BISON - MAURINE 230KV CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02951	108.0664	FLANDRU - SIOUX FALLS 115KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03300	106.8155	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03060	106.7124	FT THOMPSON - HURON 230KV CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03060	106.7124	FT THOMPSON - HURON 230KV CKT 1
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03060	106.7124	FT THOMPSON - HURON 230KV CKT 2
0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03060	106.7124	FT THOMPSON - HURON 230KV CKT 2
0	20L	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04855	106.6603	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	20L	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04855	105.1985	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	20L	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04855	103.6431	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.12425	102.7748	BASE CASE
0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03313	100.5533	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20L	G16_004	TO->FROM	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	240.0	264.0	0.04697	101.2409	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20L	G16_004	TO->FROM	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	240.0	264.0	0.04697	101.2336	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20L	G16_004	TO->FROM	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	240.0	264.0	0.04697	100.6834	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20L	G16_004	TO->FROM	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z	240.0	264.0	0.04697	99.1	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20L	G16_004	TO->FROM	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	240.0	260.0	0.04697	100.213	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20L	G16_004	TO->FROM	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	240.0	260.0	0.04697	100.2016	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20L	G16_004	TO->FROM	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1	240.0	260.0	0.04697	99.8	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04989	109.8349	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04989	109.8348	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04989	108.8672	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04989	108.8671	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	107.6947	BASE CASE
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	107.6935	BASE CASE
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05340	106.1694	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05340	105.1775	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05340	104.9459	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	102.9624	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05482	102.8818	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05482	102.8646	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05482	102.7737	HAZEL CREEK - LYON COUNTY 345KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.14490	102.6278	BASE CASE
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.14490	102.6265	BASE CASE
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	102.4327	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	102.4327	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05206	101.9756	BROOKINGS - WATERTOWN 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05206	101.9756	BROOKINGS - WATERTOWN 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	101.9498	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05181	101.4207	ARLINGTON - WATERTOWN 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	101.1804	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05125	101.1506	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05093	100.9658	BURR - CANBY 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	100.9627	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05125	100.8928	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05164	100.7518	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05164	100.7517	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	100.7034	BROOKING COUNTY - J432 345.00 345KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	100.7034	J432 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	100.657	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05065	100.6144	G15088_T 345.00 - MOORE 345KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	100.5895	YANKEE 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	100.5459	GEN659353 1-DEERCREK CTG18.000
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	100.5449	GEN659354 1-DEERCREK STG18.000
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05181	100.5341	ARLINGTON - BROOKINGS 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	100.4705	GEN587583 1-J432-GEN1 0.6900
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05088	100.4475	MN VALLEY TAP - PANTHER 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05181	100.3916	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05181	100.3916	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05181	100.3916	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	100.3549	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05051	100.3505	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05051	100.3504	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05127	100.3366	ELM CREEK - MONTICELLO 345KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05093	100.3188	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05112	100.2906	CANBY - GRANITE FALLS 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05112	100.2905	CANBY - GRANITE FALLS 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05105	100.2681	MENNO JCT - UTICA 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	100.2582	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05101	100.2556	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	100.2448	ANSON 115/17.5KV TRANSFORMER CKT 4
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05096	100.2128	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05096	100.2127	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06073	100.191	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05164	100.1487	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05164	100.1487	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05096	100.1317	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05096	100.106	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06073	100.1056	2810X2
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05096	100.1019	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05108	100.0967	PRAIRIE - RAMSEY 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05135	100	AUDUBON - HUBBARD 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05113	99.9	JAMES TOWN - WEBER 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05105	99.9	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.9	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.9	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05506	99.8	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05506	99.8	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05113	99.8	BISMARK - WEBER 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05126	99.7	ELM CREEK - PARKERS LAKE 345KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.7	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05044	99.7	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05044	99.7	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.6	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.6	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.6	WATERTOWN 230KV SWITCHED SHUNT
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05079	99.6	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05072	99.6	GRANT - MITCHELL 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05072	99.6	GRANT - MITCHELL 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05067	99.6	GRACEVT7 - ORTONVILLE 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.5	BURR - J493 115.00 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.5	J493 115.00 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05079	99.5	BIG STONE - HIGHWAY 12 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05068	99.5	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.4	GEN337652 1-WHITE BLUFF UNIT #1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.4	GEN337653 1-WHITE BLUFF UNIT #2
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.4	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.4	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.4	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05082	99.4	MCLEOD - PANTHER 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05069	99.4	CLEARWATER - NELIGH 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05069	99.4	CLEARWATER - ONEILL 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05067	99.4	GRACEVT7 - MORRIS 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05067	99.4	GRACEVT7 - MORRIS 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05060	99.4	AXTELL - SWEETWATER 345KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05026	99.4	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05026	99.4	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05240	99.3	MONTICELLO - WAITE PARK 345KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05223	99.3	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05125	99.3	MT VERN - STORLA 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05110	99.3	GRAND FORKS - PICKERT 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.3	2516-WATERTNCAP 4230.00
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.3	GEN600045 4-ANSON
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.3	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.3	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05069	99.3	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05034	99.3	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05034	99.3	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05034	99.3	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05223	99.2	FIELD NORTH - FIELD SOUTH 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05223	99.2	FIELD SOUTH - WILMARTH 345KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05096	99.2	EAGLE - MARTIN 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05091	99.2	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.2	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.2	GEN300003 1-THOMAS HILL UNIT 3
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.2	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.2	GEN338146 1-INDEPENDENCE UNIT #2
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.2	GEN542962 2-IATAN UNIT #2
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.2	GEN645012 2-NEBRASKA CITY 2
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.2	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.2	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.2	MEC115 - WILMARTH 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.2	MEC345 - WILMARTH 345KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.2	MEC345 345/19.5KV TRANSFORMER CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.2	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05083	99.2	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05083	99.2	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05083	99.2	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05083	99.2	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05111	99.1	AS KING - CHISAGO COUNTY 345KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05107	99.1	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05107	99.1	P12:230:UMZW:# 158 #: MH IN ND.
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.1	GEN636641 1-LOUISA UNIT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.1	GEN645011 1-NEBRASKA CITY 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.1	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.1	MEC115 115/15.0KV TRANSFORMER CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05082	99.1	FT RANDAL - WHITE SWAN 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05082	99.1	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05082	99.1	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05082	99.1	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05082	99.1	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05074	99.1	KELLY - SHELL CREEK 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05074	99.1	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05074	99.1	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05072	99.1	CHERRY CREEK - GRANT 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05206	99	HURON - WOONSOCKET 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05107	99	MOOREHEAD - MORRIS 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05095	99	DICKINSON - PARKERS LAKE 345KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05088	99	ARROWHEAD - FORBES 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05088	99	MORANVILLE - ROSEAU 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99	GEN344894 1-1LAB G1 20.000
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99	GEN344895 2-1LAB G2 20.000
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99	GEN344896 3-1LAB G3 20.000
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99	GEN344897 4-1LAB G4 20.000
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99	GEN501801 1-DOLET HILLS UNIT1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99	GEN542951 5-HAWTHORN UNIT #5
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99	GEN542957 1-IATAN UNIT #1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99	GEN587153 1-G16-021-GEN10.6900
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99	GEN600069 W-YANKEE 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99	GEN600077 W-YANKEE 2
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99	GEN600078 W-YANKEE 3
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99	GEN600099 W-YANKEE 4
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05082	99	TYNDALL - WHITE SWAN 115KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05072	99	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05070	99	GRANITE FALLS - WILLMAR 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05070	99	GRANITE FALLS - WILLMAR 230KV CKT 1
0	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05044	99	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04989	110.718	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04989	110.7179	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04989	109.7188	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04989	109.7187	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	108.7517	BASE CASE
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	108.7505	BASE CASE
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05340	107.167	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05340	106.1325	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05340	105.8973	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.14490	104.4933	BASE CASE
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.14490	104.4921	BASE CASE
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	104.038	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05482	103.7885	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05482	103.7695	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05482	103.6747	HAZEL CREEK - LYON COUNTY 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	103.3691	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	103.3691	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	102.9084	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05206	102.9039	BROOKINGS - WATERTOWN 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05206	102.9039	BROOKINGS - WATERTOWN 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05181	102.3571	ARLINGTON - WATERTOWN 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	102.1677	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05125	102.1203	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05093	102.0271	BURR - CANBY 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	101.938	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05125	101.8588	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05164	101.7025	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05164	101.7024	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	101.6438	BROOKING COUNTY - J432 345.00 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	101.6438	J432 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05065	101.6171	G15088_T 345.00 - MOORE 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	101.615	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	101.5509	YANKEE 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05181	101.4879	ARLINGTON - BROOKINGS 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	101.4187	GEN587583 1-J432-GEN1 0.6900
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	101.3973	GEN659354 1-DEERCREK STG18.000
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	101.3903	GEN659353 1-DEERCREK CTG18.000
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	101.376	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05051	101.3483	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05051	101.3483	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	101.3451	MN VALLEY TAP - PANTHER 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05127	101.3109	ELM CREEK - MONTICELLO 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05181	101.303	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05181	101.303	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05181	101.303	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05112	101.2973	CANBY - GRANITE FALLS 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05112	101.2973	CANBY - GRANITE FALLS 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05093	101.2934	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06073	101.2617	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05105	101.2617	MENNO JCT - UTICA 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	101.2296	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05096	101.2245	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05096	101.2244	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	101.2159	ANSON 115/17.5KV TRANSFORMER CKT 4
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06073	101.1672	2810X2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05096	101.1391	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05108	101.1284	PRAIRIE - RAMSEY 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05101	101.1278	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05096	101.113	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05096	101.1077	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05164	101.1049	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05164	101.1048	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	101.1	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05135	101.0264	AUDUBON - HUBBARD 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05113	100.9687	JAMES TOWN - WEBER 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05105	100.8951	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05506	100.8671	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05506	100.8671	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.8664	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05113	100.818	BISMARK - WEBER 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.7447	WATERTOWN 230KV SWITCHED SHUNT
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05044	100.6529	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05044	100.6453	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05126	100.6452	ELM CREEK - PARKERS LAKE 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.603	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.6017	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	100.5928	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.5824	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05072	100.5383	GRANT - MITCHELL 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05072	100.5382	GRANT - MITCHELL 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05068	100.5306	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05067	100.5298	GRACEVT7 - ORTONVILLE 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.5047	BURR - J493 115.00 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.5047	J493 115.00 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05069	100.4369	CLEARWATER - ONEILL 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.4197	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.4195	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.4174	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.4173	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05060	100.4146	AXTELL - SWEETWATER 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.4106	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	100.4089	BIG STONE - HIGHWAY 12 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05026	100.4087	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05026	100.4086	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.4	2516-WATERTNCAP 4230.00
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05069	100.3935	CLEARWATER - NELIGH 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05067	100.3426	GRACEVT7 - MORRIS 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05067	100.3425	GRACEVT7 - MORRIS 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05110	100.3378	GRAND FORKS - PICKERT 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05125	100.3146	MT VERN - STORLA 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05069	100.3055	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05034	100.3039	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05034	100.2829	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05034	100.2828	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	100.2714	MCLEOD - PANTHER 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05240	100.2543	MONTICELLO - WAITE PARK 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.2479	GEN600045 4-ANSON
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.2472	GEN645012 2-NEBRASKA CITY 2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.2379	GEN542962 2-IATAN UNIT #2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.2185	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05223	100.2169	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.2151	GEN338146 1-INDEPENDENCE UNIT #2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.207	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05223	100.1903	FIELD SOUTH - WILMARTH 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.1858	GEN337653 1-WHITE BLUFF UNIT #2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.1846	MEC345 - WILMARTH 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.1828	MEC345 345/19.5KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05083	100.1815	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05083	100.1815	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05083	100.1796	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05083	100.1796	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.1791	GEN337652 1-WHITE BLUFF UNIT #1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.1775	MEC115 - WILMARTH 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.1641	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05096	100.1543	EAGLE - MARTIN 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05223	100.152	FIELD NORTH - FIELD SOUTH 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.152	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.1517	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	100.1509	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	100.1509	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	100.1509	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	100.1509	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.1482	GEN300003 1-THOMAS HILL UNIT 3
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05091	100.1476	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05107	100.1383	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05107	100.1383	P12:230:UMZW:# 158 #: MH IN ND.
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.1336	GEN645011 1-NEBRASKA CITY 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05074	100.1209	KELLY - SHELL CREEK 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05111	100.1059	AS KING - CHISAGO COUNTY 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05074	100.1047	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05074	100.1047	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.1022	MEC115 115/15.0KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.1	GEN636641 1-LOUISA UNIT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.0746	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06142	100	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05206	100	HURON - WOONSOCKET 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05107	100	MOOREHEAD - MORRIS 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100	GEN344894 1-1LAB G1 20.000
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100	GEN344895 2-1LAB G2 20.000
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100	GEN344896 3-1LAB G3 20.000
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100	GEN344897 4-1LAB G4 20.000
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100	GEN501801 1-DOLET HILLS UNIT1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100	GEN542951 5-HAWTHORN UNIT #5

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100	GEN542957 1-IATAN UNIT #1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100	GEN587153 1-G16-021-GEN10.6900
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100	GEN600069 W-YANKEE 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	100	FT RANDAL - WHITE SWAN 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	100	TYNDALL - WHITE SWAN 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05072	100	CHERRY CREEK - GRANT 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05072	100	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05044	100	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04683	100	BLAIR - WATERTOWN 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04683	100	BLAIR - WATERTOWN 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05387	99.9	BISMARK - WASHBURN 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05387	99.9	P12:230:UMZB:# 171 #: WB IN ND.
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05387	99.9	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05131	99.9	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05125	99.9	GRANITE FALLS - MORRIS 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05125	99.9	GRANITE FALLS - MORRIS 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05105	99.9	BISMARK - HILKEN 4 230.00 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05105	99.9	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05104	99.9	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05102	99.9	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05096	99.9	EAGLE - PHILIP 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05095	99.9	DICKINSON - PARKERS LAKE 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.9	ARROWHEAD - FORBES 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.9	MORANVILLE - ROSEAU 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.9	RICHER - ROSEAU 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.9	GEN336251 1-NINEMILE POINT UNIT#4
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.9	GEN336252 1-NINEMILE POINT UNIT#5
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.9	GEN345670 1-1RUSH G1 18.000
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.9	GEN345671 2-1RUSH G2 18.000
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.9	GEN501812 1-RODEMACHER UNIT 2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.9	GEN501813 1-RODEMACHER UNIT 3
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.9	GEN542955 1-LACYGNE UNIT #1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.9	GEN600077 W-YANKEE 2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.9	GEN600078 W-YANKEE 3
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.9	GEN600099 W-YANKEE 4
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05070	99.9	GRANITE FALLS - WILLMAR 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05070	99.9	GRANITE FALLS - WILLMAR 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05067	99.9	OGALLALA - SIDNEY 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05065	99.9	G15088_T 345.00 - PAULINE 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05028	99.9	UTICA JCT - VFODNES 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05387	99.8	LELAND OLDS - WASHBURN 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05159	99.8	GROTON - REDFIELD 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05159	99.8	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05114	99.8	BALTA - HARVEY 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05109	99.8	AURORA - BROOKINGS 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05109	99.8	AURORA - BROOKINGS 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05104	99.8	FRANKLIN - REDWOOD FALLS 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05095	99.8	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05095	99.8	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05086	99.8	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05086	99.8	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05086	99.8	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05086	99.8	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05085	99.8	AINSWORTH - AINSWORTH 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.8	GEN334440 1-SABINE UNIT 4
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.8	GEN335206 1-NELSON UNIT 6
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.8	GEN336831 1-BAXTER WILSON SES
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.8	GEN337041 1-GERALD ANDRUS
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.8	GEN338388 1-1PLUM PT U1 23.000
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.8	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.8	GEN563222 1-G15088_3 0.6900
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.8	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.8	GRANITE FALLS 115KV SWITCHED SHUNT
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.8	GRANITE FALLS 230KV SWITCHED SHUNT
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.8	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05078	99.8	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05057	99.8	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05057	99.8	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04935	99.8	BIG STONE - BROWNS VALLEY 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06073	99.7	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05192	99.7	HELENA - SHEAS LK3 345.00 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05156	99.7	GRANITE FALLS - S3 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05156	99.7	GRANITE FALLS - S3 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05105	99.7	COAL CREEK - MCHENRY 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05101	99.7	MALLARD - RUGBY 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05101	99.7	MALLARD - RUGBY 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05093	99.7	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05091	99.7	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05091	99.7	CHADRON - DUNLAP 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05090	99.7	MARTIN - SHANNON 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.7	GEN335614 1-WILLOW GLENN UNIT#4
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.7	GEN336191 1-LITTLE GYPSY UNIT#3
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.7	GEN336801 1-BAXTER WILSON UNIT #1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.7	GEN542956 2-LACYGNE UNIT #2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.7	H081 345.00 - H081-TAP 345.00 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.7	H081 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.7	MINNESOTA VALLEY - MINVALY CAP7115.00 115KV CKT Z
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.7	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.7	BRISTOL - GROTON 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.7	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.7	P12:115:TSGT:COVALT7-SNAKECK7
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05068	99.7	PAYNSVILLE - WILLMAR 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05064	99.7	P13:230-345:NPPD:SIDNEY 3:KV2A
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05064	99.7	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05064	99.7	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05044	99.7	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05206	99.6	STORLA - WOONSOCKET 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05134	99.6	HURON - REDFIELD 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05131	99.6	MARSHALL ERIE ROAD - S3 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05131	99.6	MARSHALL ERIE ROAD - S3 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05109	99.6	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05109	99.6	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05104	99.6	BADOURA - HUBBARD 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05091	99.6	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05089	99.6	FALCONER - OSLO 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.6	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.6	GRE-ORTMN 4 230.00 - SHANNON 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.6	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.6	GEN300006 1-NEW MADRID UNIT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.6	GEN300007 1-NEW MADRID UNIT 2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.6	GEN334441 1-SABINE UNIT 5
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.6	GEN335204 1-NELSON UNIT 4
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.6	GEN336464 1-MICHOUD UNIT #3
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.6	GEN509403 1-PIRKEY GENERATION
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.6	GEN509416 1-TURK GENERATION
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.6	GEN587663 1-H081-GEN1 0.6900
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.6	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.6	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.6	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.6	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKE
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.6	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.6	RUNNING 230/118KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	99.6	AINSWORTH - STUART 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	99.6	TYNDALL - YANKON JCT 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05080	99.6	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05080	99.6	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.6	BRISTOL - SUMMIT 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.6	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05077	99.6	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.6	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05075	99.6	GAVINS POINT - HARTINGTON 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05072	99.6	AXTELL - PAULINE 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05067	99.6	HOSKINS - SHELL CREEK 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05064	99.6	MINGO - SETAB 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05064	99.6	MINGO - SETAB 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05034	99.6	SIOUX FALLS - VFODNES 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05219	99.5	BELFIELD - CHARLIE CREEK 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05206	99.5	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05184	99.5	LELAND OLDS - LOGAN 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05158	99.5	CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05134	99.5	LOGAN (KW1A) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05125	99.5	ARMOUR - MT VERN 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05109	99.5	AURORA - FLANDRU 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05109	99.5	AURORA - FLANDRU 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05096	99.5	MORO TAP - MORRIS 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05096	99.5	MORO TAP - MORRIS 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05095	99.5	FALCONER - GRAND FORKS 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05095	99.5	FALCONER - GRAND FORKS 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05095	99.5	FARGO - MOOREHEAD 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05093	99.5	CHADRON - WAYSIDE 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05093	99.5	P13:115-230:NPPD:WAYSIDE4:T1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05093	99.5	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05091	99.5	BAGLEY - WINGER 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.5	GRE-ORTMN 4 230.00 - RUNNING 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.5	LUND - RUNNING 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05087	99.5	FERGSFL4 230.00 (FERG230/115) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05087	99.5	FERGSFL7 115.00 - HOOT LAKE 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	1222-AINSWORTH WIND
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	2546-JAMES TOWN
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	AINSWORTH WIND 34KV SWITCHED SHUNT
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	BARNES 4 230.00 230/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	E B CAMPBELL 230/14.4KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN300002 1-THOMAS HILL UNIT 2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN303006 1-1BC2 U1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN303007 1-1BC2 U2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN303008 1-1BC2 U3
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN334433 1-SABINE UNIT 3
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN336151 1-WATERFORD UNIT#1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN336152 1-WATERFORD UNIT#2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN336170 1-GULF OXY U4
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN336222 1-LITTLE GYPSY UNIT#2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN509394 1-FLINT CREEK
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN509404 1-WELSH #1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN509406 1-WELSH #3
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN512688 2-GRDA1 GSU2 22
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN513601 1-GRECCTG_1 20.000
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN514805 1-SOONER UNIT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN514806 1-SOONER UNIT 2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN515225 1-MUSKOGEE 5G
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN515226 1-MUSKOGEE 6G
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN590010 1-ERCOT EQUIVALENCE
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN600020 2-ANGUS ANSON1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN600021 3-ANGUS ANSON2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	GENOA 161 161/24.0KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	JAMES TOWN 115KV SWITCHED SHUNT
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.5	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	99.5	ATKINSON - STUART 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	99.5	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	99.5	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05081	99.5	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05081	99.5	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05081	99.5	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.5	COVALT 7 115.00 - LYNN 7 115.00 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05073	99.5	SIOUX FALLS (SF KV3A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05073	99.5	SIOUX FALLS (SF KV5A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05068	99.5	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05217	99.4	BOWMAN - RHAME 4 230.00 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05181	99.4	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05145	99.4	LOGAN - MALLARD 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05145	99.4	LOGAN - MALLARD 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05124	99.4	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05108	99.4	BADOURA - RIVERTON 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05098	99.4	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05098	99.4	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05097	99.4	EDEN PRAIRIE - PARKERS LAKE 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05091	99.4	ALIANCE - BOXBUTE7 115.00 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.4	APPLE RIVER 161 - POPLAR LAKE 161 161KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.4	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05086	99.4	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05086	99.4	STONE LK B1 345.00 () 345/161/13.8KV TRANSFORMER CKT 9
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05085	99.4	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05085	99.4	GENOA 161 - SENECA 161 161KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	ARNOLD - HAZLETON 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	FARIBALT GEN115.00 115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	GEN511839 1-NORTHEASTERN STATION #2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	GEN511840 1-NORTHEASTERN STATION #3
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	GEN511842 1-RIVERSIDE STATION #1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	GEN511843 1-RIVERSIDE STATION #2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	GEN515223 1-MUSKOGEE 4G
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	GEN541151 3-SIBLEY GENERATING UNIT #3
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	GEN562003 1-G11_027_3 0.6900
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	GEN587233 1-G16-037-GEN10.6900
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	GEN600046 1-MECST
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	GEN600047 1-MECCT1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	LANGDON - LANGWIN7 115.00 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05083	99.4	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.4	COOPER - MOORE 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.4	P12:115:NPPD:TSGT2:W.HORSE7:B.SPRGS7:BTB
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.4	P12:115:TSGT:BSPRGS7-WHORSE7
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05075	99.4	BELDEN - HARTINGTON 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05073	99.4	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05096	99.3	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05096	99.3	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05091	99.3	GRAND FORKS (GK KV1A) 230/115/12.47KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.3	COON CREEK - SHERBURNE CO 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.3	LAWERENCE CREEK - SHAEFER 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.3	MALLARD - RUTHVILLECP7115.00 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.3	MALLARD - RUTHVILLECP7115.00 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05087	99.3	BUNKER LAKE - SHERBURNE CO 345KV CKT 2
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05087	99.3	COON CREEK - SHERBURNE CO 345KV CKT 3
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05086	99.3	AIRTECH - FEP TAP 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05086	99.3	AIRTECH - WEST FARIBAULT 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.3	AS KING 345/20.0KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.3	BLACK DOG 115/18.0KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.3	BLACK DOG 115/18.0KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.3	CENTER 230/22.0KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.3	CHEMOLITE 115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.3	GEN562517 1-G14_021_S2 0.6900
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.3	GEN587084 1-G16-012-GEN10.6900
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.3	GEN587643 1-J525-GEN1 0.6900
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.3	GEN629046 3-FOX LAKE 5 GENERATOR NO 3
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.3	GEN629069 1-EMERY STEAM TURBINE 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.3	HIGH BRIDGE 115/13.8KV TRANSFORMER CKT 9
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.3	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.3	NOBLES 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.3	WARSAW (WARSAW) 115/69/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05083	99.3	CALLAWAY - MAXWELL 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	99.3	ATKINSON - EMMET 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	99.3	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05081	99.3	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05081	99.3	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.3	COVALT 7 115.00 - W.HORSE7 115.00 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.3	COVALT 7 115.00 - W.HORSE7 115.00 115KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05072	99.3	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05072	99.3	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04935	99.2	BROWNS VALLEY - HANKINSON 230KV CKT 1
0	20SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.03424	105.8926	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.03424	105.2047	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.03444	104.8476	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	25SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.03444	104.2092	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
2	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	478.0	526.0	0.12423	100.6065	BASE CASE
2	17G	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.03626	108.3149	LELAND OLDS - WASHBURN 230KV CKT 1
2	17G	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.03626	108.3019	P12:230:UMZB:# 171 #: WB IN ND.
2	17G	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.03626	108.3019	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
2	17G	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.03626	108.2076	BISMARK - WASHBURN 230KV CKT 1
2	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04200	107.8385	LELAND OLDS - WASHBURN 230KV CKT 1
2	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04200	107.7863	P12:230:UMZB:# 171 #: WB IN ND.
2	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04200	107.7863	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
2	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04200	107.7074	BISMARK - WASHBURN 230KV CKT 1
2	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04644	102.427	BASE CASE
2	17SP	G16_004	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05966	115.4161	BASE CASE
2	17SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.03100	102.7538	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
2	17SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.03100	102.7538	P12:230:UMZW:# 158 #: MH IN ND.
2	17SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.03101	101.0716	MOOREHEAD - MORRIS 230KV CKT 1
2	16WP	G16_004	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.06262	110.478	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_004	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.06262	107.0227	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_004	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.06263	110.5026	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_004	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.06263	107.0535	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.13088	100.5291	BASE CASE
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	108.4946	BASE CASE
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04718	105.7641	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.13088	105.6474	BASE CASE
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04718	104.5245	G13_001IST 115.00 - SUMMIT 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06069	103.621	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06069	103.5944	2810X2
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06069	102.9128	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04452	102.5013	BRISTOL - GROTON 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04584	102.1862	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04452	102.1155	BRISTOL - SUMMIT 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04832	101.9428	BISON - HETINGER 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04832	101.2901	BISON - MAURINE 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04514	101.0911	BISMARK - JAMES TOWN 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04692	101.0865	GROTON - REDFIELD 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04692	101.0642	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04526	100.6175	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04526	100.6175	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04561	100.5915	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04561	100.5915	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04620	100.4867	HURON - REDFIELD 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04511	100.3622	PRAIRIE - RAMSEY 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04514	100.2525	BISMARK - WEBER 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04514	100.2313	JAMES TOWN - WEBER 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04626	100.2173	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04626	100.2173	P12:230:UMZW:# 158 #: MH IN ND.
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	100.1897	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04626	100.1311	MOOREHEAD - MORRIS 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05034	100.093	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05034	100.093	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04525	100	PRAIRIE - WINGER 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04486	100	MENNO JCT - TRIPP JCT 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	100	J460 345.00 - J460-TAP 345.00 345KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	100	J460 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04504	99.9	JAMES TOWN - PICKERT 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.9	GEN587593 1-J460-GEN1 0.6900
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04948	99.8	BISMARK - WASHBURN 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04948	99.8	LELAND OLDS - WASHBURN 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04948	99.8	P12:230:UMZB:# 171 #: WB IN ND.
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04948	99.8	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04589	99.7	GRANITE FALLS - MORRIS 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04589	99.7	GRANITE FALLS - MORRIS 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04564	99.7	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04515	99.7	BISMARK - HILKEN 4 230.00 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04493	99.7	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.7	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.7	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.7	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.7	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04471	99.7	G15088_T 345.00 - MOORE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04917	99.6	GLENHAM - WHITLOK 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04561	99.6	REDFIELD - WEST PARK B TAP 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04515	99.6	BALTA - MCHENRY 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04493	99.6	HENNING - INMANN 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.6	ANSON - SPLIT ROCK 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.6	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04456	99.6	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04930	99.5	GLENHAM - L3 HAWDON 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04917	99.5	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04687	99.5	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04548	99.5	FARGO - MOOREHEAD 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04513	99.5	AUDUBON - HUBBARD 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04504	99.5	GRAND FORKS - PICKERT 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04500	99.5	ELM CREEK - PARKERS LAKE 345KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04493	99.5	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.5	ANSON - SPLIT ROCK 115KV CKT 2
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.5	ANSON 115/17.5KV TRANSFORMER CKT 4
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.5	GEN300003 1-THOMAS HILL UNIT 3
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.5	GEN337652 1-WHITE BLUFF UNIT #1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.5	GEN337653 1-WHITE BLUFF UNIT #2
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.5	GEN338143 1-INDEPENDENCE UNIT #1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.5	GEN338146 1-INDEPENDENCE UNIT #2
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.5	GEN636641 1-LOUISA UNIT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.5	GEN659353 1-DEERCREK CTG18.000
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.5	GEN659354 1-DEERCREK STG18.000
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04467	99.5	FT THOMPSON - WESSINGTON 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04467	99.5	FT THOMPSON - WESSINGTON 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04461	99.5	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04461	99.5	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04917	99.4	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04917	99.4	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04917	99.4	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04505	99.4	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04505	99.4	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04505	99.4	MITCHELL - MITCHELL NW 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04505	99.4	MITCHELL - MITCHELL NW 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04486	99.4	MENNO JCT - UTICA 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.4	BROOKING COUNTY - J432 345.00 345KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.4	GEN344894 1-1LAB G1 20.000
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.4	GEN344896 3-1LAB G3 20.000
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.4	GEN542962 2-IATAN UNIT #2
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.4	GEN587583 1-J432-GEN1 0.6900
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.4	GEN645012 2-NEBRASKA CITY 2
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.4	J432 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.4	YANKEE 115/34.5KV TRANSFORMER CKT 2
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04464	99.4	FT THOMPSON - OAHE 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04464	99.4	FT THOMPSON - OAHE 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04464	99.4	FT THOMPSON - OAHE 230KV CKT 2
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04464	99.4	FT THOMPSON - OAHE 230KV CKT 2
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04464	99.4	FT THOMPSON - OAHE 230KV CKT 3
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04464	99.4	FT THOMPSON - OAHE 230KV CKT 3
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04464	99.4	FT THOMPSON - OAHE 230KV CKT 4
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04464	99.4	FT THOMPSON - OAHE 230KV CKT 4
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04456	99.4	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04456	99.4	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04917	99.3	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04643	99.3	BELFIELD - CHARLIE CREEK 345KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04557	99.3	MONTICELLO - WAITE PARK 345KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04513	99.3	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04508	99.3	BALTA - HARVEY 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04497	99.3	AS KING - CHISAGO COUNTY 345KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04486	99.3	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.3	GEN336251 1-NINEMILE POINT UNIT#4
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.3	GEN336252 1-NINEMILE POINT UNIT#5
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.3	GEN336831 1-BAXTER WILSON SES
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.3	GEN344895 2-1LAB G2 20.000
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.3	GEN344897 4-1LAB G4 20.000
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.3	GEN345670 1-1RUSH G1 18.000
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.3	GEN345671 2-1RUSH G2 18.000
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.3	GEN501801 1-DOLET HILLS UNIT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.3	GEN501813 1-RODEMACHER UNIT 3
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.3	GEN587153 1-G16-021-GEN10.6900
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.3	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.3	GEN645011 1-NEBRASKA CITY 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.3	YANKEE 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04917	99.2	OAHE - SULLEY BUTTE 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04508	99.2	HARVEY - UNDERWOOD 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04494	99.2	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.2	GEN300006 1-NEW MADRID UNIT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.2	GEN300007 1-NEW MADRID UNIT 2
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.2	GEN337041 1-GERALD ANDRUS
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.2	GEN542956 2-LACYGNE UNIT #2
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.2	GEN542957 1-IATAN UNIT #1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.2	GEN600045 4-ANSON
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.2	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.2	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.2	MEC115 - WILMARTH 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.2	MEC115 115/15.0KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.2	MEC345 - WILMARTH 345KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.2	MEC345 345/19.5KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.2	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.2	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04475	99.2	GRANT - MITCHELL 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04475	99.2	GRANT - MITCHELL 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04221	99.2	GROTON - ORDWAY 115KV CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.1	GEN542951 5-HAWTHORN UNIT #5
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99.1	GEN542955 1-LACYGNE UNIT #1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99	G09_001IST 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04480	99	G09_001IST 345.00 345/34.5KV TRANSFORMER CKT 2
2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.04211	99	EDGELEY - JAMES TOWN 115KV CKT 1
2	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.05906	104.0235	BISON - MAURINE 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07446	114.7985	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07446	114.7814	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07446	114.7286	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06638	110.9641	BISON - MAURINE 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06714	110.5528	GLENHAM - L3 HAWDON 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07446	110.3546	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07446	110.3396	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07446	110.2482	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
2	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.12423	110.0846	BASE CASE
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06690	109.886	GLENHAM - WHITLOK 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06690	109.8079	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06690	109.8079	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06690	109.7263	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06690	109.6903	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06690	109.6901	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06714	109.5577	BISMARK - L3 HAWDON 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06690	109.4627	OAHE - SULLEY BUTTE 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06258	106.9988	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06258	106.9988	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06638	106.9508	BISON - MAURINE 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06258	106.9276	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06109	106.8428	GARRISON - JAMES TOWN 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06180	106.8167	HESKETT - WISHEK 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06603	106.7874	P12:230:UMZB:# 171 #: WB IN ND.
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06603	106.7874	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06603	106.6968	LELAND OLDS - WASHBURN 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06603	106.6962	BISMARK - WASHBURN 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06180	106.6731	MERRCRT4 230.00 - WISHEK 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06714	106.6486	GLENHAM - L3 HAWDON 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	106.5318	CENTER - COYOTE 345KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05105	106.4213	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05105	106.4212	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 2
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06051	106.4041	BISMARK - HILKEN 4 230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06320	106.299	BOWMAN - RHAME 4 230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06690	106.082	GLENHAM - WHITLOK 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05985	106.0459	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
2	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.12423	106.0432	BASE CASE
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06061	106.0337	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06159	106.0253	J290_SUB 230.00 - RUGBY 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06690	106.0151	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06690	106.0151	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06690	105.9453	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06690	105.916	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06690	105.9159	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06073	105.886	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06061	105.864	ABERDEEN JCT - ELLENDALE 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06145	105.8552	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06714	105.7974	BISMARK - L3 HAWDON 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06064	105.7736	BISMARK - WEBER 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06024	105.7699	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06024	105.7699	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06690	105.7212	OAHE - SULLEY BUTTE 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06568	105.6866	LELAND OLDS - STANTON 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06568	105.6866	LELAND OLDS - STANTON 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06061	105.6838	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06064	105.6684	JAMES TOWN - WEBER 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06064	105.5803	BISMARK - JAMES TOWN 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06320	105.5536	BOWMAN - HETINGER 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06061	105.55	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06046	105.5217	BALTA - RAMSEY 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06129	105.4484	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06065	105.4365	FARGO - JAMES TOWN 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06108	105.4072	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06108	105.4072	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06094	105.387	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06094	105.387	P12:230:UMZW:# 158 #: MH IN ND.
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06045	105.3863	PRAIRIE - RAMSEY 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06094	105.3731	MOOREHEAD - MORRIS 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06051	105.3436	PRAIRIE - WINGER 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	105.3344	NUNDRWD - PHILIP TAP 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06038	105.3256	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06019	105.3053	P12:230:UMZW:# 166 #: PL IN SD. TAP
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06019	105.3053	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06114	105.2857	GROTON - REDFIELD 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06108	105.2528	REDFIELD - WEST PARK B TAP 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	105.2478	GEN635024 4-WALTER SCOTT UNIT 4
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06028	105.2413	ELLENDALE - J316_SUB 230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06022	105.2381	P12:115:UMZB:# 122 #: RUTH IN ND. RUTH TAP
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06056	105.1982	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	105.1854	GEN336821 1-GRAND GULF UNIT
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	105.1803	GEN635214 4-NEAL UNIT 4
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	104.4254	2516-WATERTNCAP 4230.00
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	104.4254	BASE CASE
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	104.1557	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.12112	103.9446	BASE CASE
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06020	103.6622	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.6475	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06258	103.6011	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06258	103.6011	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06016	103.5601	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.5554	GEN620115 4-HRDLKGEN 0.6000
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.541	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06258	103.5405	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	103.5045	FT RANDAL - UTICA JCT 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.4982	GEN652410 3-FT PECK
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06026	103.4704	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06109	103.4504	GARRISON - JAMES TOWN 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06180	103.4467	HESKETT - WISHEK 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.4378	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.4362	GEN659273 2-GROTON SYNC COND
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.4362	GEN659294 1-WILTONCOL9
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06603	103.4214	P12:230:UMZB:# 171 #: WB IN ND.
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06603	103.4214	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.4198	GEN652414 4-FT PECK
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.4198	GEN652415 5-FT PECK
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06032	103.4168	FT RANDAL - SIOUX CITY 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.4129	GEN600006 1-AS KING
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.3901	GEN672303 3-BOUNDARY DAM GENERATOR 3
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.3901	GEN672304 4-BOUNDARY DAM GENERATOR 4

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.3901	GEN672305 5-BOUNDARY DAM GENERATOR 5
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06019	103.3875	HANLON - SIOUX FALLS 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.373	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06603	103.3436	BISMARK - WASHBURN 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06603	103.3426	LELAND OLDS - WASHBURN 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06180	103.326	MERRCRT4 230.00 - WISHEK 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.3233	GEN672392 1-NBECGT1G 18.000
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.3178	GEN600005 1-MONTICELLO
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05931	103.3026	STORLA - WOONSOCKET 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06015	103.2975	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06015	103.2975	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.283	GEN615015 1-GRE-SPRITWDG13.200
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06016	103.2331	STORLA - WESSINGTON 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05931	103.1926	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05931	103.1618	HURON - WOONSOCKET 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.1598	CENTER - COYOTE 345KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.1351	GEN 11104 1-J262_GEN 0.6000
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.1351	GEN 11108 1-J263_GEN 0.6000
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06043	103.1234	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.123	GEN600000 1-SHERBURNECNTY G1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.12	J290_SUB 230.00 230/34.5KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05105	103.118	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05105	103.1178	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 2
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06043	103.1111	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05957	103.101	MITCHELL - MITCHELL NW 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05957	103.101	MITCHELL - MITCHELL NW 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06015	103.0968	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06015	103.0968	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.092	GEN 10572 2-J290_MK10 0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06043	103.0645	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06051	103.056	BISMARK - HILKEN 4 230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.0553	GEN657745 1-MPC02100GEN90.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	103.0102	GEN600001 2-SHERBURNE CNTY G2
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06320	102.9958	BOWMAN - RHAME 4 230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.9712	GEN659192 6-LYNN
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.9668	GEN659162 4-RED WLCK
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.9668	GEN659163 5-BLACK WDCK
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06009	102.9533	BLAIR - GRANITE FALLS 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06009	102.9533	BLAIR - GRANITE FALLS 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.9443	LETCHER - SIOUX FALLS 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05957	102.8456	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05957	102.8456	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.8387	MPC02100TAP4230.00 - MPC2100WIND4230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.8357	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.8357	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06026	102.8297	KELLY - MEADOWGROVE4230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.8081	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05985	102.7677	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06061	102.7664	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06159	102.7563	J290_SUB 230.00 - RUGBY 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05992	102.7239	FT RANDAL - LAKE PLATT 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.6933	GEN600002 3-SHERBURNE CNTY G3
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05991	102.6816	FT RANDAL - FT THOMPSON 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05991	102.6816	FT RANDAL - FT THOMPSON 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05992	102.6811	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05992	102.6811	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06018	102.6746	FT THOMPSON - LETCHER 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06018	102.6746	FT THOMPSON - LETCHER 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.6462	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.6451	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06073	102.6217	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06061	102.6201	ABERDEEN JCT - ELLENDALE 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06145	102.6045	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06022	102.5826	HANKINSON - WAHPETON 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.5818	GEN910006 1-G12_012IS_3 0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06064	102.5416	BISMARK - WEBER 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06024	102.5101	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06024	102.5101	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06061	102.4622	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06568	102.4541	LELAND OLDS - STANTON 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06568	102.4541	LELAND OLDS - STANTON 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06064	102.4519	JAMES TOWN - WEBER 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.4226	GEN659010 4-G07_027IS_2 0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.4225	GEN659366 3-WILTON 3 W0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.4144	GEN659018 1-G14_003IS_3 0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.376	GEN 10648 1-G830_GEN 0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06064	102.3748	BISMARK - JAMES TOWN 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06320	102.352	BOWMAN - HETINGER 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.3474	GEN563252 1-G15091_3 0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06061	102.342	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.3298	GEN563342 1-G15098_3 0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06046	102.3202	BALTA - RAMSEY 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.2983	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.2751	GEN652460 4-GARRISON
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.2751	GEN652461 5-GARRISON
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.2686	GEN672321 1-SHAND GENERATOR 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06129	102.2622	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06065	102.2497	FARGO - JAMES TOWN 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.24	GEN652457 1-GARRISON
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.24	GEN652458 2-GARRISON
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.24	GEN652459 3-GARRISON
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06108	102.2236	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06108	102.2236	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06094	102.2065	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06094	102.2065	P12:230:UMZW:# 158 #: MH IN ND.
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06045	102.2038	PRAIRIE - RAMSEY 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.1986	GEN672306 6-BOUNDARY DAM GENERATOR 6
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06094	102.1945	MOOREHEAD - MORRIS 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06051	102.168	PRAIRIE - WINGER 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	102.1566	NUNDRWD - PHILIP TAP 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06038	102.1548	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06019	102.1311	P12:230:UMZW:# 166 #: PL IN SD. TAP
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06019	102.1311	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	102.1258	GEN672311 2-POPLAR RIVER GENERATOR 2
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06114	102.1161	GROTON - REDFIELD 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	101.9712	GEN659403 1-NDSUNFLWR W0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	101.9469	RGBYWND4 230.00 - RUGBY 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06006	101.945	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	101.932	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06015	101.8607	HANLON - STORLA 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	101.4323	STANTON 230/18.0KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	101.3902	GEN563302 1-G15096_3 0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	101.3624	2516-WATERTNCAP 4230.00
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	101.3624	2560-BRDLAND-LNX3345.00
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	101.3624	2561-BRDLAND-LNX3345.00
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	101.3624	BASE CASE
2	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08814	101.2874	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	101.2858	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	101.1271	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05986	100.9761	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05986	100.9721	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05986	100.9706	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.12112	100.9216	BASE CASE
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.7923	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05986	100.7611	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.6596	GEN659453 1-GI1414GEN W0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06016	100.6084	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.5974	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.5948	GEN620115 4-HRDLKGEN 0.6000
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.5831	GEN615010 1-STANTON4
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06027	100.56	FT RANDAL - UTICA JCT 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.5444	GEN652410 3-FT PECK
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06026	100.5277	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.4954	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.4903	GEN659273 2-GROTON SYNC COND
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.4903	GEN659294 1-WILTONCOL9
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06032	100.4814	FT RANDAL - SIOUX CITY 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.478	GEN652414 4-FT PECK
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.478	GEN652415 5-FT PECK
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.4707	GEN600006 1-AS KING

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06019	100.4544	HANLON - SIOUX FALLS 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.4475	GEN672303 3-BOUNDARY DAM GENERATOR 3
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.4475	GEN672304 4-BOUNDARY DAM GENERATOR 4
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.4475	GEN672305 5-BOUNDARY DAM GENERATOR 5
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.4389	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.3883	GEN672392 1-NBECGT1G 18.000
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.3855	GEN600005 1-MONTICELLO
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05931	100.3778	STORLA - WOONSOCKET 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06015	100.3716	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06015	100.3716	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.3515	GEN615015 1-GRE-SPRITWDG13.200
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06016	100.3392	STORLA - WESSINGTON 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05931	100.2798	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05931	100.253	HURON - WOONSOCKET 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.2206	GEN 11104 1-J262_GEN 0.6000
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.2206	GEN 11108 1-J263_GEN 0.6000
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06043	100.2196	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.2133	GEN600000 1-SHERBURNECNTY G1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.2103	GEN657749 1-YOUNG 1 GENERATOR
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06043	100.2062	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.2051	J290_SUB 230.00 230/34.5KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06015	100.1954	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06015	100.1954	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05957	100.194	MITCHELL - MITCHELL NW 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05957	100.194	MITCHELL - MITCHELL NW 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.183	GEN 10572 2-J290_MK10 0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06043	100.1698	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.1492	GEN657745 1-MPC02100GEN90.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.1133	GEN600001 2-SHERBURNE CNTY G2
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.082	GEN659192 6-LYNN
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06009	100.0736	BLAIR - GRANITE FALLS 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06009	100.0736	BLAIR - GRANITE FALLS 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.0731	GEN659162 4-RED WLCK
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.0731	GEN659163 5-BLACK WDCK
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100.0663	LETCHER - SIOUX FALLS 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06026	100	KELLY - MEADOWGROVE4230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100	GEN659141 1-K10215A
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	100	MPC02100TAP4230.00 - MPC2100WIND4230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05957	100	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05957	100	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.9	GEN600002 3-SHERBURNE CNTY G3
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.9	GEN659110 1-LELAND OLDS UNIT1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.9	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05992	99.9	FT RANDAL - LAKE PLATT 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06018	99.8	FT THOMPSON - LETCHER 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06018	99.8	FT THOMPSON - LETCHER 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.8	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.8	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05992	99.8	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05992	99.8	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05991	99.8	FT RANDAL - FT THOMPSON 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05991	99.8	FT RANDAL - FT THOMPSON 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06022	99.7	HANKINSON - WAHPETON 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.7	GEN910006 1-G12_012IS_3 0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.6	GEN659010 4-G07_027IS_2 0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.6	GEN659018 1-G14_003IS_3 0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.6	GEN659366 3-WILTON 3 W0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.5	GEN 10648 1-G830_GEN 0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.5	GEN563252 1-G15091_3 0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.5	GEN563342 1-G15098_3 0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.5	GEN652460 4-GARRISON
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.5	GEN652461 5-GARRISON
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.5	GEN672321 1-SHAND GENERATOR 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.5	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.4	GEN652457 1-GARRISON
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.4	GEN652458 2-GARRISON
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.4	GEN652459 3-GARRISON
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.4	GEN672306 6-BOUNDARY DAM GENERATOR 6

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.3	GEN672311 2-POPLAR RIVER GENERATOR 2
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.2	GEN659403 1-NDSUNFLWR W0.6900
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.2	RGBYWND4 230.00 - RUGBY 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06006	99.2	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
2	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08814	99.2	2810X2
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06069	99.1	CARPENTER - WATERTOWN 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06069	99.1	CARPENTER - WATERTOWN 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99.1	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06015	99.1	HANLON - STORLA 230KV CKT 1
2	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08814	99.1	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	99	GEN587033 1-G16-004-GEN10.6900
2	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.36910	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.33363	-	2810X2
2	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.33363	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.28212	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	16WP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16682	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	16WP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16682	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	16WP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16682	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.16682	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	16WP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.14106	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.14106	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	16WP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.12831	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	16WP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.12831	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	16WP	G16_004	-	Non-Converged Contingency	478.0	526.0	0.12303	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.12303	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	16WP	G16_004	-	Non-Converged Contingency	797.0	797.0	0.12303	-	BROADLAND - HURON 230KV CKT 1
2	16WP	G16_004	-	Non-Converged Contingency	400.0	400.0	0.12303	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.06985	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
2	16WP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.06015	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.04657	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
2	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.04657	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.65502	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.56072	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.48450	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.36337	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.36337	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.32751	-	2810X2
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.32751	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.28381	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.28381	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.28036	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.24456	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.19737	-	2810X2
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.19737	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.18050	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16376	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16376	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16376	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.16376	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.14588	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	17G	G16_004	-	Non-Converged Contingency	720.0	792.0	0.14190	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	17G	G16_004	-	Non-Converged Contingency	720.0	792.0	0.14190	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.14018	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.14018	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.12883	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.12883	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.12245	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	17G	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12228	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12228	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12228	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.12112	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
2	17G	G16_004	-	Non-Converged Contingency	478.0	526.0	0.12112	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.12112	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	17G	G16_004	-	Non-Converged Contingency	732.0	732.0	0.12112	-	BROADLAND - HURON 230KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	400.0	400.0	0.12112	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_004	-	Non-Converged Contingency	400.0	400.0	0.12112	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.09869	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.09869	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.09869	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.09869	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09743	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09743	-	CHISAGO COUNTY - FORBES 500KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09220	-	FORBES - ROSEAU 500KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	1732.1	1905.3	0.09220	-	RIEL - ROSEAU 500KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09220	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09220	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	705.0	705.0	0.09161	-	CENTER - JAMESTOWN 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	705.0	705.0	0.09122	-	BUFFALO - JAMESTOWN 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	1793.0	1793.0	0.09016	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	720.0	792.0	0.08884	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.07294	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.07294	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.06236	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.06236	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	720.0	792.0	0.06123	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	17G	G16_004	-	Non-Converged Contingency	720.0	792.0	0.06123	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.06017	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
2	17G	G16_004	-	Non-Converged Contingency	478.0	526.0	0.06017	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.06017	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	17G	G16_004	-	Non-Converged Contingency	732.0	732.0	0.06017	-	BROADLAND - HURON 230KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	400.0	400.0	0.06017	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_004	-	Non-Converged Contingency	335.0	429.4	0.05284	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.04499	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
2	17G	G16_004	-	Non-Converged Contingency	1206.0	1336.0	0.04249	-	CENTER - CNTSHNT3 345.00 345KV CKT Z1
2	17G	G16_004	-	Non-Converged Contingency	1206.0	1336.0	0.04249	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	319.0	385.0	0.03817	-	BISON - HETINGER 230KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	409.0	450.0	0.03607	-	FORMAN - HANKINSON 230KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	409.0	450.0	0.03356	-	FORMAN - OAKES 230KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	319.0	351.0	0.03317	-	ELLENDALE - OAKES 230KV CKT 1
2	17G	G16_004	-	Non-Converged Contingency	319.0	351.0	0.03317	-	ELLENDALE - OAKES 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.67035	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.57291	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.49690	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.37279	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.37268	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.37268	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.33518	-	2810X2
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.33518	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.28976	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.28976	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.28645	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.28645	-	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.27103	-	P12:230:UMZB:# 171 #: WB IN ND.
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.27103	-	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.24853	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.24853	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.20574	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.19783	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.19487	-	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.19487	-	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.17505	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.17505	-	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16759	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16759	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16759	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.16759	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	720.0	792.0	0.14488	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	720.0	792.0	0.14488	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.14323	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.14323	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.14323	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.14323	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	430.2	430.2	0.13739	-	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	430.2	430.2	0.13739	-	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	320.0	352.0	0.13551	-	BISMARK - WASHBURN 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	319.0	351.0	0.13551	-	LELAND OLDS - WASHBURN 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.13088	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.13088	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.12991	-	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12426	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12426	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12426	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12426	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12426	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12426	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12426	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.12423	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	478.0	526.0	0.12423	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.12423	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	732.0	732.0	0.12423	-	BROADLAND - HURON 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	400.0	400.0	0.12423	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	400.0	400.0	0.12423	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	720.0	792.0	0.11211	-	SPLIT ROCK - WHITE 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	720.0	792.0	0.11211	-	SPLIT ROCK - WHITE 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.10287	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.10287	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.10151	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09907	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09907	-	CHISAGO COUNTY - FORBES 500KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	956.1	956.1	0.09480	-	ADAMS - MITCHLCO3 345.00 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.09443	-	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	1793.0	1793.0	0.09367	-	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09354	-	FORBES - ROSEAU 500KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	1732.1	1905.3	0.09354	-	GEN600000 1-SHERBURNECNTY G1
2	17SP	G16_004	-	Non-Converged Contingency	1732.1	1905.3	0.09354	-	GEN600001 2-SHERBURNE CNTY G2
2	17SP	G16_004	-	Non-Converged Contingency	1732.1	1905.3	0.09354	-	GEN600002 3-SHERBURNE CNTY G3
2	17SP	G16_004	-	Non-Converged Contingency	1732.1	1905.3	0.09354	-	GEN600003 1-PRAIRIE ISLAND G1
2	17SP	G16_004	-	Non-Converged Contingency	1732.1	1905.3	0.09354	-	GEN600004 2-PRAIRIE ISLAND G2
2	17SP	G16_004	-	Non-Converged Contingency	1732.1	1905.3	0.09354	-	GEN600005 1-MONTICELLO
2	17SP	G16_004	-	Non-Converged Contingency	1732.1	1905.3	0.09354	-	GEN600006 1-AS KING
2	17SP	G16_004	-	Non-Converged Contingency	1732.1	1905.3	0.09354	-	RIEL - ROSEAU 500KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09354	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.09354	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	1073.0	1195.0	0.09336	-	GEN542951 5-HAWTHORN UNIT #5
2	17SP	G16_004	-	Non-Converged Contingency	1073.0	1195.0	0.09336	-	GEN542955 1-LACYGNE UNIT #1
2	17SP	G16_004	-	Non-Converged Contingency	1073.0	1195.0	0.09336	-	GEN542956 2-LACYGNE UNIT #2
2	17SP	G16_004	-	Non-Converged Contingency	705.0	705.0	0.09311	-	CENTER - JAMESTOWN 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	717.0	717.0	0.09282	-	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	705.0	705.0	0.09270	-	BUFFALO - JAMESTOWN 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	430.2	430.2	0.09253	-	SQUARE BUTTE - STANTON 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	1793.0	1793.0	0.09153	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	1793.0	1793.0	0.09153	-	GEN620315 1-BIG STONE GEN
2	17SP	G16_004	-	Non-Converged Contingency	1793.0	1793.0	0.09153	-	GEN657964 1-ASH2GEN9 0.5750
2	17SP	G16_004	-	Non-Converged Contingency	720.0	792.0	0.09027	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.08995	-	P13:230-345:NPPD:STEGALL3:KV3A
2	17SP	G16_004	-	Non-Converged Contingency	1792.7	1792.7	0.08817	-	MONTICELLO - WAITE PARK 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.08752	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.08752	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.08752	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.08752	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	1099.0	1195.0	0.08355	-	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	17SP	G16_004	-	Non-Converged Contingency	1099.0	1195.0	0.08355	-	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	17SP	G16_004	-	Non-Converged Contingency	1099.0	1195.0	0.08355	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.08296	-	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	1378.0	1515.4	0.07729	-	HELENA - SHEAS LK3 345.00 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	1173.6	1195.0	0.07478	-	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.06594	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	478.0	526.0	0.06594	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.06594	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	732.0	732.0	0.06594	-	BROADLAND - HURON 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	400.0	400.0	0.06594	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	864.0	864.0	0.06556	-	HIGHLND 3 345.00 - RAUN 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	210.0	210.0	0.06513	-	BISMARK - L3 HAWDON 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	210.0	210.0	0.06513	-	GLENHAM - L3 HAWDON 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	240.0	260.0	0.06496	-	GLENHAM - WHITLOK 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	240.0	260.0	0.06496	-	OAHE - SULLEY BUTTE 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	240.0	260.0	0.06496	-	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	240.0	260.0	0.06496	-	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.06430	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.06142	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.06049	-	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.06049	-	P12:230:UMZW:# 158 #: MH IN ND.
2	17SP	G16_004	-	Non-Converged Contingency	215.0	236.0	0.05966	-	BISON - HETINGER 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	384.0	384.0	0.05966	-	BISON - MAURINE 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	1299.0	1299.0	0.05686	-	GEN514806 1-SOONER UNIT 2
2	17SP	G16_004	-	Non-Converged Contingency	1299.0	1299.0	0.05686	-	GEN515223 1-MUSKOGEE 4G
2	17SP	G16_004	-	Non-Converged Contingency	1299.0	1299.0	0.05686	-	GEN515225 1-MUSKOGEE 5G
2	17SP	G16_004	-	Non-Converged Contingency	672.0	773.0	0.05542	-	CENTER (C1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	672.0	773.0	0.05542	-	CENTER (C2) 345/230/13.8KV TRANSFORMER CKT 2
2	17SP	G16_004	-	Non-Converged Contingency	342.0	342.0	0.05429	-	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	342.0	342.0	0.05429	-	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	956.0	956.0	0.05385	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	335.0	429.4	0.05364	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	335.0	429.4	0.05364	-	J290_SUB 230.00 - RUGBY 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	319.0	341.0	0.05291	-	NUNDRWD - WAYSIDE 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	800.0	1084.0	0.05271	-	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.05107	-	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	720.0	792.0	0.05076	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	720.0	792.0	0.05076	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	430.0	430.0	0.05057	-	LELAND OLDS - LOGAN 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	1195.1	1195.1	0.05044	-	AS KING - CHISAGO COUNTY 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	318.0	318.0	0.04819	-	GARRISON - JAMES TOWN 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	239.0	299.0	0.04767	-	BOWMAN - HETINGER 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	239.0	299.0	0.04767	-	BOWMAN - RHAME 4 230.00 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	320.0	342.0	0.04722	-	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	320.0	342.0	0.04722	-	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	373.0	373.0	0.04644	-	BISMARK - HILKEN 4 230.00 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	400.0	480.0	0.04498	-	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.04480	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.04480	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.04457	-	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
2	17SP	G16_004	-	Non-Converged Contingency	320.0	320.0	0.04400	-	FT RANDAL - FT THOMPSON 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	320.0	320.0	0.04400	-	FT RANDAL - FT THOMPSON 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	318.7	318.7	0.04318	-	FT RANDAL - LAKE PLATT 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	352.0	352.0	0.04318	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	352.0	352.0	0.04318	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	1206.0	1336.0	0.04310	-	CENTER - CNTSHNT3 345.00 345KV CKT Z1
2	17SP	G16_004	-	Non-Converged Contingency	1206.0	1336.0	0.04310	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	318.0	350.0	0.04266	-	FARGO - JAMES TOWN 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	318.0	350.0	0.04173	-	FARGO - JAMES TOWN 230KV CKT 2
2	17SP	G16_004	-	Non-Converged Contingency	364.0	364.0	0.04148	-	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	364.0	364.0	0.04148	-	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.04094	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.04094	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.03891	-	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
2	17SP	G16_004	-	Non-Converged Contingency	336.0	386.0	0.03880	-	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
2	17SP	G16_004	-	Non-Converged Contingency	1072.0	1195.0	0.03796	-	GEN300003 1-THOMAS HILL UNIT 3
2	17SP	G16_004	-	Non-Converged Contingency	637.0	641.0	0.03730	-	CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	318.0	350.0	0.03682	-	BISMARK - JAMES TOWN 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	318.0	350.0	0.03677	-	BISMARK - WEBER 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	318.0	350.0	0.03677	-	JAMES TOWN - WEBER 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	320.0	320.0	0.03638	-	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	368.0	368.0	0.03638	-	KELLY - MEADOWGROVE4230.00 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	409.0	450.0	0.03627	-	FORMAN - HANKINSON 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	159.3	159.3	0.03622	-	LOGAN - MALLARD 115KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	159.3	159.3	0.03622	-	LOGAN - MALLARD 115KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	200.0	240.0	0.03507	-	LOGAN (KW1A) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	641.0	641.0	0.03457	-	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	400.0	400.0	0.03452	-	PRAIRIE - WINGER 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	400.0	400.0	0.03450	-	DRAYTON - PRAIRIE 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	288.0	288.0	0.03450	-	KARLSTAD - WINGER 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	460.0	460.0	0.03433	-	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	409.0	450.0	0.03377	-	FORMAN - OAKES 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	319.0	351.0	0.03335	-	ELLENDALE - OAKES 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	319.0	351.0	0.03335	-	ELLENDALE - OAKES 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	1173.6	1195.1	0.03332	-	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	280.0	280.0	0.03315	-	AUDUBON - SHEYNNE 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	956.0	1052.0	0.03281	-	SIDNEY - STEGALL 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	320.0	352.0	0.03249	-	MOOREHEAD - MORRIS 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	956.0	956.0	0.03232	-	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_004	-	Non-Converged Contingency	956.0	956.0	0.03215	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	956.0	956.0	0.03215	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	17SP	G16_004	-	Non-Converged Contingency	1195.1	1195.1	0.03072	-	NOBLES - SPLIT ROCK 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	372.9	372.9	0.03028	-	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	320.0	352.0	0.03024	-	FARGO - MOOREHEAD 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	390.0	429.0	0.02985	-	BIG STONE - BROWNS VALLEY 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	296.0	325.0	0.02985	-	BROWNS VALLEY - HANKINSON 230KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	956.0	956.0	0.02978	-	HOSKINS - RAUN 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	956.0	956.0	0.02978	-	HOSKINS - RAUN 345KV CKT 1
2	17SP	G16_004	-	Non-Converged Contingency	305.0	335.5	0.02969	-	AUDUBON - HUBBARD 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04979	108.6095	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04979	108.6095	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	107.7004	BASE CASE
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05330	106.2601	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.14488	105.756	BASE CASE
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05473	102.9424	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05473	102.9344	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05473	102.8133	HAZEL CREEK - LYON COUNTY 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	102.3034	J460 345.00 - J460-TAP 345.00 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	102.3034	J460 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05104	101.8913	BISMARK - JAMES TOWN 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	101.8829	GEN587593 1-J460-GEN1 0.6900
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05356	101.4677	BISON - HETINGER 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	101.4214	COYOTE 345/24.0KV TRANSFORMER CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05132	101.4196	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05132	101.4196	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05197	101.4084	BROOKINGS - WATERTOWN 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05197	101.4084	BROOKINGS - WATERTOWN 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05172	101.3639	ARLINGTON - WATERTOWN 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05116	101.2196	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05096	100.9861	MENNO JCT - TRIPP JCT 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05116	100.8829	HENNING - INMANN 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	100.7926	BURR - CANBY 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05116	100.7665	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05356	100.6342	BISON - MAURINE 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05155	100.5826	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05155	100.5826	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	100.5724	BROOKING COUNTY - J432 345.00 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	100.5724	J432 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	100.5628	GEN659354 1-DEERCREK STG18.000
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	100.5615	GEN659353 1-DEERCREK CTG18.000
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05172	100.5484	ARLINGTON - BROOKINGS 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	100.5298	YANKEE 115/34.5KV TRANSFORMER CKT 2
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	100.4632	YANKEE 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	100.4599	GEN587583 1-J432-GEN1 0.6900
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05104	100.4491	BISMARK - WEBER 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	100.4436	ANSON - SPLIT ROCK 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	100.4428	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05100	100.4413	PRAIRIE - RAMSEY 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05172	100.4235	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05172	100.4235	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05172	100.4235	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05104	100.4068	JAMES TOWN - WEBER 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05056	100.3591	G15088_T 345.00 - MOORE 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05103	100.2559	CANBY - GRANITE FALLS 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05103	100.2559	CANBY - GRANITE FALLS 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	100.2105	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05155	100.1641	MITCHELL - MITCHELL NW 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05155	100.1641	MITCHELL - MITCHELL NW 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06061	100.1542	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05042	100.126	FT THOMPSON - WESSINGTON 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05042	100.126	FT THOMPSON - WESSINGTON 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06061	100.1095	2810X2
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	100.1057	ANSON - SPLIT ROCK 115KV CKT 2
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	100	ANSON 115/17.5KV TRANSFORMER CKT 4
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	100	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05037	100	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05037	100	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05079	99.9	MN VALLEY TAP - PANTHER 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05035	99.9	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05117	99.8	ELM CREEK - PARKERS LAKE 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05117	99.8	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05101	99.8	JAMES TOWN - PICKERT 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05096	99.8	MENNO JCT - UTICA 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05096	99.8	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.8	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.8	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05127	99.7	AUDUBON - HUBBARD 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05111	99.6	BALTA - MCHENRY 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05109	99.6	PRAIRIE - WINGER 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.6	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05063	99.6	GRANT - MITCHELL 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05063	99.6	GRANT - MITCHELL 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05035	99.6	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05035	99.6	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.5	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.5	WATERTOWN 230KV SWITCHED SHUNT
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05070	99.5	BIG STONE - HIGHWAY 12 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05058	99.5	GRACEVT7 - ORTONVILLE 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05088	99.4	BYRON - PLEASANT VALLEY 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05087	99.4	NAPA JCT7 115.00 - UTICA 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05087	99.4	NAPA JCT7 115.00 - UTICA 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05087	99.4	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.4	BURR - J493 115.00 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.4	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.4	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.4	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.4	GEN600045 4-ANSON
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.4	J493 115.00 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.4	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.4	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05492	99.3	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05492	99.3	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05232	99.3	MONTICELLO - WAITE PARK 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05087	99.3	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05087	99.3	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05084	99.3	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.3	MEC345 - WILMARTH 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.3	MEC345 345/19.5KV TRANSFORMER CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05073	99.3	MCLEOD - PANTHER 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05060	99.3	CLEARWATER - NELIGH 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05060	99.3	CLEARWATER - ONEILL 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05101	99.2	GRAND FORKS - PICKERT 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.2	2516-WATERTNCAP 4230.00
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.2	GEN542962 2-IATAN UNIT #2
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.2	GEN645012 2-NEBRASKA CITY 2
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.2	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.2	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.2	MEC115 - WILMARTH 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.2	MEC115 115/15.0KV TRANSFORMER CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.2	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.2	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.2	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05070	99.2	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05060	99.2	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05059	99.2	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05052	99.2	AXTELL - SWEETWATER 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05025	99.2	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05025	99.2	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05025	99.2	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05017	99.2	LAWRENCE - SIOUX FALLS 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05017	99.2	LAWRENCE - SIOUX FALLS 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05214	99.1	FIELD NORTH - LKFLDXL3 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05214	99.1	FIELD SOUTH - WILMARTH 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05197	99.1	HURON - WOONSOCKET 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05098	99.1	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05098	99.1	P12:230:UMZW:# 158 #: MH IN ND.
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05082	99.1	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.1	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.1	GEN300003 1-THOMAS HILL UNIT 3

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.1	GEN337652 1-WHITE BLUFF UNIT #1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.1	GEN337653 1-WHITE BLUFF UNIT #2
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.1	GEN338143 1-INDEPENDENCE UNIT #1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.1	GEN587153 1-G16-021-GEN10.6900
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.1	GEN636641 1-LOUISA UNIT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99.1	GEN645011 1-NEBRASKA CITY 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05074	99.1	FT THOMPSON - OAHE 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05074	99.1	FT THOMPSON - OAHE 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05074	99.1	FT THOMPSON - OAHE 230KV CKT 2
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05074	99.1	FT THOMPSON - OAHE 230KV CKT 2
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05063	99.1	CHERRY CREEK - GRANT 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05035	99.1	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05214	99	FIELD NORTH - FIELD SOUTH 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05122	99	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05102	99	AS KING - CHISAGO COUNTY 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05095	99	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05086	99	DICKINSON - PARKERS LAKE 345KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99	GEN338146 1-INDEPENDENCE UNIT #2
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99	GEN344894 1-1LAB G1 20.000
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99	GEN344896 3-1LAB G3 20.000
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99	GEN600069 W-YANKEE 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99	GEN600077 W-YANKEE 2
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99	GEN600078 W-YANKEE 3
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05076	99	GEN600099 W-YANKEE 4
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05074	99	FT THOMPSON - OAHE 230KV CKT 3
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05074	99	FT THOMPSON - OAHE 230KV CKT 3
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05074	99	FT THOMPSON - OAHE 230KV CKT 4
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05074	99	FT THOMPSON - OAHE 230KV CKT 4
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05058	99	GRACEVT7 - MORRIS 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05058	99	GRACEVT7 - MORRIS 115KV CKT 1
2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05019	99	UTICA JCT - VFODNES 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04979	109.4544	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04979	109.4544	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	108.7558	BASE CASE
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.14488	107.8342	BASE CASE
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05330	107.2591	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05473	103.8506	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05473	103.8413	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05473	103.7145	HAZEL CREEK - LYON COUNTY 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	103.2353	J460 345.00 - J460-TAP 345.00 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	103.2353	J460 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05104	102.9941	BISMARK - JAMES TOWN 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	102.8386	GEN587593 1-J460-GEN1 0.6900
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05356	102.5496	BISON - HETINGER 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05132	102.4757	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05132	102.4757	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	102.4308	COYOTE 345/24.0KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05197	102.316	BROOKINGS - WATERTOWN 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05197	102.316	BROOKINGS - WATERTOWN 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05172	102.2969	ARLINGTON - WATERTOWN 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05116	102.1898	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05096	102.0016	MENNO JCT - TRIPP JCT 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05116	101.8518	HENNING - INMANN 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	101.8467	BURR - CANBY 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05116	101.7278	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05356	101.6796	BISON - MAURINE 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05155	101.5264	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05155	101.5264	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	101.5081	BROOKING COUNTY - J432 345.00 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	101.5081	J432 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05104	101.5041	BISMARK - WEBER 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05172	101.5021	ARLINGTON - BROOKINGS 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	101.483	YANKEE 115/34.5KV TRANSFORMER CKT 2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05100	101.4786	PRAIRIE - RAMSEY 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05104	101.4596	JAMES TOWN - WEBER 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	101.4199	YANKEE 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	101.4149	GEN659354 1-DEERCREK STG18.000
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	101.4055	GEN587583 1-J432-GEN1 0.6900
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	101.4055	GEN659353 1-DEERCREK CTG18.000
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	101.4035	ANSON - SPLIT ROCK 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	101.4027	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05056	101.3493	G15088_T 345.00 - MOORE 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05172	101.3345	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05172	101.3345	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05172	101.3345	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05103	101.2595	CANBY - GRANITE FALLS 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05103	101.2595	CANBY - GRANITE FALLS 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06061	101.2206	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	101.1804	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06061	101.17	2810X2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05042	101.1171	FT THOMPSON - WESSINGTON 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05042	101.1171	FT THOMPSON - WESSINGTON 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05155	101.1131	MITCHELL - MITCHELL NW 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05155	101.1131	MITCHELL - MITCHELL NW 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	101.071	ANSON - SPLIT ROCK 115KV CKT 2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	101	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.9902	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.982	ANSON 115/17.5KV TRANSFORMER CKT 4
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05037	100.949	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05037	100.949	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05035	100.8923	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05101	100.8286	JAMES TOWN - PICKERT 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.8009	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05117	100.7907	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	100.7905	MN VALLEY TAP - PANTHER 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05096	100.7833	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05096	100.7791	MENNO JCT - UTICA 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05117	100.7355	ELM CREEK - PARKERS LAKE 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05127	100.7241	AUDUBON - HUBBARD 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.617	WATERTOWN 230KV SWITCHED SHUNT
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05109	100.6113	PRAIRIE - WINGER 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05035	100.5574	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05035	100.5568	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05111	100.5566	BALTA - MCHENRY 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05063	100.5198	GRANT - MITCHELL 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05063	100.5198	GRANT - MITCHELL 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.5014	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05070	100.4754	BIG STONE - HIGHWAY 12 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05058	100.4731	GRACEVT7 - ORTONVILLE 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.4254	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	100.4207	BYRON - PLEASANT VALLEY 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.4016	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.4014	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.3933	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.3859	BURR - J493 115.00 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.3859	J493 115.00 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.3657	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.3632	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05087	100.3593	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05492	100.3571	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05492	100.3571	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05087	100.3542	NAPA JCT7 115.00 - UTICA 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05087	100.3542	NAPA JCT7 115.00 - UTICA 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05060	100.3223	CLEARWATER - NELIGH 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	100.3058	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.3	2516-WATERTNCAP 4230.00
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.2939	GEN600045 4-ANSON
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05087	100.2884	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05087	100.2884	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.2827	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.2827	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05060	100.2726	CLEARWATER - ONEILL 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05232	100.2431	MONTICELLO - WAITE PARK 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.2267	MEC345 - WILMARTH 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.2252	MEC345 345/19.5KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05059	100.2235	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.2162	GEN645012 2-NEBRASKA CITY 2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05060	100.2098	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05025	100.2078	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05025	100.2078	SIOUX FALLS - SPLIT ROCK 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.2021	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.1992	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.1968	MEC115 115/15.0KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05101	100.1801	GRAND FORKS - PICKERT 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.177	MEC115 - WILMARTH 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05073	100.1722	MCLEOD - PANTHER 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05017	100.1699	LAWRENCE - SIOUX FALLS 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05017	100.1699	LAWRENCE - SIOUX FALLS 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05025	100.1658	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05052	100.1653	AXTELL - SWEETWATER 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.1639	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05070	100.1418	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.138	GEN542962 2-IATAN UNIT #2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.109	GEN645011 1-NEBRASKA CITY 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.1	GEN338143 1-INDEPENDENCE UNIT #1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.1	GEN636641 1-LOUISA UNIT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.0967	GEN300003 1-THOMAS HILL UNIT 3
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05035	100.0871	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05074	100.0851	FT THOMPSON - OAHE 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05074	100.0851	FT THOMPSON - OAHE 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05074	100.0851	FT THOMPSON - OAHE 230KV CKT 2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05074	100.0851	FT THOMPSON - OAHE 230KV CKT 2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05098	100.0839	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05098	100.0839	P12:230:UMZW:# 158 #: MH IN ND.
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.0706	GEN337653 1-WHITE BLUFF UNIT #2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	100.069	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05214	100.0636	FIELD NORTH - LKFLDXL3 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.0622	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100.0614	GEN337652 1-WHITE BLUFF UNIT #1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05214	100	FIELD NORTH - FIELD SOUTH 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05214	100	FIELD SOUTH - WILMARTH 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05197	100	HURON - WOONSOCKET 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05102	100	AS KING - CHISAGO COUNTY 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05095	100	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05086	100	DICKINSON - PARKERS LAKE 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100	GEN338146 1-INDEPENDENCE UNIT #2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100	GEN587153 1-G16-021-GEN10.6900
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100	GEN600069 W-YANKEE 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	100	GEN600078 W-YANKEE 3
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05074	100	FT THOMPSON - OAHE 230KV CKT 3
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05074	100	FT THOMPSON - OAHE 230KV CKT 3
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05074	100	FT THOMPSON - OAHE 230KV CKT 4
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05074	100	FT THOMPSON - OAHE 230KV CKT 4
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05063	100	CHERRY CREEK - GRANT 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05058	100	GRACEVT7 - MORRIS 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05058	100	GRACEVT7 - MORRIS 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04672	100	BLAIR - WATERTOWN 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04672	100	BLAIR - WATERTOWN 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05376	99.9	BISMARK - WASHBURN 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05376	99.9	P12:230:UMZB:# 171 #: WB IN ND.
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05376	99.9	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05150	99.9	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05122	99.9	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05116	99.9	GRANITE FALLS - MORRIS 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05116	99.9	GRANITE FALLS - MORRIS 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05098	99.9	MOOREHEAD - MORRIS 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05096	99.9	BISMARK - HILKEN 4 230.00 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.9	GEN344894 1-1LAB G1 20.000
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.9	GEN344895 2-1LAB G2 20.000
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.9	GEN344896 3-1LAB G3 20.000
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.9	GEN344897 4-1LAB G4 20.000
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.9	GEN501801 1-DOLET HILLS UNIT1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.9	GEN600077 W-YANKEE 2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.9	GEN600099 W-YANKEE 4
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05019	99.9	UTICA JCT - VFODNES 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06131	99.8	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05376	99.8	LELAND OLDS - WASHBURN 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05150	99.8	GROTON - REDFIELD 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05116	99.8	MT VERN - STORLA 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05100	99.8	AURORA - BROOKINGS 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05100	99.8	AURORA - BROOKINGS 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05095	99.8	FRANKLIN - REDWOOD FALLS 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05093	99.8	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05087	99.8	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05086	99.8	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05077	99.8	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05077	99.8	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05077	99.8	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05077	99.8	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.8	GEN336251 1-NINEMILE POINT UNIT#4
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.8	GEN336252 1-NINEMILE POINT UNIT#5
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.8	GEN336831 1-BAXTER WILSON SES
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.8	GEN337041 1-GERALD ANDRUS
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.8	GEN345670 1-1RUSH G1 18.000
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.8	GEN345671 2-1RUSH G2 18.000
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.8	GEN501813 1-RODEMACHER UNIT 3
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.8	GEN542957 1-IATAN UNIT #1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.8	GEN563222 1-G15088_3 0.6900
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.8	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.8	GRANITE FALLS 115KV SWITCHED SHUNT
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.8	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05070	99.8	BRISTOL - GROTON 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05063	99.8	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06061	99.7	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05184	99.7	HELENA - SHEAS LK3 345.00 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05147	99.7	GRANITE FALLS - S3 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05147	99.7	GRANITE FALLS - S3 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05105	99.7	BALTA - HARVEY 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05105	99.7	HARVEY - UNDERWOOD 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05101	99.7	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05101	99.7	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.7	EAGLE - PHILIP 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	99.7	CHADRON - DUNLAP 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.7	ARROWHEAD - FORBES 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.7	AINSWORTH - AINSWORTH 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.7	AS KING 345/20.0KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.7	GEN335206 1-NELSON UNIT 6
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.7	GEN335614 1-WILLOW GLENN UNIT#4
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.7	GEN336191 1-LITTLE GYPSY UNIT#3
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.7	GEN338388 1-1PLUM PT U1 23.000
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.7	GEN542951 5-HAWTHORN UNIT #5
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.7	GEN542956 2-LACYGNE UNIT #2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.7	GRANITE FALLS 230KV SWITCHED SHUNT
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.7	H081 345.00 - H081-TAP 345.00 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.7	H081 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05070	99.7	BRISTOL - SUMMIT 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05069	99.7	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05056	99.7	P13:230-345:NPPD:SIDNEY 3:KV2A
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05056	99.7	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05056	99.7	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04926	99.7	BIG STONE - BROWNS VALLEY 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05207	99.6	BELFIELD - CHARLIE CREEK 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05197	99.6	STORLA - WOONSOCKET 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05125	99.6	HURON - REDFIELD 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05122	99.6	MARSHALL ERIE ROAD - S3 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05122	99.6	MARSHALL ERIE ROAD - S3 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05096	99.6	COAL CREEK - MCHENRY 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05095	99.6	BADOURA - HUBBARD 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.6	EAGLE - MARTIN 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05086	99.6	FALCONER - GRAND FORKS 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05086	99.6	FALCONER - GRAND FORKS 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05081	99.6	MARTIN - SHANNON 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.6	MORANVILLE - ROSEAU 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.6	RICHER - ROSEAU 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.6	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.6	GEN300006 1-NEW MADRID UNIT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.6	GEN300007 1-NEW MADRID UNIT 2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.6	GEN334440 1-SABINE UNIT 4
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.6	GEN334441 1-SABINE UNIT 5
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.6	GEN335204 1-NELSON UNIT 4

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.6	GEN336464 1-MICHOUD UNIT #3
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.6	GEN501812 1-RODEMACHER UNIT 2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.6	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.6	GEN542955 1-LACYGNE UNIT #1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.6	GEN587663 1-H081-GEN1 0.6900
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.6	GEN600020 2-ANGUS ANSON1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.6	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.6	RUNNING 230/118KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05075	99.6	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05074	99.6	TYNDALL - YANKON JCT 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05067	99.6	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05065	99.6	KELLY - SHELL CREEK 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05035	99.6	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05026	99.6	SIOUX FALLS - VFODNES 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05197	99.5	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05150	99.5	CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05116	99.5	ARMOUR - MT VERN 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05115	99.5	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05100	99.5	AURORA - FLANDRU 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05100	99.5	AURORA - FLANDRU 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05099	99.5	BADOURA - RIVERTON 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.5	MORO TAP - MORRIS 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.5	MORO TAP - MORRIS 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05083	99.5	CHISAGO COUNTY (C055765(2-4)) 500/345/34.5KV TRANSFORMER CKT 9
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	99.5	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	99.5	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05080	99.5	FALCONER - OSLO 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.5	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.5	GEN334433 1-SABINE UNIT 3
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.5	GEN509394 1-FLINT CREEK
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.5	GEN511840 1-NORTHEASTERN STATION #3
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.5	GEN512688 2-GRDA1 GSU2 22
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.5	GEN513601 1-GRECCTG_1 20.000
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.5	GEN514805 1-SOONER UNIT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.5	GEN515223 1-MUSKOGEE 4G
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.5	GEN515225 1-MUSKOGEE 5G
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.5	GEN515226 1-MUSKOGEE 6G
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.5	GEN600021 3-ANGUS ANSON2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.5	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.5	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.5	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.5	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.5	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05074	99.5	FT RANDAL - WHITE SWAN 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05074	99.5	TYNDALL - WHITE SWAN 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05073	99.5	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05073	99.5	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05070	99.5	COVALT 7 115.00 - LYNN 7 115.00 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05070	99.5	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05070	99.5	P12:115:TSGT:COVALT7-SNAKECK7
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05065	99.5	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05065	99.5	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05064	99.5	SIOUX FALLS (SF KV3A) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05064	99.5	SIOUX FALLS (SF KV5A) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05063	99.5	AXTELL - PAULINE 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05055	99.5	MINGO - SETAB 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05055	99.5	MINGO - SETAB 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05075	99.5	BONESTEEL - FT RANDAL 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05169	99.4	LELAND OLDS - LOGAN 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05137	99.4	LOGAN - MALLARD 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05137	99.4	LOGAN - MALLARD 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05125	99.4	LOGAN (KW1A) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05089	99.4	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05089	99.4	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.4	EDEN PRAIRIE - PARKERS LAKE 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.4	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05088	99.4	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05086	99.4	FARGO - MOOREHEAD 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	CHADRON - WAYSIDE 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.4	P13:115-230:NPPD:WAYSIDE4:T1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05082	99.4	CHISAGO COUNTY (C073455(1-2)) 500/345/34.5KV TRANSFORMER CKT 10
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.4	COON CREEK - SHERBURNE CO 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.4	COON CREEK - SHERBURNE CO 345KV CKT 3
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.4	GRE-ORTMN 4 230.00 - RUNNING 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.4	GRE-ORTMN 4 230.00 - SHANNON 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.4	LUND - RUNNING 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05078	99.4	BUNKER LAKE - SHERBURNE CO 345KV CKT 2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05077	99.4	AIRTECH - FEP TAP 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05077	99.4	AIRTECH - WEST FARIBAULT 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	1222-AINSWORTH WIND
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	2546-JAMES TOWN
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	AINSWORTH WIND 34KV SWITCHED SHUNT
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	BARNES 4 230.00 230/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	BLACK DOG 115/18.0KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	E B CAMPBELL 230/14.4KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	FARIBALT GEN115.00 115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	GEN303008 1-1BC2 U3
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	GEN336151 1-WATERFORD UNIT#1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	GEN336152 1-WATERFORD UNIT#2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	GEN336170 1-GULF OXY U4
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	GEN336801 1-BAXTER WILSON UNIT #1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	GEN511839 1-NORTHEASTERN STATION #2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	GEN511842 1-RIVERSIDE STATION #1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	GEN511843 1-RIVERSIDE STATION #2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	GEN541151 3-SIBLEY GENERATING UNIT #3
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	GEN562517 1-G14_021_S2 0.6900
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	GEN563082 1-G15073_3 0.6900
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	GEN600046 1-MECST
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	GENOA 161 - SENECA 161 161KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	JAMES TOWN 115KV SWITCHED SHUNT
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	P12:115:TSGT:BLKWDCK7-ELSIETP7
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.4	RGBYWND4 230.00 - RUGBY 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05075	99.4	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05074	99.4	CALLAWAY - MAXWELL 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05072	99.4	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05072	99.4	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05072	99.4	CROOKED CREEK - RIVERDALE 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05070	99.4	P12:115:TSGT:BSPRGS7-WHORSE7
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05068	99.4	103RD & ROKEBY - MOORE 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05068	99.4	103RD & ROKEBY - MOORE 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05067	99.4	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05066	99.4	BELDEN - HARTINGTON 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05065	99.4	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05061	99.4	GRANITE FALLS - WILLMAR 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05061	99.4	GRANITE FALLS - WILLMAR 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05060	99.4	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05056	99.4	G15088_T 345.00 - PAULINE 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05172	99.3	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05096	99.3	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05084	99.3	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.3	LAWERENCE CREEK - SHAEFER 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05079	99.3	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.3	BLACK DOG 115/18.0KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.3	CHEMOLITE 115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.3	GEN562518 1-G14_021_N2 0.6900
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.3	GEN587084 1-G16-012-GEN10.6900
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.3	GEN587643 1-J525-GEN1 0.6900
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.3	GEN629046 3-FOX LAKE 5 GENERATOR NO 3
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.3	GENOA 161 161/24.0KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.3	NOBLES 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.3	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.3	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.3	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05075	99.3	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05075	99.3	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05063	99.3	SUB 3454 - WAGENER 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05063	99.3	SUB 3454 - WAGENER 345KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05076	99.2	CENTER 230/22.0KV TRANSFORMER CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05060	99.2	PAYNSVILLE - WILLMAR 230KV CKT 1
2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04926	99.1	BROWNS VALLEY - HANKINSON 230KV CKT 1
3	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04029	104.5012	LELAND OLDS - WASHBURN 230KV CKT 1
3	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04029	104.4178	P12:230:UMZB:# 171 #: WB IN ND.
3	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04029	104.4178	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04029	104.3408	BISMARK - WASHBURN 230KV CKT 1
3	17G	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.03482	104.1335	LELAND OLDS - WASHBURN 230KV CKT 1
3	17G	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.03482	104.0402	P12:230:UMZB:# 171 #: WB IN ND.
3	17G	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.03482	104.0402	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	17G	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.03482	103.9603	BISMARK - WASHBURN 230KV CKT 1
3	20SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04299	100.7107	LELAND OLDS - WASHBURN 230KV CKT 1
3	20SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04299	100.594	P12:230:UMZB:# 171 #: WB IN ND.
3	20SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04299	100.594	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	20SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.04299	100.4988	BISMARK - WASHBURN 230KV CKT 1
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04821	116.4017	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04821	116.3394	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04821	115.5178	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04821	113.953	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04821	113.3238	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04821	113.2849	2810X2
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04821	112.4619	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04286	106.5837	BISON - HETINGER 230KV CKT 1
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04286	105.4227	BISON - MAURINE 230KV CKT 1
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	103.4963	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	103.1896	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	103.1896	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	103.1451	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	103.1267	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	103.103	BROADLAND - HURON 230KV CKT 1
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	103.1028	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	103.1028	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	102.6565	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17SP	G16_004	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05815	109.8074	BASE CASE
3	25SP	G16_004	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05525	103.7294	BASE CASE
3	20SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.03305	138.5651	CENTER - JAMESTOWN 345KV CKT 1
3	25SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.03296	137.2231	CENTER - JAMESTOWN 345KV CKT 1
3	17SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.02985	99	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
3	17SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.02985	99	P12:230:UMZW:# 158 #: MH IN ND.
3	16WP	G16_004	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.06075	106.3864	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
3	16WP	G16_004	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.06075	103.1712	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
3	16WP	G16_004	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.06077	106.4107	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	16WP	G16_004	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.06077	103.201	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.14861	108.3898	BASE CASE
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.07326	119.6725	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.07326	119.2	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.07326	118.7574	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	117.4791	BASE CASE
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06635	115.4262	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06635	115.4262	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06635	115.1097	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06635	115.0737	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06635	115.0676	BROADLAND - HURON 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06635	115.0675	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06635	115.0675	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06635	114.4828	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05813	114.1541	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.14861	113.8693	BASE CASE
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05813	112.9443	G13_001IST 115.00 - SUMMIT 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.07326	112.9095	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.07326	112.9031	2810X2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.07326	112.3484	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05472	111.6617	CARPENTER - HURON 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05472	111.4836	HURON - WATERTOWN 230KV CKT 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05472	111.4836	HURON - WATERTOWN 230KV CKT 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05748	111.4833	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05669	111.4462	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05472	111.3596	CARPENTER - WATERTOWN 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05472	111.3596	CARPENTER - WATERTOWN 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05669	111.2756	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05591	110.9668	BRISTOL - GROTON 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05669	110.8201	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05669	110.7699	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05591	110.6014	BRISTOL - SUMMIT 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05544	110.342	LETCHER - SIOUX FALLS 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05750	110.2472	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05594	110.0147	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05594	110.0147	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05654	109.9966	FARGO - JAMES TOWN 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05594	109.9826	FT RANDAL - LAKE PLATT 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05651	109.9028	FARGO - JAMES TOWN 230KV CKT 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05545	109.7254	HANLON - SIOUX FALLS 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05951	109.7031	BISON - HETINGER 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05820	109.6204	GROTON - REDFIELD 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05820	109.5866	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05951	109.5294	BISON - MAURINE 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05550	109.3652	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05529	109.283	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05558	109.2046	HARMONY - ST FRANCIS 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	109.0769	GEN635024 4-WALTER SCOTT UNIT 4
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05583	109.048	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05753	109.0471	HURON - REDFIELD 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05559	109.043	CENTER - COYOTE 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05650	109.0319	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05660	108.8536	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05660	108.8536	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05553	108.8296	HANKINSON - WAHPETON 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.8053	GEN635214 4-NEAL UNIT 4
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.7687	GEN344225 1-1CAL G1 25.000
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05588	108.7653	BALTA - RAMSEY 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.7386	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.7126	GEN635023 3-WALTER SCOTT UNIT 3
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.7096	GEN336821 1-GRAND GULF UNIT
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05558	108.7066	HARMONY - VALENTINE 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05609	108.6833	PRAIRIE - WINGER 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05541	108.6256	GRAND ISLAND - MCCOOL 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05520	108.5878	FT RANDAL - UTICA JCT 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.5518	J460 345.00 - J460-TAP 345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.5518	J460 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05598	108.5444	AUDUBON - SHEYNNE 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.5172	GEN640009 1-COOPER NUCLEAR STATION
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05521	108.4945	SIDNEY - STEGALL 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06198	108.4607	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06198	108.4607	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06042	108.4559	GLENHAM - WHITLOK 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05581	108.4263	ELM CREEK - MONTICELLO 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05558	108.4205	AINSWORTH - VALENTINE 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05606	108.4124	KARLSTAD - WINGER 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05601	108.4111	JAMES TOWN - WEBER 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05601	108.4015	BISMARK - WEBER 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05711	108.4014	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05711	108.4014	P12:230:UMZW:# 158 #: MH IN ND.
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06042	108.3997	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06042	108.3997	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.3934	SHEYENNE SVC - SHEYNNE 115KV CKT Z
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05630	108.3667	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05630	108.3521	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.3521	GEN635213 3-NEAL UNIT 3
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06042	108.3437	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05630	108.3427	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06042	108.3397	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05593	108.3344	PRAIRIE - RAMSEY 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05584	108.3317	JAMES TOWN - PICKERT 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05711	108.3292	MOOREHEAD - MORRIS 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05608	108.3243	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05608	108.3243	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06042	108.3213	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05542	108.3182	MCCOOL - MOORE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.3164	GEN336153 1-WATERFORD UNIT#3
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05835	108.3139	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06056	108.2705	GLENHAM - L3 HAWDON 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05718	108.2536	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.2502	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.2492	GEN587593 1-J460-GEN1 0.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05718	108.2423	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05718	108.2423	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05594	108.2297	AUDUBON - HUBBARD 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05601	108.2128	BISMARK - JAMES TOWN 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05604	108.1933	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06042	108.1859	OAHE - SULLEY BUTTE 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05573	108.1418	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05549	108.1244	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.1078	GEN335831 1-RIVERBEND UNIT#1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06115	108.0949	P12:230:UMZB:# 171 #: WB IN ND.
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06115	108.0949	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.0583	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.0582	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.0541	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06115	108.0514	BISMARK - WASHBURN 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06115	108.0478	LELAND OLDS - WASHBURN 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05573	108.0429	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05550	108.0347	G15088_T 345.00 - MOORE 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05664	108.0307	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	108.0243	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.979	GEN300003 1-THOMAS HILL UNIT 3
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05561	107.9767	AS KING - EAU CLAIRE 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05504	107.9636	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05363	107.9593	GROTON - ORDWAY 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05660	107.9581	REDFIELD - WEST PARK B TAP 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.9532	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05584	107.9484	GRAND FORKS - PICKERT 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05604	107.9345	P13:230-345:NPPD:STEGALL3:KV3A
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05604	107.9345	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05599	107.8997	BALTA - MCHENRY 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.8791	YANKEE 115/34.5KV TRANSFORMER CKT 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.8748	GEN636641 1-LOUISA UNIT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05549	107.8652	RASMUSN - SIOUX CITY 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05672	107.8553	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05672	107.8553	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.8536	YANKEE 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.8477	GEN542962 2-IATAN UNIT #2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05585	107.8436	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05585	107.8436	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05543	107.8359	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05543	107.8359	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05557	107.8337	FT RANDAL - SPENCER 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.8198	GEN338146 1-INDEPENDENCE UNIT #2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05566	107.8196	MENNO JCT - TRIPP JCT 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.8148	GEN338143 1-INDEPENDENCE UNIT #1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05557	107.8127	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05557	107.8127	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05539	107.792	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05539	107.792	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.7851	GEN337652 1-WHITE BLUFF UNIT #1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.7803	GEN659353 1-DEERCREK CTG18.000
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.7761	GEN337653 1-WHITE BLUFF UNIT #2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.7745	GEN659354 1-DEERCREK STG18.000
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.7617	GEN645012 2-NEBRASKA CITY 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05557	107.7599	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05630	107.7595	FARGO - MOOREHEAD 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05583	107.7411	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.7306	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05574	107.7303	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05534	107.7204	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05534	107.7202	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.7134	ANSON - SPLIT ROCK 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.7132	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05542	107.7094	FT THOMPSON - OAHE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05542	107.7094	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05542	107.7094	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05542	107.7094	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05541	107.707	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05541	107.707	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05541	107.707	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05541	107.707	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05547	107.7067	CENTER - SQUARE BUTTE 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.7	GEN344895 2-1LAB G2 20.000
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05549	107.6977	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05534	107.6935	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.6884	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05581	107.6849	ELM CREEK - PARKERS LAKE 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.6693	GEN344897 4-1LAB G4 20.000
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05568	107.6685	GAVINS POINT - YANKON JCT 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05568	107.6685	GAVINS POINT - YANKON JCT 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05563	107.668	MORANVILLE - ROSEAU 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.6665	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.6656	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05566	107.664	MENNO JCT - UTICA 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05563	107.6638	RICHER - ROSEAU 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05591	107.6595	HARVEY - UNDERWOOD 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05591	107.6544	COAL CREEK - UNDERWOOD 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.6394	GEN344894 1-1LAB G1 20.000
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.6393	GEN344896 3-1LAB G3 20.000
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.6364	GEN336252 1-NINEMILE POINT UNIT#5
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.6317	GEN345670 1-1RUSH G1 18.000
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.6316	BROOKING COUNTY - J432 345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.6316	J432 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05547	107.6305	AXTELL - SWEETWATER 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.6263	GEN587583 1-J432-GEN1 0.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.6226	GEN300007 1-NEW MADRID UNIT 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.6202	GEN345671 2-1RUSH G2 18.000
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.6158	GEN300006 1-NEW MADRID UNIT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05534	107.6144	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05346	107.6128	EDGELEY - JAMES TOWN 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05591	107.611	BALTA - HARVEY 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05557	107.6105	ADAMS - MITCHLCO3 345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05566	107.6081	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.5983	GEN501801 1-DOLET HILLS UNIT1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05565	107.5944	CANBY - GRANITE FALLS 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05565	107.5944	CANBY - GRANITE FALLS 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05611	107.5875	BALTA - RUGBY 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05559	107.5766	ADAMS - PLEASANT VALLEY 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.5665	GEN542957 1-IATAN UNIT #1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.5638	ANSON - SPLIT ROCK 115KV CKT 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.5629	ANSON 115/17.5KV TRANSFORMER CKT 4
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.5585	GEN336831 1-BAXTER WILSON SES
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05551	107.5585	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.5576	GEN501813 1-RODEMACHER UNIT 3
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05578	107.5532	AS KING - CHISAGO COUNTY 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05553	107.5526	CLEARWATER - ONEILL 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.5518	GEN336251 1-NINEMILE POINT UNIT#4
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05641	107.5491	MONTICELLO - WAITE PARK 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05559	107.5475	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.5417	GEN542951 5-HAWTHORN UNIT #5
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05563	107.5394	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.5368	GEN337041 1-GERALD ANDRUS
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05553	107.5309	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05553	107.5114	CLEARWATER - NELIGH 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.5093	GEN587153 1-G16-021-GEN10.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.5087	GEN542955 1-LACYGNE UNIT #1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.4804	GEN335206 1-NELSON UNIT 6
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05563	107.469	LUND - MORANVILLE 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.4685	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05563	107.4643	LUND - RUNNING 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05585	107.462	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05585	107.462	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05547	107.4571	P13:115-230:TSGT:SIDNEY-KV1A
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05563	107.451	NAPA JCT7 115.00 - UTICA 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05563	107.451	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05563	107.4403	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.4368	GEN600045 4-ANSON
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05571	107.4355	FALCONER - GRAND FORKS 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05571	107.4355	FALCONER - GRAND FORKS 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05647	107.4262	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05569	107.4218	GRAND FORKS (GK KV1A) 230/115/12.47KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.4145	GEN542956 2-LACYGNE UNIT #2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05555	107.4143	GRANT - MITCHELL 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05555	107.4143	GRANT - MITCHELL 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05595	107.409	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05541	107.4084	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05541	107.4084	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05580	107.4076	COAL CREEK - MCHENRY 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.4066	GEN501812 1-RODEMACHER UNIT 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05541	107.403	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05747	107.4017	BELFIELD - CHARLIE CREEK 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.3874	GEN334440 1-SABINE UNIT 4
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.3859	GEN338388 1-1PLUM PT U1 23.000
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.3838	GEN509403 1-PIRKEY GENERATION
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.3739	GEN336191 1-LITTLE GYPSY UNIT#3
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05566	107.3733	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.3652	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.3626	MEC345 - WILMARTH 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.362	MEC345 345/19.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.3563	GEN509416 1-TURK GENERATION
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.3502	MEC115 115/15.0KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.3469	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.3457	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.3281	GEN590011 2-ERCOT EQUIVALENCE
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.3065	G09_001IST 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.3065	G09_001IST 345.00 345/34.5KV TRANSFORMER CKT 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05745	107.3051	BOWMAN - RHAME 4 230.00 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.2791	GEN620315 1-BIG STONE GEN
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05552	107.2664	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05552	107.2664	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.1669	GEN600069 W-YANKEE 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.1636	GEN600078 W-YANKEE 3
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.1538	GEN600077 W-YANKEE 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	107.1538	GEN600099 W-YANKEE 4
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.7585	2560-BRDLAND-LNX3345.00
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.7585	2561-BRDLAND-LNX3345.00
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.7585	2562-GROTON-LNX3 345.00
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.7585	2563-GROTON-LNX3 345.00
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.7262	GEN-2016-044345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.7262	GEN-2016-044345.00 345/34.5KV TRANSFORMER CKT 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05658	106.5192	BLAIR - WATERTOWN 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05658	106.5192	BLAIR - WATERTOWN 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05582	106.5171	NOBLES - SPLIT ROCK 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.328	GROTON-LNX3 345.00 345KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05557	106.3228	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05557	106.3047	MN VALLEY TAP - PANTHER 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.2667	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05563	106.2351	BUFFALO RIDGE - YANKEE 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.2192	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05233	106.1919	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05787	106.1898	BROWNS VALLEY - HANKINSON 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.1693	GEN672350 1-NIPAWIN GENERATOR 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.1693	GEN672351 2-NIPAWIN GENERATOR 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.1693	GEN672352 3-NIPAWIN GENERATOR 3
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05569	106.1667	GRANITE FALLS - WILLMAR 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05569	106.1667	GRANITE FALLS - WILLMAR 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.1575	GEN672349 3-CORY COGEN GENERATOR 3 ST
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.1425	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.1338	GEN657964 1-ASH2GEN9 0.5750
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05570	106.12	PAYNSVILLE - WILLMAR 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05570	106.0833	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.0787	GEN672339 16-QE 16G 13.800
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.0787	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.0361	GEN652907 1-G09_007IS_3 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05571	106.0308	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05233	106.0287	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05571	106.0273	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.0134	GEN659158 2-PIONEER G213.800
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.0134	GEN659159 3-PIONEER G313.800
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.0085	GEN659156 2-LONESMCRK 2G13.800
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	106.0085	GEN659157 3-LONESMCRK 3G13.800
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.9986	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.9977	GEN563302 1-G15096_3 0.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.9691	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.9309	GEN620115 1-HRDLKGEN 0.6000
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.9259	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05570	105.9189	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05570	105.9189	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.8789	GEN652410 3-FT PECK
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.876	GEN652345 W-G07_023IS_2 0.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05653	105.869	DRAYTON - LETELLIER 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.8583	GEN652559 1-OAHE
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05563	105.8284	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.8277	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05787	105.821	BIG STONE - BROWNS VALLEY 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05571	105.8095	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05571	105.8095	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.8008	GEN652556 2-OAHE
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.8008	GEN652557 4-OAHE
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.8008	GEN652558 6-OAHE
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05634	105.7877	HELENA - SCOTTCO3 345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.7746	GEN652414 4-FT PECK
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.7746	GEN652415 5-FT PECK
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.7567	GEN659294 1-WILTONCOL9
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.7566	GEN659273 2-GROTON SYNC COND
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05571	105.7251	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05571	105.7251	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.723	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.6664	RGBYWND4 230.00 - RUGBY 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.6544	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.6465	GEN659162 4-RED WLCK
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.6465	GEN659163 5-BLACK WDCK
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05581	105.642	LAKEFIELD 3 - NOBLES 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.6409	GEN659192 6-LYNN
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05505	105.5914	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05505	105.5649	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05505	105.5649	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.5609	GEN659118 1-LARAMIE RIVER UNIT1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.5275	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.5275	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.5217	GEN659289 1-DAYCNTYWND W0.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.5176	GEN563312 1-G15097_3 0.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.5042	GEN672392 1-NBECGT1G 18.000
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.4976	GEN659290 1-EDGECOL
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05505	105.4878	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.4864	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.4864	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.4504	GEN659031 1-G12_014IS_4 0.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.4157	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.3957	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.3801	GEN659270 1-WEST SW
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.3499	GEN615015 1-GRE-SPRITWDG13.200
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.293	GEN562872 1-G15046_3 0.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.2525	GEN 11104 1-J262_GEN 0.6000
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.2525	GEN 11108 1-J263_GEN 0.6000
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.1815	GEN910006 1-G12_012IS_3 0.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.1787	LADISH 115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.1268	GEN652353 2-GR PRAIRIEG 0.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.1131	GEN660001 2-ABERDEEN SIEBRECHT
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.0386	GEN659411 1-CAMPBLCNTY W0.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	105.01	GEN587053 1-G16-007-GEN10.6500
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05573	104.9631	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05573	104.9631	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05233	104.7579	ABERDEEN JCT - ELLENDALE 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.7238	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.6691	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.6156	GEN 10648 1-G830_GEN 0.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.5597	GEN659010 4-G07_027IS_2 0.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.5501	GEN659366 3-WILTON 3 W0.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.5191	GEN672321 1-SHAND GENERATOR 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.5171	GEN672310 1-POPLAR RIVER GENERATOR 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.5171	GEN672311 2-POPLAR RIVER GENERATOR 2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.4915	GEN659194 1-NDPRAIRWND1W0.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.4783	GEN652460 4-GARRISON
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.4763	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.4662	GEN652461 5-GARRISON
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.4233	GEN659403 1-NDSUNFLWR W0.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.3572	GEN652457 1-GARRISON
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.3572	GEN652458 2-GARRISON
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.3572	GEN652459 3-GARRISON
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.3482	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.345	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05233	104.2832	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.2598	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	104.1414	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	103.8826	GEN587133 1-G16-017-GEN10.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	103.4741	GEN659453 1-GI1414GEN W0.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	103.3782	GEN659272 2-GROTON 2G13.800
3	20SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.07055	103.3616	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	20SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.07055	103.2219	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.07055	103.219	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	103.1215	GEN659274 1-GROTON
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	103.1167	GEN659141 1-K10215A
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	103.0062	GEN659110 1-LELAND OLDS UNIT1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	102.8328	STANTON 230/18.0KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	102.6954	GEN615010 1-STANTON4
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	102.4703	GEN657749 1-YOUNG 1 GENERATOR
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	102.4324	GEN659407 1-ANTELPHILLSW0.6900
3	25SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.07082	102.1343	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	25SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.07082	102.1286	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	25SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.07082	102.1171	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	101.6593	GEN587033 1-G16-004-GEN10.6900
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	101.4072	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	101.4	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
3	20SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05370	101.2749	BASE CASE
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	101.0132	COYOTE 345/24.0KV TRANSFORMER CKT 1
3	17G	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.08121	100.5016	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	100.1519	GEN661015 1-COYOTE
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	99.7	GEN657748 1-YOUNG 2 GENERATOR
3	20SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05684	99.7	CENTER - JAMESTOWN 345KV CKT 1
3	17G	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.07136	99.6	BASE CASE
3	25SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05395	99.5	BASE CASE
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	99.3	GEN659103 1-ANTELOPE VALLEY UNIT1
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	99.3	GEN659107 2-ANTELOPE VALLEY UNIT2
3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.05560	99.2	GEN659111 2-LELAND OLDS UNIT2
3	17G	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.08129	99	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.06398	99	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04821	130.9287	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04821	130.865	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04821	130.4222	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04821	128.048	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04821	127.7144	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04821	127.6766	2810X2
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04821	126.7405	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04286	121.178	BISON - HETINGER 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04286	119.9144	BISON - MAURINE 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	117.2318	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	117.0895	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	117.0895	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	117.0014	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	116.9953	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	116.9565	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	116.9509	BROADLAND - HURON 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	116.9507	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04189	116.9507	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03963	110.9358	BUFFALO - JAMESTOWN 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04018	110.5762	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03964	110.2347	SPLIT ROCK - WHITE 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03964	110.2347	SPLIT ROCK - WHITE 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04018	110.2302	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03912	109.4619	CHISAGO COUNTY - FORBES 500KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03912	109.2271	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04043	108.8697	BOWMAN - RHAME 4 230.00 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04192	108.8027	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04011	108.7694	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04011	108.7694	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04192	108.7079	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04192	108.7043	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04011	108.6097	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04192	108.5442	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03930	108.4866	BISON 3 345.00 - BUFFALO 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03910	108.2722	488489510526345.00 - BSSOUTH3 345.00 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03938	107.9605	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03896	107.881	BROOKING COUNTY - BSSOUTH3 345.00 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03967	107.5183	CENTER - JAMESTOWN 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04043	106.9883	BOWMAN - HETINGER 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03924	106.6977	BISMARK - WEBER 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03924	106.6639	BISMARK - JAMES TOWN 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03924	106.6512	JAMES TOWN - WEBER 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03810	106.5833	CENTER - SQUARE BUTTE 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	106.4564	GEN652556 3-OAHE
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03953	106.1756	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	106.0033	GEN659118 1-LARAMIE RIVER UNIT1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04005	105.9938	HESKETT - WISHEK 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.04005	105.8636	MERRCRT4 230.00 - WISHEK 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	105.8572	GEN635024 4-WALTER SCOTT UNIT 4
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03920	105.7758	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03905	105.5158	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	105.4192	GEN635023 3-WALTER SCOTT UNIT 3
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	105.3711	GEN336821 1-GRAND GULF UNIT
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03910	105.234	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03910	105.234	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03910	105.2338	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	105.1328	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	105.0857	G16-044-TAP 345.00 - GROTON 345KV CKT 2
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03889	105.0695	FARGO - JAMES TOWN 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	105.0592	GEN344225 1-1CAL G1 25.000
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03887	104.9947	FARGO - JAMES TOWN 230KV CKT 2
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	104.9899	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03903	104.9749	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	104.9717	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	104.9089	GEN336153 1-WATERFORD UNIT#3
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03983	104.8202	FT THOMPSON - HURON 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03983	104.8202	FT THOMPSON - HURON 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03983	104.8202	FT THOMPSON - HURON 230KV CKT 2
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03983	104.8202	FT THOMPSON - HURON 230KV CKT 2
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03879	104.7788	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	104.7347	GEN635214 4-NEAL UNIT 4
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	104.6651	GEN335831 1-RIVERBEND UNIT#1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	104.5958	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03887	104.5921	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03887	104.5921	P12:230:UMZW:# 158 #: MH IN ND.
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03887	104.5802	MOOREHEAD - MORRIS 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03865	104.5164	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03891	104.5055	HELENA - SHEAS LK3 345.00 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03857	104.346	AS KING - EAU CLAIRE 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03856	104.3229	ELM CREEK - MONTICELLO 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	104.2629	GEN635213 3-NEAL UNIT 3
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	104.2533	GEN337652 1-WHITE BLUFF UNIT #1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	104.2192	GEN337653 1-WHITE BLUFF UNIT #2
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	104.1971	GEN338146 1-INDEPENDENCE UNIT #2
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	104.1881	GEN338143 1-INDEPENDENCE UNIT #1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03887	104.1821	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03855	104.1806	BIG STONE - BLAIR 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03855	104.1806	BIG STONE - BLAIR 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03861	104.1733	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	104.0959	GEN501801 1-DOLET HILLS UNIT1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03866	104.0939	AUDUBON - SHEYNNE 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03879	104.0826	FARGO - SHEYNNE 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03879	104.0826	FARGO - SHEYNNE 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	102.4921	BASE CASE
3	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.05740	101.9677	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03901	100.946	DICKINSON - HEBRON 4 230.00 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.9071	J290_SUB 230.00 230/34.5KV TRANSFORMER CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03847	100.8943	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.8403	LADISH 115/13.2KV TRANSFORMER CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.7651	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.7651	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03886	100.7438	FT RANDAL - UTICA JCT 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03860	100.7375	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03836	100.6951	GARRISON - HILKEN 4 230.00 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.6646	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.6624	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.6452	GEN910006 1-G12_012IS_3 0.6900
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03856	100.6062	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03856	100.6062	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03967	100.5875	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.5708	GEN659018 1-G14_003IS_3 0.6900
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03878	100.5295	FT RANDAL - SIOUX CITY 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03948	100.5124	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03948	100.465	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.4374	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03792	100.4206	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03948	100.4179	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.3911	MPC02100TAP4230.00 - MPC2100WIND4230.00 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.3895	GEN563342 1-G15098_3 0.6900
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.3883	MPC2100WIND4230.00 230/34.5KV TRANSFORMER CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.3536	RGBYWND4 230.00 - RUGBY 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.3476	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03941	100.337	FT THOMPSON - OAHE 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03941	100.337	FT THOMPSON - OAHE 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03941	100.337	FT THOMPSON - OAHE 230KV CKT 2
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03941	100.337	FT THOMPSON - OAHE 230KV CKT 2
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.3064	GEN563252 1-G15091_3 0.6900
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.278	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.278	GEN672304 4-BOUNDARY DAM GENERATOR 4
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.278	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.2602	GEN 10572 2-J290_MK10 0.6900
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03945	100.2476	FT THOMPSON - OAHE 230KV CKT 3
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03945	100.2476	FT THOMPSON - OAHE 230KV CKT 3
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03945	100.2476	FT THOMPSON - OAHE 230KV CKT 4
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03945	100.2476	FT THOMPSON - OAHE 230KV CKT 4
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03850	100.2222	LETCHER - SIOUX FALLS 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100.215	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03792	100.193	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03792	100.193	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03790	100.1715	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03790	100.1715	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100	GEN 11104 1-J262_GEN 0.6000
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100	GEN 11108 1-J263_GEN 0.6000
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100	GEN659273 2-GROTON SYNC COND
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	100	GEN659294 1-WILTONCOL9
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03725	100	NUNDRWD - WAYSIDE 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	99.9	GEN600003 1-PRAIRIE ISLAND G1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	99.9	GEN600004 2-PRAIRIE ISLAND G2
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	99.9	GEN615015 1-GRE-SPRITWDG13.200
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	99.9	GEN672321 1-SHAND GENERATOR 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	99.8	GEN600006 1-AS KING
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	99.7	GEN657745 1-MPC02100GEN90.6900
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	99.6	CENTER 230/22.0KV TRANSFORMER CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	99.6	GEN 10648 1-G830_GEN 0.6900
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03860	99.5	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	99.3	GEN563302 1-G15096_3 0.6900
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	99.2	GEN652460 4-GARRISON

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	99.2	GEN652461 5-GARRISON
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	99.2	GEN659110 1-LELAND OLDS UNIT1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03856	99	FT THOMPSON - LETCHER 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03856	99	FT THOMPSON - LETCHER 230KV CKT 1
3	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03849	99	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07446	115.3587	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07446	115.346	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07446	115.2897	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07446	115.0725	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05634	111.7399	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05634	111.7389	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05634	110.9511	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07446	110.8433	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07446	110.8321	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07446	110.7379	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07446	110.5958	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05634	110.1359	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05634	109.8143	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05634	109.4045	2810X2
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05634	109.3922	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05634	107.8839	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05634	107.8511	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05634	107.2009	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05634	106.4438	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05634	106.1666	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11899	106.0622	BASE CASE
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05634	105.8108	2810X2
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05634	105.7706	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06344	105.687	BISON - HETINGER 230KV CKT 1
3	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08343	105.5491	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06344	105.381	BISON - MAURINE 230KV CKT 1
3	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08343	105.041	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06422	104.8354	GLENHAM - L3 HAWDON 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06016	104.5763	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06016	104.555	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	104.4271	G16-044-TAP 345.00 - GROTON 345KV CKT 2
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06016	104.4057	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05989	104.2365	CENTER - JAMESTOWN 345KV CKT 1
3	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08343	104.2	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06398	104.186	GLENHAM - WHITLOK 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06398	104.0931	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06398	104.0931	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06398	104.0133	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06398	103.9877	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06398	103.9876	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06422	103.8367	BISMARK - L3 HAWDON 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06398	103.7681	OAHE - SULLEY BUTTE 230KV CKT 1
3	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11899	102.75	BASE CASE
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05861	102.4806	CHISAGO COUNTY - FORBES 500KV CKT 1
3	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08343	102.45	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06344	102.4324	BISON - HETINGER 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05861	102.4033	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05883	102.2957	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06344	102.167	BISON - MAURINE 230KV CKT 1
3	25SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11734	102.0308	BASE CASE
3	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08343	101.9972	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05364	101.7629	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05364	101.7519	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05364	101.7402	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05813	101.7091	BIG STONE - BLAIR 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05813	101.7091	BIG STONE - BLAIR 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06422	101.7	GLENHAM - L3 HAWDON 230KV CKT 1
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04558	101.6956	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05892	101.6771	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05834	101.6383	GARRISON - JAMES TOWN 230KV CKT 1
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05364	101.5947	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05981	101.5656	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05981	101.5656	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05981	101.4963	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06016	101.4878	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06016	101.4708	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05812	101.3983	CENTER - CNTSHNT3 345.00 345KV CKT Z1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04838	101.3855	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04838	101.3854	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 2
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04558	101.377	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06017	101.3644	G16-044-TAP 345.00 - GROTON 345KV CKT 2
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05749	101.3479	CENTER - COYOTE 345KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06016	101.3389	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08343	101.3	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05846	101.2034	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05989	101.1765	CENTER - JAMESTOWN 345KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06398	101.1298	GLENHAM - WHITLOK 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05894	101.0903	HESKETT - WISHEK 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06295	101.0736	P12:230:UMZB:# 171 #: WB IN ND.
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06295	101.0736	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06398	101.0472	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06398	101.0472	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05782	101.0238	BISMARK - HILKEN 4 230.00 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06295	100.9973	LELAND OLDS - WASHBURN 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06295	100.9837	BISMARK - WASHBURN 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06398	100.9769	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06398	100.9544	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06398	100.9543	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05894	100.9516	MERRCRT4 230.00 - WISHEK 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05799	100.9502	FORMAN - OAKES 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06040	100.9204	BOWMAN - RHAME 4 230.00 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05797	100.8972	ELLENDALE - OAKES 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05797	100.8972	ELLENDALE - OAKES 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06422	100.8198	BISMARK - L3 HAWDON 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05788	100.7935	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05788	100.7935	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06398	100.7604	OAHE - SULLEY BUTTE 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05883	100.7324	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05717	100.6315	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05874	100.4551	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05856	100.4468	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05793	100.3909	JAMES TOWN - WEBER 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05793	100.387	BISMARK - JAMES TOWN 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05784	100.3846	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05793	100.3751	BISMARK - WEBER 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05796	100.3541	FARGO - JAMES TOWN 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05787	100.3437	FORMAN - HANKINSON 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05794	100.317	FARGO - JAMES TOWN 230KV CKT 2
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05778	100.3057	BALTA - RAMSEY 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05777	100.265	PRAIRIE - RAMSEY 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05868	100.2439	GROTON - REDFIELD 115KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05771	100.2227	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05784	100.2202	ABERDEEN JCT - ELLENDALE 115KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05853	100.1915	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05853	100.1915	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05784	100.1662	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05822	100.1568	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05822	100.1568	P12:230:UMZW:# 158 #: MH IN ND.
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05822	100.1418	MOOREHEAD - MORRIS 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05868	100.1128	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05751	100.0749	GEN635024 4-WALTER SCOTT UNIT 4
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06260	100.0575	LELAND OLDS - STANTON 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06260	100.0575	LELAND OLDS - STANTON 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06040	100	BOWMAN - HETINGER 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05853	100	REDFIELD - WEST PARK B TAP 115KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05844	100	HURON - REDFIELD 115KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05793	100	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05783	100	PRAIRIE - WINGER 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05751	100	GEN336821 1-GRAND GULF UNIT
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05751	100	GEN635023 3-WALTER SCOTT UNIT 3
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05751	100	GEN635214 4-NEAL UNIT 4
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05850	99.9	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05793	99.9	G13_001IST 115.00 - SUMMIT 115KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05784	99.9	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05761	99.9	ELLENDALE - J316_SUB 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05760	99.9	NUNDRWD - PHILIP TAP 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05753	99.9	P12:230:UMZW:# 166 #: PL IN SD. TAP
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05753	99.9	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05756	99.8	P12:115:UMZB:# 122 #: RUTH IN ND. RUTH TAP
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05751	99.8	GEN336153 1-WATERFORD UNIT#3
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05751	99.8	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04521	99.8	BISON - HETINGER 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05861	99.7	CHISAGO COUNTY - FORBES 500KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05861	99.6	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05883	99.5	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05751	99.4	2560-BRDLAND-LNX3345.00
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05751	99.4	2561-BRDLAND-LNX3345.00
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05751	99.4	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05751	99.4	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04521	99.2	BISON - MAURINE 230KV CKT 1
3	25SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11734	99.2	BASE CASE
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05813	99	BIG STONE - BLAIR 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05813	99	BIG STONE - BLAIR 230KV CKT 1
3	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05751	99	BASE CASE
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05364	99	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05364	99	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05364	99	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.04558	99	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	16WP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.14574	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	16WP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.14574	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	16WP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.06930	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.06808	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.04539	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	16WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.04539	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.38433	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.34801	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.31741	-	2810X2
3	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.23005	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.19217	-	2810X2
3	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.19217	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.17254	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.17254	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.15870	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.15870	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.15870	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.14616	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.14616	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17G	G16_004	-	Non-Converged Contingency	478.0	526.0	0.11600	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.11600	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17G	G16_004	-	Non-Converged Contingency	732.0	732.0	0.11600	-	BROADLAND - HURON 230KV CKT 1
3	17G	G16_004	-	Non-Converged Contingency	400.0	400.0	0.11600	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.09608	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.09608	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.09608	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.09608	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.07136	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17G	G16_004	-	Non-Converged Contingency	717.0	789.0	0.07136	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17G	G16_004	-	Non-Converged Contingency	478.0	526.0	0.05751	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17G	G16_004	-	Non-Converged Contingency	0.0	0.0	0.05751	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17G	G16_004	-	Non-Converged Contingency	732.0	732.0	0.05751	-	BROADLAND - HURON 230KV CKT 1
3	17G	G16_004	-	Non-Converged Contingency	400.0	400.0	0.05751	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17G	G16_004	-	Non-Converged Contingency	400.0	400.0	0.05751	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17G	G16_004	-	Non-Converged Contingency	705.0	705.0	0.03770	-	BUFFALO - JAMESTOWN 345KV CKT 1
3	17G	G16_004	-	Non-Converged Contingency	720.0	792.0	0.03655	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
3	17G	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.03546	-	FORBES - ROSEAU 500KV CKT 1
3	17G	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.03546	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
3	17G	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.03546	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
3	17G	G16_004	-	Non-Converged Contingency	319.0	351.0	0.03268	-	ELLENDALE - OAKES 230KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.37013	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.35696	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.33976	-	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.32482	-	2810X2
3	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.32482	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.30732	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.24675	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.24675	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16988	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.16988	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16241	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16241	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16241	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.16241	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_004	-	Non-Converged Contingency	720.0	792.0	0.15366	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	17SP	G16_004	-	Non-Converged Contingency	720.0	792.0	0.15366	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.14861	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.14861	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12338	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12338	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12338	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
3	17SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12338	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12338	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12338	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12338	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.11899	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	17SP	G16_004	-	Non-Converged Contingency	478.0	526.0	0.11899	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.11899	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17SP	G16_004	-	Non-Converged Contingency	732.0	732.0	0.11899	-	BROADLAND - HURON 230KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	400.0	400.0	0.11899	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.11208	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.08488	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	478.0	526.0	0.06275	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	215.0	236.0	0.05815	-	BISON - HETINGER 230KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	384.0	384.0	0.05815	-	BISON - MAURINE 230KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	720.0	792.0	0.05604	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	17SP	G16_004	-	Non-Converged Contingency	720.0	792.0	0.05604	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.05560	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.05560	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	319.0	341.0	0.05243	-	NUNDRWD - WAYSIDE 230KV CKT 1
3	17SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.03946	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	17SP	G16_004	-	Non-Converged Contingency	319.0	351.0	0.03285	-	ELLENDALE - OAKES 230KV CKT 1
3	20SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.13821	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.13821	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20SP	G16_004	-	Non-Converged Contingency	720.0	720.0	0.12784	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	20SP	G16_004	-	Non-Converged Contingency	705.0	705.0	0.08794	-	BUFFALO - JAMESTOWN 345KV CKT 1
3	20SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.08781	-	FORBES - ROSEAU 500KV CKT 1
3	20SP	G16_004	-	Non-Converged Contingency	1732.1	1905.3	0.08781	-	RIEL - ROSEAU 500KV CKT 1
3	20SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.08781	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
3	20SP	G16_004	-	Non-Converged Contingency	1732.1	2165.1	0.08781	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
3	20SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.05370	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.03465	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	20SP	G16_004	-	Non-Converged Contingency	720.0	792.0	0.03359	-	SPLIT ROCK - WHITE 345KV CKT 1
3	20WP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.04568	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.32312	-	2810X2
3	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.32312	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	25SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16156	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	25SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16156	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	25SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.16156	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	25SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.13905	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	25SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.13905	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	25SP	G16_004	-	Non-Converged Contingency	478.0	526.0	0.11734	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	25SP	G16_004	-	Non-Converged Contingency	717.0	789.0	0.05395	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.05188	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.03459	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	25SP	G16_004	-	Non-Converged Contingency	0.0	0.0	0.03459	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	25SP	G16_004	-	Non-Converged Contingency	720.0	792.0	0.03367	-	SPLIT ROCK - WHITE 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	143.3307	BASE CASE
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03304	142.1947	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03297	141.3174	HANLON - STORLA 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04679	139.2313	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03504	139.2044	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04679	138.797	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04679	138.793	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03302	138.6646	STORLA - WESSINGTON 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03504	138.4989	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03504	138.3975	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03283	138.0603	FT THOMPSON - LETCHER 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03283	138.0603	FT THOMPSON - LETCHER 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03504	138.0477	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03504	137.9126	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	137.8084	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	137.807	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	137.7935	GEN635214 4-NEAL UNIT 4
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03340	137.4852	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03340	137.4852	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03396	137.3535	BUFFALO RIDGE - YANKEE 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03336	137.1857	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03336	137.1446	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	136.7496	GEN635024 4-WALTER SCOTT UNIT 4
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	136.6954	COYOTE 345/24.0KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03300	136.4179	LETCHER - SIOUX FALLS 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	136.361	BASE CASE
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	136.2011	GEN635213 3-NEAL UNIT 3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03363	136.1506	BLAIR - GRANITE FALLS 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03363	136.1506	BLAIR - GRANITE FALLS 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04088	135.8675	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	135.805	GEN635023 3-WALTER SCOTT UNIT 3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04679	135.7765	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03314	135.6577	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	135.5963	GEN336821 1-GRAND GULF UNIT
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03561	135.5914	AURORA - BROOKINGS 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03561	135.5914	AURORA - BROOKINGS 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03422	135.5876	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	135.4971	ANSON - SPLIT ROCK 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	135.497	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03482	135.4727	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03427	135.4548	CHANARANBIE - FENTON 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03396	135.4061	BIG STONE - BLAIR 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03396	135.4061	BIG STONE - BLAIR 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03457	135.403	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03403	135.1507	AS KING - EAU CLAIRE 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03348	135.1193	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03307	135.0383	HANLON - SIOUX FALLS 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	134.9454	CENTER 230/22.0KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03561	134.9297	AURORA - FLANDRU 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03561	134.9297	AURORA - FLANDRU 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03308	134.8522	HANLON - STORLA 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	134.8356	ANSON - SPLIT ROCK 115KV CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	134.835	ANSON 115/17.5KV TRANSFORMER CKT 4
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	134.7389	GEN344225 1-1CAL G1 25.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03450	134.7014	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03516	134.6852	NUNDRWD - WAYSIDE 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04679	134.4162	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03438	134.4118	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03438	134.4118	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04679	134.4066	2810X2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	134.399	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03436	134.2437	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03436	134.2437	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	134.1842	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03368	134.1702	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03457	134.1599	ADAMS - MITCHLCO3 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	134.1453	MN VALLEY TAP - PANTHER 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03462	134.1335	ADAMS - PLEASANT VALLEY 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	134.1012	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	134.075	GEN336153 1-WATERFORD UNIT#3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04679	134.0231	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	134.0145	GEN600045 4-ANSON
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03530	133.9669	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03436	133.9547	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	133.919	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03281	133.8532	FT RANDAL - SIOUX CITY 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03224	133.8293	HANKINSON - WAHPETON 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03388	133.7912	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03397	133.754	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	133.648	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	133.6281	GEN335831 1-RIVERBEND UNIT#1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03512	133.6	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04688	133.5447	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03382	133.5255	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04688	133.4054	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	133.3711	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03411	133.3687	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03360	133.3683	MCLEOD - PANTHER 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04688	133.362	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03335	133.343	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03512	133.3406	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03247	133.3391	FT RANDAL - UTICA JCT 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	133.3333	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03382	133.2867	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03474	133.2658	PIPESTONE - SPLIT ROCK 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03464	133.2616	BYRON - NORTH ROCHESTER 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03181	133.2537	BIG STONE - BROWNS VALLEY 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03353	133.2388	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03353	133.2388	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03335	133.165	BROOKINGS - WHITE 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03335	133.165	BROOKINGS - WHITE 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03513	133.1191	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03513	133.1191	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03353	133.0389	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03353	133.0389	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03424	133.0271	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03382	133.0266	HENNING - INMANN 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03379	133.0229	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.9337	GEN640009 1-COOPER NUCLEAR STATION
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03443	132.9041	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03443	132.9041	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03338	132.8996	PAYNSVILLE - WILLMAR 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03999	132.879	HELENA - SHEAS LK3 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03722	132.8771	BISON - HETINGER 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.842	GEN337653 1-WHITE BLUFF UNIT #2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03341	132.8328	GRANITE FALLS - WILLMAR 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03341	132.8328	GRANITE FALLS - WILLMAR 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.8129	GEN338146 1-INDEPENDENCE UNIT #2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.8096	GEN338143 1-INDEPENDENCE UNIT #1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03338	132.8005	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.7977	GEN337652 1-WHITE BLUFF UNIT #1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03181	132.7899	BROWNS VALLEY - HANKINSON 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03383	132.6561	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03460	132.6115	BYRON - PLEASANT VALLEY 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.5602	GEN501801 1-DOLET HILLS UNIT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.5031	GEN336252 1-NINEMILE POINT UNIT#5
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03358	132.5005	MISSION - ST FRANCIS 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03396	132.4507	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03256	132.4176	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.4066	GEN336251 1-NINEMILE POINT UNIT#4
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	132.4057	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.391	GEN336831 1-BAXTER WILSON SES
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03256	132.3898	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03722	132.3684	BISON - MAURINE 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03331	132.3655	GRAND ISLAND - MCCOOL 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03256	132.3506	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03424	132.3489	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.3433	GEN337041 1-GERALD ANDRUS
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03382	132.3311	AUDUBON - SHEYNNE 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.3286	GEN344897 4-1LAB G4 20.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03358	132.3285	HARMONY - ST FRANCIS 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.3267	GEN344894 1-1LAB G1 20.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.3264	GEN344895 2-1LAB G2 20.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.3262	GEN344896 3-1LAB G3 20.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.3153	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03342	132.3091	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.2905	GEN501813 1-RODEMACHER UNIT 3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.2901	GEN587153 1-G16-021-GEN10.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.2864	GEN636641 1-LOUISA UNIT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.2631	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.2576	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.2506	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.2479	GEN345671 2-1RUSH_G2 18.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03377	132.2471	FENTON - NOBLES 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03443	132.2426	MITCHELL - MITCHELL NW 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03443	132.2426	MITCHELL - MITCHELL NW 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.2421	GEN345670 1-1RUSH_G1 18.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03302	132.2187	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03302	132.2187	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03385	132.2034	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03332	132.198	GRACEVT7 - ORTONVILLE 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03342	132.1908	BIG STONE - HIGHWAY 12 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.1777	GEN600021 3-ANGUS ANSON2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.1701	GEN600020 2-ANGUS ANSON1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.1642	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04088	132.1491	FIELD SOUTH - WILMARTH 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03344	132.1478	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.1377	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.1377	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.1331	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03348	132.1304	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03902	132.0976	GLENHAM - WHITLOK 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04088	132.088	FIELD NORTH - FIELD SOUTH 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.0871	GEN335206 1-NELSON UNIT 6
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04088	132.0771	FIELD NORTH - LKFLDXL3 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03358	132.072	HARMONY - VALENTINE 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03902	132.0614	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03902	132.0614	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.0335	GEN645012 2-NEBRASKA CITY 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03375	132.0322	FENTON - NOBLES 115KV CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	132.0267	GEN334440 1-SABINE UNIT 4
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03902	132.0032	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03902	132.0031	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03902	131.9993	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03342	131.9709	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03918	131.9571	GLENHAM - L3 HAWDON 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03311	131.9398	STORLA - WESSINGTON 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.9386	GEN336191 1-LITTLE GYPSY UNIT#3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.9327	GEN645011 1-NEBRASKA CITY 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.9307	GEN501812 1-RODEMACHER UNIT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03490	131.9278	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03342	131.9238	G15088_T 345.00 - MOORE 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.9224	GEN338388 1-1PLUM PT U1 23.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.9028	GEN563232 1-G15089_3 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03334	131.899	MCCOOL - MOORE 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.8665	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.8613	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03340	131.861	RASMUSN - UTICA JCT 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.8504	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03902	131.8502	OAHE - SULLEY BUTTE 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03561	131.8471	FLANDRU - SIOUX FALLS 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03387	131.8299	AUDUBON - HUBBARD 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03366	131.827	CANBY - GRANITE FALLS 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03366	131.827	CANBY - GRANITE FALLS 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03336	131.8163	GRANT - MITCHELL 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03336	131.8163	GRANT - MITCHELL 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.8031	GEN335614 1-WILLOW GLENN UNIT#4
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.7965	GEN336801 1-BAXTER WILSON UNIT #1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.793	MEC345 - WILMARTH 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.7928	GEN336464 1-MICHOUD UNIT #3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.7916	MEC345 345/19.5KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.7814	GEN335204 1-NELSON UNIT 4
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03385	131.7725	FARGO - SHEYNNE 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03385	131.7725	FARGO - SHEYNNE 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.7625	GEN334441 1-SABINE UNIT 5
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03378	131.7585	ELM CREEK - MONTICELLO 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.7561	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.7559	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03358	131.7531	AINSWORTH - VALENTINE 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.7518	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.745	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.7339	NOBLES 115/34.5KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03332	131.7276	GRACEVT7 - MORRIS 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03332	131.7276	GRACEVT7 - MORRIS 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03293	131.7199	FT THOMPSON - LETCHER 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03293	131.7199	FT THOMPSON - LETCHER 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.699	MEC115 - WILMARTH 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.6989	MEC115 115/15.0KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.685	GEN600149 W-J183 PROSEW10.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.664	GEN600150 W-J183 PROSEW20.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03340	131.6622	RASMUSN - SIOUX CITY 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.6062	GEN334433 1-SABINE UNIT 3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03388	131.6028	KARLSTAD - WINGER 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03310	131.5918	SIDNEY - STEGALL 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03930	131.5735	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.568	GEN542962 2-IATAN UNIT #2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.5642	GEN336222 1-LITTLE GYPSY UNIT#2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	131.5465	MENNO JCT - TRIPP JCT 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.5348	488489510526345.00 - J526 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.5348	J526 345.00 345/34.5KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.5022	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.4996	RGBYWND4 230.00 - RUGBY 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.4944	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.4647	GEN336152 1-WATERFORD UNIT#2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.4645	GEN336151 1-WATERFORD UNIT#1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.4227	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.4073	GEN303007 1-1BC2 U2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03365	131.4064	AIRTECH - FEP TAP 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.3997	GEN303006 1-1BC2 U1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	131.397	MENNO JCT - UTICA 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03445	131.3933	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.3853	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03445	131.3807	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03365	131.3804	AIRTECH - WEST FARIBAULT 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.3757	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03445	131.3749	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.3706	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.3672	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03474	131.3652	HURON - WOONSOCKET 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03370	131.3342	FENTON 115/69KV TRANSFORMER CKT 5
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	131.3311	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.3281	GEN336170 1-GULF OXY U4
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.3201	GEN303008 1-1BC2 U3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	131.3181	GEN635214 4-NEAL UNIT 4
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03414	131.3151	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.3149	GEN563222 1-G15088_3 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.314	GENOA 161 161/24.0KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.3128	GEN542957 1-IATAN UNIT #1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03249	131.3014	UTICA JCT - VFODNES 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03336	131.2947	CHERRY CREEK - GRANT 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03368	131.2718	FORT RIDGELY - FRANKLIN 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.2695	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.2695	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.2608	GEN562003 1-G11_027_3 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03414	131.2531	P13:230-345:NPPD:STEGALL3:KV3A
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	131.2462	JAMES TOWN - PICKERT 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03414	131.2352	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.227	AS KING 345/20.0KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03365	131.2259	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03387	131.2234	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03151	131.2182	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03151	131.2182	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.2124	GEN542951 5-HAWTHORN UNIT #5
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03290	131.2022	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.1992	GEN501811 1-RODEMACHER UNIT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03509	131.1956	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03509	131.1956	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03350	131.1892	GRAND ISLAND - SWEETWATER 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03509	131.1855	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03348	131.1614	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03348	131.1614	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03474	131.1498	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03365	131.1498	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.148	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03363	131.1461	BLUE LAKE - MCLEOD 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03366	131.138	WINNER - WITTEN 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03348	131.137	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.1241	GEN345765 H-1SIOUX 2 18.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03365	131.1229	LAWERENCE CREEK - SHAEFER 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.1218	GEN542955 1-LACYGNE UNIT #1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	131.1185	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.1177	GEN334071 1-LEWIS CREEK 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.1138	GEN334070 1-LEWIS CREEK 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03354	131.1076	PAYNESVILLE - WAKEFIELD 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.1027	GEN629069 1-EMERY STEAM TURBINE 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03368	131.099	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.0782	GEN337766 1-TRACTEBEL UNIT S1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03376	131.0749	ELM CREEK - PARKERS LAKE 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03383	131.0744	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.0738	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03453	131.0611	MONTICELLO - WAITE PARK 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03442	131.0583	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03356	131.0542	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	131.0477	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.0476	GEN345756 H-1SIOUX 1 18.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.0472	GEN336221 1-LITTLE GYPSY UNIT#1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.0457	GEN501910 1-ACADIA UNIT ST1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03365	131.0446	LYON COUNTY 115/69KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03474	131.0412	STORLA - WOONSOCKET 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03365	131.0397	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	131.0327	COYOTE 345/24.0KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03363	131.0323	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.0314	NOBLES 115/34.5KV TRANSFORMER CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03348	131.0313	CLEARWATER - ONEILL 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03327	131.029	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.0271	FENTON 115/34.5KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	131.0266	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.0143	GEN542956 2-LACYGNE UNIT #2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03427	131.0124	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03387	131.0052	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03387	131.0052	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03365	131.0043	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	131.003	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03393	131.002	LYON COUNTY (8779072) 345/115/34.5KV TRANSFORMER CKT 9
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03365	131.002	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	131.0011	GEN337757 1-DUKE HOTSPRINGS STG1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03446	131.0002	HIGHLND 3 345.00 - RAUN 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03386	130.9985	MT VERN - STORLA 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03344	130.998	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03366	130.9975	GREGORY - WINNER 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.9924	GEN345832 1-1TS G1 13.800
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.992	GEN345841 2-1TS G2 13.800
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03372	130.9907	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03348	130.9851	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03366	130.9802	P12:115:UMZW:# 172 #: WI IN SD.
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.9776	LANGDON - LANGWIN7 115.00 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.9763	GEN334432 1-SABINE UNIT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.976	GEN334431 1-SABINE UNIT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.9733	GEN336446 1-MICHOUD UNIT #2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	130.9706	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03366	130.9657	FT RANDAL - WHITE SWAN 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.9627	GEN337765 1-TRACTEBEL UNIT C2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.9626	GEN337764 1-TRACTEBEL UNIT C1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03257	130.9609	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03257	130.9609	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	130.9589	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03257	130.9579	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03344	130.9559	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03427	130.953	GROTON - REDFIELD 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03348	130.95	CLEARWATER - NELIGH 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.9404	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.9363	GEN336242 1-1NMIL ST1 18.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03366	130.931	TYNDALL - WHITE SWAN 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.9208	GEN501823 1-TECHE UNIT 3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03364	130.9189	ARROWHEAD - FORBES 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03372	130.9187	ARNOLD - HAZLETON 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.9083	GEN645025 5-NORTH OMAHA 5
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03523	130.8982	BOWMAN - RHAME 4 230.00 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	130.8949	FRANKLIN - REDWOOD FALLS 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8936	GEN659116 1-SPIRIT MOUND UNIT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8935	GEN336944 1-REX BROWN
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03398	130.8897	KOSSUTH 3 345.00 - LEDYARD3 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8861	GEN345156 H-1MER 4 18.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03356	130.8808	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8789	GEN629046 3-FOX LAKE 5 GENERATOR NO 3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8717	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8717	GEN501970 1-EVANGELINE UNIT 7
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8716	GEN335612 1-WILLOW GLENN UNIT#2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8652	GEN334031 1-FRONTIER UNIT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8648	GEN334030 1-FRONTIER UNIT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03363	130.8568	NOBLES () 345/115/34.5KV TRANSFORMER CKT 9
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8541	GEN337430 1-PERYVILLE UNIT #3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.854	GEN337428 1-PERYVILLE UNIT #1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03363	130.8537	NOBLES () 345/115/34.5KV TRANSFORMER CKT 10
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03402	130.8483	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.846	GEN629992 1-G164_WF9 34.500
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03411	130.8434	HURON - REDFIELD 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8388	GEN336240 1-1NMIL CT1 18.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8388	GEN336241 1-1NMIL CT2 18.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8275	GEN501911 1-ACADIA UNIT CT1A
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8275	GEN501912 1-ACADIA UNIT CT1B
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8252	GEN338443 1-PANDA S1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.815	GEN335570 1-CARVILLE CTG
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8149	GEN335571 1-CARVILLE UNIT #1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8149	GEN501971 1-EVANGELINE UNIT 7-1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8149	GEN501972 1-EVANGELINE UNIT 7-2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03377	130.8109	BLUE LAKE - HAMPTON CORNER 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.8012	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.7924	GEN659117 2-SPIRIT MOUND UNIT2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.7874	GEN587353 1-G16-050-GEN10.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.7846	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	130.782	AS KING - WILLOW RIVER 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.7777	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03364	130.7604	PLEZIOZO1ARC
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03364	130.7546	NORTH ROCHESTER (NROC TR) 345/161/34.5KV TRANSFORMER CKT 9
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	130.7426	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	130.7426	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.721	GEN600112 W-G287 NOB2G W0.5750
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03379	130.7156	WILMARTH () 161/115/13.8KV TRANSFORMER CKT 6
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03353	130.7056	GRE-CHUBLAK3345.00 - HAMPTON CORNER 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.6949	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03404	130.6552	BUFFALO RIDGE - YANKEE 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.629	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.6037	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03350	130.5886	HELENA - SCOTTCO3 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.5848	GEN660016 1-B_H WIND 0.7000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03342	130.1705	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	130.1365	GEN635024 4-WALTER SCOTT UNIT 4
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	130.1172	BLAIR - GRANITE FALLS 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	130.1172	BLAIR - GRANITE FALLS 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03342	130.1106	G13_001IST 115.00 - SUMMIT 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03326	130.1033	HAZEL CREEK - LYON COUNTY 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.0574	GEN600047 1-MECCT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03385	130.0497	BREWSTER - HERON LAKE 5 SPLIT INTO HRN EAST ELK1 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03310	130.0217	LETCHER - SIOUX FALLS 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	130.007	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03350	130.0062	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03348	129.9622	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03385	129.9526	BREWSTER - ELK 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.9272	GEN681540 5-ALMA UNIT 5

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03709	129.9209	FT THOMPSON - HURON 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03709	129.9209	FT THOMPSON - HURON 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03709	129.9209	FT THOMPSON - HURON 230KV CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03709	129.9209	FT THOMPSON - HURON 230KV CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03358	129.9044	SUB 1226 - TEKAMAH 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03358	129.9044	SUB 1226 - TEKAMAH 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03326	129.8886	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03446	129.8881	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03354	129.8851	RAUN - TEKAMAH 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03354	129.8851	RAUN - TEKAMAH 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03326	129.8681	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03352	129.8648	DIXONCO 230.00 - HOSKINS 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.8642	GEN615031 1-PLEASANT VALLEY
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	129.8604	CARROLL COUNTY - VICTORY 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.8601	GEN615032 2-PLEASANT VALLEY
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.838	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	129.8176	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	129.8176	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03363	129.8166	BROOKING COUNTY - YANKEE 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03363	129.8166	BROOKING COUNTY - YANKEE 115KV CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.8138	GEN619954 1-HUTCHINSON
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03332	129.8014	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.7791	GRE-STNYCRK7115.00 (STNYCR115-69) 115/69/12.8KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.7668	GEN652004 1-G13_001IS_3 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03365	129.7648	PLYMOUTH - SIOUX CITY 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03365	129.7648	PLYMOUTH - SIOUX CITY 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.7647	GEN600130 W-G586 - CWN 10.6000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.7623	GEN600131 W-G586 - CWN 20.6000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.7485	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03366	129.746	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.7387	GEN672370 1-COTEAU CREEK GENERATOR 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.7387	GEN672371 2-COTEAU CREEK GENERATOR 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.7387	GEN672372 3-COTEAU CREEK GENERATOR 3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03336	129.7369	SIOUX CITY - TWIN CHURCH 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03385	129.7367	HILLS - MONTEZUMA 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.7271	GEN600125 2-FEP ST G 13.800
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03364	129.7171	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03360	129.7149	COOPER - SUB 3458 NEB CTY 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03360	129.7149	COOPER - SUB 3458 NEB CTY 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	129.7117	GEN635213 3-NEAL UNIT 3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.7019	GEN659289 1-DAYCNTYWND W0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.7003	GEN563312 1-G15097_3 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.6955	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.6933	GEN657705 X-DRAYTON
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	129.6889	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	129.6889	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.6864	GEN672369 3-MERIDIAN GENERATOR 3 ST
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.6696	GEN659031 1-G12_014IS_4 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.6666	GEN620285 1-SOLWAY
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03018	129.6665	HESKETT - WISHEK 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.6544	GEN620115 1-HRDLKGEN 0.6000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.6392	GEN600013 3-BLACK DOG GEN 3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03360	129.623	COOPER - FAIRPORT 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.6226	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03362	129.6183	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.6178	GEN681522 3-GENOA 3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	129.6091	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.598	GEN652410 3-FT PECK
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.5955	GEN672384 1-CENTENNIAL WINDFARM
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	129.5719	COPSTJCPFRSJ
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	129.5719	STMDSJFAFACO
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03360	129.5707	COLUMEAST - SHELL CREEK 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.5537	GEN600056 W-BUFFALO RIDGE WIND GEN
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.5348	GEN652414 4-FT PECK
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.5348	GEN652415 5-FT PECK
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.5328	GEN672347 1-CORY COGEN GENERATOR 1 GT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.5327	GEN672348 2-CORY COGEN GENERATOR 2 GT2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.519	DONALDSON - DONALDSON PIPE 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.5182	GEN600018 S-LS POWER STEAM
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.5154	GEN603185 1-FIBROMINN GENERATION

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03360	129.4918	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03362	129.4718	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03362	129.4709	DENISON - EXIRA 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.4577	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.4577	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.4575	GEN672358 1-CHAPLN1W 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.4558	GEN672367 1-MERIDIAN GENERATOR 1 GT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.4558	GEN672368 2-MERIDIAN GENERATOR 2 GT2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.4488	YANKEE 115/34.5KV TRANSFORMER CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.4475	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.4428	GEN600050 1-FEP
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.4285	GEN672349 3-CORY COGEN GENERATOR 3 ST
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.428	GEN620323 2-HOOT LAKE 2 GEN
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.4155	GEN672350 1-NIPAWIN GENERATOR 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.4155	GEN672351 2-NIPAWIN GENERATOR 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.4155	GEN672352 3-NIPAWIN GENERATOR 3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.4144	H081 345.00 - H081-TAP 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.4144	H081 345.00 345/34.5KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.3599	GEN600012 2-BLACK DOG GEN 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03405	129.3546	BIG STONE - BLAIR 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03405	129.3546	BIG STONE - BLAIR 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.3445	GEN659162 4-RED WLCK
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.3445	GEN659163 5-BLACK WDCK
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.343	GEN659192 6-LYNN
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.3389	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03366	129.3299	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.3202	GEN657964 1-ASH2GEN9 0.5750
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.3147	GEN672339 16-QE 16G 13.800
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.3143	GEN659273 2-GROTON SYNC COND
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.3143	GEN659294 1-WILTONCOL9
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.3128	GEN659290 1-EDGECOL
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.3091	GEN587603 1-J488&J489GN10.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	129.3049	GEN635023 3-WALTER SCOTT UNIT 3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.302	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03337	129.2877	HOSKINS - SHELL CREEK 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.2783	GEN672393 2-NBECST2G 13.800
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	129.2757	GEN336821 1-GRAND GULF UNIT
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.274	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03362	129.2664	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03358	129.2637	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.2439	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.2433	GEN 11143 1-J436GEN1 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.2433	GEN 11153 1-J437GEN1 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03346	129.2419	GRIMES - LEHIGH 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04688	129.2205	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03385	129.2128	ELK - MAGNOLIA 5 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	129.2069	COOPER - ST JOE 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.1977	GEN660001 2-ABERDEEN SIEBRECHT
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.1835	GEN652556 2-OAHE
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.1835	GEN652557 4-OAHE
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.1835	GEN652558 6-OAHE
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.1804	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	129.1559	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.1456	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.1324	GEN600063 1-COLVILLE GEN 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.1323	GEN600064 2-COLVILLE GEN 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.1207	GEN659270 1-WEST SW
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.1029	LADISH 115/13.2KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.0875	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.0719	GEN562872 1-G15046_3 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.0674	GEN620324 3-HOOT LAKE 3 GEN
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.0524	GEN652353 2-GR PRAIRIEG 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.0397	GEN600014 4-BLACK DOG GEN 4
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.0082	GEN587663 1-H081-GEN1 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.005	GEN600065 7-HIGH BRIDGE
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	129.005	GEN600066 8-HIGH BRIDGE
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.9888	GEN600071 10-RIVER SIDE
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.9883	GEN600070 9-RIVER SIDE
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.9791	GEN600011 5-BLACK DOG GEN 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03492	128.9755	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.9651	GEN600007 7-RIVERSIDE GEN 7
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.9564	GEN600043 7-BLUE LAKE5
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.9564	GEN600044 8-BLUE LAKE6
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03435	128.9483	CHANARANBIE - FENTON 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.9479	GEN600017 C-LS POWER CT
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03346	128.9419	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.9302	GEN910006 1-G12_012IS_3 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03392	128.9187	BONDURANT - MONTEZUMA 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03362	128.8863	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03362	128.882	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03458	128.8458	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.8404	GEN659411 1-CAMPBLCNTY W0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03432	128.828	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03120	128.8229	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	128.8113	ANSON - SPLIT ROCK 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	128.8112	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	128.7983	CENTER 230/22.0KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.7777	GEN652345 W-G07_023IS_2 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.7766	GEN 10648 1-G830_GEN 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03119	128.7748	G16-044-TAP 345.00 - GROTON 345KV CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03362	128.7723	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03365	128.7717	DENISON - SIOUX CITY 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.7626	GEN 11104 1-J262_GEN 0.6000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.7626	GEN 11108 1-J263_GEN 0.6000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.7603	GEN659272 2-GROTON 2G13.800
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03120	128.7101	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03120	128.7075	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.6904	GEN615021 1-GRE-ER 14G 16.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.6779	GEN615015 1-GRE-SPRITWDG13.200
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03606	128.6741	AURORA - BROOKINGS 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03606	128.6741	AURORA - BROOKINGS 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.6594	GEN615052 1-CAMBRIDGE GENERATING STATION
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.6513	GEN659274 1-GROTON
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03356	128.6058	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	128.5936	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.5786	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03380	128.5697	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03317	128.5666	HANLON - SIOUX FALLS 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.565	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.549	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.549	GEN672304 4-BOUNDARY DAM GENERATOR 4
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.549	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03388	128.5328	DAN JUHL - SPLIT ROCK 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	128.5327	ANSON 115/17.5KV TRANSFORMER CKT 4
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03388	128.5297	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	128.5296	ANSON - SPLIT ROCK 115KV CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.4852	GEN600077 W-YANKEE 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.4852	GEN600099 W-YANKEE 4
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.4833	GEN659010 4-G07_027IS_2 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.4814	GEN681542 6-JP MADGETT
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.4654	GEN659366 3-WILTON 3 W0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.4625	GEN672392 1-NBECGT1G 18.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03389	128.4611	LEHIGH - RAUN 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.4572	GEN600078 W-YANKEE 3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.4566	GEN600067 9-HIGH BRIDGE
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.4553	GEN659194 1-NDPRAIRWND1W0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.4534	GEN652461 5-GARRISON
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.4531	GEN652460 4-GARRISON
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.4522	GEN600069 W-YANKEE 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03388	128.4241	DAN JUHL - MAGNOLIA 5 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.4088	GEN652457 1-GARRISON
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.4088	GEN652458 2-GARRISON
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.4088	GEN652459 3-GARRISON
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04688	128.3978	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04688	128.3825	2810X2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03413	128.3597	AS KING - EAU CLAIRE 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.34	GEN659403 1-NDSUNFLWR W0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	128.3359	GEN344225 1-1CAL G1 25.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	128.311	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03465	128.2961	CARPENTER - WATERTOWN 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03465	128.2961	CARPENTER - WATERTOWN 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03465	128.276	HURON - WATERTOWN 230KV CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03465	128.276	HURON - WATERTOWN 230KV CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.2632	STANTON 230/18.0KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	128.25	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03606	128.1331	AURORA - FLANDRU 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03606	128.1331	AURORA - FLANDRU 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03446	128.0205	FT RANDAL - FT THOMPSON 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03446	128.0205	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	128.0174	GEN587053 1-G16-007-GEN10.6500
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03459	128.0168	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03351	127.9899	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03465	127.9887	CARPENTER - HURON 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04688	127.9606	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03376	127.8629	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03444	127.8615	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03444	127.8615	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03376	127.8424	MN VALLEY TAP - PANTHER 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	127.8212	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	127.8067	GEN587133 1-G16-017-GEN10.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03458	127.7276	ADAMS - MITCHLCO3 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03351	127.7214	PAHOJA - SIOUX FALLS 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	127.7202	GEN336153 1-WATERFORD UNIT#3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	127.683	GEN659453 1-GI1414GEN W0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	127.6681	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04094	127.6439	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	127.6381	GEN600045 4-ANSON
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03465	127.6184	ADAMS - PLEASANT VALLEY 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	127.6112	GEN659110 1-LELAND OLDS UNIT1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03396	127.6096	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03444	127.5539	FT RANDAL - LAKE PLATT 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	127.5509	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03540	127.4956	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03525	127.4906	NUNDRWD - WAYSIDE 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03289	127.4807	FT RANDAL - SIOUX CITY 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	127.4494	GEN659141 1-K10215A
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03433	127.3655	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03523	127.2915	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03523	127.2915	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	127.2796	GEN335831 1-RIVERBEND UNIT#1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03390	127.2736	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03407	127.2555	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	127.2251	GEN615010 1-STANTON4
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03189	127.223	BIG STONE - BROWNS VALLEY 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03354	127.1082	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03389	127.1054	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	127.0976	GEN659407 1-ANTELPHILLSW0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	127.0634	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	127.0634	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03483	127.0591	PIPESTONE - SPLIT ROCK 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	127.0444	MCLEOD - PANTHER 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03390	127.0372	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.992	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03256	126.979	FT RANDAL - UTICA JCT 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03354	126.922	BROOKINGS - WHITE 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03354	126.922	BROOKINGS - WHITE 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	126.9184	YANKEE 115/34.5KV TRANSFORMER CKT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.9048	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	126.8935	YANKEE 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	126.8515	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	126.8515	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03419	126.8305	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03433	126.8264	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03388	126.7465	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03265	126.734	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03346	126.7338	PAYNSVILLE - WILLMAR 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03390	126.7308	HENNING - INMANN 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.7262	GEN640009 1-COOPER NUCLEAR STATION
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	126.7117	GEN672321 1-SHAND GENERATOR 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.6959	GEN645012 2-NEBRASKA CITY 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03349	126.6704	GRANITE FALLS - WILLMAR 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03349	126.6704	GRANITE FALLS - WILLMAR 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03265	126.6533	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	126.6452	BROOKING COUNTY - J432 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	126.6452	J432 345.00 345/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03189	126.644	BROWNS VALLEY - HANKINSON 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.6193	GEN338146 1-INDEPENDENCE UNIT #2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03346	126.6169	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.6159	GEN338143 1-INDEPENDENCE UNIT #1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.6043	GEN337652 1-WHITE BLUFF UNIT #1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03727	126.5948	BISON - HETINGER 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	126.5901	GEN672310 1-POPLAR RIVER GENERATOR 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	126.5901	GEN672311 2-POPLAR RIVER GENERATOR 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	126.5865	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03468	126.5735	BYRON - NORTH ROCHESTER 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	126.5571	GEN657749 1-YOUNG 1 GENERATOR
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	126.5444	GEN600004 2-PRAIRIE ISLAND G2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	126.5424	GEN587033 1-G16-004-GEN10.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03265	126.5353	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	126.5337	GEN600003 1-PRAIRIE ISLAND G1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.5232	GEN645011 1-NEBRASKA CITY 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03451	126.4845	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03451	126.4845	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.4798	GEN337653 1-WHITE BLUFF UNIT #2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.4125	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	126.4042	GEN587623 1-J493-GEN1 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.3739	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	126.3613	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	126.3613	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	126.3269	GEN659353 1-DEERCREK CTG18.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	126.2767	GEN659354 1-DEERCREK STG18.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.2739	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03350	126.245	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.1909	GEN501801 1-DOLET HILLS UNIT1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.1907	GEN336252 1-NINEMILE POINT UNIT#5
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.1512	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03391	126.123	AUDUBON - SHEYNNE 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.1171	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03464	126.0954	BYRON - PLEASANT VALLEY 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.0918	GEN336251 1-NINEMILE POINT UNIT#4
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03340	126.0904	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.0827	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.0642	MISSION - ST FRANCIS 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03394	126.0618	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	126.0481	GEN336831 1-BAXTER WILSON SES
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03351	126.0427	BIG STONE - HIGHWAY 12 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03327	126.0292	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03327	126.0292	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03404	126.008	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	125.9962	GEN587583 1-J432-GEN1 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.9915	GEN337041 1-GERALD ANDRUS
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.9759	GEN587153 1-G16-021-GEN10.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03340	125.9734	GRACEVT7 - ORTONVILLE 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03353	125.9673	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.9657	GEN344897 4-1LAB G4 20.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.9639	GEN344894 1-1LAB G1 20.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.9637	GEN344895 2-1LAB G2 20.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.9635	GEN344896 3-1LAB G3 20.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03386	125.9559	FENTON - NOBLES 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	125.9344	BURR - CANBY 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.9293	HARMONY - ST FRANCIS 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03911	125.9269	GLENHAM - WHITLOK 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.9248	GEN501813 1-RODEMACHER UNIT 3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03727	125.9173	BISON - MAURINE 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.9016	GEN636641 1-LOUISA UNIT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.8916	GEN345671 2-1RUSH G2 18.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.8857	GEN345670 1-1RUSH G1 18.000
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	125.8843	GEN600006 1-AS KING
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03911	125.8841	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03911	125.8841	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03311	125.8709	FT THOMPSON - WESSINGTON 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03311	125.8709	FT THOMPSON - WESSINGTON 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03926	125.8183	GLENHAM - L3 HAWDON 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03911	125.8162	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03911	125.8043	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03911	125.8043	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03394	125.8	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.787	BURR - J493 115.00 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.787	J493 115.00 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03451	125.7844	MITCHELL - MITCHELL NW 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03451	125.7844	MITCHELL - MITCHELL NW 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.7764	GEN600021 3-ANGUS ANSON2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03351	125.7522	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	125.7374	CANBY - GRANITE FALLS 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	125.7374	CANBY - GRANITE FALLS 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03384	125.7352	FENTON - NOBLES 115KV CKT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.7238	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.7238	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.7211	GEN335206 1-NELSON UNIT 6
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03356	125.7083	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.7019	GEN563232 1-G15089_3 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.6872	GEN338388 1-1PLUM PT U1 23.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.6854	GEN600020 2-ANGUS ANSON1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.679	GEN334440 1-SABINE UNIT 4
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.6773	NOBLES 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.6655	HARMONY - VALENTINE 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.6487	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.6427	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03498	125.639	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03911	125.6377	OAHE - SULLEY BUTTE 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.6376	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.6344	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.5974	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.5962	GEN336191 1-LITTLE GYPSY UNIT#3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.5768	GEN600149 W-J183 PROSEW10.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03519	125.5639	FLANDRU - SIOUX FALLS 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.5626	GEN501812 1-RODEMACHER UNIT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03343	125.5607	MCCOOL - MOORE 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.5532	GEN600150 W-J183 PROSEW20.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.5228	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.5226	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.5164	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03350	125.5154	G15088_T 345.00 - MOORE 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03394	125.5127	FARGO - SHEYNNE 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03394	125.5127	FARGO - SHEYNNE 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03396	125.5083	AUDUBON - HUBBARD 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	125.4874	GEN661015 1-COYOTE
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03348	125.4847	RASMUSN - UTICA JCT 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.4588	NOBLES 115/34.5KV TRANSFORMER CKT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.4436	GEN336801 1-BAXTER WILSON UNIT #1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.4433	GEN335614 1-WILLOW GLENN UNIT#4
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03345	125.4361	GRANT - MITCHELL 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03345	125.4361	GRANT - MITCHELL 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.4333	GEN336464 1-MICHOUD UNIT #3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.4292	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.4265	MEC345 - WILMARTH 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.4244	MEC345 345/19.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03319	125.4179	SIDNEY - STEGALL 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03340	125.4156	GRACEVT7 - MORRIS 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03340	125.4156	GRACEVT7 - MORRIS 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.4126	GEN334441 1-SABINE UNIT 5
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.4093	488489510526345.00 - J510 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.4093	J510 345.00 345/18.0KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.403	GEN335204 1-NELSON UNIT 4
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.3734	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03383	125.3439	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.3432	MEC115 - WILMARTH 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.3431	MEC115 115/15.0KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03386	125.3357	ELM CREEK - MONTICELLO 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.3179	GEN542962 2-IATAN UNIT #2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.3083	AINSWORTH - VALENTINE 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03348	125.2964	RASMUSN - SIOUX CITY 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03388	125.2734	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.2468	GEN334433 1-SABINE UNIT 3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.2294	RGBYWND4 230.00 - RUGBY 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.2217	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.2198	GEN336222 1-LITTLE GYPSY UNIT#2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.1999	488489510526345.00 - J526 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.1999	J526 345.00 345/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.1559	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03396	125.1396	KARLSTAD - WINGER 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03383	125.1363	MENNO JCT - TRIPP JCT 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03454	125.122	HIGHLND 3 345.00 - RAUN 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.1146	GEN336151 1-WATERFORD UNIT#1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.1146	GEN336152 1-WATERFORD UNIT#2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03378	125.1059	JAMES TOWN - PICKERT 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.1049	GEN635407 W-SHD415 W 0.6000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.1049	GEN635408 W-SHD425 W 0.6000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.1032	GEN635409 W-SHD435 W 0.6000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.102	GEN542957 1-IATAN UNIT #1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03258	125.0909	UTICA JCT - VFODNES 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.0793	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.0694	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	125.0625	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.0454	GEN303007 1-1BC2 U2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.0378	GEN303006 1-1BC2 U1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.0327	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	125.0214	GENOA 161 161/24.0KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03373	125.0126	AIRTECH - FEP TAP 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.9944	GEN563222 1-G15088_3 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03482	124.9887	HURON - WOONSOCKET 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03373	124.9823	AIRTECH - WEST FARIBAULT 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03383	124.9821	MENNO JCT - UTICA 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03351	124.979	RAUN - SIOUX CITY 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03351	124.979	RAUN - SIOUX CITY 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.9778	GEN542951 5-HAWTHORN UNIT #5
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03480	124.9728	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03480	124.9728	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03377	124.9695	FORT RIDGELY - FRANKLIN 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.9684	GEN336170 1-GULF OXY U4
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03480	124.967	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.9608	GEN303008 1-1BC2 U3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03379	124.9566	FENTON 115/69KV TRANSFORMER CKT 5
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03480	124.9496	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03480	124.9475	BROADLAND - HURON 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03480	124.9473	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03480	124.9473	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03396	124.9372	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.9317	GEN562003 1-G11_027_3 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03299	124.9197	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.9194	GEN542955 1-LACYGNE UNIT #1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03383	124.9179	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03345	124.9103	CHERRY CREEK - GRANT 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.9087	FENTON 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03355	124.8933	AXTELL - SWEETWATER 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03454	124.8917	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03454	124.8789	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.8756	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.8755	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	124.8704	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03454	124.868	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03363	124.8604	PAYNESVILLE - WAKEFIELD 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.8503	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.849	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.847	LANGDON - LANGWIN7 115.00 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.8429	GEN501811 1-RODEMACHER UNIT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03357	124.837	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.8369	AS KING 345/20.0KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03377	124.8313	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03372	124.8229	BLUE LAKE - MCLEOD 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	124.8206	WINNER - WITTEN 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03335	124.811	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03372	124.8059	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.8044	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03518	124.8013	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03518	124.7982	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03518	124.7982	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.7956	GEN542956 2-LACYGNE UNIT #2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03422	124.788	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03450	124.7748	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.7658	GEN345765 H-1SIOUX 2 18.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03422	124.7639	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	124.7638	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03380	124.7626	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.762	GEN334070 1-LEWIS CREEK 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.762	GEN334071 1-LEWIS CREEK 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03422	124.7603	P13:230-345:NPPD:STEGALL3:KV3A
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03482	124.7541	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	124.7451	LAWERENCE CREEK - SHAEFER 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.7432	GEN629069 1-EMERY STEAM TURBINE 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03335	124.735	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03335	124.7261	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.7251	GEN337766 1-TRACTEBEL UNIT S1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03384	124.7194	ELM CREEK - PARKERS LAKE 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03376	124.7191	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03365	124.7185	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03401	124.7164	LYON COUNTY (8779072) 345/115/34.5KV TRANSFORMER CKT 9
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.7089	GEN337757 1-DUKE HOTSPRINGS STG1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03377	124.7086	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.7034	GEN336221 1-LITTLE GYPSY UNIT#1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.7027	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03380	124.6966	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.6949	GEN501910 1-ACADIA UNIT ST1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03379	124.6916	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03335	124.6904	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03436	124.6877	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.6819	GEN345756 H-1SIOUX 1 18.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03482	124.6664	STORLA - WOONSOCKET 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	124.6627	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	124.6549	GREGORY - WINNER 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	124.6489	GEN659103 1-ANTELOPE VALLEY UNIT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	124.6489	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03436	124.645	GROTON - REDFIELD 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03372	124.6447	ARROWHEAD - FORBES 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	124.6411	LYON COUNTY 115/69KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	124.6396	P12:115:UMZW:# 172 #: WI IN SD.
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.6377	GEN645041 1-CASS COUNTY 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03395	124.6375	MT VERN - STORLA 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.6373	GEN345832 1-1TS G1 13.800
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.637	GEN345841 2-1TS G2 13.800
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	124.6365	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.6341	GEN336446 1-MICHOUD UNIT #2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.6332	GEN334432 1-SABINE UNIT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.6331	GEN334431 1-SABINE UNIT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03380	124.6289	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03375	124.6269	FT RANDAL - WHITE SWAN 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03356	124.6265	CLEARWATER - ONEILL 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	124.625	GEN657748 1-YOUNG 2 GENERATOR
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.6248	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	124.6246	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.6228	RUNNING 230/118KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.6209	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03396	124.6171	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03396	124.6171	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.612	GEN337764 1-TRACTEBEL UNIT C1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.612	GEN337765 1-TRACTEBEL UNIT C2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03376	124.6046	FRANKLIN - REDWOOD FALLS 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03152	124.6011	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03152	124.6011	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.5873	GEN336242 1-1NMIL ST1 18.000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	124.587	NOBLES () 345/115/34.5KV TRANSFORMER CKT 9
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	124.5832	NOBLES () 345/115/34.5KV TRANSFORMER CKT 10
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03480	124.5797	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03375	124.5753	TYNDALL - WHITE SWAN 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.5733	GEN501823 1-TECHE UNIT 3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.5721	GEN659116 1-SPIRIT MOUND UNIT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	124.5719	J460 345.00 - J460-TAP 345.00 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	124.5719	J460 345.00 345/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.5676	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.5549	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.5489	GEN629046 3-FOX LAKE 5 GENERATOR NO 3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.548	GEN336944 1-REX BROWN
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03370	124.5479	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03370	124.5479	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03365	124.5448	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03411	124.544	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03530	124.5413	BOWMAN - RHAME 4 230.00 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.534	GEN345156 H-1MER 4 18.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03266	124.531	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03266	124.531	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03266	124.5276	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.5244	GEN338443 1-PANDA S1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.5242	GEN335612 1-WILLOW GLENN UNIT#2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.5234	GEN501970 1-EVANGELINE UNIT 7
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.5212	GRAND MEADOW - PLEASANT VALLEY 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.5155	GEN334030 1-FRONTIER UNIT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.5152	GEN334031 1-FRONTIER UNIT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.5041	GEN337430 1-PERYVILLE UNIT #3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.504	GEN337428 1-PERYVILLE UNIT #1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03420	124.4985	HURON - REDFIELD 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.4968	GEN587353 1-G16-050-GEN10.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.4913	GEN336240 1-1NMIL CT1 18.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.4913	GEN336241 1-1NMIL CT2 18.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.4854	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.4803	GEN501912 1-ACADIA UNIT CT1B
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.48	GEN501911 1-ACADIA UNIT CT1A
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03382	124.4782	ARNOLD - HAZLETON 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	124.4707	GLENCOE MUNI - MCLEOD 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.4657	GEN659117 2-SPIRIT MOUND UNIT2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.46	GEN531447 1-HOLCOMB GENERATOR
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.4501	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.4383	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.4341	GEN600112 W-G287 NOB2G W0.5750
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03358	124.4227	HELENA - SCOTTCO3 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03373	124.4109	PLEZIOZO1ARC
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.4082	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	124.3989	AS KING - WILLOW RIVER 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03362	124.3863	GRE-CHUBLAK3345.00 - HAMPTON CORNER 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.3849	GEN660016 1-B_H WIND 0.7000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.3542	FENTON 115/34.5KV TRANSFORMER CKT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	124.3392	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	124.2715	GEN 11123 1-G736-GEN1 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	124.2617	GEN 11133 1-J442-GEN1 0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	124.1436	GEN600005 1-MONTICELLO
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	123.9939	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.8926	CENTER - COYOTE 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03351	123.8863	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03335	123.8358	HAZEL CREEK - LYON COUNTY 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.7371	GEN600047 1-MECCT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	123.7282	GEN600000 1-SHERBURNECNTY G1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03395	123.7194	BREWSTER - ELK 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03357	123.6932	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.6838	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	123.6791	MONONA - NEAL SOUTH 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	123.6663	NEAL SOUTH - RAUN 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	123.6558	GEN659125 1-COVEY
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	123.6524	BROOKING COUNTY () 345/115/13.8KV TRANSFORMER CKT 10
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03370	123.6296	BROOKING COUNTY () 345/115/34.5KV TRANSFORMER CKT 9
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03370	123.6238	CRWFRD 5 161.00 - MONONA 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03335	123.6172	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.6057	GEN681540 5-ALMA UNIT 5
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03335	123.6011	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03370	123.5768	CRWFRD 5 161.00 - VICTORY 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03370	123.5615	POCAHONTAS COUNTY - POMEROY 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03363	123.5372	RAUN - TEKAMAH 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03363	123.5372	RAUN - TEKAMAH 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.5359	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03370	123.5356	CARROLL COUNTY - VICTORY 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03455	123.5343	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.5333	GEN600088 W-BUFFALO RIDGE WIND GEN 11
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	123.5325	DIXONCO 230.00 - HOSKINS 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.5308	P13:115-230:NPPD:NUCOR-3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.5283	GEN615031 1-PLEASANT VALLEY
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.5246	GEN615032 2-PLEASANT VALLEY
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03717	123.5244	FT THOMPSON - HURON 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03717	123.5244	FT THOMPSON - HURON 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03717	123.5244	FT THOMPSON - HURON 230KV CKT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03717	123.5244	FT THOMPSON - HURON 230KV CKT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	123.5109	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	123.5109	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03340	123.5066	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.4809	GEN619954 1-HUTCHINSON
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.4605	GRE-STNYCRK7115.00 (STNYCR115-69) 115/69/12.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.4486	GEN672369 3-MERIDIAN GENERATOR 3 ST
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.4419	GEN659289 1-DAYCNTYWND W0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.4403	GEN563312 1-G15097_3 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03227	123.4381	SPLIT ROCK (SPLT 11) 345/115/13.8KV TRANSFORMER CKT 11
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	123.437	PLYMOUTH - SIOUX CITY 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	123.437	PLYMOUTH - SIOUX CITY 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.4346	GEN652004 1-G13_001IS_3 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03291	123.4331	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.43	GEN600130 W-G586 - CWN 10.6000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.4293	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.4275	GEN600131 W-G586 - CWN 20.6000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03221	123.4176	SPLIT ROCK (SPLT 10) 345/115/13.8KV TRANSFORMER CKT 10
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03375	123.4142	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03375	123.4142	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.4135	GEN672370 1-COTEAU CREEK GENERATOR 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.4134	GEN672371 2-COTEAU CREEK GENERATOR 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.4134	GEN672372 3-COTEAU CREEK GENERATOR 3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.4116	GEN600125 2-FEP ST G 13.800
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.4112	GEN600081 W-BUFFALO RIDGE WIND GEN 4
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.4073	GEN659031 1-G12_014IS_4 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	123.4046	BROOKING COUNTY - YANKEE 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	123.4046	BROOKING COUNTY - YANKEE 115KV CKT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.3974	GEN672384 1-CENTENNIAL WINDFARM
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03345	123.3962	SIOUX CITY - TWIN CHURCH 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.3944	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.3891	THIEF RIVER FALLS (TRF) 115/69/13.2KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03375	123.3867	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	123.3724	COOPER - FAIRPORT 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	123.3724	COOPER - FAIRPORT 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03025	123.3717	MERRCRT4 230.00 - WISHEK 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.3656	GEN652410 3-FT PECK
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	123.3557	COOPER - SUB 3458 NEB CTY 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	123.3557	COOPER - SUB 3458 NEB CTY 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	123.352	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	123.3476	STMDSJFAFACO
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	123.3475	COPSTJCPFRSJ
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	123.3475	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.3279	GEN600013 3-BLACK DOG GEN 3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.311	GEN620285 1-SOLWAY
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03372	123.3106	EDEN 345 345.00 - HCKRYCK3 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03025	123.3076	HESKETT - WISHEK 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.3023	GEN652414 4-FT PECK
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.3023	GEN652415 5-FT PECK
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.2938	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.2873	GEN681522 3-GENOA 3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.2854	GEN600056 W-BUFFALO RIDGE WIND GEN
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03394	123.2848	HILLS - MONTEZUMA 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	123.2806	DENISON - EXIRA 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	123.2803	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03444	123.2785	ELLSBORO - LAKE YANKTON 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03373	123.2765	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.272	GEN672347 1-CORY COGEN GENERATOR 1 GT1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.272	GEN672348 2-CORY COGEN GENERATOR 2 GT2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	123.2713	COLUMEAST - SHELL CREEK 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03444	123.2525	CHANARANBIE - ELLSBORO 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.2364	GEN672358 1-CHAPLN1W 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.2309	DONALDSON - DONALDSON PIPE 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.2252	GEN672367 1-MERIDIAN GENERATOR 1 GT1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.2252	GEN672368 2-MERIDIAN GENERATOR 2 GT2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03369	123.2236	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.2158	GEN603185 1-FIBROMINN GENERATION
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.2142	FRONTER4 230.00 (FRONTIER) 230/69/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.209	GEN600018 S-LS POWER STEAM
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03370	123.1975	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.173	GEN672350 1-NIPAWIN GENERATOR 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.173	GEN672351 2-NIPAWIN GENERATOR 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.173	GEN672352 3-NIPAWIN GENERATOR 3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.166	GEN672349 3-CORY COGEN GENERATOR 3 ST
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.137	GEN659162 4-RED WLCK
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.137	GEN659163 5-BLACK WDCK
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.1361	GEN600050 1-FEP
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.1354	GEN659192 6-LYNN
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.1253	H081 345.00 - H081-TAP 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.1253	H081 345.00 345/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.1178	GEN659294 1-WILTONCOL9
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.1177	GEN659273 2-GROTON SYNC COND
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.105	GEN620323 2-HOOT LAKE 2 GEN
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.0865	GEN659290 1-EDGECOL
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.0761	GEN587603 1-J488&J489GN10.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.0708	YANKEE 115/34.5KV TRANSFORMER CKT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.0656	GEN657964 1-ASH2GEN9 0.5750
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.0635	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03366	123.0604	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.0566	GEN600012 2-BLACK DOG GEN 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.0525	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.0417	GEN672357 2-FUT-WL2X 13.800
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.0275	GEN672393 2-NBECST2G 13.800
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03370	123.0272	COOPER - ST JOE 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.0266	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.0258	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	123.0227	GEN672390 2-FUT-SW2X 13.800
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03937	123.0217	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03346	123.0179	HOSKINS - SHELL CREEK 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	123.0124	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.9988	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.9911	GEN 11143 1-J436GEN1 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.9911	GEN 11153 1-J437GEN1 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.9679	GEN660001 2-ABERDEEN SIEBRECHT
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.9567	GEN652556 2-OAHE
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.9567	GEN652557 4-OAHE
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.9567	GEN652558 6-OAHE
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.9233	GEN659270 1-WEST SW
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.8997	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.8991	GEN652353 2-GR PRAIRIEG 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.8749	GEN562872 1-G15046_3 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.8546	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03355	122.8535	GRIMES - LEHIGH 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03395	122.8515	ELK - MAGNOLIA 5 161KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	122.8457	GEN587593 1-J460-GEN1 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.8327	GEN600063 1-COLVILLE GEN 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.8327	GEN600064 2-COLVILLE GEN 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03375	122.787	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03454	122.7821	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.7616	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.7601	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.748	GEN620324 3-HOOT LAKE 3 GEN
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.7468	GEN600014 4-BLACK DOG GEN 4

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.7115	GEN600065 7-HIGH BRIDGE
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.7115	GEN600066 8-HIGH BRIDGE
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.7102	LADISH 115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.6983	GEN600071 10-RIVER SIDE
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.6978	GEN600070 9-RIVER SIDE
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	122.6892	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.6878	GEN600011 5-BLACK DOG GEN 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	122.687	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	122.6816	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.6805	GEN910006 1-G12_012IS_3 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.6788	GEN587663 1-H081-GEN1 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.6749	GEN600007 7-RIVERSIDE GEN 7
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.6643	GEN600043 7-BLUE LAKE5
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.6643	GEN600044 8-BLUE LAKE6
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.6504	GEN600017 C-LS POWER CT
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03401	122.6329	BONDURANT - MONTEZUMA 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04094	122.6116	FIELD SOUTH - WILMARTH 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03127	122.5873	G16-044-TAP 345.00 - GROTON 345KV CKT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03371	122.578	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.5726	GEN652345 W-G07_023IS_2 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03128	122.5655	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03355	122.5642	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04094	122.5514	FIELD NORTH - FIELD SOUTH 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04094	122.532	FIELD NORTH - LKFLDXL3 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.5266	GEN659411 1-CAMPBLCNTY W0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.515	GEN659272 2-GROTON 2G13.800
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03374	122.4924	DENISON - SIOUX CITY 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.4865	GEN657705 X-DRAYTON
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.4437	GEN 10648 1-G830_GEN 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.4228	GEN 11104 1-J262_GEN 0.6000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.4228	GEN 11108 1-J263_GEN 0.6000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03128	122.4109	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03128	122.4089	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.4045	GEN659274 1-GROTON
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.3989	GEN615052 1-CAMBRIDGE GENERATING STATION
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.3528	GEN615015 1-GRE-SPRITWDG13.200
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.3414	GEN615021 1-GRE-ER 14G 16.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.3137	GEN681542 6-JP MADGETT
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.3109	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.3109	GEN672304 4-BOUNDARY DAM GENERATOR 4
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.3109	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03398	122.2797	DAN JUHL - SPLIT ROCK 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03398	122.2793	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.2536	GEN672356 1-FUT-WL1X 18.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.2141	GEN600067 9-HIGH BRIDGE
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.2125	GEN672389 1-FUT-SW1X 18.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.198	GEN672392 1-NBECGT1G 18.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.1861	GEN600077 W-YANKEE 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.1861	GEN600099 W-YANKEE 4
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.1759	GEN659010 4-G07_027IS_2 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.1687	GEN600078 W-YANKEE 3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.1665	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.163	GEN600069 W-YANKEE 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03398	122.1612	DAN JUHL - MAGNOLIA 5 161KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.1583	GEN659366 3-WILTON 3 W0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	122.1526	GEN600002 3-SHERBURNE CNTY G3
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.1501	STANTON 230/18.0KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.1469	GEN659194 1-NDPRAIRWND1W0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.1452	GEN652460 4-GARRISON
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.1451	GEN652461 5-GARRISON
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03368	122.1275	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03398	122.1032	LEHIGH - RAUN 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.1004	GEN652457 1-GARRISON
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.1004	GEN652458 2-GARRISON
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.1004	GEN652459 3-GARRISON
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03390	122.0359	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	122.0232	GEN659403 1-NDSUNFLWR W0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03473	122.0197	CARPENTER - WATERTOWN 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03473	122.0197	CARPENTER - WATERTOWN 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	121.9872	GEN587653 1-J526-GEN1 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03473	121.914	HURON - WATERTOWN 230KV CKT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03473	121.914	HURON - WATERTOWN 230KV CKT 2
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	121.8748	GEN615001 1-COAL CREEK
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03360	121.7486	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	121.7427	GEN615002 2-COAL CREEK
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03473	121.7067	CARPENTER - HURON 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	121.6874	GEN587053 1-G16-007-GEN10.6500
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	121.6393	GEN600001 2-SHERBURNE CNTY G2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	121.63	GEN587133 1-G16-017-GEN10.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	121.5613	ALMA 161 161/24.0KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03360	121.4572	PAHOJA - SIOUX FALLS 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	121.33	GEN659453 1-GI1414GEN W0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	121.2243	GEN659110 1-LELAND OLDS UNIT1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	121.2233	GEN587633 1-J510-GEN1 18.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	121.0793	GEN659141 1-K10215A
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	120.9957	GEN615010 1-STANTON4
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	120.8149	GEN659407 1-ANTELPHILLSW0.6900
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	120.7093	GEN587293 1-G16-044-GEN10.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	120.6255	YANKEE 115/34.5KV TRANSFORMER CKT 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	120.6077	YANKEE 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	120.5612	GEN587033 1-G16-004-GEN10.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	120.4758	BROOKING COUNTY - J432 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	120.4758	J432 345.00 345/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	120.4049	GEN657749 1-YOUNG 1 GENERATOR
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	120.3987	GEN600004 2-PRAIRIE ISLAND G2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	120.3903	GEN672321 1-SHAND GENERATOR 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	120.3882	GEN600003 1-PRAIRIE ISLAND G1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	120.352	GEN672310 1-POPLAR RIVER GENERATOR 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	120.352	GEN672311 2-POPLAR RIVER GENERATOR 2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	120.304	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	120.1264	GEN587623 1-J493-GEN1 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	119.7978	GEN587583 1-J432-GEN1 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03336	119.7882	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03336	119.7882	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	119.7659	GEN600006 1-AS KING
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	119.7517	GEN659354 1-DEERCREK STG18.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	119.7511	GEN659353 1-DEERCREK CTG18.000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	119.5124	BASE CASE
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	119.2657	RAUN - SIOUX CITY 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03361	119.2657	RAUN - SIOUX CITY 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	119.1134	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	119.0912	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	119.0176	GEN661015 1-COYOTE
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	118.6832	GEN659103 1-ANTELOPE VALLEY UNIT1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	118.6832	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	118.2412	J460 345.00 - J460-TAP 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	118.2412	J460 345.00 345/34.5KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	118.1682	GEN600005 1-MONTICELLO
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	118.078	GEN 11123 1-G736-GEN1 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	118.0631	GEN 11133 1-J442-GEN1 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	117.7714	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	117.7571	GEN600000 1-SHERBURNECNTY G1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	117.5186	GEN659125 1-COVEY
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	117.3185	GEN657748 1-YOUNG 2 GENERATOR
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	116.6996	GEN587593 1-J460-GEN1 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	116.4799	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	116.4794	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03131	116.4386	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03131	116.4386	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03131	116.4149	RIEL - ROSEAU 500KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	116.3111	GEN600002 3-SHERBURNE CNTY G3
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	116.2473	GEN620315 1-BIG STONE GEN
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02995	116.2098	HANLON - STORLA 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02998	116.1192	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	116.011	GEN600001 2-SHERBURNE CNTY G2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	115.9438	COYOTE 345/24.0KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03031	115.7473	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	115.5522	GEN587653 1-J526-GEN1 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03031	115.5341	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04223	115.4576	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	115.3993	GEN615001 1-COAL CREEK
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04223	115.3219	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04223	115.3196	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	115.2131	GEN615002 2-COAL CREEK
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	115.1237	GEN635214 4-NEAL UNIT 4
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03359	114.8757	BIG STONE 230/24.0KV TRANSFORMER CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	114.7426	GEN587633 1-J510-GEN1 18.000
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	114.43	GEN587293 1-G16-044-GEN10.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	114.4054	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03034	114.2958	BUFFALO RIDGE - YANKEE 115KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03703	114.0025	NOBLES - SPLIT ROCK 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02987	113.8721	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02987	113.8721	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02985	113.7992	STORLA - WESSINGTON 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	113.7852	GEN635024 4-WALTER SCOTT UNIT 4
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02982	113.7042	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	113.7026	GEN635213 3-NEAL UNIT 3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02983	113.6766	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02980	113.5449	FT THOMPSON - LETCHER 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02980	113.5449	FT THOMPSON - LETCHER 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03050	113.4814	AS KING - EAU CLAIRE 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03093	113.3575	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03693	113.335	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	113.1562	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	113.1014	GEN635023 3-WALTER SCOTT UNIT 3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03193	113.0611	AURORA - BROOKINGS 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03193	113.0611	AURORA - BROOKINGS 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02989	112.9949	LETCHER - SIOUX FALLS 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	112.766	CENTER 230/22.0KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03069	112.672	CHANARANBIE - FENTON 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03068	112.6616	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03038	112.4825	BIG STONE - BLAIR 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03038	112.4825	BIG STONE - BLAIR 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03193	112.4316	AURORA - FLANDRU 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03193	112.4316	AURORA - FLANDRU 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03012	112.4066	BLAIR - GRANITE FALLS 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03012	112.4066	BLAIR - GRANITE FALLS 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03087	112.4008	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	112.2531	GEN336821 1-GRAND GULF UNIT
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03093	112.2139	ADAMS - MITCHLCO3 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03100	112.1079	ADAMS - PLEASANT VALLEY 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02985	112.0169	HANLON - SIOUX FALLS 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03095	111.9599	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	111.9522	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	111.8917	GEN344225 1-1CAL G1 25.000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04223	111.814	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	111.7962	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	111.7746	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03102	111.6991	BYRON - NORTH ROCHESTER 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02973	111.6002	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03056	111.4396	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03015	111.4069	MN VALLEY TAP - PANTHER 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03044	111.4045	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03015	111.3789	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03197	111.3666	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	111.3601	GEN620315 1-BIG STONE GEN
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02973	111.3477	BROOKINGS - WHITE 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02973	111.3477	BROOKINGS - WHITE 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03693	111.3379	FIELD SOUTH - WILMARTH 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04223	111.3127	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04223	111.3064	2810X2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03693	111.2969	FIELD NORTH - FIELD SOUTH 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03693	111.2724	FIELD NORTH - LKFLDXL3 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	111.2269	GEN336153 1-WATERFORD UNIT#3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	111.1842	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03197	111.1841	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03197	111.1664	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03099	111.1619	BYRON - PLEASANT VALLEY 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04223	111.1549	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03027	111.1511	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03197	111.1385	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	111.1371	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03197	111.1307	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03109	111.0774	PIPESTONE - SPLIT ROCK 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.9903	GEN640009 1-COOPER NUCLEAR STATION
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.9304	GEN335831 1-RIVERBEND UNIT#1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03034	110.9243	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.8811	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03008	110.8656	MCLEOD - PANTHER 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03115	110.8574	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03115	110.8574	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03112	110.8342	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03112	110.8342	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03609	110.8166	HELENA - SHEAS LK3 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.7996	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03028	110.7475	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.7276	LANGDON - LANGWIN7 115.00 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03041	110.7136	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03112	110.637	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03028	110.6072	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03032	110.5887	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03124	110.581	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03003	110.5511	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03003	110.5511	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.5001	BARNES 4 230.00 230/34.5KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.491	GEN587153 1-G16-021-GEN10.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.4578	GEN337653 1-WHITE BLUFF UNIT #2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02996	110.4293	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03028	110.4222	HENNING - INMANN 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03003	110.4047	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03003	110.4047	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03367	110.3455	BIG STONE 230/24.0KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.3341	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02989	110.3278	GRANITE FALLS - WILLMAR 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02989	110.3278	GRANITE FALLS - WILLMAR 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.3168	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.3131	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.2832	GEN337652 1-WHITE BLUFF UNIT #1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.2775	GEN338146 1-INDEPENDENCE UNIT #2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.2752	GEN338143 1-INDEPENDENCE UNIT #1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02979	110.2616	GRAND ISLAND - MCCOOL 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.2522	GEN501801 1-DOLET HILLS UNIT1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03096	110.2519	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03096	110.2519	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02990	110.2372	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.2312	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02980	110.231	GRACEVT7 - ORTONVILLE 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.2265	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03103	110.2247	CHISAGO COUNTY - FORBES 500KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03010	110.2102	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03010	110.2102	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03103	110.201	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.2003	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.2003	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.1998	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.1769	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02986	110.1728	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.1412	GEN563232 1-G15089_3 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02988	110.121	G15088_T 345.00 - MOORE 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.0707	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.0698	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.051	GEN344897 4-1LAB G4 20.000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.0505	GEN344894 1-1LAB G1 20.000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.0502	GEN344896 3-1LAB G3 20.000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02990	110.0492	BIG STONE - HIGHWAY 12 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03023	110.0404	FENTON - NOBLES 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.0378	GEN501813 1-RODEMACHER UNIT 3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02992	110.0374	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03349	110.0297	BISON - HETINGER 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03068	110.0088	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.0081	GEN344895 2-1LAB G2 20.000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03012	110.0051	FORMAN - OAKES 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.0027	GEN345670 1-1RUSH G1 18.000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	110.0023	GEN345671 2-1RUSH G2 18.000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.9865	MEC345 - WILMARTH 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.9852	MEC345 345/19.5KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03513	109.9789	GLENHAM - WHITLOK 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02982	109.9448	MCCOOL - MOORE 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03028	109.9433	AUDUBON - SHEYNNE 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03513	109.9325	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03513	109.9325	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.9042	GEN645012 2-NEBRASKA CITY 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.8999	GEN335206 1-NELSON UNIT 6
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03719	109.891	NOBLES - SPLIT ROCK 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03021	109.8872	FENTON - NOBLES 115KV CKT 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03171	109.8855	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03513	109.8853	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03513	109.8853	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03513	109.8849	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.8803	MEC115 - WILMARTH 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.8802	MEC115 115/15.0KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03096	109.8755	MITCHELL - MITCHELL NW 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03096	109.8755	MITCHELL - MITCHELL NW 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02990	109.859	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02980	109.8521	GRACEVT7 - MORRIS 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02980	109.8521	GRACEVT7 - MORRIS 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02985	109.836	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02985	109.836	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.8311	GEN645011 1-NEBRASKA CITY 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03068	109.8277	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03174	109.8262	NUNDRWD - WAYSIDE 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.8257	GEN636641 1-LOUISA UNIT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03031	109.8246	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03530	109.8229	GLENHAM - L3 HAWDON 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.8186	RGBYWND4 230.00 - RUGBY 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.8163	GEN336252 1-NINEMILE POINT UNIT#5
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.8148	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02993	109.8124	GRANT - MITCHELL 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02993	109.8124	GRANT - MITCHELL 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.7989	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.788	GEN501812 1-RODEMACHER UNIT 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.7858	GEN600149 W-J183 PROSEW10.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.7807	GEN542962 2-IATAN UNIT #2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.7801	NOBLES 115/34.5KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03513	109.7686	OAHE - SULLEY BUTTE 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.7684	GEN600150 W-J183 PROSEW20.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03007	109.7639	BURR - CANBY 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.7631	GEN336831 1-BAXTER WILSON SES
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.7403	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03545	109.7352	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03012	109.7266	CANBY - GRANITE FALLS 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03012	109.7266	CANBY - GRANITE FALLS 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03031	109.7175	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.717	GEN337041 1-GERALD ANDRUS
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03024	109.7035	ELM CREEK - MONTICELLO 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.6646	GEN336251 1-NINEMILE POINT UNIT#4
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.6215	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02989	109.6178	RASMUSN - UTICA JCT 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.6011	GEN334440 1-SABINE UNIT 4
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03011	109.5891	AIRTECH - FEP TAP 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03011	109.5755	AIRTECH - WEST FARIBAULT 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.5624	GEN562003 1-G11_027_3 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02993	109.5566	CHERRY CREEK - GRANT 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.5432	GEN563222 1-G15088_3 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.5373	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02989	109.5261	RASMUSN - SIOUX CITY 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03349	109.5178	BISON - MAURINE 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03016	109.5166	FENTON 115/69KV TRANSFORMER CKT 5
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.5166	GEN336191 1-LITTLE GYPSY UNIT#3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.4988	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.4948	AS KING 345/20.0KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03012	109.4869	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.457	GEN335204 1-NELSON UNIT 4
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03015	109.4543	JAMES TOWN - PICKERT 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03033	109.4437	AUDUBON - HUBBARD 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.4412	GEN336801 1-BAXTER WILSON UNIT #1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03030	109.4393	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.4323	GEN335614 1-WILLOW GLENN UNIT#4
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03012	109.4311	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.4259	GEN336464 1-MICHOUD UNIT #3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03193	109.4162	FLANDRU - SIOUX FALLS 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03012	109.4157	LAWERENCE CREEK - SHAEFER 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.411	GEN303007 1-1BC2 U2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.4058	GEN303006 1-1BC2 U1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.4022	GEN334441 1-SABINE UNIT 5
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03010	109.3934	BLUE LAKE - MCLEOD 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.3828	GEN542957 1-IATAN UNIT #1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03116	109.3689	HURON - WOONSOCKET 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.3591	GEN336170 1-GULF OXY U4
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03008	109.3549	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.3516	GEN303008 1-1BC2 U3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03031	109.3487	FARGO - SHEYNNE 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03031	109.3487	FARGO - SHEYNNE 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03060	109.3435	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02996	109.3416	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02988	109.3384	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03008	109.3366	MISSION - ST FRANCIS 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03012	109.3324	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02953	109.3292	SIDNEY - STEGALL 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03012	109.3286	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.3282	GEN338388 1-1PLUM PT U1 23.000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03010	109.3169	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02996	109.3155	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.315	GEN334433 1-SABINE UNIT 3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03012	109.3134	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03022	109.3069	MENNO JCT - TRIPP JCT 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03022	109.3045	ELM CREEK - PARKERS LAKE 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03015	109.2979	FORT RIDGELY - FRANKLIN 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03008	109.2902	HARMONY - ST FRANCIS 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.2804	GEN501811 1-RODEMACHER UNIT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03002	109.2738	MAPLE RIVER - WINGER 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.2645	GEN336222 1-LITTLE GYPSY UNIT#2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03060	109.2541	GROTON - REDFIELD 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03033	109.2524	KARLSTAD - WINGER 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03008	109.2519	HARMONY - VALENTINE 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03024	109.2503	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03088	109.2465	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03018	109.2435	WINNER - WITTEN 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.2416	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03015	109.2389	GRAND FORKS - PICKERT 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03022	109.2345	MENNO JCT - UTICA 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.2314	BURR - J493 115.00 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.2314	J493 115.00 115/34.5KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.23	GEN542955 1-LACYGNE UNIT #1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03016	109.2205	AS KING - KOHLMAN LAKE 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03030	109.2169	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03030	109.2169	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.2088	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03116	109.2074	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.207	GEN336152 1-WATERFORD UNIT#2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.2064	GEN336151 1-WATERFORD UNIT#1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.2048	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.2024	GEN345765 H-1SIOUX 2 18.000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.2013	GEN334071 1-LEWIS CREEK 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1996	FENTON 115/34.5KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1973	GEN334070 1-LEWIS CREEK 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03023	109.1894	BLUE LAKE - HAMPTON CORNER 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03022	109.1888	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03011	109.1839	LYON COUNTY 115/69KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1832	GEN337766 1-TRACTEBEL UNIT S1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1635	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1635	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.163	GEN501910 1-ACADIA UNIT ST1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1612	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1612	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1555	GEN542956 2-LACYGNE UNIT #2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1544	GEN659116 1-SPIRIT MOUND UNIT1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1544	GEN659117 2-SPIRIT MOUND UNIT2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1415	GEN345756 H-1SIOUX 1 18.000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1402	GEN629992 1-G164_WF9 34.500
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03002	109.1356	PAYNESVILLE - WAKEFIELD 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03014	109.1353	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1306	GEN542951 5-HAWTHORN UNIT #5
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1212	GRAND MEADOW - PLEASANT VALLEY 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1164	GEN345832 1-1TS G1 13.800
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1161	GEN345841 2-1TS G2 13.800
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1154	GEN562517 1-G14_021_S2 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03020	109.1066	ARNOLD - HAZLETON 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1038	GEN337765 1-TRACTEBEL UNIT C2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.1037	GEN337764 1-TRACTEBEL UNIT C1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.0917	GEN635407 W-SHD415 W 0.6000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.0917	GEN635408 W-SHD425 W 0.6000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.0917	GEN635409 W-SHD435 W 0.6000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.0847	GEN336242 1-1NMIL ST1 18.000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03004	109.0815	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03024	109.0745	WILMARTH () 161/115/13.8KV TRANSFORMER CKT 6
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.0731	TRIMONT WD 3345.00 345/34.5KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.071	TRIMONT WD 3345.00 345/34.5KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03024	109.0696	BLUE EARTH TAP - WILMARTH 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03015	109.0689	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.0668	GEN501823 1-TECHE UNIT 3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03007	109.0633	COON CREEK - KOHLMAN LAKE 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.0569	GEN587353 1-G16-050-GEN10.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03008	109.049	AS KING - WILLOW RIVER 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.0407	GEN660016 1-B_H WIND 0.7000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.0229	488489510526345.00 - J510 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	109.0229	J510 345.00 345/18.0KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.9361	488489510526345.00 - J526 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.9361	J526 345.00 345/34.5KV TRANSFORMER CKT 1
3	20L	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05053	108.874	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.5448	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.2719	GEN600046 1-MECST
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03019	108.2592	STORLA (KV1A) 230/115/13.2KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03007	108.2556	CARROLL COUNTY - DRAGER5 161.00 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03007	108.2556	CARROLL COUNTY - DRAGER5 161.00 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.2507	P13:115-230:NPPD:NUCOR-3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03013	108.2389	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03029	108.2263	BREWSTER - ELK 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.2263	GEN681540 5-ALMA UNIT 5
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.2239	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03008	108.222	POCAHONTAS COUNTY - POMEROY 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.2108	GEN672383 1-MLTC 1G 13.800
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.2065	GEN600056 W-BUFFALO RIDGE WIND GEN
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.2016	GEN600047 1-MECCT1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03160	108.2	BOWMAN - HETINGER 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03007	108.1887	COOPER - SUB 3458 NEB CTY 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03007	108.1887	COOPER - SUB 3458 NEB CTY 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03008	108.1821	HAYES - POMEROY 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.1797	GEN672336 7-E B CAMPBELL GENERATOR 7
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.1797	GEN672337 8-E B CAMPBELL GENERATOR 8
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.1708	GEN672382 1-MEADOW LAKE GENERATOR 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03010	108.1702	EDEN 345 345.00 - HCKRYCK3 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.1688	GEN563302 1-G15096_3 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.167	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03011	108.1634	PLYMOUTH - SIOUX CITY 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03011	108.1634	PLYMOUTH - SIOUX CITY 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.1522	GEN652004 1-G13_001IS_3 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03008	108.1325	CARROLL COUNTY - VICTORY 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.1318	GEN672396 1-YHPS 1G 13.800
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.1318	GEN672397 2-YHPS 2G 13.800

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03009	108.1314	BROOKING COUNTY - YANKEE 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03009	108.1314	BROOKING COUNTY - YANKEE 115KV CKT 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.1295	GEN600130 W-G586 - CWN 10.6000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03000	108.1291	ALEXMRES3 345.00 () 345/115/34.5KV TRANSFORMER CKT 9
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02980	108.1275	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.127	GEN600131 W-G586 - CWN 20.6000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03013	108.125	FALLOW 3 345.00 - GRIMES 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.122	GEN659289 1-DAYCNTYWND W0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.1214	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.1207	GEN563312 1-G15097_3 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.1195	CENTER - COYOTE 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.1158	GEN659031 1-G12_014IS_4 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03009	108.1016	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.0966	LAKOTA 115/69KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.096	GEN652559 1-OAHE
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.0895	GEN620115 1-HRDLKGEN 0.6000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03007	108.0809	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03007	108.0809	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.0779	YANKEE 115/34.5KV TRANSFORMER CKT 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03298	108.0714	FT THOMPSON - HURON 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03298	108.0714	FT THOMPSON - HURON 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03298	108.0714	FT THOMPSON - HURON 230KV CKT 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03298	108.0714	FT THOMPSON - HURON 230KV CKT 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.0693	GEN620857 1-LKPRSTN9 41.600
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.0674	GEN672378 1-ERMINE GENERATOR 4
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.0674	GEN672379 2-ERMINE2X 13.800
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.067	GEN652410 3-FT PECK
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03007	108.0655	COOPER - FAIRPORT 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03012	108.0635	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.0633	GEN600043 7-BLUE LAKE5
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02996	108.0624	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.0574	GEN672370 1-COTEAU CREEK GENERATOR 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.0574	GEN672371 2-COTEAU CREEK GENERATOR 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.0574	GEN672372 3-COTEAU CREEK GENERATOR 3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03011	108.0476	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.0399	GEN615032 2-PLEASANT VALLEY
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.0382	GEN600125 2-FEP ST G 13.800
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.0372	GEN672369 3-MERIDIAN GENERATOR 3 ST
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03031	108.0247	HILLS - MONTEZUMA 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.019	GEN672314 1-TNTLLN1X 13.800
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.019	GEN672315 2-TNTLLN2X 13.800
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03007	108.0153	COPSTJCPFRSJ
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03007	108.0153	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03007	108.0153	STMDSJFAFACO
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.0117	GEN652414 4-FT PECK
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	108.0117	GEN652415 5-FT PECK
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03012	108.0064	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03012	108.0064	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.9863	GEN620285 1-SOLWAY
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.9799	GEN652353 2-GR PRAIRIEG 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03007	107.9688	COLUMEAST - SHELL CREEK 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03013	107.9678	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.9647	DONALDSON - DONALDSON PIPE 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03009	107.9442	DENISON - EXIRA 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03009	107.9435	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.941	GEN600013 3-BLACK DOG GEN 3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.9261	GEN652556 2-OAHE
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.9258	GEN652558 6-OAHE
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.9222	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.9187	GEN652557 5-OAHE
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.8913	GEN672384 1-CENTENNIAL WINDFARM
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.8751	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.8722	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.872	GEN660001 2-ABERDEEN SIEBRECHT
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.8684	ULRICH (ULRICH) 115/69/41.6KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.8531	GEN659162 4-RED WLCK
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.8531	GEN659163 5-BLACK WDCK
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.852	GEN659192 6-LYNN
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.8439	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.8315	GEN659273 2-GROTON SYNC COND

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.8315	GEN659294 1-WILTONCOL9
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03008	107.826	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.8248	H081 345.00 - H081-TAP 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.8248	H081 345.00 345/34.5KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.8193	GEN600018 S-LS POWER STEAM
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.801	THIEF RIVER FALLS (TRF) 115/69/13.2KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.8001	GEN659270 1-WEST SW
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02984	107.7846	HOSKINS - SHELL CREEK 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.7839	GEN659290 1-EDGECOL
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.7819	GEN657600 1-L1GEN3 9 0.5750
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.7786	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.7749	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.7633	GEN657964 1-ASH2GEN9 0.5750
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.76	GEN603185 1-FIBROMINN GENERATION
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03519	107.7576	LAKEFIELD 3 - NOBLES 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03009	107.757	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.7518	GEN672358 1-CHAPLN1W 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.7467	LADISH 115/13.2KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.7393	GEN681522 3-GENOA 3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03008	107.7363	COOPER - ST JOE 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.7322	GEN587603 1-J488&J489GN10.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.7246	GEN620323 2-HOOT LAKE 2 GEN
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03007	107.7237	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.7197	GEN600050 1-FEP
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.7102	GEN672347 1-CORY COGEN GENERATOR 1 GT1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.7101	GEN672348 2-CORY COGEN GENERATOR 2 GT2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03029	107.6748	ELK - MAGNOLIA 5 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.6699	GEN672350 1-NIPAWIN GENERATOR 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.6699	GEN672351 2-NIPAWIN GENERATOR 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.6699	GEN672352 3-NIPAWIN GENERATOR 3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.6679	GEN 11143 1-J436GEN1 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.6679	GEN 11153 1-J437GEN1 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.6608	GEN672367 1-MERIDIAN GENERATOR 1 GT1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.6608	GEN672368 2-MERIDIAN GENERATOR 2 GT2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.6452	GEN600012 2-BLACK DOG GEN 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03089	107.6347	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.6262	FRONTER4 230.00 (FRONTIER) 230/69/13.8KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.6253	WINGER (WINGER) 115/69/41.6KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.6132	GEN562872 1-G15046_3 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.598	GEN672349 3-CORY COGEN GENERATOR 3 ST
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.5834	GEN672339 16-QE 16G 13.800
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.5834	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03013	107.5529	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.4966	GEN672393 2-NBECST2G 13.800
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.4669	GEN910006 1-G12_012IS_3 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03004	107.446	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03009	107.4454	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.4418	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.437	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03009	107.4363	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.4303	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.4272	GEN659411 1-CAMPBLCNTY W0.6900
3	20L	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05053	107.4071	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.3938	GEN587663 1-H081-GEN1 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03038	107.3759	BONDURANT - MONTEZUMA 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02993	107.3656	GRIMES - LEHIGH 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.3546	GEN620324 3-HOOT LAKE 3 GEN
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03009	107.335	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.293	GEN600014 4-BLACK DOG GEN 4
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.2817	GEN600065 7-HIGH BRIDGE
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.2817	GEN600066 8-HIGH BRIDGE
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.2756	GEN652345 W-G07_023IS_2 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03011	107.2735	DENISON - SIOUX CITY 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.2596	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.257	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.2513	GEN600071 10-RIVER SIDE
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.2509	GEN600070 9-RIVER SIDE
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03008	107.2504	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.242	GEN659272 2-GROTON 2G13.800
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.238	GEN600011 5-BLACK DOG GEN 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.2365	GEN657985 1-ASH1GEN9 0.5750
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.2307	GEN659274 1-GROTON
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.2292	GEN600007 7-RIVERSIDE GEN 7
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02994	107.2203	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.209	STANTON 230/18.0KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.2047	GEN600017 C-LS POWER CT
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.1986	GEN 10648 1-G830_GEN 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.1934	GEN 11104 1-J262_GEN 0.6000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.1934	GEN 11108 1-J263_GEN 0.6000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.1701	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.1512	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03031	107.1387	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03031	107.1381	DAN JUHL - SPLIT ROCK 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.1077	GEN615015 1-GRE-SPRITWDG13.200
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.0876	GEN652461 5-GARRISON
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.0875	GEN652460 4-GARRISON
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03065	107.0615	CARPENTER - WATERTOWN 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03065	107.0615	CARPENTER - WATERTOWN 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.0572	GEN652457 1-GARRISON
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.057	GEN652458 2-GARRISON
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.057	GEN652459 3-GARRISON
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.0294	GEN615052 1-CAMBRIDGE GENERATING STATION
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03031	107.0259	DAN JUHL - MAGNOLIA 5 161KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.0191	GEN659010 4-G07_027IS_2 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	107.0027	GEN659366 3-WILTON 3 W0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03065	106.9911	HURON - WATERTOWN 230KV CKT 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03065	106.9911	HURON - WATERTOWN 230KV CKT 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.9572	GEN659194 1-NDPRAIRWND1W0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.9345	GEN657705 X-DRAYTON
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.8932	GEN659403 1-NDSUNFLWR W0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.8788	GEN600078 W-YANKEE 3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.8782	GEN600077 W-YANKEE 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.8782	GEN600099 W-YANKEE 4
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02993	106.8686	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.8562	GEN600069 W-YANKEE 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.7129	GEN600067 9-HIGH BRIDGE
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.7079	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.7079	GEN672304 4-BOUNDARY DAM GENERATOR 4
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.7079	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.6863	GEN659110 1-LELAND OLDS UNIT1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03065	106.6544	CARPENTER - HURON 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.6479	GEN587133 1-G16-017-GEN10.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.6362	GEN615021 1-GRE-ER 14G 16.000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03026	106.615	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.5996	GEN681542 6-JP MADGETT
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03034	106.5889	LEHIGH - RAUN 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02993	106.5772	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.5372	GEN672392 1-NBECGT1G 18.000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.5201	GEN587053 1-G16-007-GEN10.6500
3	17SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03003	106.4822	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.3071	GEN659453 1-GI1414GEN W0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	106.0483	GEN659141 1-K10215A
3	20L	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05053	105.8434	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	105.8101	GEN659407 1-ANTELPHILLSW0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	105.7634	GEN615010 1-STANTON4
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	105.6203	YANKEE 115/34.5KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	105.5651	YANKEE 115/34.5KV TRANSFORMER CKT 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	105.3123	BROOKING COUNTY - J432 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	105.3123	J432 345.00 345/34.5KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	105.278	GEN587033 1-G16-004-GEN10.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	105.273	GEN659354 1-DEERCREK STG18.000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	105.272	GEN659353 1-DEERCREK CTG18.000
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02972	104.9746	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02972	104.9746	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.12812	104.9586	BASE CASE
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02989	104.853	RAUN - SIOUX CITY 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.02989	104.853	RAUN - SIOUX CITY 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	104.8261	GEN587623 1-J493-GEN1 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	104.7926	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	104.7901	GEN657749 1-YOUNG 1 GENERATOR

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	104.7023	GEN659111 2-LELAND OLDS UNIT2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	104.5209	GEN600004 2-PRAIRIE ISLAND G2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	104.5137	GEN600003 1-PRAIRIE ISLAND G1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	104.4936	GEN587583 1-J432-GEN1 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	104.4545	GEN672321 1-SHAND GENERATOR 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	104.4028	GEN659103 1-ANTELOPE VALLEY UNIT1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	104.4028	GEN659107 2-ANTELOPE VALLEY UNIT2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	104.3593	GEN672310 1-POPLAR RIVER GENERATOR 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	104.3593	GEN672311 2-POPLAR RIVER GENERATOR 2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	104.3146	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	103.9149	GEN600006 1-AS KING
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	103.0925	J460 345.00 - J460-TAP 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	103.0925	J460 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03385	102.8162	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03385	102.7	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	102.6769	GEN652173 1-G09_001IS_2 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	102.6292	GEN 11123 1-G736-GEN1 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	102.6203	GEN 11133 1-J442-GEN1 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	102.3937	GEN659125 1-COVEY
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	102.3914	GEN661015 1-COYOTE
3	17SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03385	102.3729	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	102.1576	GEN600005 1-MONTICELLO
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03533	101.8087	LAKEFIELD 3 - NOBLES 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	101.7952	GEN657748 1-YOUNG 2 GENERATOR
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	101.7564	GEN600000 1-SHERBURNECNTY G1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	101.2958	GEN587593 1-J460-GEN1 0.6900
3	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.12934	101.2003	BASE CASE
3	17SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03003	100.5284	FIELD SOUTH - WILMARTH 345KV CKT 1
3	17SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03003	100.486	FIELD NORTH - LKFLDXL3 345KV CKT 1
3	17SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03003	100.4841	FIELD NORTH - FIELD SOUTH 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	100.2822	GEN600001 2-SHERBURNE CNTY G2
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	100.2	GEN600002 3-SHERBURNE CNTY G3
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	100.162	GEN587653 1-J526-GEN1 0.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	100.1	GEN615001 1-COAL CREEK
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	100	GEN615002 2-COAL CREEK
3	17SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03385	99.8	2810X2
3	17SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03385	99.8	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	99.6	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	99.4	GEN587293 1-G16-044-GEN10.6900
3	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03006	99.4	GEN587633 1-J510-GEN1 18.000
3	20L	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04916	99.3	BASE CASE
3	17SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03385	99.2	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05691	115.8383	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05691	115.8383	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05541	112.572	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05541	112.572	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05541	111.8123	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05541	111.8123	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05854	110.7778	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	110.6627	BASE CASE
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05854	110.5544	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05854	109.8416	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05854	109.753	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05535	109.327	HANKINSON - WAHPETON 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05562	108.6307	LETCHER - SIOUX FALLS 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06669	108.5741	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05915	108.3837	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06669	107.7	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	107.5	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	107.4762	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05696	107.4165	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05696	107.4165	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05696	107.2239	FT RANDAL - LAKE PLATT 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05565	107.1156	HANLON - SIOUX FALLS 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06669	106.9024	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15366	106.4247	BASE CASE
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05523	106.0354	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05575	105.7888	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05663	105.615	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	105.4951	J460 345.00 - J460-TAP 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	105.4951	J460 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05799	105.2979	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05997	105.2249	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05997	105.1759	HAZEL CREEK - LYON COUNTY 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05997	105.1723	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05601	104.946	HARMONY - ST FRANCIS 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	104.9372	COYOTE 345/24.0KV TRANSFORMER CKT 1
3	17G	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06848	104.8041	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	104.7865	GEN587593 1-J460-GEN1 0.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05501	104.5739	FT RANDAL - UTICA JCT 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05730	104.5441	BROOKINGS - WATERTOWN 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05730	104.5441	BROOKINGS - WATERTOWN 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05573	104.3656	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05573	104.3656	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05645	104.3143	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05564	104.3131	GRAND ISLAND - MCCOOL 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05666	104.2299	FARGO - JAMES TOWN 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05664	104.1267	FARGO - JAMES TOWN 230KV CKT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05601	104.0962	HARMONY - VALENTINE 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	104.0901	GEN635024 4-WALTER SCOTT UNIT 4
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	104.0869	GEN635214 4-NEAL UNIT 4
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05645	104.0594	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06669	104.0557	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06669	104.0264	2810X2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05704	103.9556	ARLINGTON - WATERTOWN 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05652	103.9174	AUDUBON - SHEYNNE 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	103.6885	YANKEE 115/34.5KV TRANSFORMER CKT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05567	103.6706	MCCOOL - MOORE 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05685	103.6296	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05685	103.6296	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	103.6258	YANKEE 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05574	103.6166	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05646	103.6104	ELM CREEK - MONTICELLO 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05612	103.6072	BURR - CANBY 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05541	103.606	SIDNEY - STEGALL 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05601	103.563	AINSWORTH - VALENTINE 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	103.5323	GEN635023 3-WALTER SCOTT UNIT 3
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	103.5112	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	103.3648	BROOKING COUNTY - J432 345.00 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	103.3648	J432 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	103.3322	GEN659354 1-DEERCREK STG18.000
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05716	103.3292	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	103.3274	GEN659353 1-DEERCREK CTG18.000
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05624	103.3075	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05716	103.3006	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05716	103.2897	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	103.2779	GEN635213 3-NEAL UNIT 3
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	103.2399	GEN587583 1-J432-GEN1 0.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05614	103.2392	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05655	103.2344	AUDUBON - HUBBARD 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	103.2082	SHEYENNE SVC - SHEYNNE 115KV CKT Z
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05631	103.1898	CANBY - GRANITE FALLS 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05631	103.1898	CANBY - GRANITE FALLS 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05743	103.1879	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05624	103.1869	BALTA - RAMSEY 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05704	103.1655	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05704	103.1655	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05704	103.1655	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05901	103.1555	BISON - HETINGER 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05663	103.1456	KARLSTAD - WINGER 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05704	103.1346	ARLINGTON - BROOKINGS 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05660	103.1294	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05660	103.1294	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05574	103.1265	RASMUSN - SIOUX CITY 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05584	103.1138	G15088_T 345.00 - MOORE 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05665	103.0867	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	103.0831	GEN640009 1-COOPER NUCLEAR STATION
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05612	103.0699	AS KING - EAU CLAIRE 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	103.0605	GEN344225 1-1CAL G1 25.000
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05675	103.021	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05901	103.01	BISON - MAURINE 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.991	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05603	102.9882	CENTER - COYOTE 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05611	102.9754	MN VALLEY TAP - PANTHER 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05639	102.9355	PRAIRIE - WINGER 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.9264	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05645	102.9194	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06669	102.9118	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05625	102.8891	MENNO JCT - TRIPP JCT 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05564	102.8638	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05564	102.8638	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05596	102.8577	FT RANDAL - SPENCER 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.848	ANSON - SPLIT ROCK 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.8478	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05596	102.8213	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05596	102.8213	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.8188	GEN336821 1-GRAND GULF UNIT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05629	102.7516	JAMES TOWN - PICKERT 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.7463	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05685	102.7333	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05685	102.7333	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05635	102.7283	JAMES TOWN - WEBER 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05596	102.7136	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05635	102.709	BISMARK - WEBER 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.667	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05515	102.6596	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05675	102.6056	P13:230-345:NPPD:STEGALL3:KV3A
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05675	102.6056	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.5954	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05625	102.5898	MENNO JCT - UTICA 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05564	102.5759	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05564	102.5759	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05629	102.5654	PRAIRIE - RAMSEY 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05600	102.5359	BIG STONE - HIGHWAY 12 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05588	102.5206	GRACEVT7 - ORTONVILLE 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05628	102.5092	GAVINS POINT - YANKON JCT 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05628	102.5092	GAVINS POINT - YANKON JCT 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05625	102.5003	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05635	102.4401	BISMARK - JAMES TOWN 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.4344	WATERTOWN 230KV SWITCHED SHUNT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.4343	ANSON - SPLIT ROCK 115KV CKT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.4327	ANSON 115/17.5KV TRANSFORMER CKT 4
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.4318	WATERTOWN 230KV SWITCHED SHUNT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.4039	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.4021	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05584	102.381	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05610	102.3642	ADAMS - MITCHLCO3 345.00 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.3613	GEN336153 1-WATERFORD UNIT#3
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.3604	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.3274	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05614	102.3145	ADAMS - PLEASANT VALLEY 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05645	102.304	ELM CREEK - PARKERS LAKE 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.3	BURR - J493 115.00 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.3	J493 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05608	102.2652	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05579	102.2535	AXTELL - SWEETWATER 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05562	102.2516	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05562	102.2513	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05562	102.2461	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05590	102.244	GRANT - MITCHELL 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05590	102.244	GRANT - MITCHELL 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05735	102.2168	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05641	102.2112	BALTA - MCHENRY 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05600	102.2086	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05735	102.2067	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05735	102.2067	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05629	102.1978	GRAND FORKS - PICKERT 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.1962	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.196	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.1881	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05588	102.1775	CLEARWATER - ONEILL 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.17	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.17	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06058	102.1598	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06058	102.1598	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05588	102.1426	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.1152	GEN335831 1-RIVERBEND UNIT#1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.105	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05257	102.0824	BLAIR - WATERTOWN 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05257	102.0824	BLAIR - WATERTOWN 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05562	102.0757	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.0741	GEN300003 1-THOMAS HILL UNIT 3
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05588	102.0705	CLEARWATER - NELIGH 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.0475	GEN645012 2-NEBRASKA CITY 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05587	102.0445	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05601	102.043	P12:230:UMZW:# 166 #: PL IN SD. TAP
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05601	102.043	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05550	102.0152	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05550	102.0152	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.0065	GEN542962 2-IATAN UNIT #2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05550	102.0054	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	102.0008	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.9937	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.9937	GEN600045 4-ANSON
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05616	101.9775	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05616	101.9775	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05611	101.9766	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.9735	MCLEOD - PANTHER 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05543	101.9684	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05543	101.9684	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05616	101.965	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05588	101.9541	GRACEVT7 - MORRIS 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05588	101.9541	GRACEVT7 - MORRIS 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05759	101.951	MONTICELLO - WAITE PARK 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05600	101.9377	OAHE - PHILIP TAP 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05467	101.937	BIG STONE - BROWNS VALLEY 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.9325	GEN636641 1-LOUISA UNIT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05616	101.9283	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05616	101.9283	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05607	101.8997	MORANVILLE - ROSEAU 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05590	101.8934	CENTER - SQUARE BUTTE 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05617	101.8927	BYRON - NORTH ROCHESTER 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05607	101.8848	RICHER - ROSEAU 230KV CKT 1
3	17G	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06848	101.8678	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
3	17G	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06848	101.867	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.8411	MEC345 - WILMARTH 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.8401	MEC345 345/19.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.829	GEN338146 1-INDEPENDENCE UNIT #2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.8256	GEN338143 1-INDEPENDENCE UNIT #1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05645	101.8186	MT VERN - STORLA 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05601	101.8082	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05601	101.8082	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05601	101.8082	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05601	101.8082	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.8075	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.805	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05630	101.7956	AS KING - CHISAGO COUNTY 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.7941	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05583	101.7928	P13:115-230:TSGT:SIDNEY-KV1A
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.7907	GEN337652 1-WHITE BLUFF UNIT #1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.7897	MEC115 115/15.0KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05601	101.7886	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05601	101.7886	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05601	101.7886	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05601	101.7886	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.7779	GEN337653 1-WHITE BLUFF UNIT #2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.7711	GEN600069 W-YANKEE 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.7677	MEC115 - WILMARTH 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.7662	GRANITE FALLS 230KV SWITCHED SHUNT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.7634	GRANITE FALLS 230KV SWITCHED SHUNT

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.7593	GEN600078 W-YANKEE 3
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.7451	GEN600077 W-YANKEE 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.7451	GEN600099 W-YANKEE 4
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.7323	GEN587153 1-G16-021-GEN10.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05616	101.7306	BYRON - PLEASANT VALLEY 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05583	101.7299	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05583	101.7298	P13:230-345:NPPD:SIDNEY 3:KV2A
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05583	101.7298	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.7282	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.7282	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05728	101.7244	HURON - WOONSOCKET 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05591	101.7076	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05659	101.7041	BALTA - RUGBY 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.7	GEN344895 2-1LAB G2 20.000
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.6947	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.6917	MINNESOTA VALLEY - MINVALY CAP7115.00 115KV CKT Z
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.6687	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05592	101.6669	GRANITE FALLS - WILLMAR 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05592	101.6669	GRANITE FALLS - WILLMAR 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05631	101.6642	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05631	101.6642	P12:230:UMZW:# 158 #: MH IN ND.
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.6605	GEN344897 4-1LAB G4 20.000
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05590	101.6549	CHERRY CREEK - GRANT 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.6529	GEN344894 1-1LAB G1 20.000
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.6527	GEN344896 3-1LAB G3 20.000
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05634	101.648	HARVEY - UNDERWOOD 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.6436	GEN542957 1-IATAN UNIT #1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05634	101.6392	COAL CREEK - UNDERWOOD 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05616	101.6378	EAGLE - PHILIP 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05597	101.628	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05614	101.6219	DICKINSON - PARKERS LAKE 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05694	101.6187	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.6135	GEN336252 1-NINEMILE POINT UNIT#5
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05607	101.6083	LUND - MORANVILLE 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05624	101.6079	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05613	101.6073	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.5999	GEN345670 1-1RUSH G1 18.000
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.5995	GEN542951 5-HAWTHORN UNIT #5
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05562	101.5979	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05607	101.5968	LUND - RUNNING 230KV CKT 1
3	17G	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06848	101.5901	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05615	101.5896	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.5853	GEN345671 2-1RUSH G2 18.000
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05634	101.5845	BALTA - HARVEY 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.577	GEN501801 1-DOLET HILLS UNIT1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05625	101.572	COAL CREEK - MCHENRY 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05602	101.5662	FT RANDAL - WHITE SWAN 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.5617	GEN300007 1-NEW MADRID UNIT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05631	101.5572	MOOREHEAD - MORRIS 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05584	101.5535	G15088_T 345.00 - PAULINE 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.5518	GEN300006 1-NEW MADRID UNIT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05593	101.5515	KELLY - SHELL CREEK 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05694	101.5498	GROTON - REDFIELD 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05611	101.541	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05593	101.5397	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05593	101.5397	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05545	101.5378	UTICA JCT - VFODNES 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05743	101.5372	FIELD NORTH - LKFLDXL3 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05602	101.5342	TYNDALL - WHITE SWAN 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05616	101.534	EAGLE - MARTIN 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05743	101.5292	FIELD SOUTH - WILMARTH 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05945	101.5218	P12:230:UMZB:# 171 #: WB IN ND.
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05945	101.5218	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.521	GEN542955 1-LACYGNE UNIT #1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05615	101.518	FALCONER - GRAND FORKS 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05615	101.518	FALCONER - GRAND FORKS 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05605	101.5173	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05605	101.5173	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05605	101.5127	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05605	101.5127	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05743	101.5108	FIELD NORTH - FIELD SOUTH 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05612	101.5031	CHADRON - WAYSIDE 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05612	101.5031	P13:115-230:NPPD:WAYSIDE4:T1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05630	101.5027	AURORA - BROOKINGS 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05630	101.5027	AURORA - BROOKINGS 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05945	101.4994	BISMARK - WASHBURN 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05650	101.4994	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05590	101.4964	PAYNSVILLE - WILLMAR 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.4934	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.493	GEN501813 1-RODEMACHER UNIT 3
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.4894	GEN336831 1-BAXTER WILSON SES
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.4868	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05612	101.4836	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.4808	GEN336251 1-NINEMILE POINT UNIT#4
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05945	101.4799	LELAND OLDS - WASHBURN 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.4656	GEN337041 1-GERALD ANDRUS
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05624	101.4639	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05624	101.4622	FRANKLIN - REDWOOD FALLS 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.444	AS KING 345/20.0KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05610	101.438	BRISTOL - GROTON 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.4334	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.4253	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.4201	GRANITE FALLS 115KV SWITCHED SHUNT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05647	101.4197	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05647	101.4197	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.4179	GRANITE FALLS 115KV SWITCHED SHUNT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.4176	FARGO 115KV SWITCHED SHUNT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05611	101.4173	GRAND FORKS (GK KV1A) 230/115/12.47KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.4066	GEN335206 1-NELSON UNIT 6
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.4051	GEN542956 2-LACYGNE UNIT #2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.3994	FARGO 115KV SWITCHED SHUNT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05608	101.3906	ARROWHEAD - FORBES 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.382	AINSWORTH - AINSWORTH 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05467	101.3797	BROWNS VALLEY - HANKINSON 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05670	101.373	HURON - REDFIELD 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.3718	H081 345.00 - H081-TAP 345.00 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.3718	H081 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05603	101.3709	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05603	101.3709	P12:115:UMZB:# 119 #: IN NE.
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.37	GEN563222 1-G15088_3 0.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05634	101.3651	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05634	101.3651	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05590	101.3564	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05621	101.3521	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.3508	GEN587663 1-H081-GEN1 0.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05610	101.3501	BRISTOL - SUMMIT 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05712	101.3441	HELENA - SHEAS LK3 345.00 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.3307	GEN600020 2-ANGUS ANSON1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05611	101.3278	CHADRON - DUNLAP 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05586	101.3252	OGALLALA - SIDNEY 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05675	101.3235	GRANITE FALLS - S3 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05675	101.3235	GRANITE FALLS - S3 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.3213	GEN501812 1-RODEMACHER UNIT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05599	101.3055	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.3029	GEN600021 3-ANGUS ANSON2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05595	101.3022	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.3006	GEN334440 1-SABINE UNIT 4
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.3001	GEN338388 1-1PLUM PT U1 23.000
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05728	101.2966	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.2915	GEN509403 1-PIRKEY GENERATION
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05728	101.2848	STORLA - WOONSOCKET 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05498	101.2845	GROTON - ORDWAY 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.2806	GEN336191 1-LITTLE GYPSY UNIT#3
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.2737	PRAIRIE - PRAIRIE SVC 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.2642	SHERBURNE CO 345/26.0KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05602	101.2629	AINSWORTH - STUART 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.2627	GEN509416 1-TURK GENERATION
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.2603	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.2564	JAMESTOWN (345/115JAM2) 345/115/41.6KV TRANSFORMER CKT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05650	101.2559	MARSHALL ERIE ROAD - S3 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05650	101.2559	MARSHALL ERIE ROAD - S3 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.2534	GEN336801 1-BAXTER WILSON UNIT #1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05583	101.251	MINGO - SETAB 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05583	101.251	MINGO - SETAB 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05630	101.2493	AURORA - FLANDRU 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05630	101.2493	AURORA - FLANDRU 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05611	101.2421	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.24	GEN509394 1-FLINT CREEK
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05623	101.2384	BADOURA - HUBBARD 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05599	101.2286	P12:115:TSGT:COVALT7-SNAKECK7
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.2285	GEN300002 1-THOMAS HILL UNIT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.2203	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.2199	GEN590011 2-ERCOT EQUIVALENCE
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05609	101.217	MARTIN - SHANNON 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05649	101.2086	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05552	101.2081	SIOUX FALLS - VFODNES 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.2069	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.2031	LANGDON - LANGWIN7 115.00 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05645	101.1974	ARMOUR - MT VERN 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05478	101.1936	EDGELEY - JAMES TOWN 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.1922	GEN590010 1-ERCOT EQUIVALENCE
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05591	101.1869	AXTELL - PAULINE 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05864	101.1819	GLENHAM - WHITLOK 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05671	101.1811	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.1811	GEN513601 1-GRECCTG_1 20.000
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05595	101.1777	GAVINS POINT - HARTINGTON 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05602	101.1751	TYNDALL - YANKON JCT 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05622	101.1669	MALLARD - RUGBY 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05622	101.1669	MALLARD - RUGBY 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05599	101.1663	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05607	101.1567	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05601	101.1466	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05601	101.1466	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05678	101.1382	CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05864	101.1313	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05864	101.1313	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05717	101.128	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.1184	GEN600047 1-MECCT1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.1178	GEN600046 1-MECST
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.1142	RGBYWND4 230.00 - RUGBY 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.1094	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05864	101.1087	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.1046	BARNES 4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.0982	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05607	101.0961	COON CREEK - SHERBURNE CO 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.0954	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.0953	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05864	101.0929	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.0781	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05618	101.0685	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05618	101.0685	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05864	101.0683	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05872	101.0601	GLENHAM - L3 HAWDON 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	101.0504	GEN587643 1-J525-GEN1 0.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05379	100.9518	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05379	100.9518	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100.6025	2516-WATERTNCAP 4230.00
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100.6025	2543-FARGO
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100.6025	2560-BRDLAND-LNX3345.00
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100.6025	2561-BRDLAND-LNX3345.00
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100.6025	NF
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100.6025	NF
3	17G	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06712	100.5274	BLAIR - GRANITE FALLS 230KV CKT 1
3	17G	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06712	100.5274	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05379	100.4951	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05379	100.4454	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05379	100.4361	BROADLAND - HURON 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05379	100.4359	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05379	100.4359	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100.2125	WATERTN-LNX3345.00 345KV SWITCHED SHUNT

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05596	100.1982	GRIMES - LEHIGH 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05623	100.1923	FRANKLIN - GRE-CEDARMT7115.00 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05623	100.1896	GRE-CEDARMT3345.00 () 345/115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05609	100.1729	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100.17	GEN620323 2-HOOT LAKE 2 GEN
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05602	100.1518	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05602	100.1518	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05502	100.1414	MERRCRT4 230.00 - WISHEK 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05502	100.1295	HESKETT - WISHEK 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100.0801	GEN615021 1-GRE-ER 14G 16.000
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100.066	GEN660003 3-HURON WEST PARK
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100.0648	ULRICH (ULRICH) 115/69/41.6KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100.0637	THIEF RIVER FALLS (TRF) 115/69/13.2KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06012	100.0602	FT THOMPSON - HURON 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06012	100.0602	FT THOMPSON - HURON 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06012	100.0602	FT THOMPSON - HURON 230KV CKT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06012	100.0602	FT THOMPSON - HURON 230KV CKT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05605	100.0543	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05605	100	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05605	100	DENISON - EXIRA 161KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100	COOPER - ST JOE 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100	DONALDSON - DONALDSON PIPE 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100	GEN563252 1-G15091_3 0.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100	GEN563342 1-G15098_3 0.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100	GEN615052 1-CAMBRIDGE GENERATING STATION
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100	GEN652007 1-G14_001IS_3 0.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100	GEN659018 1-G14_003IS_3 0.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100	GEN672369 3-MERIDIAN GENERATOR 3 ST
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100	GEN672370 1-COTEAU CREEK GENERATOR 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100	GEN672371 2-COTEAU CREEK GENERATOR 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100	GEN672372 3-COTEAU CREEK GENERATOR 3
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	100	WINGER (WINGER) 115/69/41.6KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05605	99.9	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05605	99.9	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05605	99.9	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.9	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.9	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.9	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 4
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.9	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 5
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.9	GEN652004 1-G13_001IS_3 0.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.9	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.9	GEN672384 1-CENTENNIAL WINDFARM
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.9	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.9	J290_SUB 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05624	99.8	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.8	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.8	GEN620324 3-HOOT LAKE 3 GEN
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.8	GEN662101 1-WESSINGTON190.5750
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.8	GEN672347 1-CORY COGEN GENERATOR 1 GT1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.8	GEN672348 2-CORY COGEN GENERATOR 2 GT2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.8	GEN672367 1-MERIDIAN GENERATOR 1 GT1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.8	GEN672368 2-MERIDIAN GENERATOR 2 GT2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.8	GEN672393 2-NBECST2G 13.800
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.7	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.7	GEN563302 1-G15096_3 0.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.7	GEN659156 2-LONESMCRK 2G13.800
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.7	GEN659157 3-LONESMCRK 3G13.800
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.7	GEN659158 2-PIONEER G213.800
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.7	GEN659159 3-PIONEER G313.800
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.7	GEN659291 1-FT MP COLLECTOR
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.7	GEN672349 3-CORY COGEN GENERATOR 3 ST
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.7	GEN672350 1-NIPAWIN GENERATOR 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.7	GEN672351 2-NIPAWIN GENERATOR 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.7	GEN672352 3-NIPAWIN GENERATOR 3
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.7	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.7	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.7	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05585	99.7	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05430	99.7	ABERDEEN JCT - ELLENDALE 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.6	ALMA 161 161/24.0KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.6	GEN563312 1-G15097_3 0.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.6	GEN620115 1-HRDLKGEN 0.6000
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.6	GEN659031 1-G12_014IS_4 0.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.6	GEN659289 1-DAYCNTYWND W0.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.6	GEN672339 16-QE 16G 13.800
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.6	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05585	99.6	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05585	99.6	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.5	BAGLEY - CLEARBROOK 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.5	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.5	GEN579459 1-G16-075-GEN10.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.5	GEN600006 1-AS KING
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.5	GEN652410 3-FT PECK
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.5	GEN657964 1-ASH2GEN9 0.5750
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.5	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05430	99.5	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05636	99.4	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.4	GEN562714 1-G15_023_4 0.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.4	GEN562715 1-G15_023_5 0.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.4	GEN652414 4-FT PECK
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.4	GEN652415 5-FT PECK
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.4	GEN652906 1-G09_006IS_3 0.6900
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.4	GEN659273 2-GROTON SYNC COND
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.4	GEN659294 1-WILTONCOL9
3	17G	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06563	99.3	BASE CASE
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.3	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.3	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.3	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.3	GEN659162 4-RED WLCK
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.3	GEN659163 5-BLACK WDCK
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.3	GEN659192 6-LYNN
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.3	GEN659290 1-EDGECOL
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.3	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05379	99.3	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05720	99.2	DRAYTON - LETELLIER 230KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.2	GEN652542 1-BIG BEND
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.2	GEN652543 3-BIG BEND
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.2	GEN652907 1-G09_007IS_3 0.6900
3	17G	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.06848	99.1	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05624	99.1	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05624	99.1	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99.1	GEN600005 1-MONTICELLO
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05631	99	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
3	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.05604	99	GEN660001 2-ABERDEEN SIEBRECHT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05691	116.6297	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05691	116.6297	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05541	113.3259	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05541	113.3259	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05541	112.5391	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05541	112.5391	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05854	111.6811	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	111.573	BASE CASE
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05854	111.4452	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05854	110.7154	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05854	110.6246	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05535	110.1906	HANKINSON - WAHPETON 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06669	109.7246	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05562	109.5355	LETCHER - SIOUX FALLS 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05915	109.3434	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06669	108.8	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	108.5123	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	108.5	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05696	108.3517	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05696	108.3517	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05696	108.1616	FT RANDAL - LAKE PLATT 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05565	108.0213	HANLON - SIOUX FALLS 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06669	107.9633	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15366	107.899	BASE CASE
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05523	106.9225	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05575	106.696	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05663	106.5039	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	106.3137	J460 345.00 - J460-TAP 345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	106.3137	J460 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05799	106.2337	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05997	105.9913	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
3	17G	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06848	105.9697	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05997	105.9365	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05997	105.9332	HAZEL CREEK - LYON COUNTY 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05601	105.8741	HARMONY - ST FRANCIS 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	105.8471	COYOTE 345/24.0KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	105.618	GEN587593 1-J460-GEN1 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05573	105.5198	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05573	105.5198	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05501	105.4502	FT RANDAL - UTICA JCT 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05730	105.3341	BROOKINGS - WATERTOWN 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05730	105.3341	BROOKINGS - WATERTOWN 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05564	105.1883	GRAND ISLAND - MCCOOL 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05645	105.1696	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05666	105.1649	FARGO - JAMES TOWN 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05664	105.0588	FARGO - JAMES TOWN 230KV CKT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05601	105.0022	HARMONY - VALENTINE 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06669	104.996	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	104.9694	GEN635024 4-WALTER SCOTT UNIT 4
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06669	104.9615	2810X2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	104.934	GEN635214 4-NEAL UNIT 4
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05645	104.9114	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05652	104.8084	AUDUBON - SHEYNNE 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05704	104.7566	ARLINGTON - WATERTOWN 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05567	104.5426	MCCOOL - MOORE 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	104.5272	YANKEE 115/34.5KV TRANSFORMER CKT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05612	104.5236	BURR - CANBY 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05541	104.499	SIDNEY - STEGALL 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05574	104.474	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	104.4677	YANKEE 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05646	104.4609	ELM CREEK - MONTICELLO 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05685	104.4531	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05685	104.4531	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05601	104.451	AINSWORTH - VALENTINE 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	104.4021	GEN635023 3-WALTER SCOTT UNIT 3
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	104.3705	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05716	104.2179	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05716	104.1884	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05716	104.1775	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	104.1744	BROOKING COUNTY - J432 345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	104.1744	J432 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	104.1297	SHEYENNE SVC - SHEYNNE 115KV CKT Z
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	104.1158	GEN635213 3-NEAL UNIT 3
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05655	104.1135	AUDUBON - HUBBARD 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05624	104.0898	BALTA - RAMSEY 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05614	104.0839	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05631	104.0664	CANBY - GRANITE FALLS 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05631	104.0664	CANBY - GRANITE FALLS 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	104.0607	GEN659354 1-DEERCREK STG18.000
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05624	104.0587	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	104.0583	GEN587583 1-J432-GEN1 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	104.0478	GEN659353 1-DEERCREK CTG18.000
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05901	104.0472	BISON - HETINGER 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05663	104.023	KARLSTAD - WINGER 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05660	104.0107	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05660	104.0107	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05743	103.9989	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05665	103.995	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05574	103.977	RASMUSN - SIOUX CITY 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05584	103.9756	G15088_T 345.00 - MOORE 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.9551	GEN640009 1-COOPER NUCLEAR STATION
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05704	103.9528	ARLINGTON - BROOKINGS 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.9525	GEN344225 1-1CAL G1 25.000
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05704	103.9502	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05704	103.9502	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05704	103.9502	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05612	103.9117	AS KING - EAU CLAIRE 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05675	103.9052	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05901	103.898	BISON - MAURINE 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05603	103.8941	CENTER - COYOTE 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.8758	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05639	103.8301	PRAIRIE - WINGER 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06669	103.8046	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05645	103.7621	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05625	103.7491	MENNO JCT - TRIPP JCT 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.7416	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05611	103.732	MN VALLEY TAP - PANTHER 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05564	103.7255	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05564	103.7255	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05596	103.7197	FT RANDAL - SPENCER 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.7145	GEN336821 1-GRAND GULF UNIT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05596	103.6826	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05596	103.6826	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.6681	ANSON - SPLIT ROCK 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.6678	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05629	103.6299	JAMES TOWN - PICKERT 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05635	103.6209	JAMES TOWN - WEBER 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.6194	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05635	103.6002	BISMARK - WEBER 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05596	103.5735	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05685	103.5479	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05685	103.5479	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05515	103.5348	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.5251	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05675	103.4782	P13:230-345:NPPD:STEGALL3:KV3A
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05675	103.4782	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.4508	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.4466	WATERTOWN 230KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05625	103.4447	MENNO JCT - UTICA 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05629	103.4445	PRAIRIE - RAMSEY 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.4439	WATERTOWN 230KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05564	103.4398	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05564	103.4398	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05628	103.3677	GAVINS POINT - YANKON JCT 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05628	103.3677	GAVINS POINT - YANKON JCT 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05588	103.3672	GRACEVT7 - ORTONVILLE 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05600	103.3668	BIG STONE - HIGHWAY 12 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05625	103.3527	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05635	103.3216	BISMARK - JAMES TOWN 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.2558	ANSON - SPLIT ROCK 115KV CKT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.2543	ANSON 115/17.5KV TRANSFORMER CKT 4
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.2436	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.2434	GEN336153 1-WATERFORD UNIT#3
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05584	103.2434	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.2418	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.2386	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05610	103.2049	ADAMS - MITCHLCO3 345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.1883	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.1657	BURR - J493 115.00 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.1657	J493 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.1577	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.1577	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05614	103.1503	ADAMS - PLEASANT VALLEY 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05645	103.1394	ELM CREEK - PARKERS LAKE 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05562	103.1124	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05562	103.1121	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05562	103.1119	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05579	103.1053	AXTELL - SWEETWATER 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05608	103.1021	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05735	103.0829	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05641	103.0779	BALTA - MCHENRY 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05590	103.0765	GRANT - MITCHELL 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05590	103.0765	GRANT - MITCHELL 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05735	103.0727	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05735	103.0727	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05629	103.0619	GRAND FORKS - PICKERT 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.0561	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.056	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	103.048	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05600	103.0339	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06058	103.03	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06058	103.03	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05588	103.0289	CLEARWATER - ONEILL 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05588	102.9943	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.9908	GEN335831 1-RIVERBEND UNIT#1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05257	102.972	BLAIR - WATERTOWN 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05257	102.972	BLAIR - WATERTOWN 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.9633	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	17G	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06848	102.9525	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
3	17G	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06848	102.9517	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.9339	GEN300003 1-THOMAS HILL UNIT 3
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05562	102.9329	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05588	102.9228	CLEARWATER - NELIGH 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05601	102.907	P12:230:UMZW:# 166 #: PL IN SD. TAP
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05601	102.907	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.901	GEN645012 2-NEBRASKA CITY 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05587	102.8985	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05550	102.8723	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05550	102.8723	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.8627	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05550	102.8623	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.86	GEN542962 2-IATAN UNIT #2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.8529	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05543	102.8336	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05543	102.8336	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05616	102.8303	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05616	102.8303	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05611	102.8288	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05616	102.8174	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.8136	GEN600045 4-ANSON
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05759	102.7997	MONTICELLO - WAITE PARK 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05600	102.7991	OAHE - PHILIP TAP 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.798	GEN636641 1-LOUISA UNIT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05588	102.7952	GRACEVT7 - MORRIS 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05588	102.7952	GRACEVT7 - MORRIS 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05616	102.7806	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05616	102.7806	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05590	102.7592	CENTER - SQUARE BUTTE 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05607	102.7587	MORANVILLE - ROSEAU 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.7442	MCLEOD - PANTHER 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05607	102.7431	RICHER - ROSEAU 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05467	102.7395	BIG STONE - BROWNS VALLEY 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05617	102.7239	BYRON - NORTH ROCHESTER 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.6944	GEN338146 1-INDEPENDENCE UNIT #2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.6907	GEN338143 1-INDEPENDENCE UNIT #1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05601	102.6859	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05601	102.6859	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05601	102.6859	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05601	102.6859	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.6685	MEC345 - WILMARTH 345KV CKT 1
3	17G	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06848	102.6681	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.6675	MEC345 345/19.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05601	102.6658	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05601	102.6658	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05601	102.6658	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05601	102.6658	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05645	102.6603	MT VERN - STORLA 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.6549	GEN337652 1-WHITE BLUFF UNIT #1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.6465	GRANITE FALLS 230KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05583	102.6458	P13:115-230:TSGT:SIDNEY-KV1A
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.6437	GRANITE FALLS 230KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.6418	GEN337653 1-WHITE BLUFF UNIT #2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05630	102.6411	AS KING - CHISAGO COUNTY 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.635	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.6326	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.6243	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.6176	MEC115 115/15.0KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.6064	GEN600069 W-YANKEE 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.6	GEN344895 2-1LAB G2 20.000
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.5951	MEC115 - WILMARTH 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.5934	GEN600078 W-YANKEE 3
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.5844	GEN600077 W-YANKEE 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.5844	GEN600099 W-YANKEE 4
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05583	102.5805	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05583	102.5804	P13:230-345:NPPD:SIDNEY 3:KV2A
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05583	102.5804	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.5708	GEN587153 1-G16-021-GEN10.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05616	102.5631	BYRON - PLEASANT VALLEY 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.5628	MINNESOTA VALLEY - MINVALY CAP7115.00 115KV CKT Z
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05659	102.5583	BALTA - RUGBY 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05591	102.5557	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05631	102.5524	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05631	102.5524	P12:230:UMZW:# 158 #: MH IN ND.
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.5511	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.5511	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.549	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05728	102.5418	HURON - WOONSOCKET 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.5147	GEN344897 4-1LAB G4 20.000
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.5117	GEN344894 1-1LAB G1 20.000
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.5115	GEN344896 3-1LAB G3 20.000
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05634	102.5054	HARVEY - UNDERWOOD 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05634	102.4958	COAL CREEK - UNDERWOOD 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.4932	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.4902	GEN542957 1-IATAN UNIT #1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05616	102.4863	EAGLE - PHILIP 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05590	102.4853	CHERRY CREEK - GRANT 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05597	102.4748	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.4724	GEN336252 1-NINEMILE POINT UNIT#5
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05607	102.4604	LUND - MORANVILLE 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05694	102.4597	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.4537	GEN345670 1-1RUSH G1 18.000
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05614	102.4528	DICKINSON - PARKERS LAKE 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05592	102.4528	GRANITE FALLS - WILLMAR 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05592	102.4528	GRANITE FALLS - WILLMAR 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05607	102.4478	LUND - RUNNING 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.4459	GEN542951 5-HAWTHORN UNIT #5
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05562	102.4453	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05631	102.4423	MOOREHEAD - MORRIS 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05634	102.4399	BALTA - HARVEY 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.4388	GEN345671 2-1RUSH G2 18.000
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05613	102.4383	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.4353	GEN501801 1-DOLET HILLS UNIT1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05615	102.4277	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05625	102.4232	COAL CREEK - MCHENRY 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.4149	GEN300007 1-NEW MADRID UNIT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05624	102.4138	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.4051	GEN300006 1-NEW MADRID UNIT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05602	102.4047	FT RANDAL - WHITE SWAN 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05593	102.395	KELLY - SHELL CREEK 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05694	102.3937	GROTON - REDFIELD 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05584	102.391	G15088_T 345.00 - PAULINE 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05611	102.386	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05593	102.3829	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05593	102.3829	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05616	102.3802	EAGLE - MARTIN 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05945	102.3743	P12:230:UMZB:# 171 #: WB IN ND.
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05945	102.3743	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05602	102.3725	TYNDALL - WHITE SWAN 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05545	102.3715	UTICA JCT - VFODNES 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05615	102.3688	FALCONER - GRAND FORKS 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05615	102.3688	FALCONER - GRAND FORKS 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.3674	GEN542955 1-LACYGNE UNIT #1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05743	102.3593	FIELD NORTH - LKFLDXL3 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05743	102.3515	FIELD SOUTH - WILMARTH 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05945	102.3512	BISMARK - WASHBURN 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05612	102.3476	CHADRON - WAYSIDE 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05612	102.3476	P13:115-230:NPPD:WAYSIDE4:T1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.345	GEN501813 1-RODEMACHER UNIT 3
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05650	102.3434	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.3418	GEN336831 1-BAXTER WILSON SES
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05743	102.3334	FIELD NORTH - FIELD SOUTH 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.3329	GEN336251 1-NINEMILE POINT UNIT#4
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.3319	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05945	102.3309	LELAND OLDS - WASHBURN 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05612	102.3281	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05605	102.3212	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05605	102.3212	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.3172	GEN337041 1-GERALD ANDRUS
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05605	102.3168	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05605	102.3168	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.3147	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05624	102.3033	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05630	102.3	AURORA - BROOKINGS 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05630	102.3	AURORA - BROOKINGS 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05610	102.291	BRISTOL - GROTON 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05647	102.2899	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05647	102.2899	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.2827	GRANITE FALLS 115KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.2804	GRANITE FALLS 115KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.2743	FARGO 115KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.2729	AS KING 345/20.0KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05590	102.2722	PAYNSVILLE - WILLMAR 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05624	102.2719	FRANKLIN - REDWOOD FALLS 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05611	102.2688	GRAND FORKS (GK KV1A) 230/115/12.47KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.2643	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.2562	GEN335206 1-NELSON UNIT 6
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.2562	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.2556	FARGO 115KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.2491	GEN542956 2-LACYGNE UNIT #2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05608	102.2329	ARROWHEAD - FORBES 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.2272	AINSWORTH - AINSWORTH 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05634	102.2134	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05634	102.2134	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05670	102.213	HURON - REDFIELD 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.213	GEN563222 1-G15088_3 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05603	102.2107	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05603	102.2107	P12:115:UMZB:# 119 #: IN NE.
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05610	102.1993	BRISTOL - SUMMIT 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05621	102.1943	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.1855	H081 345.00 - H081-TAP 345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.1855	H081 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.1731	GEN587663 1-H081-GEN1 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05467	102.1729	BROWNS VALLEY - HANKINSON 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05611	102.1695	CHADRON - DUNLAP 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.1688	GEN501812 1-RODEMACHER UNIT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05586	102.1671	OGALLALA - SIDNEY 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05712	102.1668	HELENA - SHEAS LK3 345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.1578	GEN600020 2-ANGUS ANSON1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.1475	GEN334440 1-SABINE UNIT 4
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.147	GEN338388 1-1PLUM PT U1 23.000
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05675	102.1456	GRANITE FALLS - S3 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05675	102.1456	GRANITE FALLS - S3 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05599	102.1456	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05595	102.1389	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.137	GEN509403 1-PIRKEY GENERATION
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.1311	GEN600021 3-ANGUS ANSON2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.1273	GEN336191 1-LITTLE GYPSY UNIT#3
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05590	102.1255	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.1231	PRAIRIE - PRAIRIE SVC 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05498	102.1144	GROTON - ORDWAY 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.1072	GEN509416 1-TURK GENERATION
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.1046	JAMESTOWN (345/115JAM2) 345/115/41.6KV TRANSFORMER CKT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05602	102.1044	AINSWORTH - STUART 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05728	102.1043	STORLA - WOONSOCKET 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05728	102.1035	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.1034	SHERBURNE CO 345/26.0KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.0989	GEN336801 1-BAXTER WILSON UNIT #1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.0887	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05583	102.0878	MINGO - SETAB 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05583	102.0878	MINGO - SETAB 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.0824	GEN509394 1-FLINT CREEK
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05611	102.0822	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05650	102.082	MARSHALL ERIE ROAD - S3 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05650	102.082	MARSHALL ERIE ROAD - S3 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05623	102.0757	BADOURA - HUBBARD 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.0697	GEN300002 1-THOMAS HILL UNIT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05599	102.0677	P12:115:TSGT:COVALT7-SNAKECK7
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.0649	GEN590011 2-ERCOT EQUIVALENCE
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.0616	GEN335614 1-WILLOW GLENN UNIT#4
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05562	102.0602	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.06	GEN336464 1-MICHOUD UNIT #3
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05609	102.0571	MARTIN - SHANNON 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.0549	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05649	102.0467	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.0457	FARGO - MOORHEAD BROOKDALE 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.0451	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05630	102.041	AURORA - FLANDRU 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05630	102.041	AURORA - FLANDRU 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05552	102.0408	SIOUX FALLS - VFODNES 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.0365	GEN590010 1-ERCOT EQUIVALENCE
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05645	102.034	ARMOUR - MT VERN 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.0336	LANGDON - LANGWIN7 115.00 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05864	102.0308	GLENHAM - WHITLOK 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05478	102.0297	EDGELEY - JAMES TOWN 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.0266	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05671	102.0234	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.0223	GEN513601 1-GRECCTG_1 20.000
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05591	102.0213	AXTELL - PAULINE 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	102.0175	JAMESTOWN (345/115JAM1) 345/115/41.6KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05602	102.0107	TYNDALL - YANKON JCT 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05622	102.0088	MALLARD - RUGBY 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05622	102.0088	MALLARD - RUGBY 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05595	102.0086	GAVINS POINT - HARTINGTON 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05379	102.0085	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05379	102.0085	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05599	102.0045	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.9998	GEN514806 1-SOONER UNIT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.9962	GEN514805 1-SOONER UNIT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.9937	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05607	101.9877	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05615	101.9863	HENSEL - LANGDON 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.9852	GEN509406 1-WELSH #3
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.9851	GEN509404 1-WELSH #1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05601	101.9822	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05601	101.9822	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05864	101.9788	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05864	101.9788	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05678	101.9749	CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05744	101.9708	BELFIELD - CHARLIE CREEK 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05717	101.962	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.9582	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.9551	GEN600047 1-MECCT1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05864	101.9546	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.9538	GEN600046 1-MECST
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.9406	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05864	101.9392	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.936	BARNES 4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.928	RGBYWND4 230.00 - RUGBY 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.9235	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.9235	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05607	101.9228	COON CREEK - SHERBURNE CO 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05864	101.9135	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.9115	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05872	101.904	GLENHAM - L3 HAWDON 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05591	101.8985	SIOUX FALLS (SF KV3A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05591	101.8985	SIOUX FALLS (SF KV5A) 230/115/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05618	101.8859	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05618	101.8859	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.8806	GEN587643 1-J525-GEN1 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05864	101.8509	OAHE - SULLEY BUTTE 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05379	101.5322	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05379	101.4781	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05379	101.4682	BROADLAND - HURON 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05379	101.468	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05379	101.468	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.43	2516-WATERTNCAP 4230.00
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.43	2543-FARGO
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.43	2560-BRDLAND-LNX3345.00
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.43	2561-BRDLAND-LNX3345.00
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.43	NF
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.43	NF
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.43	NF
3	17G	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06712	101.3948	BLAIR - GRANITE FALLS 230KV CKT 1
3	17G	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06712	101.3948	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05596	101.0428	GRIMES - LEHIGH 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05623	101.0338	FRANKLIN - GRE-CEDARMT7115.00 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05623	101.0312	GRE-CEDARMT3345.00 () 345/115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	101.0157	GEN620323 2-HOOT LAKE 2 GEN
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05609	101.004	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05602	100.9924	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05602	100.9924	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05502	100.9672	MERRCRT4 230.00 - WISHEK 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05502	100.9564	HESKETT - WISHEK 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.9348	GEN660003 3-HURON WEST PARK
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.9196	GEN615021 1-GRE-ER 14G 16.000
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06012	100.9182	FT THOMPSON - HURON 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06012	100.9182	FT THOMPSON - HURON 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06012	100.9182	FT THOMPSON - HURON 230KV CKT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06012	100.9182	FT THOMPSON - HURON 230KV CKT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.8987	GEN657745 1-MPC02100GEN90.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.8877	THIEF RIVER FALLS (TRF) 115/69/13.2KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.8847	ULRICH (ULRICH) 115/69/41.6KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05605	100.8764	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.8723	COOPER - ST JOE 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.8676	GEN615052 1-CAMBRIDGE GENERATING STATION
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.861	GEN659018 1-G14_003IS_3 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05605	100.8598	DENISON - EXIRA 161KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.8547	GEN652007 1-G14_001IS_3 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.8483	WINGER (WINGER) 115/69/41.6KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.8479	GEN672370 1-COTEAU CREEK GENERATOR 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.8479	GEN672371 2-COTEAU CREEK GENERATOR 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.8479	GEN672372 3-COTEAU CREEK GENERATOR 3
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.8068	DONALDSON - DONALDSON PIPE 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.7978	GEN563342 1-G15098_3 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.7955	GEN672369 3-MERIDIAN GENERATOR 3 ST
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.7898	GEN652004 1-G13_001IS_3 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05605	100.7782	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.769	GEN563252 1-G15091_3 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.7446	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.743	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.743	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.7363	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05605	100.7212	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05605	100.7025	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.699	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 4
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.699	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 5
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05605	100.6874	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.6862	GEN672384 1-CENTENNIAL WINDFARM
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.6765	J290_SUB 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05624	100.6719	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.6571	GEN672393 2-NBECST2G 13.800
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.656	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.6543	GEN620324 3-HOOT LAKE 3 GEN
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.6337	GEN672347 1-CORY COGEN GENERATOR 1 GT1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.6337	GEN672348 2-CORY COGEN GENERATOR 2 GT2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.6257	GEN662101 1-WESSINGTON190.5750

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05585	100.5724	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.5604	GEN672367 1-MERIDIAN GENERATOR 1 GT1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.5604	GEN672368 2-MERIDIAN GENERATOR 2 GT2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.545	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.5427	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05430	100.536	ABERDEEN JCT - ELLENDALE 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.5359	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.5355	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.5303	GEN672350 1-NIPAWIN GENERATOR 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.5303	GEN672351 2-NIPAWIN GENERATOR 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.5303	GEN672352 3-NIPAWIN GENERATOR 3
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.5183	GEN672349 3-CORY COGEN GENERATOR 3 ST
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.5147	GEN659291 1-FT MP COLLECTOR
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.5063	GEN659158 2-PIONEER G213.800
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.5063	GEN659159 3-PIONEER G313.800
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.502	GEN659156 2-LONESMCRK 2G13.800
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.502	GEN659157 3-LONESMCRK 3G13.800
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05585	100.4656	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05585	100.4656	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.4617	GEN563302 1-G15096_3 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.4457	GEN659289 1-DAYCNTYWND W0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.4424	GEN563312 1-G15097_3 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.4298	ALMA 161 161/24.0KV TRANSFORMER CKT 1
3	17G	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06563	100.4002	BASE CASE
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.3996	GEN672339 16-QE 16G 13.800
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.3996	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.3884	GEN659031 1-G12_014IS_4 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.3688	GEN600006 1-AS KING
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.359	BAGLEY - CLEARBROOK 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.3547	GEN620115 1-HRDLKGEN 0.6000
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05430	100.3328	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.3325	GEN657964 1-ASH2GEN9 0.5750
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.329	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.3176	GEN652410 3-FT PECK
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.3089	GEN579459 1-G16-075-GEN10.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.3078	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05379	100.286	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.2639	GEN562714 1-G15_023_4 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.2639	GEN562715 1-G15_023_5 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05636	100.2365	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.1847	GEN652414 4-FT PECK
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.1847	GEN652415 5-FT PECK
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.1613	GEN659273 2-GROTON SYNC COND
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.1613	GEN659294 1-WILTONCOL9
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.1561	GEN652906 1-G09_006IS_3 0.6900
3	17G	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06848	100.1291	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.1145	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.1034	GEN659290 1-EDGECOL
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.0827	GEN659162 4-RED WLCK
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.0827	GEN659163 5-BLACK WDCK
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.078	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100.0769	GEN659192 6-LYNN
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05720	100	DRAYTON - LETELLIER 230KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100	GEN600005 1-MONTICELLO
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100	GEN652542 1-BIG BEND
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100	GEN652543 3-BIG BEND
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	100	GEN652907 1-G09_007IS_3 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05624	99.9	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05624	99.9	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
3	17G	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06810	99.8	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05631	99.8	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05631	99.8	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.8	GEN600000 1-SHERBURNECNTY G1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.8	GEN660001 2-ABERDEEN SIEBRECHT
3	17G	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06810	99.7	CHISAGO COUNTY - FORBES 500KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05734	99.7	BROOKINGS - WHITE 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05734	99.7	BROOKINGS - WHITE 115KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05685	99.7	NOBLES - SPLIT ROCK 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.7	GEN652559 1-OAHE
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.7	GEN659270 1-WEST SW
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.7	GEN659296 2-SDPRAIRWND1W0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.6	GEN562872 1-G15046_3 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.6	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.6	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	17G	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06848	99.5	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.5	GEN652345 W-G07_023IS_2 0.6900
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.5	GEN672392 1-NBECGT1G 18.000
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.5	GEN910006 1-G12_012IS_3 0.6900
3	17G	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06848	99.4	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05734	99.4	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.4	GEN652556 2-OAHE
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.4	GEN652557 4-OAHE
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.4	GEN652558 6-OAHE
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05774	99.3	HELENA - SCOTTCO3 345.00 345KV CKT 1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.3	GEN615015 1-GRE-SPRITWDG13.200
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.2	GEN 11104 1-J262_GEN 0.6000
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.2	GEN 11108 1-J263_GEN 0.6000
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.2	GEN600001 2-SHERBURNE CNTY G2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.2	GEN600002 3-SHERBURNE CNTY G3
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99.1	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	17G	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06848	99	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17G	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.06848	99	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05717	99	HURON - WATERTOWN 230KV CKT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05717	99	HURON - WATERTOWN 230KV CKT 2
3	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.05604	99	GEN659118 1-LARAMIE RIVER UNIT1
3	20SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04330	114.9057	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	20SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04330	114.9057	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04330	114.846	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04330	114.5154	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04330	114.1508	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	20SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04330	114.1508	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04330	114.0912	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04352	113.7653	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	25SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04352	113.7653	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	25SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04352	113.6977	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04352	113.4382	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04330	113.3398	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	25SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04352	113.0648	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	25SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04352	113.0648	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	25SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04352	113.0133	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04352	112.3022	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17G	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.05597	106.4019	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	17G	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.05597	106.4019	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17G	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.05597	106.3771	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17G	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.05597	106.3611	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	17G	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.05597	104.9629	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	17G	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.05597	104.9629	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17G	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.05597	104.9258	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	17G	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.05597	104.39	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20WP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04013	100.4916	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	16WP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.05308	100.4361	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	16WP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.05308	100.0796	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	16WP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.05308	100.0796	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	16WP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.05308	100.0605	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20WP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04013	100	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	20WP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04013	100	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20WP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04013	100	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	16WP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.05308	99.1	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	16WP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.05308	99.1	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	16WP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.05308	99.1	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	16WP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.05308	99.1	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20WP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.04013	99	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	25SP	G16_005	FROM->TO	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	726.6	726.6	0.20228	107.5079	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	17G	G16_005	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.04090	106.9187	BASE CASE
0	17SP	G16_005	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.04083	105.5858	BASE CASE
0	20SP	G16_005	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.03981	103.0698	BASE CASE
0	16WP	G16_005	-	Non-Converged Contingency	726.6	726.6	0.15810	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	16WP	G16_005	-	Non-Converged Contingency	1793.0	1793.0	0.15412	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_005	-	Non-Converged Contingency	1793.0	1793.0	0.15412	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	17G	G16_005	-	Non-Converged Contingency	726.6	726.6	0.15924	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17G	G16_005	-	Non-Converged Contingency	1505.0	1793.0	0.14882	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	17G	G16_005	-	Non-Converged Contingency	1505.0	1793.0	0.14882	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	17G	G16_005	-	Non-Converged Contingency	956.09	1051.7	0.08126	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	17SP	G16_005	-	Non-Converged Contingency	726.6	726.6	0.15787	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_005	-	Non-Converged Contingency	1505.0	1793.0	0.15312	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	17SP	G16_005	-	Non-Converged Contingency	1505.0	1793.0	0.15312	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_005	-	Non-Converged Contingency	726.6	726.6	0.16661	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_005	-	Non-Converged Contingency	726.6	726.6	0.16661	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_005	-	Non-Converged Contingency	1505.0	1793.0	0.14383	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	G16_005	-	Non-Converged Contingency	1505.0	1793.0	0.14383	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20SP	G16_005	-	Non-Converged Contingency	726.6	726.6	0.16162	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20SP	G16_005	-	Non-Converged Contingency	1505.0	1793.0	0.15037	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20SP	G16_005	-	Non-Converged Contingency	1505.0	1793.0	0.15037	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20SP	G16_005	-	Non-Converged Contingency	956.09	1051.7	0.08302	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_005	-	Non-Converged Contingency	726.6	726.6	0.16249	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20WP	G16_005	-	Non-Converged Contingency	1793.0	1793.0	0.15078	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20WP	G16_005	-	Non-Converged Contingency	1793.0	1793.0	0.15078	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_005	-	Non-Converged Contingency	1505.0	1793.0	0.15138	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_005	-	Non-Converged Contingency	956.09	1051.7	0.08076	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_005	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.03608	102.9656	BASE CASE
2	17SP	G16_005	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.03620	101.3121	BASE CASE
0	16WP	G16_007	FROM->TO	BIG STONE - BLAIR 230KV CKT 1	478.0	526.0	0.07422	119.9446	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	16WP	G16_007	FROM->TO	BIG STONE - BLAIR 230KV CKT 1	478.0	526.0	0.07422	119.2176	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	17SP	G16_007	FROM->TO	BIG STONE - BLAIR 230KV CKT 1	478.0	526.0	0.07575	112.1238	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	16WP	G16_007	FROM->TO	BIG STONE - BLAIR 230KV CKT 1	478.0	526.0	0.07422	106.3756	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	BIG STONE - BLAIR 230KV CKT 1	478.0	526.0	0.04580	100.4297	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	25SP	G16_007	FROM->TO	BIG STONE - BLAIR 230KV CKT 1	478.0	526.0	0.04580	100.4279	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	BIG STONE - BLAIR 230KV CKT 1	478.0	526.0	0.04580	100.3919	BASE CASE
0	20SP	G16_007	FROM->TO	BIG STONE - BLAIR 230KV CKT 1	478.0	526.0	0.04757	99.5	CANBY - GRANITE FALLS 115KV CKT 1
0	20SP	G16_007	FROM->TO	BIG STONE - BLAIR 230KV CKT 1	478.0	526.0	0.04577	99.3	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	20SP	G16_007	FROM->TO	BIG STONE - BLAIR 230KV CKT 1	478.0	526.0	0.04577	99.3	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	FARGO - JAMES TOWN 230KV CKT 1	318.0	350.0	0.10312	99.9	FARGO - JAMES TOWN 230KV CKT 2
0	20SP	G16_007	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.12472	117.1047	HANKINSON - WAHPETON 230KV CKT 1
0	25SP	G16_007	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.12473	114.8257	HANKINSON - WAHPETON 230KV CKT 1
0	20SP	G16_007	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.08283	103.2271	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
0	20SP	G16_007	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.13134	102.9841	JAMES TOWN - PICKERT 230KV CKT 1
0	25SP	G16_007	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.08304	102.7227	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
0	17SP	G16_007	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.13231	102.646	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	17SP	G16_007	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.13231	102.646	P12:230:UMZW:# 158 #: MH IN ND.
0	25SP	G16_007	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.11126	102.332	FARGO 115/69KV TRANSFORMER CKT 2
0	17SP	G16_007	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.13217	100.9787	MOOREHEAD - MORRIS 230KV CKT 1
0	20SP	G16_007	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.13134	100.4708	GRAND FORKS - PICKERT 230KV CKT 1
0	17SP	G16_007	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.08034	99.8	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
0	20SP	G16_007	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.11119	99.6	FARGO 115/69KV TRANSFORMER CKT 2
0	20SP	G16_007	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.10952	99.3	PRAIRIE - WINGER 230KV CKT 1
0	20SP	G16_007	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342.0	342.0	0.13146	99	MOOREHEAD - MORRIS 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03775	120.0553	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03777	118.6667	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03601	112.4208	AUDUBON - SHEYNNE 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03614	111.076	AUDUBON - HUBBARD 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03291	111.0346	EDGETOWN TAP - HOOT LAKE 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03604	111.0303	AUDUBON - SHEYNNE 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03292	110.5565	EDGETOWN TAP - HOOT LAKE 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03617	109.2393	AUDUBON - HUBBARD 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	109.1	GEN600005 1-MONTICELLO
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	108.0096	GEN600006 1-AS KING
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	107.7789	GEN600006 1-AS KING
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03254	107.5738	GRANITE FALLS - WILLMAR 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	107.238	GEN600003 1-PRAIRIE ISLAND G1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	107.2352	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	106.9976	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	106.9972	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03291	106.9386	EDGETOWN TAP - PELICAN RAPIDS 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03472	106.4395	BIG STONE - BLAIR 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03420	106.2508	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03253	106.1362	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03292	106.0865	EDGETOWN TAP - PELICAN RAPIDS 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03369	105.2971	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03291	105.2887	FARGO TAP - PELICAN RAPIDS 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03291	105.2847	FARGO TAP - TAMARAC 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03254	105.0677	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	105.0171	BASE CASE
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03389	104.715	KARLSTAD - WINGER 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	104.3292	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03369	104.3208	BRANDN 7 115.00 - ELBOWLK7 115.00 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03292	104.216	FARGO TAP - PELICAN RAPIDS 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03292	104.2117	FARGO TAP - TAMARAC 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03632	104.1955	EFERGUS7 115.00 - HOOT LAKE 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	104.1748	BASE CASE
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03281	104.0748	BLAIR - GRANITE FALLS 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03371	104.0366	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03184	103.7842	ALEXMRES3 345.00 () 345/115/34.5KV TRANSFORMER CKT 9
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03632	103.6034	EFERGUS7 115.00 - GRANTCO7 115.00 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03334	103.5987	GRANTCO7 115.00 - MORRIS 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03195	103.5762	FARGO - SHEYNNE 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	103.5294	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	103.5278	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03258	103.4266	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03369	103.3886	BRANDN 7 115.00 - GRE-LKMINAT7115.00 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	103.318	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03291	103.2822	CORMARAN TAP - TAMARAC 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03933	103.2524	FRONTER4 230.00 - WAHPETON 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03369	103.1347	ALEXANDRIA SWTCH STATION - GRE-LKMINAT7115.00 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	103.124	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03371	103.0265	BRANDN 7 115.00 - ELBOWLK7 115.00 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03256	102.9336	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	102.9283	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03185	102.8966	ALEXMRES3 345.00 () 345/115/34.5KV TRANSFORMER CKT 9
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03291	102.8758	CORMARAN TAP - FRAZEE TAP 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03332	102.8531	GRANTCO7 115.00 - MORRIS 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	102.8273	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	102.8257	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03367	102.8001	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03389	102.7595	KARLSTAD - WINGER 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03634	102.6963	EFERGUS7 115.00 - HOOT LAKE 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03258	102.6915	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03252	102.5307	PAYNSVILLE - WILLMAR 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03189	102.4752	HELENA - SCOTTCO3 345.00 345KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	102.4577	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	102.4577	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03252	102.4558	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03396	102.4364	BADOURA - HUBBARD 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03279	102.318	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03278	102.2407	MN VALLEY TAP - PANTHER 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03267	102.2292	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03933	102.2157	FRONTER4 230.00 - WAHPETON 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03267	102.2099	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03246	102.1787	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03301	102.1712	ALEXANDRIA - GRE-HUDSON 7115.00 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03254	102.1617	GRANITE FALLS - WILLMAR 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	102.1137	GEN587053 1-G16-007-GEN10.6500
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03292	102.1124	CORMARAN TAP - TAMARAC 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03295	102.11	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03861	102.1082	FERGSFL7 115.00 - HOOT LAKE 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	102.0805	CENTER 230/22.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03301	102.0753	DOUGLAS CO - GRE-HUDSON 7115.00 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03295	102.0715	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03634	102.0629	EFERGUS7 115.00 - GRANTCO7 115.00 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03861	102.0364	FERGSFL4 230.00 (FERG230/115) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03371	101.9969	BRANDN 7 115.00 - GRE-LKMINAT7115.00 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	101.9055	GEN587623 1-J493-GEN1 0.6900
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03191	101.8901	HELENA - SCOTTCO3 345.00 345KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03398	101.8646	FRAZEE - NPERHAM 115 115.00 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03398	101.8522	NPERHAM 115 115.00 - PERHAM 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03371	101.7351	ALEXANDRIA SWTCH STATION - GRE-LKMINAT7115.00 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03275	101.7055	MCLEOD - PANTHER 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03292	101.6765	CORMARAN TAP - FRAZEE TAP 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03355	101.5672	MAPLE RIVER - WINGER 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	101.5567	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	101.5305	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03262	101.4736	DOUGLAS CO - LITTLE SAUK TAP 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03254	101.4653	PAYNSVILLE - WILLMAR 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	101.4557	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	101.3974	GEN587053 1-G16-007-GEN10.6500
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03254	101.3738	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	101.3455	GEN587133 1-G16-017-GEN10.6900
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03262	101.3413	LITTLE SAUK TAP - LONG PRAIRIE 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03409	101.3363	BADOURA - RIVERTON 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03369	101.2662	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	101.264	GEN587623 1-J493-GEN1 0.6900
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	101.259	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	101.259	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	101.2266	GEN652173 1-G09_001IS_2 0.6900
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03350	101.1889	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	101.1147	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03281	101.1054	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03256	101.0986	GRANITE FALLS - WILLMAR 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	101.0858	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03280	101.0476	MN VALLEY TAP - PANTHER 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	100.983	RICHER - ROSEAU 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	100.9826	MORANVILLE - ROSEAU 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03303	100.9495	ALEXANDRIA - GRE-HUDSON 7115.00 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	100.9455	SHEYENNE SVC - SHEYNNE 115KV CKT Z
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03398	100.9278	BADOURA - HUBBARD 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03248	100.8585	NOBLES - SPLIT ROCK 345KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03303	100.8495	DOUGLAS CO - GRE-HUDSON 7115.00 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	100.7419	CENTER 230/22.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03267	100.7196	ALEXANDRIA - ALEXANDRIA SWTCH STATION 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	100.7124	EDGETOWN - EDGETOWN TAP 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03275	100.6992	WAITE PARK () 345/115/34.5KV TRANSFORMER CKT 9
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	100.5931	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03297	100.5862	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03000	100.5325	MAPLE RIVER - SHEYNNE 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03355	100.5244	MAPLE RIVER - WINGER 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03276	100.482	MCLEOD - PANTHER 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03289	100.4698	FRAZEE - FRAZEE TAP 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03297	100.4421	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	100.3423	SHEYENNE SVC - SHEYNNE 115KV CKT Z
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03400	100.2845	FRAZEE - NPERHAM 115 115.00 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03400	100.2718	NPERHAM 115 115.00 - PERHAM 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	100.2635	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	100.1755	GEN659103 1-ANTELOPE VALLEY UNIT1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	100.1755	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03264	100.1659	DOUGLAS CO - LITTLE SAUK TAP 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	100.1	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	100.1	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	100.0497	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	100	HOOT LAKE 115/41.6KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03264	100	LITTLE SAUK TAP - LONG PRAIRIE 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03411	99.8	BADOURA - RIVERTON 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	99.6	GEN 11123 1-G736-GEN1 0.6900
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	99.6	GEN 11133 1-J442-GEN1 0.6900
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	99.5	EDGETOWN - EDGETOWN TAP 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03268	99.5	ALEXANDRIA - ALEXANDRIA SWTCH STATION 115KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03003	99.5	MAPLE RIVER - SHEYNNE 230KV CKT 1
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03277	99.4	WAITE PARK () 345/115/34.5KV TRANSFORMER CKT 9
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	99.4	GEN659125 1-COVEY
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	99.3	GEN659125 1-COVEY
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03933	99.2	FRONTER4 230.00 - MAPLE RIVER 230KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	99.2	BASE CASE
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03290	99.2	FRAZEE - FRAZEE TAP 115KV CKT 1
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	99.1	GEN 11123 1-G736-GEN1 0.6900
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	99.1	GEN 11133 1-J442-GEN1 0.6900
0	20SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03269	99	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_007	FROM->TO	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1	273.0	273.0	0.03271	99	GEN587293 1-G16-044-GEN10.6900
0	20SP	G16_007	TO->FROM	FERGSFL4 230.00 - WAHPETON 230KV CKT 1	319.0	351.0	0.05219	105.7516	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	FERGSFL4 230.00 - WAHPETON 230KV CKT 1	319.0	351.0	0.05222	105.6051	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	FERGSFL4 230.00 - WAHPETON 230KV CKT 1	319.0	351.0	0.04507	99.4	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_007	TO->FROM	FERGSFL4 230.00 - WAHPETON 230KV CKT 1	319.0	351.0	0.05031	99.3	AUDUBON - SHEYNNE 230KV CKT 1
0	25SP	G16_007	TO->FROM	FERGSFL4 230.00 - WAHPETON 230KV CKT 1	319.0	351.0	0.05033	99	AUDUBON - SHEYNNE 230KV CKT 1
0	20WP	G16_007	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120.0	121.0	0.04307	113.4785	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	16WP	G16_007	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120.0	121.0	0.05393	100.2122	G09_001IST 345.00 - GROTON 345KV CKT 1
0	17SP	G16_007	FROM->TO	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	240.0	259.0	0.03587	153.0731	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_007	FROM->TO	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	240.0	259.0	0.03587	153.0462	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
0	16WP	G16_007	FROM->TO	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	240.0	259.0	0.03804	119.9649	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
0	16WP	G16_007	FROM->TO	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	240.0	259.0	0.03804	119.9649	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_007	FROM->TO	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	240.0	259.0	0.03421	115.9146	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03775	115.3781	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	25SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03777	113.8547	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03601	107.7942	AUDUBON - SHEYNNE 230KV CKT 1
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03614	106.4914	AUDUBON - HUBBARD 230KV CKT 1
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03291	106.4721	EDGETOWN TAP - HOOT LAKE 115KV CKT 1
0	25SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03604	106.2801	AUDUBON - SHEYNNE 230KV CKT 1
0	25SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03292	105.868	EDGETOWN TAP - HOOT LAKE 115KV CKT 1
0	25SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03617	104.5306	AUDUBON - HUBBARD 230KV CKT 1
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03269	104.4	GEN600005 1-MONTICELLO
0	25SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03271	103.1901	GEN600006 1-AS KING
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03269	103.0919	GEN600006 1-AS KING
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03254	102.8912	GRANITE FALLS - WILLMAR 230KV CKT 1
0	25SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03271	102.4211	GEN600003 1-PRAIRIE ISLAND G1
0	25SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03271	102.4182	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03291	102.3825	EDGETOWN TAP - PELICAN RAPIDS 115KV CKT 1
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03269	102.3153	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03269	102.3146	GEN600004 2-PRAIRIE ISLAND G2
0	25SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03472	101.6537	BIG STONE - BLAIR 230KV CKT 1
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03420	101.5815	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03253	101.4748	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	25SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03292	101.4138	EDGETOWN TAP - PELICAN RAPIDS 115KV CKT 1
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03369	100.7546	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03291	100.7285	FARGO TAP - PELICAN RAPIDS 115KV CKT 1
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03291	100.7243	FARGO TAP - TAMARAC 115KV CKT 1
0	25SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03254	100.2733	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	25SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03271	100.2102	BASE CASE
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03389	100.133	KARLSTAD - WINGER 230KV CKT 1
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03369	99.8	BRANDN 7 115.00 - ELBOWLK7 115.00 115KV CKT 1
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03632	99.7	EFERGUS7 115.00 - HOOT LAKE 115KV CKT 1
0	25SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03271	99.6	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03269	99.5	BASE CASE
0	25SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03292	99.5	FARGO TAP - PELICAN RAPIDS 115KV CKT 1
0	25SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03292	99.5	FARGO TAP - TAMARAC 115KV CKT 1
0	25SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03371	99.4	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
0	25SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03281	99.3	BLAIR - GRANITE FALLS 230KV CKT 1
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03184	99.2	ALEXMRES3 345.00 () 345/115/34.5KV TRANSFORMER CKT 9
0	20SP	G16_007	FROM->TO	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1	273.0	273.0	0.03632	99.1	EFERGUS7 115.00 - GRANTCO7 115.00 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	139.6279	BASE CASE
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	134.7339	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	134.7309	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	134.0789	BASE CASE
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07157	133.9564	BIG STONE - BLAIR 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07893	133.7757	FARGO - SHEYNNE 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.26205	131.9825	JAMES TOWN - VALLEY CITY 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06951	131.8272	ELLENDALE - ELLENDLMVP4 230.00 230KV CKT Z
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06951	130.7328	ABERDEEN JCT - ELLENDALE 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	130.6513	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	130.6484	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	130.3573	GEN600006 1-AS KING
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	129.6478	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06415	129.5607	GRANTCO7 115.00 - MORRIS 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	129.3469	GEN600003 1-PRAIRIE ISLAND G1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	129.345	GEN600004 2-PRAIRIE ISLAND G2
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06336	129.1442	LELAND OLDS - STANTON 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	128.9696	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07189	128.9132	FARGO - JAMES TOWN 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.05940	128.7326	EDGELEY - JAMES TOWN 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07170	128.6934	FARGO - JAMES TOWN 230KV CKT 2
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	128.1565	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06512	128.1427	GRACEVT7 - MORRIS 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06582	127.6011	BLAIR - GRANITE FALLS 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06427	127.5376	GLENHAM - WHITLOK 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06509	127.4964	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	127.3	GEN600005 1-MONTICELLO
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07216	127.1968	BIG STONE - BLAIR 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07216	127.1968	BIG STONE - BLAIR 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06427	127.1763	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06424	127.1046	GLENHAM - L3 HAWDON 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	127.0675	GEN 11104 1-J262_GEN 0.6000
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	127.0675	GEN 11108 1-J263_GEN 0.6000
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06427	126.9811	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06427	126.9423	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06427	126.799	OAHE - SULLEY BUTTE 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06604	126.6962	CANBY - GRANITE FALLS 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06529	126.6782	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06509	126.6659	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	126.6003	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06815	126.5608	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07301	126.5477	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
0	16WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.11281	126.5022	BIG STONE - BLAIR 230KV CKT 1
0	16WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.11281	126.5022	BIG STONE - BLAIR 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06815	126.3515	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06815	126.3232	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06533	126.21	GRANITE FALLS - WILLMAR 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06243	126.1142	GRANITE FALLS - MORRIS 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06611	126.0823	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06696	126.0785	EDGELEY (ED KY6A) 115/69/13.2KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07884	125.9942	FARGO - SHEYNNE 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06964	125.8723	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06581	125.8708	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.26204	125.8703	JAMES TOWN - VALLEY CITY 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06355	125.8702	FARGO - MOOREHEAD 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06633	125.8155	J316_SUB 230.00 - TATANKA 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	125.793	BASE CASE
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	125.7593	GEN600006 1-AS KING
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	125.7451	GEN659353 1-DEERCREK CTG18.000
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	125.7377	GEN659354 1-DEERCREK STG18.000
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06153	125.6367	MOOREHEAD - MORRIS 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06953	125.5392	SPLIT ROCK - WHITE 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	125.5125	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06954	125.391	ELLENDALE - ELLENDLMVP4 230.00 230KV CKT Z
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06954	125.3881	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	125.1923	CENTER 230/22.0KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	125.1689	CALEDONIA (CALEDONIA) 115/69/13.2KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07584	125.0571	MERRCRT4 230.00 - WISHEK 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	125.0332	GEN587603 1-J488&J489GN10.6900
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06964	125.0133	G13_001IST 115.00 - SUMMIT 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06166	124.9678	BISMARK - WEBER 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07893	124.9406	FARGO - SHEYNNE 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	124.9235	GEN652345 W-G07_023IS_2 0.6900
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	124.9035	LAKOTA 115/69KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06609	124.9027	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	124.8811	GEN587583 1-J432-GEN1 0.6900
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06633	124.8559	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	124.7844	RAUN - SIOUX CITY 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06954	124.7818	ABERDEEN JCT - ELLENDALE 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	124.7357	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	124.7352	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06166	124.7223	JAMES TOWN - WEBER 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06522	124.6959	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	124.6217	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06166	124.4776	BISMARK - JAMES TOWN 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07584	124.3128	HESKETT - WISHEK 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	124.2777	BASE CASE
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06419	124.2607	GRANTCO7 115.00 - MORRIS 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	124.0813	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06748	124.0682	GRAND FORKS - PICKERT 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06748	124.0221	JAMES TOWN - PICKERT 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06218	123.9717	GARRISON - JAMES TOWN 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06567	123.9645	GRAND FORKS (GK KV1A) 230/115/12.47KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	123.8839	GEN587593 1-J460-GEN1 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	123.7325	CENTER 230/22.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	123.4711	GEN615052 1-CAMBRIDGE GENERATING STATION
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06554	123.4476	PAHOJA - SIOUX FALLS 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	123.4463	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	123.3896	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06554	123.3629	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	123.339	GEN587053 1-G16-007-GEN10.6500
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	123.311	GEN615021 1-GRE-ER 14G 16.000
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.05944	123.0339	EDGELEY - JAMES TOWN 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06526	122.9007	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	122.8845	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06339	122.7615	LELAND OLDS - STANTON 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	122.7546	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	122.7094	GEN615015 1-GRE-SPRITWDG13.200
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06606	122.4998	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	122.3938	GEN 11104 1-J262_GEN 0.6000
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	122.3938	GEN 11108 1-J263_GEN 0.6000
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06431	122.3265	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	122.2686	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.05675	122.1579	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	122.0419	GEN587623 1-J493-GEN1 0.6900
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	121.9555	BASE CASE
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	121.8355	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06431	121.627	OAHE - SULLEY BUTTE 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06431	121.6268	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06431	121.5901	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	121.5862	BIG STONE - HIGHWAY 12 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06431	121.5565	GLENHAM - WHITLOK 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06427	121.5121	GLENHAM - L3 HAWDON 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06431	121.5104	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06508	121.4018	GRACEVT7 - ORTONVILLE 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	121.1974	GEN615002 2-COAL CREEK
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06660	121.1121	CARPENTER - HURON 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	121.0891	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	121.0782	GEN615001 1-COAL CREEK
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06699	121.0719	EDGELEY (ED KY6A) 115/69/13.2KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	121.0401	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07303	121.0033	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07303	120.9732	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	120.9635	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06532	120.9451	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06532	120.9192	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06609	120.8442	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06615	120.8319	ELLENDLMVP4 230.00 - MERRCRT4 230.00 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06636	120.8265	J316_SUB 230.00 - TATANKA 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	120.7978	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06819	120.7802	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	120.7789	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06819	120.7239	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06613	120.6929	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06613	120.6794	BROADLAND - HURON 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06613	120.6781	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06819	120.6758	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06613	120.6732	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	120.6623	GEN587293 1-G16-044-GEN10.6900
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	120.5689	GEN 11143 1-J436GEN1 0.6900
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	120.5689	GEN 11153 1-J437GEN1 0.6900
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	120.5415	GEN660001 2-ABERDEEN SIEBRECHT
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	120.3355	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06359	120.2985	FARGO - MOOREHEAD 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06157	120.2381	MOOREHEAD - MORRIS 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06654	120.1731	BLAIR - GRANITE FALLS 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06654	120.1731	BLAIR - GRANITE FALLS 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06247	120.1485	GRANITE FALLS - MORRIS 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	120.1309	GEN587603 1-J488&J489GN10.6900
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.05675	120.0735	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	120.0493	GEN652345 W-G07_023IS_2 0.6900
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	120.0009	LAKOTA 115/69KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	120.0006	GEN587583 1-J432-GEN1 0.6900
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06559	119.9631	BIG STONE - HIGHWAY 12 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06512	119.9115	GRACEVT7 - ORTONVILLE 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06508	119.7777	GRACEVT7 - MORRIS 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	119.7776	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	119.7776	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	119.677	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06422	119.5433	HELENA - SCOTTCO3 345.00 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07590	119.5206	MERRCRT4 230.00 - WISHEK 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06546	119.3359	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06559	119.2847	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06636	119.1796	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	119.1699	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06569	119.1071	BURR - CANBY 115KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	119.056	GEN600002 3-SHERBURNE CNTY G3
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06613	119.0343	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	118.9846	GEN587593 1-J460-GEN1 0.6900
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	118.9763	GEN587133 1-G16-017-GEN10.6900
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06600	118.9649	CANBY - GRANITE FALLS 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06577	118.9095	PRAIRIE - WINGER 230KV CKT 1
0	16WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.08669	118.898	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07590	118.8612	HESKETT - WISHEK 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	118.8317	GEN600001 2-SHERBURNE CNTY G2
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	118.7497	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06548	118.7411	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06551	118.7172	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06551	118.7172	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06548	118.7025	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	118.6852	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	118.6852	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06509	118.6808	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	118.6554	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06505	118.5982	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	16WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.08669	118.5699	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06609	118.5219	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07941	118.5197	FARGO - SHEYNNE 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	118.4722	GEN587053 1-G16-007-GEN10.6500
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06512	118.4657	GRACEVT7 - MORRIS 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06546	118.4153	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06609	118.3416	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06529	118.317	GRANITE FALLS - WILLMAR 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06505	118.297	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06529	118.29	PAYNSVILLE - WILLMAR 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06529	118.1546	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	117.8574	BURR - J493 115.00 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	117.8574	J493 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06564	117.6799	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06522	117.6737	PRAIRIE - RAMSEY 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	117.6693	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06564	117.6452	MN VALLEY TAP - PANTHER 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06572	117.5585	BURR - CANBY 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06466	117.5351	BALTA - RAMSEY 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	117.5178	GEN600000 1-SHERBURNECNTY G1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06604	117.4508	CANBY - GRANITE FALLS 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06613	117.4428	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06613	117.408	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06513	117.3904	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06425	117.2664	HELENA - SCOTTCO3 345.00 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	117.2511	GEN587623 1-J493-GEN1 0.6900
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	117.2479	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	117.2394	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	117.2394	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	117.2305	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06583	117.212	PRAIRIE - WINGER 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	117.2116	GEN600005 1-MONTICELLO
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06497	117.1998	ALEXMRES3 345.00 () 345/115/34.5KV TRANSFORMER CKT 9
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	117.1458	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06581	117.1276	CENTER - SQUARE BUTTE 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	117.1188	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06951	117.093	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	117.0909	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06559	117.0712	MCLEOD - PANTHER 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06508	117.0118	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.08419	116.965	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	116.9109	SHEYENNE SVC - SHEYNNE 115KV CKT Z
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	116.9012	GEN 11123 1-G736-GEN1 0.6900
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	116.8787	GEN 11133 1-J442-GEN1 0.6900
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06560	116.7793	BUFFALO RIDGE - YANKEE 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06508	116.7196	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06533	116.6876	GRANITE FALLS - WILLMAR 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06533	116.6563	PAYNSVILLE - WILLMAR 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07246	116.633	FARGO - JAMES TOWN 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	116.6286	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	116.6255	LANGDON - LANGWIN7 115.00 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06585	116.6121	CENTER - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06457	116.5727	CENTER - COYOTE 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06533	116.542	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	116.5379	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06415	116.4964	GRANTCO7 115.00 - MORRIS 115KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07228	116.4663	FARGO - JAMES TOWN 230KV CKT 2
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	116.3541	RAUN - SIOUX CITY 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06568	116.2172	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06567	116.1578	MN VALLEY TAP - PANTHER 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06525	116.1261	BALTA - MCHENRY 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	116.0838	SIBLEY 4 230.00 230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	116.0159	BURR - J493 115.00 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	116.0159	J493 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	115.9629	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06542	115.9502	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	115.9491	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06549	115.9229	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	115.8294	BARNES 4 230.00 230/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06558	115.8256	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06526	115.7943	PRAIRIE - RAMSEY 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	115.7609	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	115.755	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	115.7504	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06954	115.7338	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06563	115.6263	MCLEOD - PANTHER 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06529	115.6103	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06501	115.5296	ALEXMRES3 345.00 () 345/115/34.5KV TRANSFORMER CKT 9
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	115.4838	BROWNS VALLEY 230/41.6KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06580	115.4783	GRACEVT7 - MORRIS 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06470	115.4116	BALTA - RAMSEY 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06563	115.3833	BUFFALO RIDGE - YANKEE 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06336	115.2553	LELAND OLDS - STANTON 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	115.2082	RAUN - SIOUX CITY 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06460	115.2039	CENTER - COYOTE 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.05512	115.1137	FRONTER4 230.00 - MAPLE RIVER 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	115.045	GEN620324 3-HOOT LAKE 3 GEN
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06419	115.0154	GRANTCO7 115.00 - MORRIS 115KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	114.9328	GEN600006 1-AS KING
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	114.7938	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	114.7212	LANGDON - LANGWIN7 115.00 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	114.6548	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	114.5876	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	114.5742	GEN672310 1-POPLAR RIVER GENERATOR 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	114.5742	GEN672311 2-POPLAR RIVER GENERATOR 2
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06669	114.5007	CANBY - GRANITE FALLS 115KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06669	114.5007	CANBY - GRANITE FALLS 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06561	114.4773	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	114.4706	GEN672321 1-SHAND GENERATOR 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06547	114.4427	DONALDSON - DRAYTON 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06545	114.4418	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	114.326	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06529	114.3249	BALTA - MCHENRY 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	114.3105	SHEYENNE SVC - SHEYNNE 115KV CKT Z
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.26284	114.2426	JAMES TOWN - VALLEY CITY 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06427	114.1874	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06427	114.1874	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06339	114.1625	LELAND OLDS - STANTON 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06519	114.0814	KARLSTAD - WINGER 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07004	114.0271	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07004	114.027	ELLENDALE - ELLENDLMVP4 230.00 230KV CKT Z
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06612	114.0218	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06612	114.0132	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	113.9762	SIBLEY 4 230.00 230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	113.9231	BROWNS VALLEY 230/41.6KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	113.8272	GEN620323 2-HOOT LAKE 2 GEN
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06657	113.7401	HURON - WATERTOWN 230KV CKT 2
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	113.7247	GEN657985 1-ASH1GEN9 0.5750
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	113.6848	GEN600003 1-PRAIRIE ISLAND G1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	113.6794	GEN600004 2-PRAIRIE ISLAND G2
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06577	113.6722	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06577	113.6722	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06600	113.641	GRANITE FALLS - WILLMAR 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06600	113.641	GRANITE FALLS - WILLMAR 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06478	113.5865	AUDUBON - HUBBARD 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06678	113.5454	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06230	113.5347	BISMARK - JAMES TOWN 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06678	113.5222	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07301	113.521	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06231	113.4798	JAMES TOWN - WEBER 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06231	113.4584	BISMARK - WEBER 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06577	113.4391	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06577	113.4391	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06678	113.4147	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06279	113.4119	GARRISON - JAMES TOWN 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06533	113.4111	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07004	113.3055	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06581	113.2983	CENTER - MPC02100TAP4230.00 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06499	113.2892	INMANN (INMAN230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06634	113.2711	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	113.2694	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07026	113.2628	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	113.2609	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06541	113.1998	DICKINSON - PARKERS LAKE 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	113.199	AS KING 345/20.0KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06530	113.1716	GRE-WINGRIV7115.00 - VERNDALE 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	113.163	DEVILS LAKE JCT - DEVILS LAKE S 115KV CKT 1
0	16WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.08669	113.1387	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07004	113.1099	ABERDEEN JCT - ELLENDALE 115KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06613	113.0885	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06581	113.0812	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06817	113.0557	JAMES TOWN - PICKERT 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06488	113.0265	GRANTCO7 115.00 - MORRIS 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06525	113.0198	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06438	113.006	MUD LAKE - RIVERTON 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06609	113.005	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06609	113.0035	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06541	112.9982	CALUMET4 230.00 - MCARTHY4 230.00 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06609	112.9754	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06523	112.9375	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06532	112.9313	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.9218	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06537	112.9205	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.9198	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06254	112.8615	FERGSFL7 115.00 - HOOT LAKE 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06546	112.8609	FARGO TAP - PELICAN RAPIDS 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.8587	MEC115 - WILMARTH 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.8587	MEC115 115/15.0KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06546	112.8585	FARGO TAP - TAMARAC 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06243	112.8542	GRANITE FALLS - MORRIS 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.8324	MEC345 345/19.5KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.8173	MEC345 - WILMARTH 345KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.8112	GEN672392 1-NBECGT1G 18.000
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.8077	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06254	112.7803	FERGSFL4 230.00 (FERG230/115) 230/115/13.2KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.7791	GEN681542 6-JP MADGETT
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06452	112.7784	MAPLE RIVER - WINGER 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07026	112.7683	G13_001IST 115.00 - SUMMIT 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06273	112.7655	MONTICELLO - WAITE PARK 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06541	112.7614	CALUMET4 230.00 - CLAY BOSWELL 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.7576	GEN615021 1-GRE-ER 14G 16.000
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06153	112.7228	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06153	112.7228	P12:230:UMZW:# 158 #: MH IN ND.
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06525	112.6698	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.6421	GEN657964 1-ASH2GEN9 0.5750
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06612	112.6201	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06546	112.611	EDGETOWN TAP - PELICAN RAPIDS 115KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.6078	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.6077	GEN672304 4-BOUNDARY DAM GENERATOR 4
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.6077	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06431	112.5728	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06431	112.5728	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.5687	GEN657705 X-DRAYTON
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.05513	112.5679	FRONTER4 230.00 - MAPLE RIVER 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.5557	GEN615002 2-COAL CREEK
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.5284	GEN615001 1-COAL CREEK
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.5181	GEN615052 1-CAMBRIDGE GENERATING STATION
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06817	112.5074	GRAND FORKS - PICKERT 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.497	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06530	112.4848	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.4209	ULRICH (ULRICH) 115/69/41.6KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.3871	GEN615015 1-GRE-SPRITWDG13.200
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06634	112.3846	GRAND FORKS (GK KV1A) 230/115/12.47KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06520	112.3795	KARLSTAD - WINGER 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06614	112.377	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.377	ANSON - SPLIT ROCK 115KV CKT 2
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.351	ANSON 115/17.5KV TRANSFORMER CKT 4
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	112.3411	GEN 11123 1-G736-GEN1 0.6900
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.341	WINGER (WINGER) 115/69/41.6KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.3335	GEN600067 9-HIGH BRIDGE
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.3226	GEN661015 1-COYOTE
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	112.3127	GEN 11133 1-J442-GEN1 0.6900
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.2941	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06614	112.2892	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.2815	DONALDSON - DONALDSON PIPE 115KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06614	112.281	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06614	112.265	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06614	112.2601	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.2532	GEN657748 1-YOUNG 2 GENERATOR
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07303	112.2181	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.2121	THIEF RIVER FALLS (TRF) 115/69/13.2KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.2029	GEN 11104 1-J262_GEN 0.6000
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.2029	GEN 11108 1-J263_GEN 0.6000
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06546	112.1997	EDGETOWN TAP - HOOT LAKE 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07030	112.1616	MAPLE RIVER - SHEYNNE 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.1539	ANSON - SPLIT ROCK 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.1536	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06533	112.1452	AS KING - EAU CLAIRE 345KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06636	112.1426	FALCONER - GRAND FORKS 115KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06622	112.1339	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06285	112.1025	EFERGUS7 115.00 - GRANTCO7 115.00 115KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	112.0814	GEN620285 1-SOLWAY
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06481	112.0617	AUDUBON - HUBBARD 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.0428	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06515	112.04	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	112.0317	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06013	112.0042	EDGELEY - JAMES TOWN 115KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	111.9668	GEN600007 7-RIVERSIDE GEN 7
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	111.955	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	111.9534	GEN600071 10-RIVER SIDE
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	111.9533	GEN600070 9-RIVER SIDE
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06464	111.9407	CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.9367	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.9256	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	111.9111	GEN672393 2-NBECST2G 13.800
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06548	111.8927	COON CREEK - SHERBURNE CO 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06523	111.8805	BYRON - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06533	111.8594	GRE-WINGRIV7115.00 - VERNDALE 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.8457	DEVILS LAKE JCT - DEVILS LAKE S 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	111.8432	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06627	111.8426	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06627	111.8426	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06477	111.8426	GRE-WINGRIV4230.00 (WINGR230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	111.8388	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	111.8363	EDGETOWN - EDGETOWN TAP 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	111.8357	GEN587653 1-J526-GEN1 0.6900
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	111.8235	GEN672339 16-QE 16G 13.800
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	111.8235	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06545	111.8215	DICKINSON - PARKERS LAKE 345KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	111.811	GEN672349 3-CORY COGEN GENERATOR 3 ST
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06285	111.7971	EFERGUS7 115.00 - HOOT LAKE 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06442	111.7952	MUD LAKE - RIVERTON 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.7591	AS KING 345/20.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06544	111.6752	CALUMET4 230.00 - CLAY BOSWELL 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06429	111.6439	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	111.6314	BROOKING COUNTY - J432 345.00 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	111.6314	J432 345.00 345/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06525	111.6006	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06535	111.5915	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06490	111.5548	ELM CREEK - PARKERS LAKE 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.543	MEC115 - WILMARTH 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.543	MEC115 115/15.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06542	111.5419	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06549	111.5313	FARGO TAP - PELICAN RAPIDS 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06549	111.5293	FARGO TAP - TAMARAC 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06257	111.5155	FERGSFL7 115.00 - HOOT LAKE 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06524	111.5145	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06257	111.5127	FERGSFL4 230.00 (FERG230/115) 230/115/13.2KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.5121	MEC345 - WILMARTH 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.4875	MEC345 345/19.5KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	111.4827	STANTON 230/18.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.4805	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	111.4531	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.4255	ULRICH (ULRICH) 115/69/41.6KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06534	111.4186	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	111.4043	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.4014	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.3981	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.3739	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	111.3662	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06456	111.3572	MAPLE RIVER - WINGER 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.3504	THIEF RIVER FALLS (TRF) 115/69/13.2KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.3476	WINGER (WINGER) 115/69/41.6KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	111.3344	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	111.3026	GEN657749 1-YOUNG 1 GENERATOR
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	111.2301	YANKEE 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06247	111.2287	GRANITE FALLS - MORRIS 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06549	111.2221	EDGETOWN TAP - PELICAN RAPIDS 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06525	111.2087	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.1424	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.1276	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07035	111.1137	MAPLE RIVER - SHEYNNE 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	111.0842	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06613	111.0445	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06613	111.0425	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06613	111.0267	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06156	111.0188	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06156	111.0188	P12:230:UMZW:# 158 #: MH IN ND.
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	111.0163	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06277	111.0097	MONTICELLO - WAITE PARK 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	110.9804	ANSON - SPLIT ROCK 115KV CKT 2
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	110.979	ANSON 115/17.5KV TRANSFORMER CKT 4
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	110.8174	DONALDSON - DONALDSON PIPE 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06549	110.8052	EDGETOWN TAP - HOOT LAKE 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06537	110.8005	AS KING - EAU CLAIRE 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	110.7812	GEN587633 1-J510-GEN1 18.000
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06289	110.6415	EFERGUS7 115.00 - GRANTCO7 115.00 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	110.6225	EDGETOWN - EDGETOWN TAP 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	110.5842	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	110.5769	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	110.569	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	110.5618	ANSON - SPLIT ROCK 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	110.5615	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06480	110.5304	GRE-WINGRIV4230.00 (WINGR230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	110.5167	FRONTER4 230.00 (FRONTIER) 230/69/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	110.4463	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06289	110.3626	EFERGUS7 115.00 - HOOT LAKE 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	110.2921	BROOKING COUNTY - J432 345.00 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	110.2921	J432 345.00 345/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	110.2621	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06267	110.0895	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06493	110.0751	ELM CREEK - PARKERS LAKE 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	110.0508	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	110.0374	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	109.9796	FRONTER4 230.00 (FRONTIER) 230/69/13.8KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06629	109.9743	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06629	109.9092	G09_001IST 345.00 - GROTON 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	109.9084	YANKEE 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	109.8988	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06614	109.8841	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	109.8637	GEN 11143 1-J436GEN1 0.6900
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	109.8637	GEN 11153 1-J437GEN1 0.6900
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06614	109.8094	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06614	109.8037	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	109.7762	GEN635023 3-WALTER SCOTT UNIT 3
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06429	109.7385	FARGO - MOOREHEAD 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	109.7103	GEN635213 3-NEAL UNIT 3
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06700	109.6724	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06485	109.6683	ELM CREEK - MONTICELLO 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	109.6565	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06552	109.6565	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	109.6201	GEN635024 4-WALTER SCOTT UNIT 4
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	109.5644	GEN587603 1-J488&J489GN10.6900
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06651	109.5517	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	109.5351	CALEDONIA (CALEDONIA) 115/69/13.2KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	109.4704	GEN652345 W-G07_023IS_2 0.6900
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	109.4147	GEN587583 1-J432-GEN1 0.6900
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	109.3584	GEN635214 4-NEAL UNIT 4
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	109.3501	LAKOTA 115/69KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06700	109.2711	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06700	109.2711	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06700	109.2701	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06700	109.2642	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06700	109.2633	BROADLAND - HURON 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06700	109.2632	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06700	109.2632	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.05512	109.2468	FRONTER4 230.00 - WAHPETON 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06700	109.063	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	16WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.08669	109.0622	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06487	108.9252	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07364	108.7235	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.07364	108.7039	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06246	108.4442	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	108.4293	GEN587593 1-J460-GEN1 0.6900
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	108.4057	GEN587053 1-G16-007-GEN10.6500
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	108.3914	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06705	108.3404	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	108.2953	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	108.2953	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06489	108.2832	ELM CREEK - MONTICELLO 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06271	108.2434	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	108.0853	GEN652173 1-G09_001IS_2 0.6900
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.05513	108.0083	FRONTER4 230.00 - WAHPETON 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	107.8105	GEN587293 1-G16-044-GEN10.6900
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06491	107.5989	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	107.4337	GEN587653 1-J526-GEN1 0.6900
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	107.3148	GEN587623 1-J493-GEN1 0.6900
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06249	106.6323	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06555	106.4129	GEN587633 1-J510-GEN1 18.000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06906	104.9418	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.05980	104.8225	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06906	104.7713	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06906	104.7708	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	16WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.08317	104.0473	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	103.1957	GEN 11123 1-G736-GEN1 0.6900
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	103.1756	GEN 11133 1-J442-GEN1 0.6900
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.05984	103.1073	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	16WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.08091	101.7961	CENTER - JAMESTOWN 345KV CKT 1
0	25SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.05901	101.0929	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
0	17SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.08419	100.9115	CENTER 230/22.0KV TRANSFORMER CKT 1
0	16WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.08669	99.8	CENTER 230/22.0KV TRANSFORMER CKT 1
0	16WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.08669	99.4	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
0	20SP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.05905	99.2	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
0	20WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.06621	99.2	GEN587653 1-J526-GEN1 0.6900
0	16WP	G16_007	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.08669	99.1	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_007	-	Non-Converged Contingency	1800.0	1980.0	0.10409	-	BROOKING COUNTY - BSSOUTH3 345.00 345KV CKT 1
0	25SP	G16_007	-	Non-Converged Contingency	1800.0	1980.0	0.06874	-	488489510526345.00 - BSSOUTH3 345.00 345KV CKT 1
0	25SP	G16_007	-	Non-Converged Contingency	720.0	792.0	0.06572	-	SPLIT ROCK - WHITE 345KV CKT 1
0	25SP	G16_007	-	Non-Converged Contingency	1732.1	2165.1	0.04306	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	25SP	G16_007	-	Non-Converged Contingency	1732.1	2165.1	0.04306	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	150.2033	BASE CASE
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	146.4509	BASE CASE
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05569	142.9483	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06290	142.8595	LETCHER - SIOUX FALLS 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06946	142.291	AURORA - BROOKINGS 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	141.6574	BASE CASE
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06946	141.5259	AURORA - FLANDRU 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06341	141.1086	HANLON - SIOUX FALLS 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05569	141.0543	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	140.5225	GEN600045 4-ANSON
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	140.3194	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	140.2154	GEN336153 1-WATERFORD UNIT#3
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06353	140.146	FT RANDAL - UTICA JCT 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06545	140.1448	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06545	139.946	BROOKINGS - WHITE 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06541	139.888	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06589	139.8802	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06537	139.7983	GRANITE FALLS - WILLMAR 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06427	139.7561	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06713	139.6887	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	139.6727	GEN335831 1-RIVERBEND UNIT#1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06713	139.6384	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06691	139.4463	BISON - HETINGER 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06988	139.4314	AURORA - BROOKINGS 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	139.4023	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	139.3421	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	139.0916	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	139.0239	GEN640009 1-COOPER NUCLEAR STATION
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06357	138.9861	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.9577	GEN501801 1-DOLET HILLS UNIT1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06541	138.9453	G15088_T 345.00 - MOORE 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.9286	GEN337653 1-WHITE BLUFF UNIT #2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06589	138.8501	MITCHELL - MITCHELL NW 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.8484	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.8403	GEN338143 1-INDEPENDENCE UNIT #1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.8224	GEN344897 4-1LAB G4 20.000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.8196	GEN344894 1-1LAB G1 20.000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.8194	GEN344895 2-1LAB G2 20.000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.8193	GEN344896 3-1LAB G3 20.000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.8153	GEN336251 1-NINEMILE POINT UNIT#4
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.791	GEN336831 1-BAXTER WILSON SES
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.7698	GEN501813 1-RODEMACHER UNIT 3
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.7688	GEN587153 1-G16-021-GEN10.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.7428	GEN337041 1-GERALD ANDRUS
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.711	GEN345671 2-1RUSH G2 18.000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.7059	GEN345670 1-1RUSH G1 18.000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06519	138.6739	MCCOOL - MOORE 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.6623	GEN645012 2-NEBRASKA CITY 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.6516	GEN335206 1-NELSON UNIT 6

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06514	138.6142	GRAND ISLAND - MCCOOL 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.6138	GEN336191 1-LITTLE GYPSY UNIT#3
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.5976	GEN501812 1-RODEMACHER UNIT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.5924	GEN336252 1-NINEMILE POINT UNIT#5
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06459	138.5916	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06599	138.5605	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.5487	GEN645011 1-NEBRASKA CITY 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07407	138.5353	HANKINSON - WAHPETON 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06558	138.5213	AINSWORTH - VALENTINE 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06691	138.5079	BISON - MAURINE 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.495	GEN600020 2-ANGUS ANSON1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.4562	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.4559	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.4491	GEN334440 1-SABINE UNIT 4
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.4472	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.44	GEN338388 1-1PLUM PT U1 23.000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06544	138.4367	GRACEVT7 - MORRIS 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.4146	GEN600021 3-ANGUS ANSON2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06599	138.4043	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.3945	GEN336464 1-MICHOUD UNIT #3
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.3825	GEN335204 1-NELSON UNIT 4
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06613	138.3467	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06483	138.3415	GRANT - MITCHELL 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.3288	GEN334441 1-SABINE UNIT 5
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.3159	GEN336801 1-BAXTER WILSON UNIT #1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07061	138.291	GLENHAM - WHITLOK 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06946	138.2516	FLANDRU - SIOUX FALLS 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06603	138.2507	CANBY - GRANITE FALLS 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07061	138.207	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06508	138.1969	SIDNEY - STEGALL 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.1931	GEN335614 1-WILLOW GLENN UNIT#4
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.1839	GEN542962 2-IATAN UNIT #2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07061	138.1774	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06490	138.1683	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.1563	GEN334433 1-SABINE UNIT 3
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07061	138.1541	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06558	138.1214	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07076	138.1195	GLENHAM - L3 HAWDON 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.1153	GEN336222 1-LITTLE GYPSY UNIT#2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06988	138.0548	AURORA - FLANDRU 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07061	138.053	OAHE - SULLEY BUTTE 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.0278	GEN563232 1-G15089_3 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	138.0095	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.9907	GEN336151 1-WATERFORD UNIT#1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.9907	GEN336152 1-WATERFORD UNIT#2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06681	137.9335	GRAND FORKS - PICKERT 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.9288	GEN303007 1-1BC2 U2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06560	137.9249	WINNER - WITTEN 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.9204	GEN600149 W-J183 PROSEW10.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06617	137.9059	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06617	137.9059	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.9001	GEN600150 W-J183 PROSEW20.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.8974	GEN303006 1-1BC2 U1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06709	137.8656	FARGO - SHEYNNE 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.8652	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.8353	GEN303008 1-1BC2 U3
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.8233	GEN542957 1-IATAN UNIT #1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.821	GEN336170 1-GULF OXY U4
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06550	137.8064	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06548	137.8041	AXTELL - SWEETWATER 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06414	137.803	UTICA JCT - VFODNES 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06533	137.794	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.7827	GEN563222 1-G15088_3 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.7462	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06533	137.7359	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06533	137.7357	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.7286	GEN542951 5-HAWTHORN UNIT #5
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06665	137.709	HURON - WOONSOCKET 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06545	137.703	CLEARWATER - ONEILL 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06535	137.6707	RASMUSN - UTICA JCT 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06533	137.6642	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05679	137.6569	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06588	137.6536	MT VERN - STORLA 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06206	137.6344	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06681	137.6331	JAMES TOWN - PICKERT 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.6246	GEN501811 1-RODEMACHER UNIT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06545	137.6147	CLEARWATER - NELIGH 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05679	137.6122	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.5832	GEN542955 1-LACYGNE UNIT #1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.5534	GEN345765 H-1SIOUX 2 18.000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.5367	GEN334071 1-LEWIS CREEK 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06560	137.533	GREGORY - WINNER 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.5317	GEN334070 1-LEWIS CREEK 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.53	GEN562003 1-G11_027_3 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06554	137.5016	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06336	137.4955	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06562	137.4942	FT RANDAL - WHITE SWAN 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06617	137.4922	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06559	137.4853	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	137.4822	GEN600045 4-ANSON
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.458	GEN337766 1-TRACTEBEL UNIT S1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06562	137.4472	TYNDALL - WHITE SWAN 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.4315	GEN336221 1-LITTLE GYPSY UNIT#1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.4301	GEN345756 H-1SIOUX 1 18.000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06550	137.4227	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06550	137.4227	FT THOMPSON - OAHE 230KV CKT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.4185	GEN501910 1-ACADIA UNIT ST1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06560	137.4183	BASSETT 7115.00 - STUART 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.3852	GEN345832 1-1TS G1 13.800
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.3849	GEN345841 2-1TS G2 13.800
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06605	137.3805	BOWMAN - RHAME 4 230.00 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06549	137.3746	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06549	137.3746	FT THOMPSON - OAHE 230KV CKT 4
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06612	137.37	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06665	137.3643	STORLA - WOONSOCKET 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.3642	GEN337757 1-DUKE HOTSPRINGS STG1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.3591	GEN336446 1-MICHOUD UNIT #2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.3341	GEN334431 1-SABINE UNIT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.334	GEN334432 1-SABINE UNIT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06713	137.3168	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.3151	GEN337764 1-TRACTEBEL UNIT C1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.3151	GEN337765 1-TRACTEBEL UNIT C2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.2862	GEN336242 1-1NMIL ST1 18.000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06613	137.2848	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.2667	GEN501823 1-TECHE UNIT 3
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06613	137.2383	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06561	137.2346	ONEILL - SPENCER 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06712	137.2292	GROTON - REDFIELD 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06592	137.1957	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06561	137.173	FT RANDAL - SPENCER 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.1405	GEN659116 1-SPIRIT MOUND UNIT1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.1373	GEN587353 1-G16-050-GEN10.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06576	137.0637	PLEZIOZO1ARC
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	137.0508	GEN659117 2-SPIRIT MOUND UNIT2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06251	137.0483	FT THOMPSON - LETCHER 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06577	137.0173	MENNO JCT - TRIPP JCT 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06720	136.978	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06571	136.9385	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06431	136.9219	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	136.7807	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	136.7048	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	136.6639	GEN660016 1-B_H WIND 0.7000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06431	136.6401	G13_001IST 115.00 - SUMMIT 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06380	136.5937	MOOREHEAD - MORRIS 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	136.4544	GEN600046 1-MECST
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	136.4072	GEN600047 1-MECCT1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06562	136.3365	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06274	136.3	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06986	136.2928	FT THOMPSON - HURON 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06986	136.2928	FT THOMPSON - HURON 230KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06566	136.2478	SUB 1226 - TEKAMAH 161KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06640	136.2398	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06606	136.1745	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	136.1707	GEN615031 1-PLEASANT VALLEY
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	136.1672	GEN615032 2-PLEASANT VALLEY
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	136.1613	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06557	136.1609	DIXONCO 230.00 - HOSKINS 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	136.1598	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06559	136.1219	RAUN - TEKAMAH 161KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06578	136.1051	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06693	136.1033	BISON - MAURINE 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06578	136.1031	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06570	136.0643	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	136.0506	GEN619954 1-HUTCHINSON
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.9921	GEN600125 2-FEP ST G 13.800
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06568	135.9816	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06537	135.9654	SIOUX CITY - TWIN CHURCH 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.9649	GEN600130 W-G586 - CWN 10.6000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.9588	GEN600131 W-G586 - CWN 20.6000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06566	135.9586	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06566	135.9586	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.9346	GEN652004 1-G13_001IS_3 0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	135.9275	GEN335206 1-NELSON UNIT 6
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06569	135.9119	COOPER - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.8878	GEN600013 3-BLACK DOG GEN 3
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	135.8586	GEN335204 1-NELSON UNIT 4
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.8137	GEN603185 1-FIBROMINN GENERATION
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.7857	GEN659289 1-DAYCNTYWND W0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.7832	GEN563312 1-G15097_3 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07062	135.7796	HESKETT - WISHEK 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06489	135.7771	GRANT - MITCHELL 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06570	135.7617	COOPER - FAIRPORT 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06660	135.7567	BUFFALO RIDGE - YANKEE 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.7502	GEN600018 S-LS POWER STEAM
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.7477	GEN659031 1-G12_014IS_4 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.7245	GEN600050 1-FEP
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06521	135.7198	HOSKINS - SHELL CREEK 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	135.6897	GEN587153 1-G16-021-GEN10.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06574	135.6782	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06553	135.6548	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	135.6205	GEN501812 1-RODEMACHER UNIT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06553	135.6154	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.6047	GEN600012 2-BLACK DOG GEN 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06420	135.5941	UTICA JCT - VFODNES 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07066	135.5929	GLENHAM - WHITLOK 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06466	135.5671	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.5508	GEN600056 W-BUFFALO RIDGE WIND GEN
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07164	135.5451	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.5352	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06573	135.5343	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06573	135.5342	DENISON - EXIRA 161KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07164	135.461	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.4593	GEN652414 4-FT PECK
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.4593	GEN652415 5-FT PECK
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	135.4475	GEN334441 1-SABINE UNIT 5
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07164	135.4253	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06593	135.3943	MT VERN - STORLA 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.3725	GEN600063 1-COLVILLE GEN 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.3725	GEN600064 2-COLVILLE GEN 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.3287	GEN 11143 1-J436GEN1 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.3287	GEN 11153 1-J437GEN1 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.3269	GEN659290 1-EDGECOL
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06594	135.3197	MITCHELL - MITCHELL NW 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.3112	GEN587603 1-J488&J489GN10.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.2949	GEN600014 4-BLACK DOG GEN 4
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06573	135.2658	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	135.2658	GEN542957 1-IATAN UNIT #1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	135.2435	COOPER - ST JOE 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07066	135.2361	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	135.2353	GEN334433 1-SABINE UNIT 3

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.2302	GEN659162 4-RED WLCK
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.2302	GEN659163 5-BLACK WDCK
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.2267	GEN587663 1-H081-GEN1 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.2267	GEN659192 6-LYNN
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.224	GEN600065 7-HIGH BRIDGE
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.224	GEN600066 8-HIGH BRIDGE
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.2195	GEN600011 5-BLACK DOG GEN 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06565	135.2173	GREGORY - WINNER 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.2157	GEN600071 10-RIVER SIDE
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.2145	GEN600070 9-RIVER SIDE
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07081	135.2012	GLENHAM - L3 HAWDON 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.1958	GEN659294 1-WILTONCOL9
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.1957	GEN659273 2-GROTON SYNC COND
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	135.1912	GEN336222 1-LITTLE GYPSY UNIT#2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.1911	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.1897	GEN660001 2-ABERDEEN SIEBRECHT
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.1896	GEN600007 7-RIVERSIDE GEN 7
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.1882	GEN600043 7-BLUE LAKE5
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.1882	GEN600044 8-BLUE LAKE6
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	135.1722	GEN600017 C-LS POWER CT
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05683	135.0963	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07066	135.0803	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06616	135.0525	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07066	135.0427	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.9804	GEN336152 1-WATERFORD UNIT#2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.9803	GEN336151 1-WATERFORD UNIT#1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06578	134.9478	DENISON - SIOUX CITY 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.9439	GEN338388 1-1PLUM PT U1 23.000
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06900	134.9285	FLANDRU - SIOUX FALLS 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.9226	GEN659270 1-WEST SW
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.9189	GEN652556 2-OAHE
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.9189	GEN652557 4-OAHE
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.9189	GEN652558 6-OAHE
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.9146	GEN600020 2-ANGUS ANSON1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.9063	GEN303007 1-1BC2 U2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.8966	GEN303006 1-1BC2 U1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.8874	GEN336191 1-LITTLE GYPSY UNIT#3
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06574	134.8861	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06574	134.8782	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.8729	GEN615021 1-GRE-ER 14G 16.000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.8593	GEN562872 1-G15046_3 0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.84	GEN600021 3-ANGUS ANSON2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.8344	GEN615052 1-CAMBRIDGE GENERATING STATION
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06574	134.7686	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.762	GEN652559 1-OAHE
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07066	134.7546	OAHE - SULLEY BUTTE 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.7425	GEN652345 W-G07_023IS_2 0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.7423	GEN563222 1-G15088_3 0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.7031	BASE CASE
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.7001	GEN335614 1-WILLOW GLENN UNIT#4
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.6926	GEN336170 1-GULF OXY U4
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.6905	GEN303008 1-1BC2 U3
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.6888	GEN600067 9-HIGH BRIDGE
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07221	134.6823	HURON - WATERTOWN 230KV CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.6703	GEN563232 1-G15089_3 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.634	GEN910006 1-G12_012IS_3 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07221	134.6168	CARPENTER - WATERTOWN 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.6077	GEN600149 W-J183 PROSEW10.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.5958	GEN336464 1-MICHOUD UNIT #3
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.5814	GEN659272 2-GROTON 2G13.800
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.5804	GEN600150 W-J183 PROSEW20.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.5714	GEN336801 1-BAXTER WILSON UNIT #1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06204	134.5645	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.5168	GEN501811 1-RODEMACHER UNIT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06669	134.5102	HURON - WOONSOCKET 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06623	134.5	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.4776	GEN345765 H-1SIOUX 2 18.000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.4618	GEN600069 W-YANKEE 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.4419	GEN659274 1-GROTON
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.4193	GEN600078 W-YANKEE 3

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07799	134.4088	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.4075	GEN600077 W-YANKEE 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.4075	GEN600099 W-YANKEE 4
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06665	134.3638	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.3638	GEN659411 1-CAMPBLCNTY W0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.361	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.3462	GEN 10648 1-G830_GEN 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.326	GEN 11104 1-J262_GEN 0.6000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.326	GEN 11108 1-J263_GEN 0.6000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06737	134.2849	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.2834	GEN615015 1-GRE-SPRITWDG13.200
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06342	134.2599	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.2492	GEN562003 1-G11_027_3 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07221	134.2408	CARPENTER - HURON 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06623	134.049	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06623	134.049	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06730	134.0367	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.0328	GEN659010 4-G07_027IS_2 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06946	134.0255	AURORA - BROOKINGS 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.0209	TYNDALL - YANKON JCT 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.0198	GEN659194 1-NDPRAIRWND1W0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	134.0132	GEN587353 1-G16-050-GEN10.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.0116	GEN659366 3-WILTON 3 W0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.0074	GEN652460 4-GARRISON
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	134.0042	GEN652461 5-GARRISON
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	133.9969	ANSON - SPLIT ROCK 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	133.9968	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	133.9571	GEN300006 1-NEW MADRID UNIT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	133.9548	GEN652457 1-GARRISON
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	133.9548	GEN652458 2-GARRISON
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	133.9548	GEN652459 3-GARRISON
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06576	133.9487	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06697	133.9316	CHANARANBIE - FENTON 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06580	133.9236	PLEZIOZO1ARC
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06669	133.9218	STORLA - WOONSOCKET 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	133.8911	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06717	133.8734	GROTON - REDFIELD 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	133.8685	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	133.8611	GEN659403 1-NDSUNFLWR W0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06587	133.8273	BLOOMFIELD - GAVINS POINT 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06639	133.7116	AS KING - EAU CLAIRE 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	133.6682	GEN659116 1-SPIRIT MOUND UNIT1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	133.6	GEN590010 1-ERCOT EQUIVALENCE
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	133.5835	GEN600112 W-G287 NOB2G W0.5750
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	133.5591	GEN587053 1-G16-007-GEN10.6500
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	133.5565	GEN659117 2-SPIRIT MOUND UNIT2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	133.5343	PAHOJA - SIOUX FALLS 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	133.5272	GEN590011 2-ERCOT EQUIVALENCE
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06604	133.5143	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	133.4654	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	133.4454	CENTER 230/22.0KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06990	133.4436	FT THOMPSON - HURON 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06990	133.4436	FT THOMPSON - HURON 230KV CKT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06946	133.3354	AURORA - FLANDRU 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	133.3335	ANSON - SPLIT ROCK 115KV CKT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	133.3328	ANSON 115/17.5KV TRANSFORMER CKT 4
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06611	133.3168	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	133.218	GEN660016 1-B_H WIND 0.7000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06749	133.1519	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	133.1013	GEN600046 1-MECST
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06541	133.091	FT RANDAL - FT THOMPSON 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	133.0749	GEN600047 1-MECCT1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	133.0713	GEN659110 1-LELAND OLDS UNIT1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	133.0526	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06564	133.0502	RAUN - TEKAMAH 161KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	133.0446	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06583	133.0435	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06646	132.9874	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	132.9438	GEN587133 1-G16-017-GEN10.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	132.907	GEN659141 1-K10215A

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06541	132.8914	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06869	132.8619	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06562	132.8586	DIXONCO 230.00 - HOSKINS 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06573	132.8431	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	132.8354	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	132.8212	GEN600003 1-PRAIRIE ISLAND G1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07166	132.7188	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06730	132.7097	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	132.7076	GEN659353 1-DEERCREK CTG18.000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	132.6831	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06575	132.6721	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06598	132.6651	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06739	132.6613	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	132.6493	GEN659354 1-DEERCREK STG18.000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06598	132.6248	MN VALLEY TAP - PANTHER 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	132.6091	GEN615010 1-STANTON4
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	132.5996	GEN600125 2-FEP ST G 13.800
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	132.5879	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06543	132.5825	SIOUX CITY - TWIN CHURCH 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06574	132.5692	COOPER - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07412	132.5675	HANKINSON - WAHPETON 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	132.5203	GEN603185 1-FIBROMINN GENERATION
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07166	132.515	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	132.514	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	132.5022	GEN600013 3-BLACK DOG GEN 3
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06579	132.4976	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07166	132.4943	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	132.4785	GEN600130 W-G586 - CWN 10.6000
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	132.4686	GEN600131 W-G586 - CWN 20.6000
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06575	132.4426	COOPER - FAIRPORT 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	132.438	GEN652004 1-G13_001IS_3 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06860	132.3942	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06578	132.3813	DENISON - EXIRA 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06578	132.3741	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	132.3594	GEN600018 S-LS POWER STEAM
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	132.3576	GEN600050 1-FEP
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	132.301	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06629	132.2933	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	132.2314	GEN600012 2-BLACK DOG GEN 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	132.1342	GEN600056 W-BUFFALO RIDGE WIND GEN
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06577	132.123	COOPER - ST JOE 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06761	132.0456	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	132.0064	GEN600063 1-COLVILLE GEN 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	132.0064	GEN600064 2-COLVILLE GEN 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06578	131.9872	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.9377	GEN600014 4-BLACK DOG GEN 4
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06583	131.9324	DENISON - SIOUX CITY 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06653	131.9251	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	131.8847	GEN587583 1-J432-GEN1 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	131.8797	GEN587033 1-G16-004-GEN10.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	131.8638	GEN600006 1-AS KING
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.8581	GEN600011 5-BLACK DOG GEN 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.8566	GEN600071 10-RIVER SIDE
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.8552	GEN600070 9-RIVER SIDE
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06585	131.8525	MCLEOD - PANTHER 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.8516	GEN600065 7-HIGH BRIDGE
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.8516	GEN600066 8-HIGH BRIDGE
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.8384	GEN600043 7-BLUE LAKE5
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.8384	GEN600044 8-BLUE LAKE6
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.8281	GEN600007 7-RIVERSIDE GEN 7
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06761	131.821	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.8195	GEN600017 C-LS POWER CT
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.8146	GEN659290 1-EDGECOL
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	131.811	GEN587623 1-J493-GEN1 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06788	131.7943	PIPESTONE - SPLIT ROCK 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.7894	GEN 11143 1-J436GEN1 0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.7894	GEN 11153 1-J437GEN1 0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.7794	GEN659162 4-RED WLCK
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.7794	GEN659163 5-BLACK WDCK
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.7769	GEN659192 6-LYNN

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.7757	GEN587603 1-J488&J489GN10.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06741	131.7643	BYRON - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.7574	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.7431	GEN659273 2-GROTON SYNC COND
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.7431	GEN659294 1-WILTONCOL9
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.7383	GEN587663 1-H081-GEN1 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05601	131.7316	BIG STONE - BROWNS VALLEY 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06490	131.7289	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06579	131.716	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06579	131.7075	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06545	131.6609	BROOKINGS - WHITE 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.6463	GEN660001 2-ABERDEEN SIEBRECHT
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06761	131.5546	HENNING - INMANN 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.5508	GEN659270 1-WEST SW
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06490	131.5207	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.493	GEN562872 1-G15046_3 0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06579	131.4702	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06589	131.3941	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06536	131.3898	PAYNSVILLE - WILLMAR 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07646	131.3886	HELENA - SHEAS LK3 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.3706	GEN600067 9-HIGH BRIDGE
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06558	131.3528	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06601	131.3452	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06537	131.3218	GRANITE FALLS - WILLMAR 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06536	131.2896	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05601	131.2726	BROWNS VALLEY - HANKINSON 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.2599	GEN910006 1-G12_012IS_3 0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.2514	GEN652345 W-G07_023IS_2 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06564	131.1947	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.192	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.1904	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06608	131.1822	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.1389	GEN659272 2-GROTON 2G13.800
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06735	131.138	BYRON - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06459	131.0241	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.0058	GEN659411 1-CAMPBLCNTY W0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	131.0028	GEN659274 1-GROTON
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06630	130.9586	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	130.9331	GEN600078 W-YANKEE 3
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	130.9314	GEN 10648 1-G830_GEN 0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	130.9067	GEN600077 W-YANKEE 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	130.9067	GEN600099 W-YANKEE 4
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	130.9003	GEN600069 W-YANKEE 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.8673	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06617	130.853	AUDUBON - SHEYNNE 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	130.8313	GEN 11104 1-J262_GEN 0.6000
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	130.8313	GEN 11108 1-J263_GEN 0.6000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.8249	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.8083	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06599	130.8075	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06557	130.7962	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06357	130.7503	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06602	130.7329	FENTON - NOBLES 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06589	130.7262	MITCHELL - MITCHELL NW 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06711	130.7106	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06544	130.692	GRACEVT7 - ORTONVILLE 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06569	130.6877	BIG STONE - HIGHWAY 12 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07799	130.669	FIELD SOUTH - WILMARTH 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.6505	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.6442	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.6442	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06543	130.6376	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.6194	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	130.6136	GEN659194 1-NDPRAIRWND1W0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	130.6129	GEN659010 4-G07_027IS_2 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07799	130.6075	FIELD NORTH - FIELD SOUTH 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	130.5997	GEN659366 3-WILTON 3 W0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07799	130.598	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	130.5952	GEN652461 5-GARRISON
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	130.5947	GEN652460 4-GARRISON

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07061	130.5863	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07061	130.5863	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06685	130.552	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	130.5329	GEN652457 1-GARRISON
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	130.5329	GEN652458 2-GARRISON
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	130.5329	GEN652459 3-GARRISON
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06598	130.5308	FENTON - NOBLES 115KV CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06258	130.4753	FT THOMPSON - LETCHER 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06569	130.4652	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	130.4406	GEN659403 1-NDSUNFLWR W0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.3584	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.353	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06631	130.3452	AUDUBON - HUBBARD 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06603	130.3309	CANBY - GRANITE FALLS 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06483	130.3265	GRANT - MITCHELL 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06709	130.2948	FARGO - SHEYNNE 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.2732	MEC345 345/19.5KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.2657	MEC345 - WILMARTH 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.2453	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	130.2259	GEN587053 1-G16-007-GEN10.6500
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06544	130.2202	GRACEVT7 - MORRIS 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.217	NOBLES 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.1939	GEN659111 2-LELAND OLDS UNIT2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.1833	MEC115 - WILMARTH 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.1832	MEC115 115/15.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06600	130.1531	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.1	GEN600005 1-MONTICELLO
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06609	130.0917	KARLSTAD - WINGER 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06600	130.0915	ELM CREEK - MONTICELLO 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07531	130.0728	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.0173	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	130.0115	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.9976	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06577	129.8981	AIRTECH - FEP TAP 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.8828	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.8708	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06577	129.8687	AIRTECH - WEST FARIBAULT 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.858	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.8549	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06577	129.8523	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06561	129.8255	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06561	129.8255	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.8238	GENOA 161 161/24.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06599	129.823	P13:230-345:NPPD:STEGALL3:KV3A
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06588	129.8137	FENTON 115/69KV TRANSFORMER CKT 5
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.8126	488489510526345.00 - J526 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.8126	J526 345.00 345/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06483	129.796	CHERRY CREEK - GRANT 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.759	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.759	GEN659107 2-ANTELOPE VALLEY UNIT2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06585	129.7533	FORT RIDGELY - FRANKLIN 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	129.753	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06206	129.7497	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06667	129.7393	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06576	129.7309	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.7278	AS KING 345/20.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.6792	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06570	129.6622	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06570	129.6622	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06576	129.645	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06553	129.6326	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06582	129.6272	BLUE LAKE - MCLEOD 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06576	129.6239	LAWERENCE CREEK - SHAEFER 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06583	129.6223	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06665	129.6106	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06565	129.5918	PAYNESVILLE - WAKEFIELD 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06609	129.5798	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	129.5792	GEN659453 1-GI1414GEN W0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06739	129.5624	MONTICELLO - WAITE PARK 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06596	129.5569	ELM CREEK - PARKERS LAKE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06565	129.548	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06576	129.5343	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	129.5304	GEN659110 1-LELAND OLDS UNIT1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06579	129.5225	LYON COUNTY 115/69KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.5148	NOBLES 115/34.5KV TRANSFORMER CKT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06582	129.5144	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.5107	FENTON 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06576	129.5084	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06563	129.5075	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06568	129.5017	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06558	129.4964	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06585	129.4943	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06576	129.494	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06336	129.4928	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06336	129.4928	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06545	129.4909	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06713	129.4905	HIGHLND 3 345.00 - RAUN 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06560	129.4817	P12:115:UMZW:# 172 #: WI IN SD.
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06636	129.4808	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06619	129.476	LYON COUNTY (8779072) 345/115/34.5KV TRANSFORMER CKT 9
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.4692	LANGDON - LANGWIN7 115.00 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.4619	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	129.4571	GEN587133 1-G16-017-GEN10.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06558	129.4519	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06584	129.4498	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06713	129.4473	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06712	129.4341	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.4334	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.4248	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06589	129.4191	ARNOLD - HAZLETON 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06571	129.4133	ARROWHEAD - FORBES 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06633	129.3746	KOSSUTH 3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06585	129.3742	FRANKLIN - REDWOOD FALLS 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06590	129.3692	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.3612	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	129.3477	GEN659141 1-K10215A
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06575	129.3396	NOBLES () 345/115/34.5KV TRANSFORMER CKT 9
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06574	129.3364	NOBLES () 345/115/34.5KV TRANSFORMER CKT 10
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06599	129.2964	BLUE LAKE - HAMPTON CORNER 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.2918	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06724	129.2786	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.2774	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.2701	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06570	129.2658	AS KING - WILLOW RIVER 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06571	129.243	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06575	129.2389	NORTH ROCHESTER (NROC TR) 345/161/34.5KV TRANSFORMER CKT 9
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.2328	GEN 11123 1-G736-GEN1 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.2289	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.2202	GEN 11133 1-J442-GEN1 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	129.2093	CEDRSAUK B4 345.00 - EDG BUS2 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	129.2033	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06601	129.1951	WILMARTH () 161/115/13.8KV TRANSFORMER CKT 6
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06560	129.1945	GRE-CHUBLAK3345.00 - HAMPTON CORNER 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	129.187	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	129.1851	GLENCOE MUNI - MCLEOD 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.1629	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06665	129.1068	BUFFALO RIDGE - YANKEE 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06551	129.0887	HELENA - SCOTTCO3 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	129.0509	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	129.0128	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	129.0047	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06599	128.8813	BLAIR - GRANITE FALLS 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	128.6554	GEN659125 1-COVEY
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	128.6357	GEN587593 1-J460-GEN1 0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	128.6302	GEN659353 1-DEERCREK CTG18.000
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	128.6274	GEN659354 1-DEERCREK STG18.000
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06380	128.5968	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06380	128.5968	P12:230:UMZW:# 158 #: MH IN ND.
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06508	128.5903	HAZEL CREEK - LYON COUNTY 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06584	128.5542	CENTER - COYOTE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06617	128.5394	BREWSTER - HERON LAKE 5 SPLIT INTO HRN EAST ELK1 161KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06617	128.448	BREWSTER - ELK 161KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06768	128.4458	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06720	128.4012	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06566	128.3949	SUB 1226 - TEKAMAH 161KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06559	128.3771	RAUN - TEKAMAH 161KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06508	128.3747	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06508	128.354	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06571	128.3501	CARROLL COUNTY - VICTORY 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	128.3463	GEN587583 1-J432-GEN1 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	128.3298	NEW MADRID 161/22.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	128.317	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06986	128.3116	FT THOMPSON - HURON 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06986	128.3116	FT THOMPSON - HURON 230KV CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	128.3108	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	128.3093	GEN600006 1-AS KING
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06570	128.3016	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06577	128.2863	BROOKING COUNTY - YANKEE 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06577	128.2863	BROOKING COUNTY - YANKEE 115KV CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	128.2785	GEN587623 1-J493-GEN1 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	128.2657	GRE-STNYCRK7115.00 (STNYCR115-69) 115/69/12.8KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06578	128.2575	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	128.22	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06611	128.214	HILLS - MONTEZUMA 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06575	128.2056	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06579	128.1988	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06569	128.1962	COOPER - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06578	128.1885	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06570	128.1076	COOPER - FAIRPORT 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06570	128.1006	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06568	128.0328	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06870	128.0075	BIG STONE - BLAIR 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	127.9944	DONALDSON - DONALDSON PIPE 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	127.9772	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06743	127.9576	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	127.9351	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	127.9317	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	127.9277	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	127.8931	H081 345.00 - H081-TAP 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	127.8931	H081 345.00 345/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06566	127.865	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	127.8356	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06579	127.8243	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	127.7965	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06546	127.7534	GRIMES - LEHIGH 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	127.7402	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06617	127.6853	ELK - MAGNOLIA 5 161KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06571	127.6558	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	127.6454	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	127.6443	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	127.5738	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	127.5609	LADISH 115/13.2KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06546	127.4551	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06672	127.4344	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06702	127.4281	CHANARANBIE - FENTON 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	127.4069	CENTER 230/22.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06623	127.4035	BONDURANT - MONTEZUMA 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06722	127.3363	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	127.2611	ANSON - SPLIT ROCK 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	127.2609	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06988	127.2295	AURORA - BROOKINGS 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	127.1891	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06602	127.0623	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06623	127.0343	DAN JUHL - SPLIT ROCK 161KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06623	127.0264	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	126.9894	ANSON 115/17.5KV TRANSFORMER CKT 4
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	126.9855	ANSON - SPLIT ROCK 115KV CKT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06617	126.9528	LEHIGH - RAUN 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06623	126.9248	DAN JUHL - MAGNOLIA 5 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06646	126.8753	AS KING - EAU CLAIRE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	126.873	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	126.8649	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	126.8034	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	126.7595	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	126.6999	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06546	126.6145	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07221	126.6008	CARPENTER - WATERTOWN 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06988	126.5967	AURORA - FLANDRU 115KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	126.5813	GEN615001 1-COAL CREEK
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07221	126.5808	HURON - WATERTOWN 230KV CKT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	126.5515	GEN615002 2-COAL CREEK
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	126.5502	GEN659111 2-LELAND OLDS UNIT2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	126.5169	GEN587653 1-J526-GEN1 0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06754	126.4953	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06546	126.4473	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06603	126.3941	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06603	126.366	MN VALLEY TAP - PANTHER 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	126.3463	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06865	126.2234	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06722	126.199	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	126.174	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	126.1532	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	126.1471	GEN659103 1-ANTELOPE VALLEY UNIT1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	126.1471	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07800	126.1256	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06874	126.1117	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06734	126.0809	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06766	125.7989	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	125.7528	GEN587633 1-J510-GEN1 18.000
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05605	125.7239	BIG STONE - BROWNS VALLEY 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06637	125.6999	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06495	125.6091	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06563	125.6052	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06590	125.5723	MCLEOD - PANTHER 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	125.5456	GEN 11123 1-G736-GEN1 0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06766	125.5436	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06794	125.5387	PIPESTONE - SPLIT ROCK 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	125.5325	GEN 11133 1-J442-GEN1 0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	125.5016	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06560	125.4406	BROOKINGS - WHITE 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06495	125.3914	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	125.3709	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	125.3638	YANKEE 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06766	125.2738	HENNING - INMANN 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06541	125.2578	PAYNSVILLE - WILLMAR 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06657	125.2364	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06542	125.195	GRANITE FALLS - WILLMAR 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06466	125.1885	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06608	125.185	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06563	125.173	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	125.1725	GEN587593 1-J460-GEN1 0.6900
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	125.1575	BROOKING COUNTY - J432 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	125.1575	J432 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05605	125.1452	BROWNS VALLEY - HANKINSON 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06541	125.1387	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06738	125.0232	BYRON - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06594	125.0086	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	124.9911	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	124.9462	GEN659125 1-COVEY
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	124.9439	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06054	124.9312	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	124.8506	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06604	124.7684	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06622	124.6797	AUDUBON - SHEYNNE 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06690	124.6644	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06563	124.6336	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06512	124.5815	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06574	124.5792	BIG STONE - HIGHWAY 12 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	124.5695	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06733	124.5402	BYRON - PLEASANT VALLEY 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06616	124.5369	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	124.5353	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06549	124.5154	GRACEVT7 - ORTONVILLE 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06635	124.5076	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06548	124.4988	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06584	124.4784	BURR - CANBY 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06607	124.4677	FENTON - NOBLES 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07066	124.4527	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07066	124.4527	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06363	124.4429	FT THOMPSON - WESSINGTON 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06717	124.3437	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06594	124.295	MITCHELL - MITCHELL NW 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06608	124.2803	CANBY - GRANITE FALLS 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06574	124.2715	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06603	124.2467	FENTON - NOBLES 115KV CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	124.2234	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	124.2234	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	124.2108	BURR - J493 115.00 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	124.2108	J493 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	124.137	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	124.1189	NOBLES 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06715	124.1153	FARGO - SHEYNNE 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06636	124.085	AUDUBON - HUBBARD 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	124.0798	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	124.0774	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	124.0641	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	124.0553	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.9608	NOBLES 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06489	123.9583	GRANT - MITCHELL 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.943	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06549	123.9373	GRACEVT7 - MORRIS 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.9303	488489510526345.00 - J526 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.9303	J526 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.8783	MEC345 345/19.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.8729	MEC345 - WILMARTH 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.7892	MEC115 - WILMARTH 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.7891	MEC115 115/15.0KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06605	123.7592	ELM CREEK - MONTICELLO 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06614	123.7338	KARLSTAD - WINGER 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.7234	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.715	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06606	123.7055	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06718	123.6373	HIGHLND 3 345.00 - RAUN 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.6145	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06564	123.5434	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.5264	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.5175	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06590	123.5054	FORT RIDGELY - FRANKLIN 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06582	123.5027	AIRTECH - FEP TAP 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06582	123.4769	AIRTECH - WEST FARIBAULT 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.4566	GENOA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06582	123.4547	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06671	123.4536	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06593	123.4524	FENTON 115/69KV TRANSFORMER CKT 5
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06489	123.4291	CHERRY CREEK - GRANT 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.3892	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.3805	AS KING 345/20.0KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06558	123.3728	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.3725	LANGDON - LANGWIN7 115.00 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06582	123.3451	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.34	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06587	123.3375	BLUE LAKE - MCLEOD 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.3357	FENTON 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06587	123.3198	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06570	123.3119	PAYNESVILLE - WAKEFIELD 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06604	123.302	P13:230-345:NPPD:STEGALL3:KV3A
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06582	123.2655	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06589	123.2571	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06669	123.2489	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06582	123.2463	LAWERENCE CREEK - SHAEFER 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06568	123.2421	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06570	123.2405	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06624	123.2389	LYON COUNTY (8779072) 345/115/34.5KV TRANSFORMER CKT 9
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06590	123.2366	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06744	123.2312	MONTICELLO - WAITE PARK 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06588	123.231	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06642	123.1789	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06565	123.1656	P12:115:UMZW:# 172 #: WI IN SD.
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06582	123.1653	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06601	123.1599	ELM CREEK - PARKERS LAKE 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06577	123.1554	ARROWHEAD - FORBES 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06204	123.1502	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06582	123.1413	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06584	123.1305	LYON COUNTY 115/69KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.1293	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06582	123.1274	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06717	123.1228	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06590	123.1204	FRANKLIN - REDWOOD FALLS 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06596	123.0942	ARNOLD - HAZLETON 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06580	123.0916	NOBLES () 345/115/34.5KV TRANSFORMER CKT 9
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.0909	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06580	123.0878	NOBLES () 345/115/34.5KV TRANSFORMER CKT 10
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06342	123.0871	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06342	123.0841	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06719	123.0671	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06595	123.0667	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.0654	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	123.0128	GRAND MEADOW - PLEASANT VALLEY 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06576	123.002	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06577	122.9809	GLENCOE MUNI - MCLEOD 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06556	122.9638	HELENA - SCOTTCO3 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	122.9548	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06730	122.9509	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06576	122.9392	CEDRSAUK B4 345.00 - EDG BUS2 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06574	122.9349	BLUE LAKE (7000550) 345/115/13.8KV TRANSFORMER CKT 9
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	122.9333	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	122.9296	FENTON 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	122.9255	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06576	122.9184	AS KING - WILLOW RIVER 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	122.9122	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06565	122.9057	GRE-CHUBLAK3345.00 - HAMPTON CORNER 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	122.8976	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	122.8673	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	122.8673	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	122.6798	GEN587653 1-J526-GEN1 0.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	122.6533	RUNNING 230/118KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	122.3537	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06589	122.3482	CENTER - COYOTE 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06513	122.3337	HAZEL CREEK - LYON COUNTY 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06622	122.2406	BREWSTER - ELK 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06773	122.2222	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06575	122.1949	NEAL SOUTH - RAUN 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06577	122.1405	BROOKING COUNTY () 345/115/13.8KV TRANSFORMER CKT 10
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06578	122.1174	BROOKING COUNTY () 345/115/34.5KV TRANSFORMER CKT 9
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06513	122.1147	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06513	122.0938	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06577	122.0568	POCAHONTAS COUNTY - POMEROY 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	122.0413	P13:115-230:NPPD:NUCOR-3
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06576	122.0392	CARROLL COUNTY - VICTORY 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06564	122.0324	RAUN - TEKAMAH 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06575	122.0254	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06287	121.97	SPLIT ROCK (SPLT 11) 345/115/13.8KV TRANSFORMER CKT 11
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.9679	GRE-STNYCRK7115.00 (STNYCR115-69) 115/69/12.8KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06439	121.9638	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06583	121.9568	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06275	121.9511	SPLIT ROCK (SPLT 10) 345/115/13.8KV TRANSFORMER CKT 10
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06583	121.9386	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06990	121.9376	FT THOMPSON - HURON 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06990	121.9376	FT THOMPSON - HURON 230KV CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.9246	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06584	121.9036	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06575	121.8897	COOPER - FAIRPORT 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06582	121.8886	BROOKING COUNTY - YANKEE 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06582	121.8886	BROOKING COUNTY - YANKEE 115KV CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06574	121.8693	COOPER - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06576	121.8632	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.8494	GEN587633 1-J510-GEN1 18.000
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.8357	WINGER (WINGER) 115/69/41.6KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06579	121.8188	EDEN 345 345.00 - HCKRYCK3 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06581	121.7925	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06617	121.7844	HILLS - MONTEZUMA 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.778	THIEF RIVER FALLS (TRF) 115/69/13.2KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06573	121.7742	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06714	121.7552	ELLSBORO - LAKE YANKTON 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.7508	DONALDSON - DONALDSON PIPE 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06714	121.7291	CHANARANBIE - ELLSBORO 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06576	121.7195	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.6396	FRONTER4 230.00 (FRONTIER) 230/69/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.595	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.5673	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.5661	H081 345.00 - H081-TAP 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.5661	H081 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07532	121.5508	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.5112	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.4708	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.4617	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.453	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06622	121.4425	ELK - MAGNOLIA 5 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.4267	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06551	121.4084	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06584	121.3156	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.2834	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.2831	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.2821	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06718	121.27	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06577	121.2221	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.2078	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07800	121.1569	FIELD NORTH - FIELD SOUTH 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07800	121.1452	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07800	121.144	FIELD SOUTH - WILMARTH 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	121.1267	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06628	121.1262	BONDURANT - MONTEZUMA 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06551	121.1221	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06628	120.8101	DAN JUHL - SPLIT ROCK 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06628	120.8095	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06628	120.694	DAN JUHL - MAGNOLIA 5 161KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	120.6626	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06623	120.6362	LEHIGH - RAUN 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06608	120.564	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	120.5175	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07225	120.3513	CARPENTER - WATERTOWN 230KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07225	120.329	HURON - WATERTOWN 230KV CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	120.0737	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	119.2398	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	119.0905	YANKEE 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	118.906	BROOKING COUNTY - J432 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	118.906	J432 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06518	118.367	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	118.0931	BASE CASE
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06571	117.8398	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	117.6507	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	116.6625	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	116.6625	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05929	114.9465	HANLON - STORLA 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05942	114.8408	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06140	114.1623	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06140	114.0325	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06266	113.9642	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06266	113.829	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	113.8285	GEN635214 4-NEAL UNIT 4

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06266	113.8274	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06567	113.1663	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06515	113.0842	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	112.9598	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07163	112.6621	NOBLES - SPLIT ROCK 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06044	112.51	STORLA - WESSINGTON 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	112.4951	GEN635024 4-WALTER SCOTT UNIT 4
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	112.4081	GEN635213 3-NEAL UNIT 3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05953	112.2794	FT THOMPSON - LETCHER 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05953	112.2794	FT THOMPSON - LETCHER 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	111.8115	GEN635023 3-WALTER SCOTT UNIT 3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05984	111.728	LETCHER - SIOUX FALLS 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06584	111.7197	AURORA - BROOKINGS 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06584	111.7197	AURORA - BROOKINGS 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06512	111.1851	BIG STONE - BLAIR 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06512	111.1851	BIG STONE - BLAIR 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06248	111.1134	BLAIR - GRANITE FALLS 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06248	111.1134	BLAIR - GRANITE FALLS 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06584	111.0891	AURORA - FLANDRU 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06584	111.0891	AURORA - FLANDRU 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	110.9475	GEN336821 1-GRAND GULF UNIT
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06024	110.7449	HANLON - SIOUX FALLS 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	110.6995	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06266	110.6151	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	110.5886	GEN344225 1-1CAL G1 25.000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06187	110.3178	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06049	110.253	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06049	110.253	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06251	110.1137	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06266	110.1135	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06266	110.1096	2810X2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06163	110.0921	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06187	110.0641	BROOKINGS - WHITE 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06187	110.0641	BROOKINGS - WHITE 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06266	109.9494	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	109.9252	GEN336153 1-WATERFORD UNIT#3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06163	109.9127	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06163	109.8955	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	109.8852	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05813	109.8759	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06163	109.864	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06163	109.8598	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05813	109.8197	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06087	109.7862	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	109.6817	GEN640009 1-COOPER NUCLEAR STATION
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	109.6287	GEN335831 1-RIVERBEND UNIT#1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	109.5812	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06223	109.5704	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06223	109.5704	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06223	109.5453	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06223	109.5453	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	109.4996	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06017	109.4577	FT RANDAL - UTICA JCT 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06223	109.3511	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06146	109.2519	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06146	109.2519	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	109.2309	GEN587153 1-G16-021-GEN10.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	109.1563	GEN337653 1-WHITE BLUFF UNIT #2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06201	109.1392	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06146	109.102	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06146	109.102	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06191	109.0254	GRANITE FALLS - WILLMAR 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06191	109.0254	GRANITE FALLS - WILLMAR 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.9941	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.9817	GEN337652 1-WHITE BLUFF UNIT #1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.9753	GEN338146 1-INDEPENDENCE UNIT #2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.9731	GEN338143 1-INDEPENDENCE UNIT #1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06167	108.9554	GRAND ISLAND - MCCOOL 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.9521	GEN501801 1-DOLET HILLS UNIT1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05702	108.9206	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06248	108.9112	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06248	108.9112	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.8421	GEN563232 1-G15089_3 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06193	108.818	G15088_T 345.00 - MOORE 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.7762	GEN344897 4-1LAB G4 20.000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.7757	GEN344894 1-1LAB G1 20.000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.7754	GEN344896 3-1LAB G3 20.000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06324	108.7514	BISON - HETINGER 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.7371	GEN501813 1-RODEMACHER UNIT 3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.7326	GEN344895 2-1LAB G2 20.000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06678	108.7046	GLENHAM - WHITLOK 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.7004	GEN345670 1-1RUSH G1 18.000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.7001	GEN345671 2-1RUSH G2 18.000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06678	108.6621	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06678	108.6621	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06172	108.6424	MCCOOL - MOORE 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05338	108.6349	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.629	GEN645012 2-NEBRASKA CITY 2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06069	108.6263	UTICA JCT - VFODNES 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05338	108.6246	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06678	108.6143	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06678	108.6143	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06678	108.6139	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06572	108.6128	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.5996	GEN335206 1-NELSON UNIT 6
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06248	108.5777	MITCHELL - MITCHELL NW 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06248	108.5777	MITCHELL - MITCHELL NW 115KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07176	108.5693	NOBLES - SPLIT ROCK 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06044	108.5641	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06044	108.5641	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06306	108.5578	NUNDRWD - WAYSIDE 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.5546	GEN645011 1-NEBRASKA CITY 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06694	108.552	GLENHAM - L3 HAWDON 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06197	108.5516	GRACEVT7 - MORRIS 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06145	108.5354	GRANT - MITCHELL 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06207	108.5303	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.5156	GEN336252 1-NINEMILE POINT UNIT#5
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.5142	GEN636641 1-LOUISA UNIT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06096	108.5035	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06678	108.4979	OAHE - SULLEY BUTTE 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.488	GEN501812 1-RODEMACHER UNIT 2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.4867	GEN600149 W-J183 PROSEW10.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06096	108.4783	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.4735	GEN542962 2-IATAN UNIT #2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.4695	GEN600150 W-J183 PROSEW20.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.4627	GEN336831 1-BAXTER WILSON SES
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06096	108.4592	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06234	108.4373	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06255	108.4276	CANBY - GRANITE FALLS 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06255	108.4276	CANBY - GRANITE FALLS 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.4166	GEN337041 1-GERALD ANDRUS
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05876	108.3906	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.3644	GEN336251 1-NINEMILE POINT UNIT#4
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06189	108.3199	RASMUSN - UTICA JCT 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.3023	GEN334440 1-SABINE UNIT 4
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.2707	GEN562003 1-G11_027_3 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.2664	GEN563222 1-G15088_3 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06324	108.2539	BISON - MAURINE 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.2263	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06189	108.2233	RASMUSN - SIOUX CITY 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.217	GEN336191 1-LITTLE GYPSY UNIT#3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06315	108.1672	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.1585	GEN335204 1-NELSON UNIT 4
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.1421	GEN336801 1-BAXTER WILSON UNIT #1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.1334	GEN335614 1-WILLOW GLENN UNIT#4
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.1271	GEN336464 1-MICHOUD UNIT #3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.1121	GEN303007 1-1BC2 U2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06007	108.1107	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.1071	GEN303006 1-1BC2 U1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.1039	GEN334441 1-SABINE UNIT 5

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06332	108.0958	JAMES TOWN - PICKERT 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.0772	GEN542957 1-IATAN UNIT #1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06212	108.0668	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06584	108.0664	FLANDRU - SIOUX FALLS 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06312	108.0628	HURON - WOONSOCKET 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.0605	GEN336170 1-GULF OXY U4
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.053	GEN303008 1-1BC2 U3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06212	108.0509	MISSION - ST FRANCIS 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06087	108.0476	SIOUX FALLS - VFODNES 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06193	108.0422	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06157	108.0328	SIDNEY - STEGALL 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06068	108.0299	MANNING - SPIRIT MOUND 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.0293	GEN338388 1-1PLUM PT U1 23.000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	108.0169	GEN334433 1-SABINE UNIT 3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06201	108.012	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06351	108.004	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06212	108	HARMONY - ST FRANCIS 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06231	107.9901	MENNO JCT - TRIPP JCT 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.9823	GEN501811 1-RODEMACHER UNIT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.9663	GEN336222 1-LITTLE GYPSY UNIT#2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06361	107.9619	FARGO - SHEYNNE 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06212	107.9594	HARMONY - VALENTINE 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06230	107.9592	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06262	107.9433	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06218	107.9368	WINNER - WITTEN 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06332	107.9365	GRAND FORKS - PICKERT 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06231	107.9364	MENNO JCT - UTICA 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06136	107.9246	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.9242	GEN542955 1-LACYGNE UNIT #1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.9153	GEN345765 H-1SIOUX 2 18.000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.9089	GEN336152 1-WATERFORD UNIT#2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.9082	GEN336151 1-WATERFORD UNIT#1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06351	107.9061	GROTON - REDFIELD 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.9037	GEN334071 1-LEWIS CREEK 2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06362	107.9001	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06362	107.9001	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8997	GEN334070 1-LEWIS CREEK 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06312	107.8947	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06068	107.8907	BERSFORD - MANNING 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8854	GEN337766 1-TRACTEBEL UNIT S1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8671	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8651	GEN501910 1-ACADIA UNIT ST1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8603	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8602	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8581	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8528	GEN345756 H-1SIOUX 1 18.000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8509	GEN542956 2-LACYGNE UNIT #2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8474	GEN659116 1-SPIRIT MOUND UNIT1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8474	GEN659117 2-SPIRIT MOUND UNIT2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8466	GEN629992 1-G164_WF9 34.500
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8291	GEN345832 1-1TS G1 13.800
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8288	GEN345841 2-1TS G2 13.800
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8275	GEN542951 5-HAWTHORN UNIT #5
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8209	GEN562517 1-G14_021_S2 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8063	GEN337764 1-TRACTEBEL UNIT C1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.8063	GEN337765 1-TRACTEBEL UNIT C2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06218	107.8054	GREGORY - WINNER 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.7994	GEN635407 W-SHD415 W 0.6000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.7994	GEN635408 W-SHD425 W 0.6000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.7994	GEN635409 W-SHD435 W 0.6000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.787	GEN336242 1-1NMIL ST1 18.000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.7694	GEN501823 1-TECHE UNIT 3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.7539	GEN334030 1-FRONTIER UNIT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.7537	GEN334031 1-FRONTIER UNIT 2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.7469	GEN587353 1-G16-050-GEN10.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.7443	GEN660016 1-B_H WIND 0.7000
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06517	107.1058	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06085	107.0445	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	107.0119	GEN600046 1-MECST
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06222	106.966	CARROLL COUNTY - DRAGER5 161.00 161KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06233	106.9569	STORLA (KV1A) 230/115/13.2KV TRANSFORMER CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.9563	P13:115-230:NPPD:NUCOR-3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.9506	GEN681540 5-ALMA UNIT 5
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.9423	GEN600047 1-MECCT1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.9187	GEN672383 1-MLTC 1G 13.800
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.9151	GEN600056 W-BUFFALO RIDGE WIND GEN
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06221	106.8993	COOPER - SUB 3458 NEB CTY 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06221	106.8993	COOPER - SUB 3458 NEB CTY 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.8876	GEN672336 7-E B CAMPBELL GENERATOR 7
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.8876	GEN672337 8-E B CAMPBELL GENERATOR 8
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.8868	GEN563302 1-G15096_3 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.8791	GEN672382 1-MEADOW LAKE GENERATOR 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06230	106.8734	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06093	106.8667	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.8633	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.8444	GEN652004 1-G13_001IS_3 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.84	GEN672396 1-YHPS 1G 13.800
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.84	GEN672397 2-YHPS 2G 13.800
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.8373	GEN600130 W-G586 - CWN 10.6000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.8348	GEN600131 W-G586 - CWN 20.6000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06225	106.8226	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06828	106.8155	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.8145	LAKOTA 115/69KV TRANSFORMER CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.8103	GEN659289 1-DAYCNTYWND W0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.8089	GEN563312 1-G15097_3 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.8082	GEN659031 1-G12_014IS_4 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06259	106.8045	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06222	106.7919	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.7886	GEN652410 3-FT PECK
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.7883	GEN620115 1-HRDLKGEN 0.6000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.7863	GEN652559 1-OAHE
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.7762	GEN672378 1-ERMINE GENERATOR 4
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.7762	GEN672379 2-ERMINE2X 13.800
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.77	GEN600043 7-BLUE LAKE5
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.7674	GEN600125 2-FEP ST G 13.800
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06222	106.7671	COOPER - FAIRPORT 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.7665	GEN672371 2-COTEAU CREEK GENERATOR 2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.7664	GEN672372 3-COTEAU CREEK GENERATOR 3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.7663	GEN672370 1-COTEAU CREEK GENERATOR 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.7652	GEN620857 1-LKPRSTN9 41.600
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.7462	GEN672369 3-MERIDIAN GENERATOR 3 ST
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.7385	GEN615032 2-PLEASANT VALLEY
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.7364	GEN652414 4-FT PECK
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.7364	GEN652415 5-FT PECK
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.7282	GEN672314 1-TNTLLN1X 13.800
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.7282	GEN672315 2-TNTLLN2X 13.800
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06223	106.7165	COPSTJCPFRSJ
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06223	106.7165	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06223	106.7165	STMDSJFAFACO
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06580	106.7124	FT THOMPSON - HURON 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06580	106.7124	FT THOMPSON - HURON 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06580	106.7124	FT THOMPSON - HURON 230KV CKT 2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06580	106.7124	FT THOMPSON - HURON 230KV CKT 2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06229	106.7109	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06229	106.7109	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.6999	GEN652353 2-GR PRAIRIEG 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.6935	GEN620285 1-SOLWAY
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.6827	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.6705	GEN600013 3-BLACK DOG GEN 3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06225	106.6558	DENISON - EXIRA 161KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06225	106.6551	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.647	GEN652556 2-OAHE
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.6467	GEN652558 6-OAHE
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.6398	GEN652557 5-OAHE
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.6316	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.6205	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.6009	GEN672384 1-CENTENNIAL WINDFARM
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.5851	GEN659162 4-RED WLCK
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.5851	GEN659163 5-BLACK WDCK
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.5845	GEN659192 6-LYNN

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.5597	GEN660001 2-ABERDEEN SIEBRECHT
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.5578	GEN659273 2-GROTON SYNC COND
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.5578	GEN659294 1-WILTONCOL9
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.5429	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.533	GEN657600 1-L1GEN3 9 0.5750
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.533	GEN659270 1-WEST SW
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.5229	H081 345.00 - H081-TAP 345.00 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.52	GEN600018 S-LS POWER STEAM
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06173	106.5064	HOSKINS - SHELL CREEK 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.4826	GEN659290 1-EDGECOL
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.4732	GEN657964 1-ASH2GEN9 0.5750
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06225	106.4687	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.4654	GEN603185 1-FIBROMINN GENERATION
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.4641	GEN672358 1-CHAPLN1W 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06220	106.4555	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06224	106.4389	COOPER - ST JOE 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.4381	GEN587603 1-J488&J489GN10.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.4351	GEN620323 2-HOOT LAKE 2 GEN
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.4335	GEN681522 3-GENOA 3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.423	GEN672347 1-CORY COGEN GENERATOR 1 GT1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.423	GEN672348 2-CORY COGEN GENERATOR 2 GT2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.4173	GEN600050 1-FEP
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.383	GEN672352 3-NIPAWIN GENERATOR 3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.3829	GEN672350 1-NIPAWIN GENERATOR 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.3829	GEN672351 2-NIPAWIN GENERATOR 2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.3745	GEN672367 1-MERIDIAN GENERATOR 1 GT1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.3745	GEN672368 2-MERIDIAN GENERATOR 2 GT2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.3687	GEN 11143 1-J436GEN1 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.3687	GEN 11153 1-J437GEN1 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.3561	GEN562872 1-G15046_3 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.3462	GEN600012 2-BLACK DOG GEN 2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.3125	GEN672349 3-CORY COGEN GENERATOR 3 ST
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.2982	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.2981	GEN672339 16-QE 16G 13.800
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.2155	GEN910006 1-G12_012IS_3 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.2139	GEN672393 2-NBECST2G 13.800
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.1898	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.1758	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.1639	GEN659411 1-CAMPBLCNTY W0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.1632	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06225	106.1483	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06225	106.1439	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.0819	GEN587663 1-H081-GEN1 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	106.0646	GEN620324 3-HOOT LAKE 3 GEN
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06225	106.0376	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.9905	GEN600014 4-BLACK DOG GEN 4
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.9821	GEN600065 7-HIGH BRIDGE
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.9821	GEN600066 8-HIGH BRIDGE
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06229	105.9794	DENISON - SIOUX CITY 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.9645	GEN652345 W-G07_023IS_2 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.956	GEN 10648 1-G830_GEN 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.9543	GEN657985 1-ASH1GEN9 0.5750
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.95	GEN600071 10-RIVER SIDE
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.9498	GEN600070 9-RIVER SIDE
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.9354	GEN600011 5-BLACK DOG GEN 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.93	GEN 11104 1-J262_GEN 0.6000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.93	GEN 11108 1-J263_GEN 0.6000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.9277	GEN600007 7-RIVERSIDE GEN 7
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.9141	GEN659272 2-GROTON 2G13.800
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.9026	GEN659274 1-GROTON
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.9022	GEN600017 C-LS POWER CT
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.8459	GEN615015 1-GRE-SPRITWDG13.200
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.8451	GEN652460 4-GARRISON
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.8451	GEN652461 5-GARRISON
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.8168	GEN652459 3-GARRISON
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.8167	GEN652457 1-GARRISON
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.8167	GEN652458 2-GARRISON
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.7738	GEN659010 4-G07_027IS_2 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.7575	GEN659366 3-WILTON 3 W0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.7253	GEN615052 1-CAMBRIDGE GENERATING STATION

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.719	GEN659194 1-NDPRAIRWND1W0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.663	GEN657705 X-DRAYTON
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.6524	GEN659403 1-NDSUNFLWR W0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06826	105.5973	CARPENTER - WATERTOWN 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06826	105.5973	CARPENTER - WATERTOWN 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06220	105.5857	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.5851	GEN600077 W-YANKEE 2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.5851	GEN600099 W-YANKEE 4
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.5789	GEN600078 W-YANKEE 3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.5583	GEN600069 W-YANKEE 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06826	105.5269	HURON - WATERTOWN 230KV CKT 2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06826	105.5269	HURON - WATERTOWN 230KV CKT 2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.4677	GEN659110 1-LELAND OLDS UNIT1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.4284	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.4284	GEN672304 4-BOUNDARY DAM GENERATOR 4
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.4284	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.4104	GEN587133 1-G16-017-GEN10.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.4102	GEN600067 9-HIGH BRIDGE
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.3372	GEN615021 1-GRE-ER 14G 16.000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06220	105.2933	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.2856	GEN681542 6-JP MADGETT
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.2605	GEN672392 1-NBECGT1G 18.000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.2435	GEN587053 1-G16-007-GEN10.6500
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06826	105.1867	CARPENTER - HURON 230KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	105.0891	GEN659453 1-GI1414GEN W0.6900
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03814	104.9226	BASE CASE
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03814	104.9219	BASE CASE
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	104.8391	GEN659141 1-K10215A
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	104.6228	GEN659407 1-ANTELPHILLSW0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	104.5635	GEN615010 1-STANTON4
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05824	104.2747	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05824	104.2486	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	104.1098	GEN587033 1-G16-004-GEN10.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	103.9707	GEN659354 1-DEERCREK STG18.000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	103.9697	GEN659353 1-DEERCREK CTG18.000
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06163	103.6977	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06163	103.6977	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	103.6014	GEN657749 1-YOUNG 1 GENERATOR
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06208	103.5918	RAUN - SIOUX CITY 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	103.5596	GEN659111 2-LELAND OLDS UNIT2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	103.5337	GEN587623 1-J493-GEN1 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	103.2626	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	103.2626	GEN659107 2-ANTELOPE VALLEY UNIT2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	103.2053	GEN672321 1-SHAND GENERATOR 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	103.2037	GEN600004 2-PRAIRIE ISLAND G2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	103.1967	GEN600003 1-PRAIRIE ISLAND G1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	103.1915	GEN587583 1-J432-GEN1 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	103.1105	GEN672310 1-POPLAR RIVER GENERATOR 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	103.1105	GEN672311 2-POPLAR RIVER GENERATOR 2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	103.0722	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	102.6073	GEN600006 1-AS KING
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03814	102.069	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03814	101.9576	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	101.3252	GEN 11123 1-G736-GEN1 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	101.3171	GEN 11133 1-J442-GEN1 0.6900
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	101.2921	GEN659125 1-COVEY
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	101.253	GEN661015 1-COYOTE
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	101.2488	GEN652173 1-G09_001IS_2 0.6900
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03729	101.1359	BUFFALO RIDGE - YANKEE 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	100.8581	GEN600005 1-MONTICELLO
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06862	100.6748	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	100.6711	GEN657748 1-YOUNG 2 GENERATOR
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06862	100.5854	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06862	100.5852	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	25SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06839	100.5533	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	100.456	GEN600000 1-SHERBURNECNTY G1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06328	100.4056	G09_001IST 345.00 - GROTON 345KV CKT 1
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03814	100.371	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03814	100.3631	ANSON 115/17.5KV TRANSFORMER CKT 4
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03734	100.2429	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03734	100.2429	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03720	100.1767	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03721	100.1507	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03746	100.1316	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04147	100	AURORA - BROOKINGS 115KV CKT 1
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04147	100	AURORA - BROOKINGS 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	100	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03746	99.7	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05250	99.6	FIELD SOUTH - WILMARTH 345KV CKT 1
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05250	99.5	FIELD NORTH - FIELD SOUTH 345KV CKT 1
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05250	99.5	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03746	99.5	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04147	99.3	AURORA - FLANDRU 115KV CKT 1
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04147	99.3	AURORA - FLANDRU 115KV CKT 1
0	17SP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03925	99.1	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	99	GEN600001 2-SHERBURNE CNTY G2
0	20WP	G16_007	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06219	99	GEN615001 1-COAL CREEK
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03525	109.8349	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03525	109.8348	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03525	108.8672	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03525	108.8671	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	107.6947	BASE CASE
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	107.6935	BASE CASE
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03963	106.1694	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03963	105.1775	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03963	104.9459	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	102.9624	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04934	102.8818	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04934	102.8646	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04934	102.7737	HAZEL CREEK - LYON COUNTY 345KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	102.4327	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	102.4327	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04332	101.9756	BROOKINGS - WATERTOWN 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04332	101.9756	BROOKINGS - WATERTOWN 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	101.9498	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04278	101.4207	ARLINGTON - WATERTOWN 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	101.1804	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04345	101.1506	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04106	100.9658	BURR - CANBY 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	100.9627	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04345	100.8928	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04103	100.7518	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04103	100.7517	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	100.7034	BROOKING COUNTY - J432 345.00 345KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	100.7034	J432 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	100.657	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04040	100.6144	G15088_T 345.00 - MOORE 345KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	100.5895	YANKEE 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	100.5459	GEN659353 1-DEERCREK CTG18.000
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	100.5449	GEN659354 1-DEERCREK STG18.000
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04278	100.5341	ARLINGTON - BROOKINGS 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	100.4705	GEN587583 1-J432-GEN1 0.6900
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04098	100.4475	MN VALLEY TAP - PANTHER 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04278	100.3916	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04278	100.3916	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04278	100.3916	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	100.3549	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03920	100.3505	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03920	100.3504	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04149	100.3366	ELM CREEK - MONTICELLO 345KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04218	100.3188	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04180	100.2906	CANBY - GRANITE FALLS 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04180	100.2905	CANBY - GRANITE FALLS 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04083	100.2681	MENNO JCT - UTICA 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	100.2582	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04125	100.2556	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	100.2448	ANSON 115/17.5KV TRANSFORMER CKT 4
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04080	100.2128	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04080	100.2127	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04200	100.191	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04103	100.1487	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04103	100.1487	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04080	100.1317	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04080	100.106	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04200	100.1056	2810X2
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04080	100.1019	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04050	100.0967	PRAIRIE - RAMSEY 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04188	100	AUDUBON - HUBBARD 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04083	99.9	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.9	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.9	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03891	99.9	JAMES TOWN - WEBER 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03891	99.8	BISMARK - WEBER 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03713	99.8	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03713	99.8	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04146	99.7	ELM CREEK - PARKERS LAKE 345KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.7	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04027	99.7	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04027	99.7	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04121	99.6	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04082	99.6	GRACEVT7 - ORTONVILLE 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.6	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.6	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.6	WATERTOWN 230KV SWITCHED SHUNT
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04014	99.6	GRANT - MITCHELL 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04014	99.6	GRANT - MITCHELL 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04121	99.5	BIG STONE - HIGHWAY 12 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.5	BURR - J493 115.00 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.5	J493 115.00 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04049	99.5	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04082	99.4	GRACEVT7 - MORRIS 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04082	99.4	GRACEVT7 - MORRIS 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04081	99.4	MCLEOD - PANTHER 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.4	GEN337652 1-WHITE BLUFF UNIT #1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.4	GEN337653 1-WHITE BLUFF UNIT #2
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.4	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.4	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.4	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04042	99.4	CLEARWATER - NELIGH 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04042	99.4	CLEARWATER - ONEILL 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04034	99.4	AXTELL - SWEETWATER 345KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03949	99.4	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03949	99.4	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04373	99.3	MONTICELLO - WAITE PARK 345KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04351	99.3	GRAND FORKS - PICKERT 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04318	99.3	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04102	99.3	MT VERN - STORLA 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.3	2516-WATERTNCAP 4230.00
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.3	GEN600045 4-ANSON
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.3	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.3	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04042	99.3	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03949	99.3	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03949	99.3	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.03949	99.3	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04318	99.2	FIELD NORTH - FIELD SOUTH 345KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04318	99.2	FIELD SOUTH - WILMARTH 345KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04072	99.2	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.2	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.2	GEN300003 1-THOMAS HILL UNIT 3
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.2	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.2	GEN338146 1-INDEPENDENCE UNIT #2
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.2	GEN542962 2-IATAN UNIT #2
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.2	GEN645012 2-NEBRASKA CITY 2
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.2	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.2	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.2	MEC115 - WILMARTH 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.2	MEC345 - WILMARTH 345KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.2	MEC345 345/19.5KV TRANSFORMER CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.2	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04067	99.2	EAGLE - MARTIN 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04067	99.2	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04067	99.2	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04067	99.2	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04067	99.2	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04116	99.1	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04116	99.1	P12:230:UMZW:# 158 #: MH IN ND.
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04103	99.1	AS KING - CHISAGO COUNTY 345KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.1	GEN636641 1-LOUISA UNIT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.1	GEN645011 1-NEBRASKA CITY 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.1	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99.1	MEC115 115/15.0KV TRANSFORMER CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04067	99.1	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04067	99.1	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04067	99.1	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04067	99.1	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04058	99.1	FT RANDAL - WHITE SWAN 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04051	99.1	KELLY - SHELL CREEK 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04051	99.1	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04051	99.1	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04014	99.1	CHERRY CREEK - GRANT 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04185	99	HURON - WOONSOCKET 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04116	99	MOOREHEAD - MORRIS 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04087	99	DICKINSON - PARKERS LAKE 345KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04073	99	ARROWHEAD - FORBES 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04070	99	MORANVILLE - ROSEAU 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99	GEN344894 1-1LAB G1 20.000
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99	GEN344895 2-1LAB G2 20.000
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99	GEN344896 3-1LAB G3 20.000
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99	GEN344897 4-1LAB G4 20.000
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99	GEN501801 1-DOLET HILLS UNIT1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99	GEN542951 5-HAWTHORN UNIT #5
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99	GEN542957 1-IATAN UNIT #1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99	GEN587153 1-G16-021-GEN10.6900
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99	GEN600069 W-YANKEE 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99	GEN600077 W-YANKEE 2
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99	GEN600078 W-YANKEE 3
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04069	99	GEN600099 W-YANKEE 4
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04058	99	TYNDALL - WHITE SWAN 115KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04054	99	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04046	99	GRANITE FALLS - WILLMAR 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04046	99	GRANITE FALLS - WILLMAR 230KV CKT 1
0	17SP	G16_007	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.04027	99	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03525	110.718	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03525	110.7179	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03525	109.7188	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03525	109.7187	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	108.7517	BASE CASE
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	108.7505	BASE CASE
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03963	107.167	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03963	106.1325	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03963	105.8973	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	104.038	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04934	103.7885	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04934	103.7695	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04934	103.6747	HAZEL CREEK - LYON COUNTY 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	103.3691	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	103.3691	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	102.9084	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04332	102.9039	BROOKINGS - WATERTOWN 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04332	102.9039	BROOKINGS - WATERTOWN 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04278	102.3571	ARLINGTON - WATERTOWN 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	102.1677	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04345	102.1203	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04106	102.0271	BURR - CANBY 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	101.938	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04345	101.8588	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04103	101.7025	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04103	101.7024	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	101.6438	BROOKING COUNTY - J432 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	101.6438	J432 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04040	101.6171	G15088_T 345.00 - MOORE 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	101.615	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	101.5509	YANKEE 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04278	101.4879	ARLINGTON - BROOKINGS 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	101.4187	GEN587583 1-J432-GEN1 0.6900
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	101.3973	GEN659354 1-DEERCREK STG18.000
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	101.3903	GEN659353 1-DEERCREK CTG18.000
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	101.376	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03920	101.3483	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03920	101.3483	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04098	101.3451	MN VALLEY TAP - PANTHER 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04149	101.3109	ELM CREEK - MONTICELLO 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04278	101.303	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04278	101.303	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04278	101.303	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04180	101.2973	CANBY - GRANITE FALLS 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04180	101.2973	CANBY - GRANITE FALLS 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04218	101.2934	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04200	101.2617	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04083	101.2617	MENNO JCT - UTICA 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	101.2296	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04080	101.2245	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04080	101.2244	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	101.2159	ANSON 115/17.5KV TRANSFORMER CKT 4
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04200	101.1672	2810X2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04080	101.1391	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04050	101.1284	PRAIRIE - RAMSEY 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04125	101.1278	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04080	101.113	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04080	101.1077	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04103	101.1049	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04103	101.1048	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	101.1	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04188	101.0264	AUDUBON - HUBBARD 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03891	100.9687	JAMES TOWN - WEBER 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04083	100.8951	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03713	100.8671	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03713	100.8671	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.8664	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03891	100.818	BISMARK - WEBER 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.7447	WATERTOWN 230KV SWITCHED SHUNT
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04027	100.6529	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04027	100.6453	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04146	100.6452	ELM CREEK - PARKERS LAKE 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.603	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.6017	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04121	100.5928	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.5824	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04014	100.5383	GRANT - MITCHELL 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04014	100.5382	GRANT - MITCHELL 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04049	100.5306	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04082	100.5298	GRACEVT7 - ORTONVILLE 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.5047	BURR - J493 115.00 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.5047	J493 115.00 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04042	100.4369	CLEARWATER - ONEILL 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.4197	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.4195	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.4174	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.4173	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04034	100.4146	AXTELL - SWEETWATER 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.4106	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04121	100.4089	BIG STONE - HIGHWAY 12 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03949	100.4087	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03949	100.4086	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.4	2516-WATERTNCAP 4230.00
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04042	100.3935	CLEARWATER - NELIGH 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04082	100.3426	GRACEVT7 - MORRIS 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04082	100.3425	GRACEVT7 - MORRIS 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04351	100.3378	GRAND FORKS - PICKERT 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04102	100.3146	MT VERN - STORLA 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04042	100.3055	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03949	100.3039	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03949	100.2829	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03949	100.2828	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04081	100.2714	MCLEOD - PANTHER 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04373	100.2543	MONTICELLO - WAITE PARK 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.2479	GEN600045 4-ANSON
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.2472	GEN645012 2-NEBRASKA CITY 2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.2379	GEN542962 2-IATAN UNIT #2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.2185	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04318	100.2169	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.2151	GEN338146 1-INDEPENDENCE UNIT #2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.207	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04318	100.1903	FIELD SOUTH - WILMARTH 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.1858	GEN337653 1-WHITE BLUFF UNIT #2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.1846	MEC345 - WILMARTH 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.1828	MEC345 345/19.5KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04067	100.1815	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04067	100.1815	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04067	100.1796	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04067	100.1796	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.1791	GEN337652 1-WHITE BLUFF UNIT #1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.1775	MEC115 - WILMARTH 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.1641	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04067	100.1543	EAGLE - MARTIN 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04318	100.152	FIELD NORTH - FIELD SOUTH 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.152	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.1517	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04067	100.1509	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04067	100.1509	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04067	100.1509	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04067	100.1509	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.1482	GEN300003 1-THOMAS HILL UNIT 3
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04072	100.1476	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04116	100.1383	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04116	100.1383	P12:230:UMZW:# 158 #: MH IN ND.
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.1336	GEN645011 1-NEBRASKA CITY 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04051	100.1209	KELLY - SHELL CREEK 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04103	100.1059	AS KING - CHISAGO COUNTY 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04051	100.1047	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04051	100.1047	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.1022	MEC115 115/15.0KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.1	GEN636641 1-LOUISA UNIT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100.0746	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04185	100	HURON - WOONSOCKET 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04116	100	MOOREHEAD - MORRIS 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100	GEN344894 1-1LAB G1 20.000
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100	GEN344895 2-1LAB G2 20.000
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100	GEN344896 3-1LAB G3 20.000
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100	GEN344897 4-1LAB G4 20.000
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100	GEN501801 1-DOLET HILLS UNIT1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100	GEN542951 5-HAWTHORN UNIT #5
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100	GEN542957 1-IATAN UNIT #1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100	GEN587153 1-G16-021-GEN10.6900
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	100	GEN600069 W-YANKEE 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04058	100	FT RANDAL - WHITE SWAN 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04058	100	TYNDALL - WHITE SWAN 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04054	100	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04027	100	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04014	100	CHERRY CREEK - GRANT 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03008	100	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04166	99.9	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04164	99.9	GRANITE FALLS - MORRIS 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04164	99.9	GRANITE FALLS - MORRIS 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04147	99.9	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04117	99.9	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04088	99.9	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04087	99.9	DICKINSON - PARKERS LAKE 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04073	99.9	ARROWHEAD - FORBES 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04070	99.9	MORANVILLE - ROSEAU 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04070	99.9	RICHER - ROSEAU 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.9	GEN336251 1-NINEMILE POINT UNIT#4
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.9	GEN336252 1-NINEMILE POINT UNIT#5
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.9	GEN345670 1-1RUSH G1 18.000
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.9	GEN345671 2-1RUSH G2 18.000
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.9	GEN501812 1-RODEMACHER UNIT 2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.9	GEN501813 1-RODEMACHER UNIT 3
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.9	GEN542955 1-LACYGNE UNIT #1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.9	GEN600077 W-YANKEE 2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.9	GEN600078 W-YANKEE 3
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.9	GEN600099 W-YANKEE 4
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04067	99.9	EAGLE - PHILIP 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04050	99.9	OGALLALA - SIDNEY 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04046	99.9	GRANITE FALLS - WILLMAR 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04046	99.9	GRANITE FALLS - WILLMAR 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04040	99.9	G15088_T 345.00 - PAULINE 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04007	99.9	BISMARK - HILKEN 4 230.00 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03992	99.9	UTICA JCT - VFODNES 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03766	99.9	BISMARK - WASHBURN 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03766	99.9	P12:230:UMZB:# 171 #: WB IN ND.
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03766	99.9	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04274	99.8	GROTON - REDFIELD 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04274	99.8	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04122	99.8	AURORA - BROOKINGS 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04122	99.8	AURORA - BROOKINGS 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04117	99.8	FRANKLIN - REDWOOD FALLS 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04089	99.8	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04083	99.8	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.8	AINSWORTH - AINSWORTH 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.8	GEN334440 1-SABINE UNIT 4
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.8	GEN335206 1-NELSON UNIT 6
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.8	GEN336831 1-BAXTER WILSON SES
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.8	GEN337041 1-GERALD ANDRUS
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.8	GEN338388 1-1PLUM PT U1 23.000
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.8	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.8	GEN563222 1-G15088_3 0.6900
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.8	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.8	GRANITE FALLS 115KV SWITCHED SHUNT
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.8	GRANITE FALLS 230KV SWITCHED SHUNT
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.8	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04062	99.8	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04062	99.8	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04061	99.8	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04043	99.8	BALTA - HARVEY 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03867	99.8	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03867	99.8	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03866	99.8	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03866	99.8	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03766	99.8	LELAND OLDS - WASHBURN 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03291	99.8	BIG STONE - BROWNS VALLEY 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04262	99.7	HELENA - SHEAS LK3 345.00 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04218	99.7	GRANITE FALLS - S3 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04218	99.7	GRANITE FALLS - S3 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04200	99.7	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04084	99.7	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04074	99.7	MARTIN - SHANNON 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04072	99.7	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04072	99.7	CHADRON - DUNLAP 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.7	GEN335614 1-WILLOW GLENN UNIT#4
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.7	GEN336191 1-LITTLE GYPSY UNIT#3
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.7	GEN336801 1-BAXTER WILSON UNIT #1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.7	GEN542956 2-LACYGNE UNIT #2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.7	H081 345.00 - H081-TAP 345.00 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.7	H081 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.7	MINNESOTA VALLEY - MINVALY CAP7115.00 115KV CKT Z
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.7	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04062	99.7	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04062	99.7	P12:115:TSGT:COVALT7-SNAKECK7
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04060	99.7	COAL CREEK - MCHENRY 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04047	99.7	P13:230-345:NPPD:SIDNEY 3:KV2A
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04047	99.7	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04047	99.7	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04046	99.7	PAYNSVILLE - WILLMAR 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04029	99.7	MALLARD - RUGBY 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04029	99.7	MALLARD - RUGBY 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04027	99.7	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03774	99.7	BRISTOL - GROTON 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04249	99.6	HURON - REDFIELD 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04234	99.6	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04234	99.6	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04193	99.6	MARSHALL ERIE ROAD - S3 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04193	99.6	MARSHALL ERIE ROAD - S3 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04185	99.6	STORLA - WOONSOCKET 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04113	99.6	BADOURA - HUBBARD 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04078	99.6	FALCONER - OSLO 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04074	99.6	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04072	99.6	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04070	99.6	GRE-ORTMN 4 230.00 - SHANNON 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.6	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.6	GEN300006 1-NEW MADRID UNIT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.6	GEN300007 1-NEW MADRID UNIT 2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.6	GEN334441 1-SABINE UNIT 5
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.6	GEN335204 1-NELSON UNIT 4
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.6	GEN336464 1-MICHOUD UNIT #3
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.6	GEN509403 1-PIRKEY GENERATION
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.6	GEN509416 1-TURK GENERATION
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.6	GEN587663 1-H081-GEN1 0.6900
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.6	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.6	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.6	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.6	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.6	RUNNING 230/118KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04067	99.6	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKEI
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04066	99.6	AINSWORTH - STUART 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04062	99.6	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04062	99.6	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04062	99.6	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04058	99.6	GAVINS POINT - HARTINGTON 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04058	99.6	TYNDALL - YANKON JCT 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04056	99.6	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04055	99.6	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04052	99.6	AXTELL - PAULINE 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04039	99.6	MINGO - SETAB 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04039	99.6	MINGO - SETAB 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04038	99.6	HOSKINS - SHELL CREEK 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03995	99.6	SIOUX FALLS - VFODNES 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03774	99.6	BRISTOL - SUMMIT 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04203	99.5	CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04185	99.5	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04122	99.5	AURORA - FLANDRU 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04122	99.5	AURORA - FLANDRU 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04102	99.5	ARMOUR - MT VERN 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04102	99.5	MORO TAP - MORRIS 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04102	99.5	MORO TAP - MORRIS 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04101	99.5	FERGSFL4 230.00 (FERG230/115) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04101	99.5	FERGSFL7 115.00 - HOOT LAKE 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04093	99.5	FARGO - MOOREHEAD 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04084	99.5	FALCONER - GRAND FORKS 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04084	99.5	FALCONER - GRAND FORKS 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04080	99.5	BAGLEY - WINGER 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04072	99.5	CHADRON - WAYSIDE 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04072	99.5	P13:115-230:NPPD:WAYSIDE4:T1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04072	99.5	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04070	99.5	GRE-ORTMN 4 230.00 - RUNNING 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04070	99.5	LUND - RUNNING 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	1222-AINSWORTH WIND
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	2546-JAMES TOWN
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	AINSWORTH WIND 34KV SWITCHED SHUNT
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	BARNES 4 230.00 230/34.5KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	E B CAMPBELL 230/14.4KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN300002 1-THOMAS HILL UNIT 2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN303006 1-1BC2 U1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN303007 1-1BC2 U2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN303008 1-1BC2 U3
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN334433 1-SABINE UNIT 3
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN336151 1-WATERFORD UNIT#1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN336152 1-WATERFORD UNIT#2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN336170 1-GULF OXY U4
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN336222 1-LITTLE GYPSY UNIT#2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN509394 1-FLINT CREEK
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN509404 1-WELSH #1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN509406 1-WELSH #3
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN512688 2-GRDA1 GSU2 22
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN513601 1-GRECCTG_1 20.000
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN514805 1-SOONER UNIT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN514806 1-SOONER UNIT 2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN515225 1-MUSKOGEE 5G
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN515226 1-MUSKOGEE 6G
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN590010 1-ERCOT EQUIVALENCE
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN600020 2-ANGUS ANSON1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN600021 3-ANGUS ANSON2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	GENOA 161 161/24.0KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	JAMES TOWN 115KV SWITCHED SHUNT
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.5	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04066	99.5	ATKINSON - STUART 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04066	99.5	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04066	99.5	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04066	99.5	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04065	99.5	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04065	99.5	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04065	99.5	LELAND OLDS - LOGAN 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04062	99.5	COVALT 7 115.00 - LYNN 7 115.00 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04046	99.5	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04039	99.5	SIOUX FALLS (SF KV3A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04039	99.5	SIOUX FALLS (SF KV5A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04026	99.5	LOGAN (KW1A) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03959	99.5	BELFIELD - CHARLIE CREEK 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04246	99.4	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04241	99.4	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04116	99.4	BADOURA - RIVERTON 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04108	99.4	BOWMAN - RHAME 4 230.00 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04101	99.4	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04101	99.4	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04091	99.4	EDEN PRAIRIE - PARKERS LAKE 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04074	99.4	APPLE RIVER 161 - POPLAR LAKE 161 161KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04074	99.4	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04072	99.4	ALIANCE - BOXBUTE7 115.00 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04072	99.4	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04072	99.4	STONE LK B1 345.00 () 345/161/13.8KV TRANSFORMER CKT 9
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04071	99.4	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04070	99.4	GENOA 161 - SENECA 161 161KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	ARNOLD - HAZLETON 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	FARIBALT GEN115.00 115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	GEN511839 1-NORTHEASTERN STATION #2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	GEN511840 1-NORTHEASTERN STATION #3
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	GEN511842 1-RIVERSIDE STATION #1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	GEN511843 1-RIVERSIDE STATION #2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	GEN515223 1-MUSKOGEE 4G
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	GEN541151 3-SIBLEY GENERATING UNIT #3
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	GEN562003 1-G11_027_3 0.6900
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	GEN587233 1-G16-037-GEN10.6900
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	GEN600046 1-MECST
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	GEN600047 1-MECCT1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	LANGDON - LANGWIN7 115.00 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.4	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04068	99.4	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04062	99.4	P12:115:NPPD:TSGT2:W.HORSE7:B.SPRGS7:BTB
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04062	99.4	P12:115:TSGT:BSPRGS7-WHORSE7
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04059	99.4	COOPER - MOORE 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04058	99.4	BELDEN - HARTINGTON 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04055	99.4	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03996	99.4	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03973	99.4	LOGAN - MALLARD 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03973	99.4	LOGAN - MALLARD 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04096	99.3	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04096	99.3	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04076	99.3	COON CREEK - SHERBURNE CO 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04076	99.3	COON CREEK - SHERBURNE CO 345KV CKT 3
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04076	99.3	GRAND FORKS (GK KV1A) 230/115/12.47KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04075	99.3	BUNKER LAKE - SHERBURNE CO 345KV CKT 2
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04074	99.3	LAWERENCE CREEK - SHAEFER 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04071	99.3	AIRTECH - FEP TAP 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04071	99.3	AIRTECH - WEST FARIBAULT 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.3	AS KING 345/20.0KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.3	BLACK DOG 115/18.0KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.3	BLACK DOG 115/18.0KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.3	CENTER 230/22.0KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.3	CHEMOLITE 115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.3	GEN562517 1-G14_021_S2 0.6900
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.3	GEN587084 1-G16-012-GEN10.6900
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.3	GEN587643 1-J525-GEN1 0.6900
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.3	GEN629046 3-FOX LAKE 5 GENERATOR NO 3
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.3	GEN629069 1-EMERY STEAM TURBINE 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.3	HIGH BRIDGE 115/13.8KV TRANSFORMER CKT 9
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.3	NOBLES 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04069	99.3	WARSAW (WARSAW) 115/69/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04068	99.3	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04068	99.3	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04067	99.3	CALLAWAY - MAXWELL 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04066	99.3	ATKINSON - EMMET 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04065	99.3	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04065	99.3	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04062	99.3	COVALT 7 115.00 - W.HORSE7 115.00 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04062	99.3	COVALT 7 115.00 - W.HORSE7 115.00 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04061	99.3	MALLARD - RUTHVILLECP7115.00 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04061	99.3	MALLARD - RUTHVILLECP7115.00 115KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04048	99.3	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.04048	99.3	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_007	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.03291	99.2	BROWNS VALLEY - HANKINSON 230KV CKT 1
0	17SP	G16_008	TO->FROM	CLINTON JUNCTION - ELK CITY 138KV CKT 1	136.0	152.0	0.07313	107.1886	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.14583	109.6733	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.13462	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.13462	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.13394	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.13394	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.14329	107.0835	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12159	104.4987	BASE CASE
0	16WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.14583	104.4902	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12599	104.3491	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12533	103.6936	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12081	103.443	BASE CASE
0	20WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.14329	102.1688	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12159	101.4903	GEN587433 1-G16-063-GEN10.6900
0	20WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12081	100.7184	GEN587433 1-G16-063-GEN10.6900
0	16WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12816	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12816	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12159	99.9	GEN509416 1-TURK GENERATION
0	16WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12244	99.8	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12244	99.5	G15066_T 345.00 - SOONER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12720	99.3	P12:138:WFEC:MSL03
0	16WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12244	99.3	917X
0	20WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12166	99.3	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12081	99.3	GEN509403 1-PIRKEY GENERATION
0	20WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12081	99.1	GEN509416 1-TURK GENERATION
0	16WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12159	99	GEN501801 1-DOLET HILLS UNIT1
0	20WP	G16_008	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12166	99	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_008	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.03288	123.2624	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_008	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.03288	123.2624	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_008	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.10478	112.8138	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_008	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.10507	110.6909	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_008	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.10478	107.5838	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G16_008	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.10507	105.3493	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03204	134.4175	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03204	134.4175	PITTSBURG - VALLIANT 345KV CKT 1
0	20WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03212	130.8304	PITTSBURG - VALLIANT 345KV CKT 1
0	20WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03212	130.8304	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03033	129.8415	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03033	129.8415	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03043	128.8551	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03043	128.8551	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03146	127.7886	G16-063-TAP 345.00 - HUGO 345KV CKT 1
0	20WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03154	126.1748	G16-063-TAP 345.00 - HUGO 345KV CKT 1
0	16WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03121	125.4138	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03127	124.7088	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03127	120.4768	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03121	120.4745	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03146	119.0317	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03154	117.0725	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.04406	106.7999	HUGO (HUGO 1) 345/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_008	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.04395	105.1673	HUGO (HUGO 1) 345/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766.0	923.0	0.16054	106.1701	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60788	122.1176	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.63284	120.1041	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.63084	118.4719	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62665	118.0251	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60788	117.7385	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.63284	115.9458	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62095	115.7802	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60078	115.2923	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.59805	114.885	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.63084	114.3681	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	114.0566	GEN542955 1-LACYGNE UNIT #1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62665	113.9073	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62004	113.6341	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60788	113.4371	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60078	113.3647	917X
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	113.0457	GEN542956 2-LACYGNE UNIT #2
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61426	113.0236	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62523	112.76	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62041	112.7149	RANCHRD7 345.00 - SOONER 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.58965	112.5667	SWISSVALE - WEST GARDNER 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	112.5169	GEN542955 1-LACYGNE UNIT #1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60078	112.4901	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61386	112.4716	SWISSVALE - WEST GARDNER 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62095	112.3593	G14_001T 345.00 - WICHITA 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62491	112.2363	RENO COUNTY - WICHITA 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.63928	112.0263	RANCHRD7 345.00 - SOONER 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62297	111.8269	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61989	111.7717	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62523	111.7609	917X
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.63284	111.7316	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	111.4797	GEN542956 2-LACYGNE UNIT #2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.59680	111.4455	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.70764	111.4359	BENTON - WOLF CREEK 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.59805	111.3437	G14_001T 345.00 - WICHITA 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60080	111.3306	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60080	111.3306	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62387	111.1811	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62523	111.1518	G15066_T 345.00 - SOONER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	110.913	BASE CASE
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61912	110.7302	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61243	110.6766	SWISSVALE - WEST GARDNER 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60715	110.6575	SWISSVALE - WEST GARDNER 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62293	110.5768	HOYT - STRANGER CREEK 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.63705	110.5734	RANCHRD7 345.00 - SOONER 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.70828	110.4852	ROSE HILL - WOLF CREEK 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62407	110.3629	RENO COUNTY - WICHITA 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.59936	110.2561	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62444	110.2267	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62444	110.2267	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62004	110.2249	G14_001T 345.00 - WICHITA 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60319	110.2195	RENO COUNTY - WICHITA 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.63084	110.2015	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	110.0936	BASE CASE
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.70707	110.0822	BENTON - WOLF CREEK 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61878	109.8971	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62191	109.8327	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.59963	109.7986	HOYT - STRANGER CREEK 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61912	109.7514	917X
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62665	109.7046	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61848	109.6979	RENO COUNTY - WICHITA 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61426	109.6302	G14_001T 345.00 - WICHITA 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	109.6124	GEN542962 2-IATAN UNIT #2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62387	109.5996	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61631	109.595	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61350	109.4099	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62950	109.2162	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.70289	109.1897	BENTON - WOLF CREEK 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61912	109.1436	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	109.1381	GEN542951 5-HAWTHORN UNIT #5
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	109.1163	BASE CASE
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.70757	109.0806	ROSE HILL - WOLF CREEK 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62950	109.0678	BURLINGTON JUNCTION - WOLF CREEK 69KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62537	108.9933	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	108.9736	GEN542957 1-IATAN UNIT #1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	108.9478	GEN300003 1-THOMAS HILL UNIT 3
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.63442	108.899	RANCHRD7 345.00 - SOONER 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.66535	108.8839	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62950	108.7903	BURLINGTON JUNCTION - COFFEY COUNTY NO. 3 WESTPHALIA 69KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62950	108.751	COFFEY COUNTY NO. 3 WESTPHALIA - GREEN 69KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62473	108.7416	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62189	108.6689	HOYT - STRANGER CREEK 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62950	108.6447	COFFEY COUNTY NO. 4 VERNON - GREEN 69KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62360	108.6381	RENO COUNTY - SUMMIT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60277	108.6186	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62537	108.616	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62950	108.6049	ATHENS SWITCHING STATION - COFFEY COUNTY NO. 4 VERNON 69KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	108.6019	BASE CASE
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62315	108.5739	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61633	108.4135	HOYT - STRANGER CREEK 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60339	108.3562	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.70381	108.2787	ROSE HILL - WOLF CREEK 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61835	108.2359	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61835	108.2359	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	108.2011	GEN640009 1-COOPER NUCLEAR STATION
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60277	108.1746	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60803	108.0168	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	107.9765	GEN645012 2-NEBRASKA CITY 2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62473	107.9551	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	107.9207	GEN542962 2-IATAN UNIT #2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60209	107.9129	RENO COUNTY - SUMMIT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60803	107.9072	P12:069:WERE:ATHE-WOLF_69::
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60803	107.8791	BURLINGTON JUNCTION - WOLF CREEK 69KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	107.8571	GEN645011 1-NEBRASKA CITY 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62561	107.8096	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	107.749	GEN635024 4-WALTER SCOTT UNIT 4
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62349	107.7425	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60803	107.6814	BURLINGTON JUNCTION - COFFEY COUNTY NO. 3 WESTPHALIA 69KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60803	107.6657	COFFEY COUNTY NO. 3 WESTPHALIA - GREEN 69KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62349	107.6481	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60803	107.6247	COFFEY COUNTY NO. 4 VERNON - GREEN 69KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	107.6194	GEN640009 1-COOPER NUCLEAR STATION
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60803	107.6087	ATHENS SWITCHING STATION - COFFEY COUNTY NO. 4 VERNON 69KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62836	107.5981	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	107.5868	GEN541151 3-SIBLEY GENERATING UNIT #3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	107.5804	GEN344225 1-1CAL G1 25.000
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60523	107.5502	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	107.4914	GEN635023 3-WALTER SCOTT UNIT 3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	107.4706	GEN542951 5-HAWTHORN UNIT #5
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60339	107.4638	G15063_T 345.00 - WOODRING 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	107.4582	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62836	107.4505	BURLINGTON JUNCTION - WOLF CREEK 69KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62418	107.3792	SOONER - SPRING CREEK 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62425	107.3774	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	107.3546	GEN300003 1-THOMAS HILL UNIT 3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62418	107.3366	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	107.3227	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62349	107.3223	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	107.3099	GEN542957 1-IATAN UNIT #1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	107.2562	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62167	107.2474	CENTERVILLE - G15-016T 161.00 161KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	107.2335	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62456	107.2204	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60219	107.2086	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60219	107.2086	MINGO - RED WILLOW 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62836	107.1521	BURLINGTON JUNCTION - COFFEY COUNTY NO. 3 WESTPHALIA 69KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	107.1269	GEN600002 3-SHERBURNE CNTY G3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62836	107.1129	COFFEY COUNTY NO. 3 WESTPHALIA - GREEN 69KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	107.0906	GEN635214 4-NEAL UNIT 4
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	107.0657	GEN546702 1-NM GEN N1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61901	107.0628	DELAWARE - NORTHEAST STATION 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61901	107.0628	DELAWARE - NORTHEAST STATION 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62167	107.0526	CENTERVILLE - PAOLA 161KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62360	107.0423	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62360	107.0423	PITTSBURG - VALLIANT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60156	107.0373	BLUSTEM7 345.00 - SUMMIT 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	107.0346	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	107.0344	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	107.0182	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62350	107.0162	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62836	107.008	COFFEY COUNTY NO. 4 VERNON - GREEN 69KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62425	106.9929	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62344	106.9894	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62319	106.9866	G15088_T 345.00 - MOORE 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62370	106.9694	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62836	106.9612	ATHENS SWITCHING STATION - COFFEY COUNTY NO. 4 VERNON 69KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62261	106.9568	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.9566	GEN300007 1-NEW MADRID UNIT 2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.9471	GEN300006 1-NEW MADRID UNIT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62262	106.9414	RENO COUNTY - SUMMIT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60151	106.9219	GRDA1 - GREC TAP5 345.00 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62375	106.9212	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62332	106.9153	AXTELL - PAULINE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.9057	GEN659103 1-ANTELOPE VALLEY UNIT1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.9057	GEN659107 2-ANTELOPE VALLEY UNIT2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.9039	GEN300002 1-THOMAS HILL UNIT 2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.9009	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62406	106.8992	ALTOONA - BUTLER 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62360	106.8942	P12:069:WERE:ATHE-WOLF_69::
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62274	106.8715	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.871	GEN600000 1-SHERBURNECNTY G1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62274	106.863	MORRIS COUNTY - UNIONRG6 230.00 230KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62561	106.8555	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62370	106.8503	BURLINGTON JUNCTION - WOLF CREEK 69KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61873	106.8451	DELAWARE - NEOSHO 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61873	106.8451	DELAWARE - NEOSHO 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62345	106.8371	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.8319	GEN636641 1-LOUISA UNIT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.65677	106.8306	CANEYRV7 345.00 - NEOSHO 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.8226	GEN659111 2-LELAND OLDS UNIT2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62319	106.813	G15088_T 345.00 - PAULINE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.8118	GEN600001 2-SHERBURNE CNTY G2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62129	106.7987	OVEXFRMCCOVE
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62350	106.7851	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62278	106.7704	BROOKLINE - FLINT CREEK 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62278	106.7704	BROOKLINE - FLINT CREEK 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61947	106.7651	87th STREET - STRANGER CREEK 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	106.7628	GEN635024 4-WALTER SCOTT UNIT 4
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.7485	GEN635213 3-NEAL UNIT 3
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60164	106.7422	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62367	106.7222	CIMARRON - DRAPER LAKE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.722	GEN600005 1-MONTICELLO
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62336	106.7003	FT SMITH - MUSKOGEE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62347	106.6983	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62347	106.6983	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.6913	GEN615002 2-COAL CREEK
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.6799	GEN615001 1-COAL CREEK
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	106.6675	GEN344225 1-1CAL G1 25.000
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.6661	GEN600003 1-PRAIRIE ISLAND G1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.6654	GEN600006 1-AS KING
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.6647	GEN600004 2-PRAIRIE ISLAND G2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62344	106.6472	LYDIA - VALLIANT 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62344	106.6472	LYDIA - VALLIANT 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62389	106.6458	MINGO - SETAB 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60164	106.6441	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60266	106.6414	SOONER - SPRING CREEK 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62296	106.6376	GREC TAP5 345.00 - TULSA NORTH 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62364	106.6007	HOLCOMB - SETAB 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.597	GEN542954 3-MONTROSE UNIT #3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.5897	GEN590011 2-ERCOT EQUIVALENCE
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.5887	GEN300001 1-THOMAS HILL UNIT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62360	106.5872	BURLINGTON JUNCTION - COFFEY COUNTY NO. 3 WESTPHALIA 69KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62467	106.5858	ATHENS SWITCHING STATION - LEHIGH TAP 69KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62296	106.5789	GRDA1 - GREC TAP5 345.00 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60266	106.5751	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.5592	GEN590010 1-ERCOT EQUIVALENCE
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62360	106.5521	COFFEY COUNTY NO. 3 WESTPHALIA - GREEN 69KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.551	GEN562694 1-G15_016_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	106.5484	GEN300007 1-NEW MADRID UNIT 2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.5463	GEN344897 4-1LAB G4 20.000
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.5455	GEN344894 1-1LAB G1 20.000
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.5445	GEN344896 3-1LAB G3 20.000
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	106.5381	GEN635023 3-WALTER SCOTT UNIT 3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.5225	GEN620315 1-BIG STONE GEN
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.5178	GEN344895 2-1LAB G2 20.000
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62298	106.5147	AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.5027	GEN541163 1-ARIES COMBUSTION TURBINE #1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.5009	GEN657748 1-YOUNG 2 GENERATOR
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62347	106.4984	G16-063-TAP 345.00 - HUGO 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60188	106.4889	PITTSBURG - VALLIANT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60188	106.4889	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61883	106.4822	87th STREET - CRAIG 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	106.4771	GEN640009 1-COOPER NUCLEAR STATION
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62292	106.4594	MORRIS COUNTY - SWISSVALE 230KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62272	106.459	STILWELL - WEST GARDNER 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62342	106.4471	LYDIA - WELSH 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62342	106.4471	LYDIA - WELSH 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.447	GEN661015 1-COYOTE
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62291	106.4433	GRAND ISLAND - MCCOOL 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62468	106.4418	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.4382	GEN681542 6-JP MADGETT
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62360	106.4373	COFFEY COUNTY NO. 4 VERNON - GREEN 69KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60274	106.431	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62338	106.4278	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62347	106.4262	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60119	106.4251	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60119	106.4251	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62468	106.42	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60251	106.4153	P13:069-138:WERE:BUTL_TX-1::

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60251	106.4136	ALTOONA - BUTLER 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.4123	GEN652559 1-OAHE
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.4063	GEN659118 1-LARAMIE RIVER UNIT1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.4031	GEN505432 1-SIKESTON
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62360	106.402	ATHENS SWITCHING STATION - COFFEY COUNTY NO. 4 VERNON 69KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61887	106.3961	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62468	106.3946	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62338	106.3928	OSAGE - WEBB CITY TAP 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	106.3849	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62321	106.3809	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62321	106.3809	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.3776	GEN345670 1-1RUSH G1 18.000
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60523	106.3774	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.3764	GEN345671 2-1RUSH G2 18.000
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.3751	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	106.3712	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.3706	GEN672310 1-POPLAR RIVER GENERATOR 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.3706	GEN672311 2-POPLAR RIVER GENERATOR 2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62370	106.3686	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.3597	GEN672321 1-SHAND GENERATOR 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.3568	GEN645025 5-NORTH OMAHA 5
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.3567	GEN659110 1-LELAND OLDS UNIT1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62468	106.3557	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.3327	GEN300011 1-ST FRANCIS UNIT 2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.3302	GEN563082 1-G15073_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60366	106.3206	P13:069-138:WERE:ALTO_TX-1OR3P::
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.3202	GEN546698 1-QN GEN2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62338	106.3167	ELMCREEK7 345.00 - SUMMIT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60164	106.3167	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60190	106.3109	BLUSTEM7 345.00 - JEFFREY ENERGY CENTER 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.3104	GEN681522 3-GENOA 3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62338	106.3099	FAIRFAX TAP - SHIDLER 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62338	106.3098	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62293	106.307	MCCOOL - MOORE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62467	106.2969	ALLEN - LEHIGH TAP 69KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.2929	GEN300010 1-ST FRANCIS UNIT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.2841	GEN541170 4-LAKERD#4 13.800
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60151	106.2812	GREC TAP5 345.00 - TULSA NORTH 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62333	106.277	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62333	106.277	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62324	106.2733	SHIDLER - WEST PAWHUSKA 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62329	106.2717	HUGO - VALLIANT 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62329	106.2717	HUGO - VALLIANT 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62390	106.2681	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62324	106.2665	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.265	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62338	106.264	ELMCREEK7 345.00 (ELMCREEK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62324	106.2571	P12:138:AEPW:MOUNDRD4:SHIDLER4
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62478	106.2542	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62478	106.2542	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62324	106.249	DOMES - PAWHUSKA TAP 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.248	GEN300015 1-1SGPDEL 18.000
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62327	106.2475	AVOCA - EAST ROGERS 161KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62333	106.246	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.2449	GEN659353 1-DEERCREK CTG18.000
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	106.2349	GEN645012 2-NEBRASKA CITY 2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62324	106.2337	DOMES - MOUND ROAD 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.2317	GEN641089 2-ENERGY CENTER 2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	106.2308	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62341	106.2302	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62341	106.2302	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.2286	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.2279	GEN657749 1-YOUNG 1 GENERATOR
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62330	106.2275	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62376	106.2269	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62288	106.2236	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60147	106.2214	MORRIS COUNTY - UNIONRG6 230.00 230KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62332	106.2207	MORISNT4 138.00 - SOONER 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62385	106.2193	ARCADIA - NORTHWEST 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62330	106.219	MCELROY - UNVRSTY4 138.00 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62346	106.2177	CLIFTON - CONCORDIA 115KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.2171	GEN645024 4-NORTH OMAHA 4
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.2134	GEN652457 1-GARRISON
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.2134	GEN652458 2-GARRISON
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.2134	GEN652459 3-GARRISON
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.213	GEN652461 5-GARRISON
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.2126	GEN652460 4-GARRISON
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60182	106.2115	PITTSBURG - SEMINOLE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60182	106.2115	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.2114	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62343	106.2086	IRONWOOD7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	106.2028	GEN590011 2-ERCOT EQUIVALENCE
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.2007	GEN652557 5-OAHE
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60190	106.1999	P12:138:OKGE:3TERM2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60190	106.1985	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.1976	GEN652556 2-OAHE
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	106.1963	GEN629070 2-BEAVER CHANNEL GENERATORFOR UNIT NO 2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62346	106.1941	CLIFTON - GREENLEAF 115KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62350	106.1936	59TH ST - EL PASO 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62330	106.1911	KINZE - MCELROY 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62319	106.1889	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	106.1851	GEN300006 1-NEW MADRID UNIT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62302	106.1832	ELM CREEK - NORTHWEST MANHATTAN 230KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62345	106.1829	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60241	106.1813	CIMARRON - DRAPER LAKE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62350	106.1802	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	106.1708	GEN542951 5-HAWTHORN UNIT #5
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	106.1547	GEN590010 1-ERCOT EQUIVALENCE
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61873	106.1485	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60179	106.1391	FT SMITH - MUSKOGEE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62239	106.1214	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62375	106.1122	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	106.1092	GEN645011 1-NEBRASKA CITY 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61742	106.0871	RENO COUNTY - SUMMIT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60193	106.0847	MINGO - SETAB 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60193	106.0847	MINGO - SETAB 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	106.0515	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	106.0457	GEN645012 2-NEBRASKA CITY 2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60177	106.0408	G15088_T 345.00 - MOORE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	106.0308	GEN636641 1-LOUISA UNIT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62239	106.0259	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62485	106.0203	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	106.0022	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	106.001	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	106.001	GEN659107 2-ANTELOPE VALLEY UNIT2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.9909	GEN635214 4-NEAL UNIT 4
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60044	105.9838	CENTERVILLE - G15-016T 161.00 161KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60191	105.9754	LYDIA - VALLIANT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60191	105.9754	LYDIA - VALLIANT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60044	105.96	P12:161:WERE:MARM-KCPL_161::
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.9536	GEN600002 3-SHERBURNE CNTY G3
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.9511	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60195	105.9429	G16-063-TAP 345.00 - HUGO 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.9096	GEN562694 1-G15_016_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.9065	GEN635024 4-WALTER SCOTT UNIT 4
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60340	105.9043	P12:069:WERE:ALLE-ATHE_69::
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.9026	GEN541151 3-SIBLEY GENERATING UNIT #3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.8832	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60044	105.8752	CENTERVILLE - PAOLA 161KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62352	105.8724	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.8692	GEN505432 1-SIKESTON
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60286	105.8682	ARCADIA - NORTHWEST 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60177	105.8591	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60195	105.8568	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.8368	GEN300002 1-THOMAS HILL UNIT 2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60150	105.8365	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60190	105.8326	AXTELL - PAULINE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60192	105.8311	HOLCOMB - SETAB 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60192	105.8311	HOLCOMB - SETAB 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.8273	GEN600001 2-SHERBURNE CNTY G2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.8268	GEN600005 1-MONTICELLO
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60357	105.8132	P12:138:OKGE:3TERM7
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.8115	GEN659111 2-LELAND OLDS UNIT2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.8076	GEN635213 3-NEAL UNIT 3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.7986	GEN344225 1-1CAL G1 25.000
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60250	105.7858	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60250	105.7858	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.7832	GEN600000 1-SHERBURNECNTY G1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60206	105.7809	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60150	105.7787	MORRIS COUNTY - SWISSVALE 230KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61873	105.7783	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60198	105.7629	DELL 500 - INDEPENDENCE 500KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60340	105.7613	ATHENS SWITCHING STATION - LEHIGH TAP 69KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60195	105.7546	LYDIA - WELSH 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60195	105.7546	LYDIA - WELSH 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60119	105.7544	STILWELL - WEST GARDNER 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60186	105.7484	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.7336	GEN615002 2-COAL CREEK
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60342	105.733	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60193	105.728	KEO EHV - WEST MEMPHIS 500 500KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60342	105.7233	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.7222	4SIOUX 2 138.00 138/18.0KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.7177	GEN600003 1-PRAIRIE ISLAND G1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.7166	GEN600004 2-PRAIRIE ISLAND G2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60186	105.7164	OSAGE - WEBB CITY TAP 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.7158	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60342	105.7069	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.7037	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60177	105.7011	MUSKOGEE - SEMINOLE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62239	105.6966	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60208	105.6926	P12:069:WERE:ALLE-TIOG_69::
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60342	105.6904	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60248	105.676	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.6741	GEN635023 3-WALTER SCOTT UNIT 3
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.6633	GEN659118 1-LARAMIE RIVER UNIT1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60236	105.6534	7JASPER 345.00 - MORGAN 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61887	105.653	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60183	105.652	SHIDLER - WEST PAWHUSKA 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60183	105.6491	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60186	105.6478	FAIRFAX TAP - SHIDLER 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60186	105.6475	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.6435	GEN563082 1-G15073_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60203	105.6324	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.6302	GEN344894 1-1LAB G1 20.000
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62195	105.6267	GRDA1 - GREC TAP5 345.00 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.6202	GEN520997 1-MORLND2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60183	105.6174	P12:138:AEPW:MOUNDRD4:SHIDLER4
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60183	105.6168	DOMES - PAWHUSKA TAP 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60375	105.6162	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60375	105.6162	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.6158	GEN336151 1-WATERFORD UNIT#1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60202	105.6158	ARKANSAS NUCLEAR ONE - PLEASANT HILL 500KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.6153	GEN336152 1-WATERFORD UNIT#2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.6153	GEN501970 1-EVANGELINE UNIT 7
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.6132	GEN562550 1-G14_040_3 0.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62281	105.6128	7SPORTSMAN - GRDA1 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62342	105.6102	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60183	105.6086	DOMES - MOUND ROAD 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.607	GEN560105 1-G08-22 0.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.603	GEN520998 1-MORLND3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62272	105.602	BLACKBERRY - NEOSHO 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62366	105.6016	MARMTNE5 (MARM TX-1) 161/69/13.2KV TRANSFORMER CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62313	105.6014	SOONER - SPRING CREEK 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5997	GEN336222 1-LITTLE GYPSY UNIT#2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5979	GEN337764 1-TRACTEBEL UNIT C1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5979	GEN337765 1-TRACTEBEL UNIT C2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62292	105.5963	PECULIAR (PECULIAR) 345/161/13.8KV TRANSFORMER CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62322	105.5951	CANADIAN RIVER - MUSKOGEE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60340	105.5947	ALLEN - LEHIGH TAP 69KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.5932	GEN600006 1-AS KING

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5911	GEN514905 1-REDBUD3S
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60289	105.5897	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62258	105.588	FAIRPORT - ST JOE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62275	105.5869	EASTOWN7 345.00 - ST JOE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.5846	GEN641089 2-ENERGY CENTER 2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5828	GEN527882 1-CUNNINGHAM GEN #2 20 KV
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.5779	GEN620315 1-BIG STONE GEN
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60216	105.5763	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60216	105.5763	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5727	GEN514899 1-REDBUD1S
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5726	GEN514900 1-REDBUD2S
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5703	GEN514940 1-REDBUD GEN
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5695	GEN511840 1-NORTHEASTERN STATION #3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62297	105.5683	PLEASANT HILL (P HILL) 345/161/13.8KV TRANSFORMER CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62302	105.5682	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5672	GEN515483 1-BLKWLWD1 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60198	105.5671	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60198	105.5671	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.554	GEN659110 1-LELAND OLDS UNIT1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62293	105.5517	BROOKLINE - MORGAN 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60235	105.5511	HUBEN - MORGAN 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62313	105.5493	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5485	GEN514911 2-REDBUD GEN
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5485	GEN514942 2-REDBUD4G
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5454	GEN337766 1-TRACTEBEL UNIT S1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5444	GEN501910 1-ACADIA UNIT ST1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62299	105.5411	NEOSHO (N345 TX-2) 345/161/13.8KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60213	105.538	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60207	105.5371	P12:138:WERE:GORD-HALS_138::
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62346	105.5365	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60198	105.5341	HUGO - VALLIANT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60198	105.5341	HUGO - VALLIANT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.66535	105.534	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5322	GEN526332 1-JONES GEN #2 21 KV
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60207	105.531	P12:138:WERE:HARR-WEAV_138::
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60173	105.528	GRAND ISLAND - MCCOOL 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60250	105.5279	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60250	105.5279	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5263	GEN514910 2-REDBUD GEN
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5256	GEN587333 1-G16-048-GEN10.5200
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5253	GEN509404 1-WELSH #1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5253	GEN509406 1-WELSH #3
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.5198	INDEPENDENCE 500/26.0KV TRANSFORMER CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5197	GEN523461 1-BLACKHAWK GEN #1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5196	GEN523462 1-BLACKHAWK GEN #2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62304	105.5188	5LOSTVALY 161.00 - TRUMAN 161KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60194	105.5146	8BHAM STEEL 500.00 - WEST MEMPHIS 500 500KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.5087	GEN542962 2X-IATAN UNIT #2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60186	105.5058	ELM CREEK - NORTHWEST MANHATTAN 230KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60186	105.5058	ELM CREEK - NORTHWEST MANHATTAN 230KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.504	GEN509403 1-PIRKEY GENERATION
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5032	GEN334030 1-FRONTIER UNIT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.5013	GEN334031 1-FRONTIER UNIT 2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60210	105.4987	ELMCREEK7 345.00 - SUMMIT 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4944	GEN336801 1-BAXTER WILSON UNIT #1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60196	105.4931	MORISNT4 138.00 - SOONER 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60207	105.4915	P12:138:WERE:BENT-NORT_138P::
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4911	GEN336170 1-GULF OXY U4
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62274	105.4897	SUMMIT - UNIONRG6 230.00 230KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4887	GEN336464 1-MICHOUD UNIT #3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62394	105.4815	OXFORD - SUMNER 4 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4803	GEN303008 1-1BC2 U3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4793	GEN515041 1-SEMINOLE 2G
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60201	105.4777	ARKANSAS NUCLEAR ONE - MABELVALE 500 500KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.4754	7CALAWY 1 345.00 345/25.0KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60201	105.4754	MAYFLOWER 500 - PLEASANT HILL 500KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4748	GEN520947 1-HUGO1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4748	GEN527161 1-MUSTANG GEN #1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4748	GEN527162 1-MUSTANG GEN #2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62312	105.4744	3TR3AR8EL7EL

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62394	105.4727	CRESWELL - OXFORD 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4719	GEN335614 1-WILLOW GLENN UNIT#4
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60213	105.4719	P12:138:WFEC:MSL15
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60156	105.471	AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4674	GEN334433 1-SABINE UNIT 3
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60219	105.4592	IRONWOOD7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60219	105.4592	IRONWOOD7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60186	105.4592	5JASPER 161.00 - LAMAR 161KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60186	105.4588	7JASPER 345.00 345/161KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.4587	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60204	105.4581	ARCADIA - SEMINOLE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4564	GEN336191 1-LITTLE GYPSY UNIT#3
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.4556	THOMAS HILL 161/22.0KV TRANSFORMER CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4549	GEN511839 1-NORTHEASTERN STATION #2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.454	GEN587293 1-G16-044-GEN10.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62162	105.4515	BLUSTEM7 345.00 - SUMMIT 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61990	105.4511	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4482	GEN303006 1-1BC2 U1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4468	GEN303007 1-1BC2 U2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.4466	GEN672310 1-POPLAR RIVER GENERATOR 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4463	GEN515042 1-SEMINOLE 3G
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.4462	GEN549893 2-SOUTHWEST 2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4448	GEN501811 1-RODEMACHER UNIT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.444	GEN527163 1-MUSTANG GEN #3 22 KV
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4374	GEN511842 1-RIVERSIDE STATION #1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.4366	GEN659125 1-COVEY
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60200	105.436	DOLET HILLS 345/230KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60172	105.4345	MCCOOL - MOORE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4284	GEN334070 1-LEWIS CREEK 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4268	GEN514643 1-BRKWND11 0.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4246	GEN334071 1-LEWIS CREEK 2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60216	105.4236	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60214	105.4208	CLIFTON - CONCORDIA 115KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60214	105.4208	CLIFTON - CONCORDIA 115KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60189	105.4202	P12:115:WERE:MOUN-WEMP_115P::
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.419	BURLINGTON NO1 + NO 2 + NO 3 161/20.0KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61727	105.4173	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4131	GEN337041 1-GERALD ANDRUS
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.4111	GEN300002 1-THOMAS HILL UNIT 2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.4071	P12:069:WERE:64TH-NORT_69F::
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4043	GEN334441 1-SABINE UNIT 5
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.4038	GEN531447 1-HOLCOMB GENERATOR
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.4027	P12:069:WERE:MIDI-MOBI_69::
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62074	105.3962	CENTERVILLE - G15-016T 161.00 161KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62301	105.3921	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62301	105.3921	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.3813	GEN336251 1-NINEMILE POINT UNIT#4
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62417	105.3799	TIOGA (TIOG TX-1) 138/69/13.2KV TRANSFORMER CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.378	GEN515223 1-MUSKOGEE 4G
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.3777	GEN515225 1-MUSKOGEE 5G
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.3745	GEN546702 1-NM GEN N1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.3719	GEN335204 1-NELSON UNIT 4
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62417	105.3709	ALTOONA - TIOGA 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.3685	GEN301382 1-1OSAGEWINDG10.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62468	105.365	CRESWELL - MIDLTNT4 138.00 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.3513	GEN587103 1-G16-024-GEN10.5200
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.3437	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.3405	GEN509416 1-TURK GENERATION
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.3374	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.3372	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62235	105.336	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.334	GEN511848 1-SOUTHWESTERN STATION #3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.3264	GEN338143 1-INDEPENDENCE UNIT #1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.3237	GEN336831 1-BAXTER WILSON SES
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61727	105.3227	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.3221	GEN526331 1-JONES GEN #1 22 KV
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.3211	GEN515226 1-MUSKOGEE 6G
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	105.3208	GEN563052 1-G15069_3 0.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62314	105.3102	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62314	105.3102	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.3056	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.2966	GEN511843 1-RIVERSIDE STATION #2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62275	105.2933	WEST GARDNER (WGARD 11) 345/161/13.8KV TRANSFORMER CKT 11
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.2899	GEN300007 1-NEW MADRID UNIT 2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62254	105.2847	PITTSBURG - VALLIANT 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.2835	GEN300006 1-NEW MADRID UNIT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.2714	GEN336252 1-NINEMILE POINT UNIT#5
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.27	GEN338146 1-INDEPENDENCE UNIT #2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62174	105.2688	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62239	105.2591	STILWELL (STLWL 11) 345/161/13.8KV TRANSFORMER CKT 11
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.2536	GEN600002 3-SHERBURNE CNTY G3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62237	105.248	STILWELL (STLWL 22) 345/161/13.8KV TRANSFORMER CKT 22
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.2446	GEN334440 1-SABINE UNIT 4
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62650	105.2283	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.2262	GEN635214 4-NEAL UNIT 4
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62193	105.2241	CLINTON - MONTROSE 161KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62290	105.2167	ALTOONA - BUTLER 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62243	105.2026	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62074	105.1992	CENTERVILLE - PAOLA 161KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.1939	GEN562479 1-G14_001_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62208	105.1856	G15088_T 345.00 - MOORE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62283	105.1778	MINGO - SETAB 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61816	105.1589	DELAWARE - NORTHEAST STATION 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62236	105.1557	EASTOWN7 345.00 - IATAN 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.1552	GEN523971 1-HARRINGTON GEN #1 24 KV
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.1552	GEN523973 1-HARRINGTON GEN #3 24 KV
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.1551	GEN523972 1-HARRINGTON GEN #2 24 KV
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.65090	105.1502	BENTON - WICHITA 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62167	105.1474	G15-016T 161.00 - MARMTNE5 161KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.1469	GEN563032 1-G15067_3 0.4180
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.1467	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.1467	GEN659107 2-ANTELOPE VALLEY UNIT2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.1393	GEN527901 1-HOBBS PLANT #1 (CT)
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.1393	GEN527902 1-HOBBS PLANT #2 (CT)
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.138	GEN636641 1-LOUISA UNIT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62392	105.1348	EL PASO - FARBER 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.1342	AXTELL - PAULINE 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61828	105.1045	SOONER - SPRING CREEK 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.1032	GEN515040 1-SEMINOLE 1G
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62235	105.0942	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	105.0802	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.0793	GEN501812 1-RODEMACHER UNIT 2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.0712	GEN587213 1-G16-032-GEN10.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.0708	GEN515484 1-CHSHMVW1 0.5750
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.0706	GEN515479 1-CHSHMVE1 0.5750
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.0667	GEN659111 2-LELAND OLDS UNIT2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62392	105.0645	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61828	105.064	NORTHWEST - SPRING CREEK 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62262	105.0622	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.0581	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62172	105.0576	MORRIS COUNTY - UNIONRG6 230.00 230KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62180	105.0472	BROOKLINE - FLINT CREEK 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62241	105.0326	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	105.0315	GEN600000 1-SHERBURNECNTY G1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.0296	GEN515622 1-KAYWND11 0.7000
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	105.0234	GEN515623 1-KAYWND12 0.7000
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62208	105.0164	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62037	105.0152	OVEXFRMCCOVE
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61825	105.0121	87th STREET - STRANGER CREEK 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61727	105.0082	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.9926	GEN335206 1-NELSON UNIT 6
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.9859	GEN562691 1-G15_015_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.9761	GEN600001 2-SHERBURNE CNTY G2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.9743	GEN600005 1-MONTICELLO
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62235	104.9614	FT SMITH - MUSKOGEE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62259	104.9589	HOLCOMB - SETAB 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62485	104.9586	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.9549	GEN532605 1-ELKRVR-WTG1 0.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.9392	GEN532606 1-ELKRVR-WTG2 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60131	104.9386	EASTOWN7 345.00 - IATAN 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61790	104.9353	DELAWARE - NEOSHO 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.9343	GEN337652 1-WHITE BLUFF UNIT #1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.9296	GEN635213 3-NEAL UNIT 3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62228	104.9175	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.9097	GEN300001 1-THOMAS HILL UNIT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61810	104.9064	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61559	104.905	CENTERVILLE - G15-016T 161.00 161KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.8967	GEN501813 1-RODEMACHER UNIT 3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.881	GEN533124 1-FR2E2WF1 0.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.881	GEN533126 1-FR2W2WF1 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62361	104.8695	ATHENS SWITCHING STATION - LEHIGH TAP 69KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.8693	GEN533123 1-FR2E1WF1 0.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.8685	GEN533125 1-FR2W1WF1 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62238	104.8621	LYDIA - VALLIANT 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.861	GEN542954 3-MONTROSE UNIT #3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.8603	GEN615002 2-COAL CREEK
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.858	GEN590011 2-ERCOT EQUIVALENCE
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61559	104.8558	P12:161:WERE:MARM-KCPL_161::
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.8505	GEN615001 1-COAL CREEK
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.8501	GEN337653 1-WHITE BLUFF UNIT #2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.8497	GEN600006 1-AS KING
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.8456	GEN334433 1-SABINE UNIT 3
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60147	104.845	SUMMIT - UNIONRG6 230.00 230KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.8448	GEN600003 1-PRAIRIE ISLAND G1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.8445	GEN336251 1-NINEMILE POINT UNIT#4
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.8445	GEN337428 1-PERYVILLE UNIT #1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.8441	GEN337430 1-PERYVILLE UNIT #3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.8436	GEN600004 2-PRAIRIE ISLAND G2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.8355	GEN334393 1-EXXON MOBIL IPP 2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.8355	GEN334394 1-EXXON MOBIL IPP 3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.63928	104.8325	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.8303	GEN334392 1-EXXON MOBIL IPP 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60191	104.8282	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60191	104.8282	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.828	GEN590010 1-ERCOT EQUIVALENCE
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.8271	GEN336242 1-1NMIL ST1 18.000
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.8268	GEN303006 1-1BC2 U1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.8264	GEN562694 1-G15_016_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.8221	GEN303007 1-1BC2 U2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.8208	GEN562723 1-G15_030_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60271	104.8208	OXFORD - SUMNER 4 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.8195	GEN334441 1-SABINE UNIT 5
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60271	104.8166	CRESWELL - OXFORD 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.8138	GEN336801 1-BAXTER WILSON UNIT #1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61758	104.8125	PITTSBURG - VALLIANT 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61758	104.8125	PITTSBURG - VALLIANT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.808	GEN525844 1-ELK_1 118.000
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60203	104.8061	8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.8036	GEN336464 1-MICHOUD UNIT #3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.8016	GEN527903 1-HOBBS PLANT #3 (ST)
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60196	104.7994	MCADAMS - WOLF CREEK 500KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.7982	GEN336191 1-LITTLE GYPSY UNIT#3
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61369	104.7974	87th STREET - STRANGER CREEK 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61273	104.7969	DELAWARE - NORTHEAST STATION 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61273	104.7969	DELAWARE - NORTHEAST STATION 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.7965	FRONTIER - GRIMES 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.7941	GEN515393 1-OGEWND2G
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.7923	GEN344894 1-1LAB G1 20.000
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.7921	GEN344897 4-1LAB G4 20.000
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.7918	GEN515483 1-BLKWLWD1 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.7914	GEN335614 1-WILLOW GLENN UNIT#4
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.7913	GEN344896 3-1LAB G3 20.000
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.7911	ARKANSAS NUCLEAR ONE 500/22.0KV TRANSFORMER CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62207	104.7863	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.7851	GEN541163 1-ARIES COMBUSTION TURBINE #1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62184	104.7848	GRAND ISLAND - MCCOOL 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60191	104.7838	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60160	104.7784	WEST GARDNER (WGARD 11) 345/161/13.8KV TRANSFORMER CKT 11
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62193	104.7746	AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.7734	GEN344895 2-1LAB G2 20.000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60123	104.7625	STILWELL (STLWL 11) 345/161/13.8KV TRANSFORMER CKT 11
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.761	GEN560183 1-REDHIL-WTG1 12.000
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62239	104.7568	G16-063-TAP 345.00 - HUGO 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60122	104.7563	STILWELL (STLWL 22) 345/161/13.8KV TRANSFORMER CKT 22
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61721	104.7552	G15088_T 345.00 - MOORE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.7541	GEN523461 1-BLACKHAWK GEN #1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62187	104.7525	MORRIS COUNTY - SWISSVALE 230KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60200	104.7429	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60200	104.7429	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.7424	GEN524285 1-WILDORADO WIND GEN
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.7418	GEN659118 1-LARAMIE RIVER UNIT1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.7399	GEN587333 1-G16-048-GEN10.5200
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.7382	GEN337041 1-GERALD ANDRUS
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.7309	ARKANSAS NUCLEAR ONE 500/22.0KV TRANSFORMER CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.7288	GEN562611 1-G14_064_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.7251	GEN515449 1-CRSRDW11 0.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.7225	GEN533141 1-SLATEGEN1 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62195	104.7182	GREC TAP5 345.00 - TULSA NORTH 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.7128	GEN334031 1-FRONTIER UNIT 2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.7119	GEN334030 1-FRONTIER UNIT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62160	104.7111	STILWELL - WEST GARDNER 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.7089	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.7076	GEN620315 1-BIG STONE GEN
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.7068	DOLET HILLS 345/24.0KV TRANSFORMER CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.7035	GEN587163 1-G16-022-GEN10.6500
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61758	104.6991	87th STREET - CRAIG 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6955	GEN657748 1-YOUNG 2 GENERATOR
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.6951	GEN563022 1-G15066_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62239	104.6946	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61559	104.6939	CENTERVILLE - PAOLA 161KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61813	104.6905	ALTOONA - BUTLER 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61813	104.6889	P13:069-138:WERE:BUTL_TX-1::
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62232	104.6836	OSAGE - WEBB CITY TAP 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.6835	GEN335204 1-NELSON UNIT 4
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61671	104.6773	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60077	104.6747	CLINTON - MONTROSE 161KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60077	104.6747	CLINTON - MONTROSE 161KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.6734	GEN524295 1-SPNSPUR_WND10.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.672	GEN505432 1-SIKESTON
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.6704	GEN336252 1-NINEMILE POINT UNIT#5
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.6693	GEN336831 1-BAXTER WILSON SES
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6663	GEN300011 1-ST FRANCIS UNIT 2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6643	GEN300012 1-HOLDEN UNIT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6643	GEN300013 1-HOLDEN UNIT 2
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61760	104.6633	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.6612	GEN514643 1-BRKWND11 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61744	104.659	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	104.6581	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.6568	GEN336170 1-GULF OXY U4
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62322	104.6557	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.6549	GEN563182 1-G15083_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6537	GEN681542 6-JP MADGETT
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.653	GEN301382 1-1OSAGEWINDG10.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6503	GEN546698 1-QN GEN2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6497	GEN661015 1-COYOTE
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62236	104.6402	LYDIA - WELSH 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62322	104.6347	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.6311	GEN334440 1-SABINE UNIT 4
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6289	GEN345670 1-1RUSH G1 18.000
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6276	GEN345671 2-1RUSH G2 18.000
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6243	GEN652559 1-OAHE
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6236	GEN300010 1-ST FRANCIS UNIT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61732	104.6223	AXTELL - PAULINE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6201	GEN645025 5-NORTH OMAHA 5
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.619	GEN525561 1-TOLK GEN #1 24 KV
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62322	104.6181	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6156	GEN659110 1-LELAND OLDS UNIT1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6153	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6103	GEN672310 1-POPLAR RIVER GENERATOR 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6103	GEN672311 2-POPLAR RIVER GENERATOR 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6102	GEN681522 3-GENOA 3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.6101	GEN587463 1-G16-068-GEN10.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62280	104.6095	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62186	104.6066	MCCOOL - MOORE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6059	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61752	104.6033	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61751	104.6012	P12:138:OKGE:3TERM2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.6007	GEN672321 1-SHAND GENERATOR 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62361	104.5931	ALLEN - LEHIGH TAP 69KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61681	104.5906	MORRIS COUNTY - UNIONRG6 230.00 230KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.5879	GEN563082 1-G15073_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60199	104.586	WEBRE - WELLS 500KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62232	104.5853	FAIRFAX TAP - SHIDLER 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62232	104.5851	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60273	104.5829	P13:069-138:WERE:ELPA_TX-1::
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.5816	GEN525562 1-TOLK GEN #2 24 KV
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.5802	GEN587413 1-G16-061-GEN10.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.58	GEN587103 1-G16-024-GEN10.5200
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62322	104.5795	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61721	104.5782	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60268	104.5768	EL PASO - FARBER 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61832	104.5713	PLEASANT HILL - SIBLEY 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61693	104.5709	GREC TAP5 345.00 - TULSA NORTH 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.5707	GEN335831 1-RIVERBEND UNIT#1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61244	104.5605	DELAWARE - NEOSHO 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61244	104.5605	DELAWARE - NEOSHO 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.5591	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.5562	GEN300015 1-1SGPDEL 18.000
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60268	104.5553	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62219	104.5548	SHIDLER - WEST PAWHUSKA 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61803	104.5501	MINGO - RED WILLOW 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61803	104.5501	MINGO - RED WILLOW 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62219	104.5481	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61727	104.5457	FT SMITH - MUSKOGEE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62224	104.5451	AVOCA - EAST ROGERS 161KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62229	104.5419	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62229	104.541	MORISNT4 138.00 - SOONER 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62230	104.5388	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62279	104.5365	ARCADIA - NORTHWEST 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60273	104.5346	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62262	104.5341	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61874	104.5335	P12:069:WERE:ALLE-ATHE_69::
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62224	104.5293	HUGO - VALLIANT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.5286	GEN527903 1-HOBBS PLANT #3 (ST)
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62277	104.5245	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62219	104.5232	DOMES - PAWHUSKA TAP 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62240	104.5205	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62235	104.5185	ELMCREEK7 345.00 - SUMMIT 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61571	104.5177	7MCCREDIE 345.00 - 7MONTGMRY 345.00 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61990	104.517	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61693	104.5156	GRDA1 - GREC TAP5 345.00 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62219	104.5152	DOMES - MOUND ROAD 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61303	104.5142	87th STREET - CRAIG 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.5085	GEN659353 1-DEERCREK CTG18.000
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.5084	GEN659354 1-DEERCREK STG18.000
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61748	104.5067	PITTSBURG - SEMINOLE 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61748	104.5067	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.5043	GEN587483 1-G16-071-GEN10.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.4999	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	104.4992	P12:069:WERE:64TH-NORT_69F::
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.4988	GEN659289 1-DAYCNTYWND W0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62241	104.4948	CLIFTON - CONCORDIA 115KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.4916	GEN641089 2-ENERGY CENTER 2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.4909	GEN645024 4-NORTH OMAHA 4
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.4892	GEN562992 1-G15063_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	104.4873	GEN659031 1-G12_014IS_4 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62388	104.4854	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62388	104.4854	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62231	104.4749	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62235	104.4747	ELMCREEK7 345.00 (ELMCREEK T1) 345/230/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.4643	GEN527901 1-HOBBS PLANT #1 (CT)
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61778	104.4556	CIMARRON - DRAPER LAKE 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61760	104.4512	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61745	104.4483	LYDIA - VALLIANT 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61745	104.4483	LYDIA - VALLIANT 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61714	104.4444	KEO EHV - WEST MEMPHIS 500 500KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.4377	GEN562479 1-G14_001_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.4348	GEN523971 1-HARRINGTON GEN #1 24 KV
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61534	104.4301	OVEXFRMCCOVE
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60317	104.4234	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61668	104.4142	JEFFREY ENERGY CENTER - SUMMIT 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61671	104.4124	BROOKLINE - FLINT CREEK 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61671	104.4124	BROOKLINE - FLINT CREEK 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.4089	GEN336153 1-WATERFORD UNIT#3
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.4048	GEN501812 1-RODEMACHER UNIT 2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.3992	GEN338143 1-INDEPENDENCE UNIT #1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.3864	GEN501813 1-RODEMACHER UNIT 3
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.3857	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.3746	GEN515040 1-SEMINOLE 1G
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60653	104.3743	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.69149	104.3688	BENTON - WOLF CREEK 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61734	104.3649	P12:138:WERE:HARR-WEAV_138::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61874	104.3643	ATHENS SWITCHING STATION - LEHIGH TAP 69KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.3627	WHITE BLUFF 500/26.0KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.3596	GEN563032 1-G15067_3 0.4180
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61734	104.3579	P12:069:WERE:COWS-HOOVS_69F::
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.3425	GEN587213 1-G16-032-GEN10.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	104.3411	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.3285	GEN338146 1-INDEPENDENCE UNIT #2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.323	GEN562772 1-G15034_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.59897	104.3226	7OVERTON 345.00 - SIBLEY 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.59897	104.3226	7OVERTON 345.00 - SIBLEY 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61720	104.3204	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61720	104.3204	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.319	GEN562658 1-G15_001_3 0.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.3178	GEN501801 1-DOLET HILLS UNIT1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61700	104.3056	AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61673	104.3046	STILWELL - WEST GARDNER 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61718	104.2908	DELL 500 - INDEPENDENCE 500KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.2864	GEN515484 1-CHSHMVW1 0.5750
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.2861	GEN515479 1-CHSHMVE1 0.5750
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61752	104.2823	G16-063-TAP 345.00 - HUGO 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.2818	GEN562882 1-G15047_3 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	104.2805	4SIOUX 1 138.00 138/18.0KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	104.2728	THOMAS HILL 161/22.0KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61745	104.2602	HOLCOMB - SETAB 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61745	104.2602	HOLCOMB - SETAB 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61919	104.2587	P13:069-138:WERE:ALTO_TX-1OR3P::
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.2582	GEN515622 1-KAYWND11 0.7000
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61702	104.2566	GRAND ISLAND - MCCOOL 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61552	104.2557	7SPORTSMAN - BLACKBERRY 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.247	GEN515623 1-KAYWND12 0.7000
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61758	104.2388	MINGO - SETAB 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61758	104.2388	MINGO - SETAB 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61744	104.2386	LYDIA - WELSH 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61744	104.2386	LYDIA - WELSH 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	104.233	P12:138:WERE:HOOV-MURR_138::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61715	104.2295	7JASPER 345.00 345/161KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61715	104.2285	5JASPER 161.00 - LAMAR 161KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.2252	GEN563242 1-G15090_3 0.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.2251	GEN562718 1-G15_024_3 0.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.2251	GEN587503 1-G73-073-GEN10.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.2248	GEN562720 1-G15_025_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.224	NEW MADRID 161/22.0KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61696	104.2181	MORRIS COUNTY - SWISSVALE 230KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	104.2178	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.207	GEN562691 1-G15_015_3 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61752	104.2048	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.2042	GEN514805 1-SOONER UNIT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61744	104.2038	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	104.2021	P12:069:WERE:MACA-PLAZ_69::
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.1983	GEN336821 1-GRAND GULF UNIT
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.59757	104.1949	PLEASANT HILL - SIBLEY 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61781	104.1899	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61717	104.1828	8BHAM STEEL 500.00 - WEST MEMPHIS 500 500KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.1813	GEN532720 1-CANEYWF1 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.181	GEN532605 1-ELKRVR-WTG1 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61736	104.1731	P12:138:WERE:GORD-HALS_138::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61744	104.1684	OSAGE - WEBB CITY TAP 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.1658	GEN532606 1-ELKRVR-WTG2 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.1641	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61762	104.1626	HUBEN - MORGAN 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61704	104.1434	MCCOOL - MOORE 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61698	104.1411	HAWTHORN - NASHUA 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61893	104.1356	P12:138:OKGE:3TERM7
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61728	104.1322	ARKANSAS NUCLEAR ONE - PLEASANT HILL 500KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61735	104.132	P12:069:WERE:ALLE-TIOG_69::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61884	104.1302	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61757	104.1291	P12:138:WERE:ELPA-MURR_138::
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.1237	GEN335206 1-NELSON UNIT 6
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.1183	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	104.1139	P12:069:WERE:HOOVN-RIPL_69::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61884	104.1126	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61730	104.0995	SHIDLER - WEST PAWHUSKA 138KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.099	GEN514806 1-SOONER UNIT 2
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61735	104.0965	P12:138:OKGE:3TERM47
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.69242	104.0962	ROSE HILL - WOLF CREEK 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61874	104.0958	ALLEN - LEHIGH TAP 69KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61730	104.0955	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61744	104.0888	FAIRFAX TAP - SHIDLER 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61744	104.0886	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61884	104.0839	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	104.0753	P12:069:WERE:MIDI-MOBI_69::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61738	104.0752	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61738	104.0752	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61704	104.0741	CLARK - LAMAR 161KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61734	104.0729	HUGO - VALLIANT 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61734	104.0729	HUGO - VALLIANT 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61564	104.0682	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.0647	GEN562429 1-G13-029 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.0642	GEN562723 1-G15_030_3 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61730	104.0633	DOMES - PAWHUSKA TAP 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61730	104.0623	P12:138:AEPW:MOUNDRD4:SHIDLER4
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	104.0592	GEN587493 1-G16-072-GEN10.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	104.0578	P12:138:WERE:NORT-WEAV_138::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61884	104.0529	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.048	GEN533124 1-FR2E2WF1 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61742	104.0478	ELMCREEK7 345.00 - SUMMIT 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.0475	GEN533126 1-FR2W2WF1 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61730	104.0455	DOMES - MOUND ROAD 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	104.0409	INDEPENDENCE 500/26.0KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61749	104.0389	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61749	104.0389	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.0356	GEN533123 1-FR2E1WF1 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61734	104.0341	P12:069:WERE:MEAD-PLAZ_69::
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.034	GEN533125 1-FR2W1WF1 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61767	104.0326	7JASPER 345.00 - MORGAN 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61720	104.0243	P12:115:WERE:MOUN-WEMP_115P::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61742	104.0197	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61738	104.0157	MORISNT4 138.00 - SOONER 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61721	104.0137	7LABADIE3 345.00 - 7MONTGMRY 345.00 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61735	104.0125	P12:138:WERE:17TH-CANA_138::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61735	104.0123	P12:069:WERE:MOUN-NEWT_69::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	104.0071	BURLINGTON NO1 + NO 2 + NO 3 161/20.0KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61803	104.007	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	104.0052	GEN533141 1-SLATEGEN1 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61779	104.0046	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61779	104.0046	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	104.0043	P12:069:WERE:COWS-SUNS_69F::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61737	104.0033	STILLWATER - UNVRSTY4 138.00 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61742	104.0027	ELMCREEK7 345.00 (ELMCREEK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61747	103.9979	IRONWOOD7 345.00 - SPEARVILLE 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61747	103.9979	IRONWOOD7 345.00 - SPEARVILLE 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61737	103.9966	MCELROY - UNVRSTY4 138.00 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61757	103.9953	59TH ST - EL PASO 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61883	103.9943	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61883	103.9943	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61729	103.9817	MAYFLOWER 500 - PLEASANT HILL 500KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.9815	GEN562611 1-G14_064_3 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61732	103.9811	P12:115:WERE:PHLP-SALM_115::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61757	103.975	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61739	103.9747	ARCADIA - SEMINOLE 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61815	103.9746	P12:069:WERE:ATHE-TIOG_69::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61729	103.9742	ARKANSAS NUCLEAR ONE - MABELVALE 500 500KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.9735	GEN563022 1-G15066_3 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61735	103.9733	P12:138:WERE:COWS-WACO_138::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61737	103.972	KINZE - MCELROY 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	103.9719	P12:115:WERE:3VAN-HEC_115P::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61747	103.9697	CLIFTON - CONCORDIA 115KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61747	103.9697	CLIFTON - CONCORDIA 115KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61754	103.9683	BENTON (BENT TX-2) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61712	103.9663	ELM CREEK - NORTHWEST MANHATTAN 230KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61712	103.9663	ELM CREEK - NORTHWEST MANHATTAN 230KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61752	103.966	P13:069-138:WERE:WEAV_TX-2::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61736	103.9604	EVANS ENERGY CENTER NORTH - SEDGWICK COUNTY NO. 12 COLWICH 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61756	103.9589	BENTON (BENT TX-1) 345/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.9407	NEW MADRID 345/22.0KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.9404	GEN337653 1-WHITE BLUFF UNIT #2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.9336	GEN563182 1-G15083_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.9324	GEN337652 1-WHITE BLUFF UNIT #1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.9317	GEN587163 1-G16-022-GEN10.6500
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62022	103.9206	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61914	103.9174	7OVERTON 345.00 - SIBLEY 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62215	103.9103	CANADIAN RIVER - MUSKOGEE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.9077	GEN562550 1-G14_040_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8999	GEN528501 1-G14_012 24.000
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8996	GEN520997 1-MORLND2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8977	GEN334431 1-SABINE UNIT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8977	GEN334432 1-SABINE UNIT 2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60044	103.8961	G15-016T 161.00 - MARMTNE5 161KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8942	GEN530690 1-PRWINDG1 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62189	103.8874	PECULIAR (PECULIAR) 345/161/13.8KV TRANSFORMER CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62142	103.8872	ADRIAN - ARCHIE 161KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8865	GEN501970 1-EVANGELINE UNIT 7
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62270	103.8837	OXFORD - SUMNER 4 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8821	GEN520998 1-MORLND3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62270	103.8776	CRESWELL - OXFORD 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8776	GEN501823 1-TECHE UNIT 3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62263	103.8721	MARMTNE5 (MARM TX-1) 161/69/13.2KV TRANSFORMER CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8714	GEN337764 1-TRACTEBEL UNIT C1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8714	GEN337765 1-TRACTEBEL UNIT C2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62152	103.8703	FAIRPORT - ST JOE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62194	103.8633	PLEASANT HILL (P HILL) 345/161/13.8KV TRANSFORMER CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8546	GEN539670 4-JUDSON LARGE GENERATOR
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62169	103.8545	EASTOWN7 345.00 - ST JOE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8514	GEN514905 1-REDBUD3S
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.8506	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.8503	4OSAGEWIND 138.00 138/34.5KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.8444	GEN587463 1-G16-068-GEN10.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62198	103.8418	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62167	103.8414	BLACKBERRY - NEOSHO 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8365	GEN524023 1-NICHOLS GEN #3 22 KV
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62322	103.8357	CRESWELL - MIDLTNT4 138.00 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8353	GEN515483 1-BLKWLWD1 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8314	GEN514899 1-REDBUD1S
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8314	GEN514900 1-REDBUD2S
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.831	GEN336151 1-WATERFORD UNIT#1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8306	GEN336152 1-WATERFORD UNIT#2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8289	GEN514940 1-REDBUD GEN
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.8199	GEN587413 1-G16-061-GEN10.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8193	GEN511840 1-NORTHEASTERN STATION #3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62190	103.8185	BROOKLINE - MORGAN 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.817	GEN337766 1-TRACTEBEL UNIT S1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8117	GEN501910 1-ACADIA UNIT ST1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8106	GEN336222 1-LITTLE GYPSY UNIT#2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8084	GEN523461 1-BLACKHAWK GEN #1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8084	GEN523462 1-BLACKHAWK GEN #2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8056	GEN514911 2-REDBUD GEN
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.8056	GEN514942 2-REDBUD4G
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62196	103.8048	NEOSHO (N345 TX-2) 345/161/13.8KV TRANSFORMER CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7957	GEN587333 1-G16-048-GEN10.5200
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.7873	GEN587483 1-G16-071-GEN10.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62323	103.7824	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7816	GEN514910 2-REDBUD GEN
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7748	GEN334031 1-FRONTIER UNIT 2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.774	GEN334030 1-FRONTIER UNIT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7731	GEN509404 1-WELSH #1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7729	GEN509406 1-WELSH #3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7664	GEN527161 1-MUSTANG GEN #1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7664	GEN527162 1-MUSTANG GEN #2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7646	GEN527883 1-CUNNINGHAM GEN #3 22 KV
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7643	GEN527884 1-CUNNINGHAM GEN #4 22 KV
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7584	GEN509403 1-PIRKEY GENERATION
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.7571	GEN562992 1-G15063_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62209	103.754	3TR3AR8EL7EL
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7537	GEN336170 1-GULF OXY U4
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7525	GEN525494 1-PLANT X GEN #4 20 KV
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7496	GEN520947 1-HUGO1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7455	GEN527882 1-CUNNINGHAM GEN #2 20 KV
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7426	GEN303008 1-1BC2 U3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62172	103.7407	SUMMIT - UNIONRG6 230.00 230KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.7379	GEN514805 1-SOONER UNIT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7375	GEN527163 1-MUSTANG GEN #3 22 KV
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62201	103.7364	5LOSTVALY 161.00 - TRUMAN 161KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7132	GEN336801 1-BAXTER WILSON UNIT #1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.712	GEN511839 1-NORTHEASTERN STATION #2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7087	GEN303006 1-1BC2 U1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7084	GEN501811 1-RODEMACHER UNIT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.7072	GEN303007 1-1BC2 U2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62271	103.7016	EL PASO - FARBER 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.6993	GEN336464 1-MICHOUD UNIT #3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.698	GEN511842 1-RIVERSIDE STATION #1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62312	103.6951	TIOGA (TIOG TX-1) 138/69/13.2KV TRANSFORMER CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.6947	GEN514643 1-BRKWND11 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.6847	GEN334070 1-LEWIS CREEK 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62198	103.6844	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62312	103.6837	ALTOONA - TIOGA 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.6811	GEN334071 1-LEWIS CREEK 2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.6794	GEN335614 1-WILLOW GLENN UNIT#4
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62209	103.6699	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.6633	GEN334433 1-SABINE UNIT 3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.6584	GEN336191 1-LITTLE GYPSY UNIT#3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62210	103.6453	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62271	103.6444	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.6437	GEN514806 1-SOONER UNIT 2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.6418	GEN335831 1-RIVERBEND UNIT#1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.6391	GEN587103 1-G16-024-GEN10.5200
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.639	GEN301382 1-1OSAGEWINDG10.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.6273	GEN515041 1-SEMINOLE 2G
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.6173	GEN531447 1-HOLCOMB GENERATOR
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.6131	GEN526333 1-JONES GEN #3 21 KV
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.6129	GEN337041 1-GERALD ANDRUS
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.6125	GEN515223 1-MUSKOGEE 4G
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.6123	GEN515225 1-MUSKOGEE 5G
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.6073	GEN511848 1-SOUTHWESTERN STATION #3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.6006	GEN509416 1-TURK GENERATION
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.5925	GEN338143 1-INDEPENDENCE UNIT #1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.5896	GEN334441 1-SABINE UNIT 5
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.65677	103.5861	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.5855	GEN526331 1-JONES GEN #1 22 KV

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.5854	GEN526332 1-JONES GEN #2 21 KV
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.63705	103.5842	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62172	103.5717	WEST GARDNER (WGARD 11) 345/161/13.8KV TRANSFORMER CKT 11
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.5707	GEN335204 1-NELSON UNIT 4
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62136	103.5525	STILWELL (STLWL 11) 345/161/13.8KV TRANSFORMER CKT 11
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.5501	GEN562772 1-G15034_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.55	GEN515226 1-MUSKOGEE 6G
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.5492	GEN511843 1-RIVERSIDE STATION #2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.5468	GEN562658 1-G15_001_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.5465	GEN562882 1-G15047_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.5461	GEN336251 1-NINEMILE POINT UNIT#4
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62134	103.5416	STILWELL (STLWL 22) 345/161/13.8KV TRANSFORMER CKT 22
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.5294	GEN338146 1-INDEPENDENCE UNIT #2
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.59723	103.5277	CRAIG - WEST GARDNER 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62093	103.5243	CLINTON - MONTROSE 161KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.5192	GEN336831 1-BAXTER WILSON SES
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.5068	GEN527901 1-HOBBS PLANT #1 (CT)
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.5068	GEN527902 1-HOBBS PLANT #2 (CT)
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.5063	GEN336821 1-GRAND GULF UNIT
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.5058	GEN501801 1-DOLET HILLS UNIT1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.5006	GEN515042 1-SEMINOLE 3G
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62309	103.4816	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.471	GEN562718 1-G15_024_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.4709	GEN563242 1-G15090_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.4709	GEN587503 1-G73-073-GEN10.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.4706	GEN562720 1-G15_025_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.4651	GEN336153 1-WATERFORD UNIT#3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.459	GEN562479 1-G14_001_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.4522	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.451	GEN336252 1-NINEMILE POINT UNIT#5
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.4291	GEN334440 1-SABINE UNIT 4
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61691	103.4191	EASTOWN7 345.00 - ST JOE 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62281	103.4185	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.4164	GEN532720 1-CANEYWF1 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61726	103.4162	P13:115-230:WERE:EMAN_TX-1::
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.408	GEN563032 1-G15067_3 0.4180
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.59652	103.4067	PECULIAR - PLEASANT HILL 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61732	103.4065	CANADIAN RIVER - MUSKOGEE 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	103.399	8CAJUN2 500/24.0KV TRANSFORMER CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62127	103.3968	EASTOWN7 345.00 - IATAN 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61681	103.3961	BLACKBERRY - NEOSHO 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	103.3936	ARKANSAS NUCLEAR ONE 500/22.0KV TRANSFORMER CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.3888	GEN523971 1-HARRINGTON GEN #1 24 KV
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.3888	GEN523972 1-HARRINGTON GEN #2 24 KV
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.3888	GEN523973 1-HARRINGTON GEN #3 24 KV
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61701	103.3879	PECULIAR (PECULIAR) 345/161/13.8KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61698	103.3876	BROOKLINE - MORGAN 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61698	103.3876	BROOKLINE - MORGAN 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61709	103.3875	NEOSHO (N345 TX-2) 345/161/13.8KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61711	103.3868	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.3803	GEN525561 1-TOLK GEN #1 24 KV
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61727	103.3758	EAST MANHATTAN - JEFFREY ENERGY CENTER 230KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	103.3681	ESSEX UNIT 2 500/18.0KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61749	103.3654	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	103.3633	FRONTIER - GRIMES 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61718	103.3571	PECULIAR - PLEASANT HILL 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61706	103.357	PLEASANT HILL (P HILL) 345/161/13.8KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61770	103.354	MARMTNE5 (MARM TX-1) 161/69/13.2KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	103.3435	ARKANSAS NUCLEAR ONE 500/22.0KV TRANSFORMER CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.3431	GEN515040 1-SEMINOLE 1G
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.3295	GEN501812 1-RODEMACHER UNIT 2
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.3237	GEN587213 1-G16-032-GEN10.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61719	103.3155	ELDORADO EHV 500/345KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61719	103.3144	3TR3AR8EL7EL
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61719	103.3143	7SAREPTA% 345.00 - ELDORADO EHV 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62074	103.3108	G15-016T 161.00 - MARMTNE5 161KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.308	GEN515484 1-CHSHMVW1 0.5750
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.3077	GEN515479 1-CHSHMVE1 0.5750
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.3044	GEN515622 1-KAYWND11 0.7000
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61722	103.3011	WEBRE - WELLS 500KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.2959	GEN515623 1-KAYWND12 0.7000
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61807	103.2956	P12:138:WERE:CRSW-SUMN_138::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61718	103.2945	8WNEWMADRID 500.00 - DELL 500 500KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61753	103.2828	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61730	103.277	8DANIEL8 500.00 - MCKNIGHT 500KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	103.2666	DOLET HILLS 345/24.0KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61807	103.2606	OXFORD - SUMNER 4 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61807	103.2495	CRESWELL - OXFORD 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61597	103.2468	CLINTON - MONTROSE 161KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61597	103.2468	CLINTON - MONTROSE 161KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61681	103.2414	SUMMIT - UNIONRG6 230.00 230KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.239	GEN335206 1-NELSON UNIT 6
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.2386	GEN562429 1-G13-029 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.2362	GEN532605 1-ELKRVR-WTG1 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.2346	GEN562691 1-G15_015_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.234	GEN587493 1-G16-072-GEN10.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61708	103.2272	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61708	103.2272	7SAREPTA% 345.00 - LONGWOOD 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.221	GEN532606 1-ELKRVR-WTG2 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	103.2207	ST FRANCIS 2 161/16.0KV TRANSFORMER CKT 2
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	103.2207	ST FRANCIS 345/161KV TRANSFORMER CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61832	103.2177	CRAIG - WEST GARDNER 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61893	103.2121	P12:138:WERE:CRSW-OGE_138::
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.2091	GEN527903 1-HOBBS PLANT #3 (ST)
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62586	103.1957	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.192	GEN337652 1-WHITE BLUFF UNIT #1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	103.1905	P12:161:GRDA:KERR-SALINA-CKT1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	103.1905	P12:161:GRDA:KERR-SALINA-CKT2
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	103.1826	ST FRANCIS - ST FRANCIS 1 161KV CKT Z1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	103.1826	ST FRANCIS 161/16.0KV TRANSFORMER CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	103.1621	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	103.1425	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61721	103.14	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61721	103.14	DOLET HILLS - SOUTHWEST SHREVEPORT 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.1397	GEN501813 1-RODEMACHER UNIT 3
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62894	103.1371	BENTON - WICHITA 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61824	103.1318	ALTOONA - TIOGA 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61824	103.1262	TIOGA (TIOG TX-1) 138/69/13.2KV TRANSFORMER CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.0942	GEN337653 1-WHITE BLUFF UNIT #2
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61685	103.0861	WEST GARDNER (WGARD 11) 345/161/13.8KV TRANSFORMER CKT 11
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.0844	GEN533124 1-FR2E2WF1 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.0842	GEN533126 1-FR2W2WF1 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.0717	GEN533123 1-FR2E1WF1 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.0707	GEN533125 1-FR2W1WF1 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.0703	GEN562723 1-G15_030_3 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61649	103.0607	STILWELL (STLWL 11) 345/161/13.8KV TRANSFORMER CKT 11
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61658	103.055	EASTOWN7 345.00 - IATAN 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61416	103.0548	7OVERTON 345.00 - SIBLEY 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61416	103.0548	7OVERTON 345.00 - SIBLEY 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61648	103.0495	STILWELL (STLWL 22) 345/161/13.8KV TRANSFORMER CKT 22
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61884	103.0455	CRESWELL - MIDLTNT4 138.00 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	103.0353	GEN533141 1-SLATEGEN1 0.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.57126	103.0248	LACYGNE - NEOSHO 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	103.0111	CHOUTEAU 161/16.0KV TRANSFORMER CKT 11
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61808	103.0079	P13:069-138:WERE:ELPA_TX-1::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	102.9916	WHITE BLUFF 500/26.0KV TRANSFORMER CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62650	102.9811	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.9809	GEN563182 1-G15083_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.9697	GEN562611 1-G14_064_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.9685	GEN587163 1-G16-022-GEN10.6500
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61805	102.9652	EL PASO - FARBER 138KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	102.9624	CHOUTEAU 161/16.0KV TRANSFORMER CKT 10
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.9579	GEN525561 1-TOLK GEN #1 24 KV
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.9398	GEN563022 1-G15066_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61735	102.9303	PLEASANT HILL - SIBLEY 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62087	102.9095	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61805	102.8748	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.8445	GEN525562 1-TOLK GEN #2 24 KV
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61559	102.8388	G15-016T 161.00 - MARMTNE5 161KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.8335	GEN587463 1-G16-068-GEN10.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.8115	GEN587413 1-G16-061-GEN10.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.8019	GEN587483 1-G16-071-GEN10.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.7895	GEN335831 1-RIVERBEND UNIT#1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.59533	102.7834	PECULIAR - STILWELL 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.7089	GEN562992 1-G15063_3 0.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	102.6571	GEN562902 1-G15052_3 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.67687	102.6501	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60268	102.6399	P12:138:WERE:ELPA-SUMN_138::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	102.6323	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.6225	GEN336153 1-WATERFORD UNIT#3
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.614	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.5824	GEN562772 1-G15034_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.5785	GEN562658 1-G15_001_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.5504	GEN501801 1-DOLET HILLS UNIT1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	102.5207	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.5159	GEN562882 1-G15047_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.4962	GEN563242 1-G15090_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.4961	GEN562718 1-G15_024_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.4961	GEN587503 1-G73-073-GEN10.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.4958	GEN562720 1-G15_025_3 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.4545	GEN532720 1-CANEYWF1 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61270	102.4387	PLEASANT HILL - SIBLEY 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.4041	GEN336821 1-GRAND GULF UNIT
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.3981	GEN514805 1-SOONER UNIT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	102.382	NEW MADRID 345/22.0KV TRANSFORMER CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61733	102.372	NEW MADRID 161/22.0KV TRANSFORMER CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.336	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61730	102.3106	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.2765	GEN514806 1-SOONER UNIT 2
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61591	102.2727	PECULIAR - STILWELL 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.64462	102.2625	BENTON - WICHITA 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.65443	102.2566	GEN542955 1-LACYGNE UNIT #1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.2343	GEN562429 1-G13-029 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	102.2292	GEN587493 1-G16-072-GEN10.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.66535	102.2004	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.54800	102.1388	LACYGNE - NEOSHO 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.63442	102.0057	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.68636	101.9938	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	101.9236	GEN562902 1-G15052_3 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.66281	101.9057	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62041	101.875	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	101.8687	GEN560248 1-G10_003_2 0.6900
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62325	101.863	GEN532957 1-WAVERGEN1 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61624	101.7521	PECULIAR - PLEASANT HILL 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61722	101.5847	CRAIG - WEST GARDNER 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61805	101.3686	P12:138:WERE:ELPA-SUMN_138::
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.65443	101.2871	GEN542956 2-LACYGNE UNIT #2
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61160	101.2202	PECULIAR - PLEASANT HILL 345KV CKT 1
0	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.63928	101.22	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.73400	101.2193	BENTON - WOLF CREEK 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61262	101.165	CRAIG - WEST GARDNER 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.66281	101.088	917X
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	101.0807	GEN560248 1-G10_003_2 0.6900
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60205	101.0753	GEN532957 1-WAVERGEN1 0.6900
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	100.9321	GEN562902 1-G15052_3 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62017	100.8896	SWISSVALE - WEST GARDNER 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61499	100.7126	PECULIAR - STILWELL 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.72934	100.6877	ROSE HILL - WOLF CREEK 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62716	100.6862	SWISSVALE - WEST GARDNER 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62087	100.6546	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.65449	100.5398	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.66281	100.5108	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.56336	100.4742	LACYGNE - NEOSHO 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.57467	100.4208	LACYGNE - WEST GARDNER 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.65677	100.2714	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	100.1555	GEN560248 1-G10_003_2 0.6900
0	17SP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62965	100.153	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62221	100.1497	GEN532957 1-WAVERGEN1 0.6900
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.63486	100.1453	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61036	100.1412	PECULIAR - STILWELL 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.63705	100.1224	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
0	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.57156	100.0749	LACYGNE - NEOSHO 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.67687	100	G14_001T 345.00 - WICHITA 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.64985	99.9	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.67204	99.8	RENO COUNTY - WICHITA 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.65449	99.8	917X
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.66734	99.6	RANCHRD7 345.00 - SOONER 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.66005	99.5	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.65449	99.4	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.68636	99.3	G14_001T 345.00 - WICHITA 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.66269	99.2	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.66269	99.2	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.65443	99.1	BASE CASE
0	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.63570	99	HOYT - STRANGER CREEK 345KV CKT 1
0	20L	G16_012	-	Non-Converged Contingency	1141.0	1195.0	0.60205	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	17G	G16_012	FROM->TO	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	100.0	110.0	0.04176	123.842	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	16WP	G16_012	FROM->TO	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	100.0	110.0	0.04508	120.3177	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20WP	G16_012	FROM->TO	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	100.0	110.0	0.04072	120.1957	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	17G	G16_012	FROM->TO	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	100.0	110.0	0.04176	116.8112	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G16_012	FROM->TO	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	100.0	110.0	0.03801	113.2105	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	16WP	G16_012	FROM->TO	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	100.0	110.0	0.04508	112.7352	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20WP	G16_012	FROM->TO	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	100.0	110.0	0.04072	112.5897	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	17SP	G16_012	FROM->TO	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	100.0	110.0	0.04343	112.0837	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20SP	G16_012	FROM->TO	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	100.0	110.0	0.04385	111.2747	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	17SP	G16_012	FROM->TO	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	100.0	110.0	0.04343	107.3478	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G16_012	FROM->TO	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	100.0	110.0	0.03801	107.0018	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20SP	G16_012	FROM->TO	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	100.0	110.0	0.04385	106.6506	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	25SP	G16_012	FROM->TO	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	100.0	110.0	0.04348	101.6766	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.60199	117.6253	NEOSHO - WOLF CREEK 345KV CKT 1
2	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.66266	106.612	NEOSHO - WOLF CREEK 345KV CKT 1
2	16WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62299	106.3625	NEOSHO - WOLF CREEK 345KV CKT 1
2	20WP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62198	104.6229	NEOSHO - WOLF CREEK 345KV CKT 1
2	17G	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.61700	104.1699	NEOSHO - WOLF CREEK 345KV CKT 1
2	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.53060	102.7726	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
2	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.52248	100.6315	SWISSVALE - WEST GARDNER 345KV CKT 1
2	17SP	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.62023	100	NEOSHO - WOLF CREEK 345KV CKT 1
2	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.53375	100	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
2	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.53060	99.5	G14_001T 345.00 - WICHITA 345KV CKT 1
2	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.52960	99.5	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
2	20WP	G16_012	FROM->TO	NEOSHO (N345 TX-2) 345/161/13.8KV TRANSFORMER CKT 1	410.0	494.0	0.03985	104.4041	NEOSHO (NEOSHO1X) 345/138/13.8KV TRANSFORMER CKT 1
2	20SP	G16_012	FROM->TO	NEOSHO (N345 TX-2) 345/161/13.8KV TRANSFORMER CKT 1	410.0	494.0	0.04103	103.8466	NEOSHO (NEOSHO1X) 345/138/13.8KV TRANSFORMER CKT 1
2	17SP	G16_012	FROM->TO	NEOSHO (N345 TX-2) 345/161/13.8KV TRANSFORMER CKT 1	410.0	494.0	0.04081	103.5101	NEOSHO (NEOSHO1X) 345/138/13.8KV TRANSFORMER CKT 1
2	20SP	G16_012	FROM->TO	NEOSHO (N345 TX-2) 345/161/13.8KV TRANSFORMER CKT 1	410.0	494.0	0.04103	102.067	NEOSHO (NEOSHO1X) 345/138/13.8KV TRANSFORMER CKT 1
2	17SP	G16_012	FROM->TO	NEOSHO (N345 TX-2) 345/161/13.8KV TRANSFORMER CKT 1	410.0	494.0	0.04081	101.9452	NEOSHO (NEOSHO1X) 345/138/13.8KV TRANSFORMER CKT 1
2	16WP	G16_012	FROM->TO	NEOSHO (N345 TX-2) 345/161/13.8KV TRANSFORMER CKT 1	410.0	494.0	0.05130	100.7324	NEOSHO (NEOSHO1X) 345/138/13.8KV TRANSFORMER CKT 1
2	20WP	G16_012	FROM->TO	NEOSHO (N345 TX-2) 345/161/13.8KV TRANSFORMER CKT 1	410.0	494.0	0.03985	100.4194	NEOSHO (NEOSHO1X) 345/138/13.8KV TRANSFORMER CKT 1
2	20WP	G16_012	FROM->TO	NEOSHO (N345 TX-2) 345/161/13.8KV TRANSFORMER CKT 1	410.0	494.0	0.03563	99.3	BASE CASE
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05039	111.6989	BLACKBERRY - NEOSHO 345KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05039	111.6988	BLACKBERRY - NEOSHO 345KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.08485	111.1781	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.08485	111.1781	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05193	110.5184	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05034	110.1628	BLACKBERRY - NEOSHO 345KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.08483	109.873	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05774	109.6011	GEN547656 1-STATE LINE UNIT #2
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.08483	109.0469	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04680	108.7	SUB 349 - ASBURY - SUB 366 - CARL JUNCTION 161KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05765	108.681	GEN547656 1-STATE LINE UNIT #2
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05186	108.4325	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05443	107.8638	BROOKLINE - MORGAN 345KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05443	107.8637	BROOKLINE - MORGAN 345KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05765	107.8574	GEN547657 1-STATE LINE UNIT #3
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04680	107.7304	SUB 366 - CARL JUNCTION - SUB 417 - JOPLIN FIR RD. 161KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04672	107.6121	SUB 349 - ASBURY - SUB 366 - CARL JUNCTION 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04680	107.4559	P12:161:EDE_ASB349_ORO110::
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05436	107.0122	BROOKLINE - MORGAN 345KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04672	106.6312	SUB 366 - CARL JUNCTION - SUB 417 - JOPLIN FIR RD. 161KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05436	106.3099	BROOKLINE - MORGAN 345KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04680	106.2914	SUB 110 - ORONOGO JCT. - SUB 417 - JOPLIN FIR RD. 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06757	105.7838	BAKER - NEOSHO 161KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05774	105.7582	GEN547657 1-STATE LINE UNIT #3
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04672	105.6528	P12:161:EDE_ASB349_ORO110::
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06757	105.5219	P12:161:WERE:LITC-NSES_161::
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06757	105.297	BAKER - LITCHFIELD 161KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04672	105.14	SUB 110 - ORONOGO JCT. - SUB 417 - JOPLIN FIR RD. 161KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06751	104.7328	BAKER - NEOSHO 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05746	104.7013	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06339	104.4333	KETCHUM5 161.00 - PENSACOLA 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06339	104.4332	KETCHUM5 161.00 - PENSACOLA 161KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06751	104.1939	BAKER - LITCHFIELD 161KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05737	104.0089	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06339	103.9817	AFTON - KETCHUM5 161.00 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06398	103.8251	P12:161:GRDA:KETCHUM-MIAMI
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06751	103.7985	P12:161:WERE:LITC-NSES_161::
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05934	103.5354	FLINT CREEK - SUB 392 - DECATUR SOUTH 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05934	103.5354	FLINT CREEK - SUB 392 - DECATUR SOUTH 161KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06329	103.2724	KETCHUM5 161.00 - PENSACOLA 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05402	103.0178	7JASPER 345.00 - MORGAN 345KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05774	102.9685	GEN547649 1-ASBURY UNIT #1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06329	102.8166	AFTON - KETCHUM5 161.00 161KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06329	102.7389	KETCHUM5 161.00 - PENSACOLA 161KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05925	102.3879	FLINT CREEK - SUB 392 - DECATUR SOUTH 161KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05765	102.0718	GEN547649 1-ASBURY UNIT #1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06389	102.0429	P12:161:GRDA:KETCHUM-MIAMI
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05925	101.8544	FLINT CREEK - SUB 392 - DECATUR SOUTH 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05991	101.8377	HAWTHORNE - NORTHEAST STATION 138KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05774	101.7166	BASE CASE
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05774	101.7164	BASE CASE
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05991	101.6431	CHELSEA - HAWTHORNE 138KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05774	101.3619	GEN509394 1-FLINT CREEK
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05761	101.3021	GRDA1 - GREC TAP5 345.00 345KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06311	101.1781	AFTON - MIAMI 161KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05395	101.094	7JASPER 345.00 - MORGAN 345KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05991	100.8135	ALLUWE TAP - CHELSEA 138KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05981	100.7636	HAWTHORNE - NORTHEAST STATION 138KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05765	100.7111	GEN509394 1-FLINT CREEK
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05752	100.7024	GRDA1 - GREC TAP5 345.00 345KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05765	100.6502	BASE CASE
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05991	100.6421	P12:138:AEPW:VINTAJC4:N.E.S.-4
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05991	100.6218	ALLUWE TAP - VINITA JUNCTION 138KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06107	100.6151	CRAWFORD - MARMTNE5 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04337	100.6147	SUB 349 - ASBURY - SUB 421 - PURCELL SOUTHWEST 161KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05981	100.5689	CHELSEA - HAWTHORNE 138KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04337	100.4415	P12:161:EDE_ASB349_CAR(SPA)::
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04337	100.3602	SUB 395 - CARTHAGE SOUTHWEST - SUB 421 - PURCELL SOUTHWEST 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05887	100.1222	SUB 392 - DECATUR SOUTH - SUB 435 - NOEL SOUTHWEST 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05887	100.1222	SUB 392 - DECATUR SOUTH - SUB 435 - NOEL SOUTHWEST 161KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06301	100	AFTON - MIAMI 161KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05765	100	BASE CASE
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05910	99.9	MAID - PENSACOLA 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05910	99.9	MAID - PENSACOLA 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04337	99.9	CARTHAGE - SUB 395 - CARTHAGE SOUTHWEST 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05910	99.7	PENSACOLA - PENSACOLA 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05910	99.7	PENSACOLA - PENSACOLA 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05779	99.7	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05981	99.7	ALLUWE TAP - CHELSEA 138KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04329	99.7	SUB 349 - ASBURY - SUB 421 - PURCELL SOUTHWEST 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05779	99.6	917X
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06099	99.6	CRAWFORD - MARMTNE5 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05779	99.5	G15066_T 345.00 - SOONER 345KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05981	99.5	ALLUWE TAP - VINITA JUNCTION 138KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05709	99.4	5JASPER 161.00 - LAMAR 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05709	99.4	7JASPER 345.00 345/161KV TRANSFORMER CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04329	99.4	SUB 395 - CARTHAGE SOUTHWEST - SUB 421 - PURCELL SOUTHWEST 161KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05754	99.2	LACYGNE - STILWELL 345KV CKT 1
0	17SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05774	99.1	GEN549893 2-SOUTHWEST 2
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05981	99	P12:138:AEPW:VINTAJC4:N.E.S.-4
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05878	99	SUB 392 - DECATUR SOUTH - SUB 435 - NOEL SOUTHWEST 161KV CKT 1
0	20SP	G16_013_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04329	99	CARTHAGE - SUB 395 - CARTHAGE SOUTHWEST 161KV CKT 1
0	16WP	G16_013_WP	TO->FROM	CRAWFORD - NEOSHO 69KV CKT 1	41.0	48.0	0.03719	116.4112	P13:138-161:WERE:NSES_TX-4OR5::

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_013_WP	TO->FROM	CRAWFORD - NEOSHO 69KV CKT 1	41.0	48.0	0.03720	112.3396	P13:138-161:WERE:NSES_TX-4OR5::
0	16WP	G16_013_WP	FROM->TO	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1	223.0	223.0	0.21560	113.0745	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1
0	20WP	G16_013_WP	FROM->TO	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1	223.0	223.0	0.21574	112.3649	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1
0	20WP	G16_013_WP	FROM->TO	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1	223.0	223.0	0.21624	99.8	GEN547649 1-ASBURY UNIT #1
0	20WP	G16_013_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.07275	139.0951	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
0	20WP	G16_013_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.07275	139.0951	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
0	16WP	G16_013_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.07277	133.5664	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
0	16WP	G16_013_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.07277	133.5664	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
0	20WP	G16_013_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.03993	110.8235	CARTHAGE - SUB 382 - LARUSSEL 161KV CKT 1
0	20WP	G16_013_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.03993	110.8235	CARTHAGE - SUB 382 - LARUSSEL 161KV CKT 1
0	16WP	G16_013_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.03984	104.3627	CARTHAGE - SUB 382 - LARUSSEL 161KV CKT 1
0	16WP	G16_013_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.03984	104.3627	CARTHAGE - SUB 382 - LARUSSEL 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05039	111.6989	BLACKBERRY - NEOSHO 345KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05039	111.6988	BLACKBERRY - NEOSHO 345KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.08485	111.1781	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.08485	111.1781	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05193	110.5184	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05034	110.1628	BLACKBERRY - NEOSHO 345KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.08483	109.873	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05774	109.6011	GEN547656 1-STATE LINE UNIT #2
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.08483	109.0469	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04680	108.7	SUB 349 - ASBURY - SUB 366 - CARL JUNCTION 161KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05765	108.681	GEN547656 1-STATE LINE UNIT #2
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05186	108.4325	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05443	107.8638	BROOKLINE - MORGAN 345KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05443	107.8637	BROOKLINE - MORGAN 345KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05765	107.8574	GEN547657 1-STATE LINE UNIT #3
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04680	107.7304	SUB 366 - CARL JUNCTION - SUB 417 - JOPLIN FIR RD. 161KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04672	107.6121	SUB 349 - ASBURY - SUB 366 - CARL JUNCTION 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04680	107.4559	P12:161:EDE_ASB349_ORO110::
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05436	107.0122	BROOKLINE - MORGAN 345KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04672	106.6312	SUB 366 - CARL JUNCTION - SUB 417 - JOPLIN FIR RD. 161KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05436	106.3099	BROOKLINE - MORGAN 345KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04680	106.2914	SUB 110 - ORONOGO JCT. - SUB 417 - JOPLIN FIR RD. 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06757	105.7838	BAKER - NEOSHO 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05774	105.7582	GEN547657 1-STATE LINE UNIT #3
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04672	105.6528	P12:161:EDE_ASB349_ORO110::
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06757	105.5219	P12:161:WERE:LITC-NSES_161::
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06757	105.297	BAKER - LITCHFIELD 161KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04672	105.14	SUB 110 - ORONOGO JCT. - SUB 417 - JOPLIN FIR RD. 161KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06751	104.7328	BAKER - NEOSHO 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05746	104.7013	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06339	104.4333	KETCHUM5 161.00 - PENSACOLA 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06339	104.4332	KETCHUM5 161.00 - PENSACOLA 161KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06751	104.1939	BAKER - LITCHFIELD 161KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05737	104.0089	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06339	103.9817	AFTON - KETCHUM5 161.00 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06398	103.8251	P12:161:GRDA:KETCHUM-MIAMI
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06751	103.7985	P12:161:WERE:LITC-NSES_161::
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05934	103.5354	FLINT CREEK - SUB 392 - DECATUR SOUTH 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05934	103.5354	FLINT CREEK - SUB 392 - DECATUR SOUTH 161KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06329	103.2724	KETCHUM5 161.00 - PENSACOLA 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05402	103.0178	7JASPER 345.00 - MORGAN 345KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05774	102.9685	GEN547649 1-ASBURY UNIT #1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06329	102.8166	AFTON - KETCHUM5 161.00 161KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06329	102.7389	KETCHUM5 161.00 - PENSACOLA 161KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05925	102.3879	FLINT CREEK - SUB 392 - DECATUR SOUTH 161KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05765	102.0718	GEN547649 1-ASBURY UNIT #1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06389	102.0429	P12:161:GRDA:KETCHUM-MIAMI
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05925	101.8544	FLINT CREEK - SUB 392 - DECATUR SOUTH 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05991	101.8377	HAWTHORNE - NORTHEAST STATION 138KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05774	101.7166	BASE CASE
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05774	101.7164	BASE CASE
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05991	101.6431	CHELSEA - HAWTHORNE 138KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05774	101.3619	GEN509394 1-FLINT CREEK
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05761	101.3021	GRDA1 - GREC TAP5 345.00 345KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06311	101.1781	AFTON - MIAMI 161KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05395	101.094	7JASPER 345.00 - MORGAN 345KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05991	100.8135	ALLUWE TAP - CHELSEA 138KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05981	100.7636	HAWTHORNE - NORTHEAST STATION 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05765	100.7111	GEN509394 1-FLINT CREEK
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05752	100.7024	GRDA1 - GREC TAP5 345.00 345KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05765	100.6502	BASE CASE
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05991	100.6421	P12:138:AEPW:VINTAJC4:N.E.S.-4
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05991	100.6218	ALLUWE TAP - VINITA JUNCTION 138KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06107	100.6151	CRAWFORD - MARMTNE5 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04337	100.6147	SUB 349 - ASBURY - SUB 421 - PURCELL SOUTHWEST 161KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05981	100.5689	CHELSEA - HAWTHORNE 138KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04337	100.4415	P12:161:EDE_ASB349_CAR(SPA)::
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04337	100.3602	SUB 395 - CARTHAGE SOUTHWEST - SUB 421 - PURCELL SOUTHWEST 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05887	100.1222	SUB 392 - DECATUR SOUTH - SUB 435 - NOEL SOUTHWEST 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05887	100.1222	SUB 392 - DECATUR SOUTH - SUB 435 - NOEL SOUTHWEST 161KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06301	100	AFTON - MIAMI 161KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05765	100	BASE CASE
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05910	99.9	MAID - PENSACOLA 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05910	99.9	MAID - PENSACOLA 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04337	99.9	CARTHAGE - SUB 395 - CARTHAGE SOUTHWEST 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05910	99.7	PENSACOLA - PENSACOLA 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05910	99.7	PENSACOLA - PENSACOLA 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05779	99.7	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05981	99.7	ALLUWE TAP - CHELSEA 138KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04329	99.7	SUB 349 - ASBURY - SUB 421 - PURCELL SOUTHWEST 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05779	99.6	917X
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.06099	99.6	CRAWFORD - MARMTNE5 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05779	99.5	G15066_T 345.00 - SOONER 345KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05981	99.5	ALLUWE TAP - VINITA JUNCTION 138KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05709	99.4	5JASPER 161.00 - LAMAR 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05709	99.4	7JASPER 345.00 345/161KV TRANSFORMER CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04329	99.4	SUB 395 - CARTHAGE SOUTHWEST - SUB 421 - PURCELL SOUTHWEST 161KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05754	99.2	LACYGNE - STILWELL 345KV CKT 1
0	17SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05774	99.1	GEN549893 2-SOUTHWEST 2
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05981	99	P12:138:AEPW:VINTAJC4:N.E.S.-4
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.05878	99	SUB 392 - DECATUR SOUTH - SUB 435 - NOEL SOUTHWEST 161KV CKT 1
0	20SP	G16_014_SP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.04329	99	CARTHAGE - SUB 395 - CARTHAGE SOUTHWEST 161KV CKT 1
0	16WP	G16_014_WP	TO->FROM	CRAWFORD - NEOSHO 69KV CKT 1	41.0	48.0	0.03719	116.4112	P13:138-161:WERE:NSES_TX-4OR5::
0	20WP	G16_014_WP	TO->FROM	CRAWFORD - NEOSHO 69KV CKT 1	41.0	48.0	0.03720	112.3396	P13:138-161:WERE:NSES_TX-4OR5::
0	16WP	G16_014_WP	FROM->TO	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1	223.0	223.0	0.21560	113.0745	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1
0	20WP	G16_014_WP	FROM->TO	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1	223.0	223.0	0.21574	112.3649	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1
0	20WP	G16_014_WP	FROM->TO	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1	223.0	223.0	0.21624	99.8	GEN547649 1-ASBURY UNIT #1
0	20WP	G16_014_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.07275	139.0951	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
0	20WP	G16_014_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.07275	139.0951	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
0	16WP	G16_014_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.07277	133.5664	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
0	16WP	G16_014_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.07277	133.5664	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
0	20WP	G16_014_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.03993	110.8235	CARTHAGE - SUB 382 - LARUSSEL 161KV CKT 1
0	20WP	G16_014_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.03993	110.8235	CARTHAGE - SUB 382 - LARUSSEL 161KV CKT 1
0	16WP	G16_014_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.03984	104.3627	CARTHAGE - SUB 382 - LARUSSEL 161KV CKT 1
0	16WP	G16_014_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209.0	223.0	0.03984	104.3627	CARTHAGE - SUB 382 - LARUSSEL 161KV CKT 1
0	25SP	G16_015	FROM->TO	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1	525.0	525.0	1.00000	102.8262	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	157.2913	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	156.8383	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3507	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3507	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1117	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1117	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.9024	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.9024	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.8698	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.7161	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.6734	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.5483	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.5256	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.4876	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.346	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0234	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0234	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9074	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9074	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8127	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8127	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7986	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7179	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7102	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6707	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6494	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6354	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.5732	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.5215	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.0701	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8346	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8346	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.5969	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.5969	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3886	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3886	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3561	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.2032	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.1607	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.0363	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.0136	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.9758	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.8349	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5146	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5146	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3992	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3992	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3049	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3049	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2909	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2106	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2029	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1636	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1425	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1285	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.0666	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_015	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06302	111.2423	BASE CASE
0	20SP	G16_015	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06002	106.965	BASE CASE
0	17G	G16_015	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06346	104.3555	BASE CASE
0	20WP	G16_015	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06123	100.6452	BASE CASE
0	16WP	G16_015	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24663	117.2755	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_015	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21927	113.9417	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_015	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24663	112.5386	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G16_015	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24478	107.9528	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17SP	G16_015	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24478	103.4902	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29676	197.2146	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29676	189.9362	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31112	115.1329	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31112	114.7364	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.34022	213.0015	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.35220	134.0852	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.21457	119.8072	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.21402	109.6936	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_015	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.10919	117.8449	BASE CASE
0	17SP	G16_015	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.10921	113.6626	BASE CASE
0	25SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51048	189.9035	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64281	167.7508	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64281	167.7508	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64499	161.4746	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64499	161.4746	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64265	153.0965	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64265	153.0965	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20L	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51146	114.8595	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20L	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51146	114.2331	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51053	103.3308	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51053	102.7352	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51048	99.5	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	25SP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.51048	136.318	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64281	117.3847	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64281	117.3847	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64499	115.1282	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64499	115.1282	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64265	107.6702	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64265	107.6702	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_015	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.51048	105.028	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.64281	101.0095	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.64281	101.0095	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_015	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.5033	ANDRWSXFMR12
0	25SP	G16_015	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.4881	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1
0	20L	G16_015	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.09665	117.1249	BASE CASE
0	20WP	G16_015	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11955	109.9811	BASE CASE
0	16WP	G16_015	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12864	108.8041	BASE CASE
0	17G	G16_015	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12648	107.5286	BASE CASE
0	20L	G16_015	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09665	131.0896	BASE CASE
0	20WP	G16_015	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11955	123.9661	BASE CASE
0	16WP	G16_015	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12864	122.9494	BASE CASE
0	17G	G16_015	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12648	120.973	BASE CASE
0	17SP	G16_015	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12852	106.8776	BASE CASE
0	20SP	G16_015	TO->FROM	G15039_T 230.00 - PLANT X STATION 230KV CKT 1	318.7	350.6	0.10919	101.2007	BASE CASE
0	16WP	G16_015	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24663	106.6944	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_015	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.21927	103.5122	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_015	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24663	102.1214	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G16_015	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04451	104.9056	BASE CASE
0	20SP	G16_015	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04342	103.3041	BASE CASE
0	17G	G16_015	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03711	102.2178	BASE CASE
0	25SP	G16_015	TO->FROM	JAL SUB - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24991	101.658	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_015	TO->FROM	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	1011.0	1176.0	0.21496	101.3643	BASE CASE
0	25SP	G16_015	FROM->TO	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1	143.4	179.3	0.04337	100.1195	BASE CASE
0	17G	G16_015	FROM->TO	National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35719	112.5656	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	FROM->TO	National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35719	112.5656	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	TO->FROM	National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35719	102.3847	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	TO->FROM	National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35719	102.3847	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24991	108.4988	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35719	102.3407	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35719	102.3407	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35501	101.4644	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35501	101.4644	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	1022.0	1124.0	0.19886	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	1022.0	1124.0	0.19886	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.19848	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.19694	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.18904	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.18479	-	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.18479	-	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	1330.0	1940.0	0.17649	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	1330.0	1940.0	0.17649	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	987.2	1082.8	0.16804	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.14644	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.14643	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	16WP	G16_015	-	Non-Converged Contingency	987.16	1082.77	0.13381	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	956.09	1051.7	0.13381	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	1420.0	1775.0	0.09986	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	1420.0	1775.0	0.09986	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	1420.0	1775.0	0.09986	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.09465	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.09465	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	439.0	439.0	0.06737	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	450.0	450.0	0.06737	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_015	-	Non-Converged Contingency	439.0	439.0	0.04538	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17G	G16_015	-	Non-Converged Contingency	0.0	0.0	0.07240	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	17G	G16_015	-	Non-Converged Contingency	0.0	0.0	0.05838	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	17G	G16_015	-	Non-Converged Contingency	0.0	0.0	0.03614	-	P12:138:AEPW:REDROCKRD4:WTH_JCT4
0	17G	G16_015	-	Non-Converged Contingency	0.0	0.0	0.03440	-	P12:138:WFEC-AEPW:WASHITA4:CLINTJC4
0	17G	G16_015	-	Non-Converged Contingency	0.0	0.0	0.03308	-	P12:138:AEPW:HOB-JCT4:ELKCTY-4
0	17G	G16_015	-	Non-Converged Contingency	0.0	0.0	0.03188	-	P12:138:AEPW:WTHWF4:WTH_SE4
0	17SP	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.28055	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G16_015	-	Non-Converged Contingency	956.0	1042.0	0.21496	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17SP	G16_015	-	Non-Converged Contingency	956.0	1042.0	0.21496	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.17579	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.17290	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	17SP	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.17290	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	17SP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.17001	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_015	-	Non-Converged Contingency	956.1	1051.7	0.16004	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17SP	G16_015	-	Non-Converged Contingency	1330.0	1940.0	0.15840	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17SP	G16_015	-	Non-Converged Contingency	1330.0	1940.0	0.15840	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17SP	G16_015	-	Non-Converged Contingency	956.09	1051.7	0.13925	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G16_015	-	Non-Converged Contingency	478.0	502.0	0.12417	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G16_015	-	Non-Converged Contingency	956.09	1051.7	0.11770	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	G16_015	-	Non-Converged Contingency	318.7	350.6	0.10921	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	17SP	G16_015	-	Non-Converged Contingency	318.7	350.6	0.10921	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	17SP	G16_015	-	Non-Converged Contingency	478.0	502.0	0.10296	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G16_015	-	Non-Converged Contingency	1420.0	1775.0	0.09250	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_015	-	Non-Converged Contingency	353.0	353.0	0.05142	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17SP	G16_015	-	Non-Converged Contingency	318.7	350.57	0.04451	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.29244	-	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	0.0	0.0	0.23129	-	P12:345:SPS:J15.1.XRDS.TOLK
0	20L	G16_015	-	Non-Converged Contingency	0.0	0.0	0.19116	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.18877	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.17611	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	717.0	926.0	0.17603	-	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.16445	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1022.0	1124.0	0.15821	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1022.0	1124.0	0.15821	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1022.0	1124.0	0.15821	-	OKLAUNION 345KV SWITCHED SHUNT
0	20L	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.14834	-	CIMARRON - MINCO 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.14834	-	GRACEMONT - MINCO 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.14733	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.14733	-	GEN509403 1-PIRKEY GENERATION
0	20L	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.14733	-	GEN509416 1-TURK GENERATION
0	20L	G16_015	-	Non-Converged Contingency	956.1	1051.7	0.13136	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	956.1	1051.7	0.13136	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1584.0	2098.0	0.12593	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1584.0	2098.0	0.12593	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.12369	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
0	20L	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.12369	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.12369	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20L	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.12369	-	BORDER 7345.00 345KV SWITCHED SHUNT
0	20L	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.12368	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	956.09	1051.7	0.10138	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	956.09	1051.7	0.10138	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	717.0	789.0	0.09665	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	717.0	789.0	0.09665	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	717.0	789.0	0.09665	-	GEN515040 1-SEMINOLE 1G
0	20L	G16_015	-	Non-Converged Contingency	0.0	0.0	0.09146	-	P12:138:WFEC:MSL03
0	20L	G16_015	-	Non-Converged Contingency	956.09	1051.7	0.08979	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	956.09	1051.7	0.08979	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	956.09	1051.7	0.08979	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	956.09	1051.7	0.08979	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.07853	-	ARCADIA - NORTHWEST 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	0.0	0.0	0.07611	-	P12:230:AEPW:ELKCITY6:SWEETWT6
0	20L	G16_015	-	Non-Converged Contingency	497.0	547.0	0.07502	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	478.0	502.0	0.07480	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	478.0	502.0	0.07480	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	478.0	502.0	0.07480	-	BUSHLAND INTERCHANGE 230KV SWITCHED SHUNT
0	20L	G16_015	-	Non-Converged Contingency	1561.0	1793.0	0.06665	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1561.0	1793.0	0.06665	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1561.0	1793.0	0.06665	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_015	-	Non-Converged Contingency	1561.0	1793.0	0.06665	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_015	-	Non-Converged Contingency	478.0	502.0	0.06627	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	318.7	350.6	0.06579	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	318.7	350.6	0.06579	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1192.0	1192.0	0.06557	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	956.0	956.0	0.06557	-	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	478.0	502.0	0.06551	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	318.7	350.57	0.06494	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	318.7	350.57	0.06494	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.06442	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.06442	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1420.0	1775.0	0.05925	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1420.0	1775.0	0.05925	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G16_015	-	Non-Converged Contingency	1420.0	1775.0	0.05925	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1420.0	1775.0	0.05925	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_015	-	Non-Converged Contingency	1420.0	1775.0	0.05925	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1420.0	1775.0	0.05925	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G16_015	-	Non-Converged Contingency	0.0	0.0	0.05560	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	20L	G16_015	-	Non-Converged Contingency	0.0	0.0	0.05471	-	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
0	20L	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.05301	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.05301	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
0	20L	G16_015	-	Non-Converged Contingency	1793.0	1793.0	0.05301	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1716.0	1793.0	0.05301	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	G16_015	-	Non-Converged Contingency	1793.0	1793.0	0.05301	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1716.0	1793.0	0.05301	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	G16_015	-	Non-Converged Contingency	1793.0	1793.0	0.05301	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1716.0	1793.0	0.05301	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_015	-	Non-Converged Contingency	1532.0	1793.0	0.05122	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1532.0	1793.0	0.05122	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20L	G16_015	-	Non-Converged Contingency	1532.0	1793.0	0.05122	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	G16_015	-	Non-Converged Contingency	0.0	0.0	0.04970	-	P12:115:SPS:T14.1.MADDOX.WBENDR
0	20L	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.04962	-	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	785.0	785.0	0.04920	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	785.0	785.0	0.04920	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	439.0	439.0	0.04876	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	450.0	450.0	0.04876	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_015	-	Non-Converged Contingency	450.0	450.0	0.04876	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_015	-	Non-Converged Contingency	762.5	762.5	0.04827	-	MINGO - SETAB 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	762.5	762.5	0.04827	-	MINGO - SETAB 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	717.1	717.1	0.04750	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	717.1	717.1	0.04750	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	0.0	0.0	0.04672	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	20L	G16_015	-	Non-Converged Contingency	0.0	0.0	0.04323	-	P12:138:WFEC:MSL14
0	20L	G16_015	-	Non-Converged Contingency	0.0	0.0	0.04173	-	917X
0	20L	G16_015	-	Non-Converged Contingency	1504.0	1792.0	0.04146	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1504.0	1792.0	0.04146	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1505.0	1793.0	0.04077	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1505.0	1793.0	0.04077	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1505.0	1793.0	0.04077	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	501.95	501.95	0.04002	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	501.95	501.95	0.04002	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	726.6	726.6	0.03864	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	726.6	726.6	0.03864	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1413.0	1517.0	0.03864	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1413.0	1517.0	0.03864	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	956.0	956.0	0.03831	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	318.7	350.57	0.03532	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	318.7	350.57	0.03532	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	560.0	560.0	0.03514	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_015	-	Non-Converged Contingency	560.0	560.0	0.03514	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1141.0	1195.0	0.03439	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1141.0	1195.0	0.03439	-	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G16_015	-	Non-Converged Contingency	1141.0	1195.0	0.03439	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20SP	G16_015	-	Non-Converged Contingency	956.0	1042.0	0.21016	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20SP	G16_015	-	Non-Converged Contingency	956.0	1042.0	0.21016	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.17229	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20SP	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.17229	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20SP	G16_015	-	Non-Converged Contingency	956.1	1051.7	0.16012	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.19378	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.18916	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	1022.0	1124.0	0.18530	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	1022.0	1124.0	0.18530	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.17407	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	987.2	1082.8	0.16308	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.16267	-	CIMARRON - MINCO 345KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.16267	-	GRACEMONT - MINCO 345KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	1584.0	2098.0	0.15435	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	1584.0	2098.0	0.15435	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.14051	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.14051	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	G16_015	-	Non-Converged Contingency	987.16	1082.77	0.12916	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	717.0	789.0	0.11955	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	956.09	1051.7	0.11489	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	987.16	1082.77	0.11489	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.08684	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.08684	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	439.0	439.0	0.06123	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	450.0	450.0	0.06123	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	560.0	560.0	0.05345	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	329.05	360.92	0.04480	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	421.0	439.0	0.04151	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20WP	G16_015	-	Non-Converged Contingency	329.05	360.92	0.03653	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	17SP	G16_015	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	442.0	752.0	0.09234	100.8893	BASE CASE
0	17SP	G16_015	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	442.0	752.0	0.09326	100.8893	BASE CASE
2	25SP	G16_015	FROM->TO	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1	525.0	525.0	1.00000	102.8243	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	157.29	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	156.84	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3472	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3472	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1122	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1122	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.9024	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.9024	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.8711	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.7174	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.551	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.4948	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.353	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0217	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0217	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9076	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9076	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8127	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8127	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7991	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7107	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6718	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6519	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.5754	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.5202	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.0718	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8311	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8311	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.5973	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.5973	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3886	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3886	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3574	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.2045	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.0389	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.983	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.8418	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5129	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5129	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3994	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3994	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3049	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3049	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2914	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2035	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1647	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1449	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.0688	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_015	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06611	113.9867	BASE CASE
2	20SP	G16_015	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06290	110.7777	BASE CASE
2	17G	G16_015	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06346	104.3556	BASE CASE
2	20WP	G16_015	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06125	99.1	BASE CASE
2	17SP	G16_015	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.30569	103.9462	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20SP	G16_015	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.30101	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_015	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24668	117.0258	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G16_015	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21938	112.9654	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G16_015	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24668	112.441	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	G16_015	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21938	108.3696	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17SP	G16_015	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24163	108.1247	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17SP	G16_015	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24163	103.6738	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.21626	126.3303	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20SP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.21841	117.4113	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.21460	110.5121	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.21403	105.6091	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	25SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.50999	189.2747	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64281	167.7508	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64281	167.7508	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64395	158.5987	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64395	158.5987	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64265	153.104	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64265	153.104	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	20SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51007	102.1	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51007	101.5007	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.50999	135.9092	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64281	117.3847	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64281	117.3847	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64395	113.2781	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64395	113.2781	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64265	107.675	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64265	107.675	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_015	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.50999	104.613	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.64281	101.0095	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.64281	101.0095	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_015	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.5032	ANDRWSXFMR12
2	25SP	G16_015	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.4881	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1
2	20WP	G16_015	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11958	109.7093	BASE CASE
2	16WP	G16_015	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12866	108.7418	BASE CASE
2	17G	G16_015	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12648	107.5286	BASE CASE
2	20WP	G16_015	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11958	123.7856	BASE CASE
2	16WP	G16_015	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12866	122.9306	BASE CASE
2	17G	G16_015	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12648	120.973	BASE CASE
2	17SP	G16_015	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12499	105.8511	BASE CASE
2	16WP	G16_015	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24668	106.376	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G16_015	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.21938	102.3425	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G16_015	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24668	101.9464	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_015	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03711	102.2178	BASE CASE
2	25SP	G16_015	TO->FROM	JAL SUB - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24983	101.5521	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	FROM->TO	National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35719	112.5656	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	FROM->TO	National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35719	112.5656	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	TO->FROM	National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35719	102.3847	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	TO->FROM	National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35719	102.3847	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24983	108.392	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35605	104.0494	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35605	104.0494	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35719	102.3407	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35719	102.3407	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	1022.0	1124.0	0.19889	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	1022.0	1124.0	0.19889	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.19851	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.19698	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.18908	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.18483	-	CIMARRON - MINCO 345KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.18483	-	GRACEMONT - MINCO 345KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	1330.0	1940.0	0.17652	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	1330.0	1940.0	0.17652	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	987.2	1082.8	0.16808	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.14646	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.14646	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	16WP	G16_015	-	Non-Converged Contingency	987.16	1082.77	0.13384	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	956.09	1051.7	0.13384	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	1420.0	1775.0	0.09988	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.09467	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.09467	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	439.0	439.0	0.06738	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	16WP	G16_015	-	Non-Converged Contingency	450.0	450.0	0.06738	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.33347	-	HOBBS - YOAKUM_345 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	560.0	644.0	0.33347	-	HOBBS (HUPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.31856	-	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.19174	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.19174	-	GEN509403 1-PIRKEY GENERATION

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.19174	-	GEN509404 1-WELSH #1
2	17G	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.19174	-	GEN509406 1-WELSH #3
2	17G	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.19174	-	GEN509416 1-TURK GENERATION
2	17G	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.19174	-	GEN511848 1-SOUTHWESTERN STATION #3
2	17G	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.19100	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1022.0	1124.0	0.19091	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1022.0	1124.0	0.19091	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.19054	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	717.0	926.0	0.18926	-	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.17866	-	CIMARRON - MINCO 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.17866	-	GRACEMONT - MINCO 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.17744	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1330.0	1940.0	0.17019	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1330.0	1940.0	0.17019	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	956.1	1051.7	0.15759	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	414.0	414.0	0.14898	-	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.13997	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.13997	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
2	17G	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.13997	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.13997	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	17G	G16_015	-	Non-Converged Contingency	717.0	789.0	0.12648	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	717.0	789.0	0.12648	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	956.09	1051.7	0.12268	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	956.09	1051.7	0.12268	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	318.7	350.57	0.11493	-	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1420.0	1775.0	0.09924	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1420.0	1775.0	0.09924	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1420.0	1775.0	0.09924	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1561.0	1793.0	0.08969	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1561.0	1793.0	0.08969	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.08924	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.08924	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.08856	-	ARCADIA - NORTHWEST 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	478.0	502.0	0.08176	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	497.0	547.0	0.07285	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1532.0	1793.0	0.07214	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1532.0	1793.0	0.07214	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	G16_015	-	Non-Converged Contingency	1532.0	1793.0	0.07214	-	G1524G1525 345.00 - WICHITA 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1532.0	1793.0	0.07214	-	G1524G1525 345.00 - WICHITA 345KV CKT 2
2	17G	G16_015	-	Non-Converged Contingency	1532.0	1793.0	0.07214	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	G16_015	-	Non-Converged Contingency	318.7	350.57	0.07189	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	318.7	350.6	0.07090	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	318.7	350.6	0.07090	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	478.05	547.36	0.07086	-	NEWHART 230 - PLANT X STATION 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	478.0	502.0	0.07001	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.06614	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.06614	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
2	17G	G16_015	-	Non-Converged Contingency	1793.0	1793.0	0.06614	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1716.0	1793.0	0.06614	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	G16_015	-	Non-Converged Contingency	1793.0	1793.0	0.06614	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1716.0	1793.0	0.06614	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G16_015	-	Non-Converged Contingency	1793.0	1793.0	0.06614	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1716.0	1793.0	0.06614	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.06614	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.06614	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 2
2	17G	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.06485	-	CIMARRON - DRAPER LAKE 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	318.7	350.57	0.06470	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	439.0	439.0	0.06346	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	450.0	450.0	0.06346	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_015	-	Non-Converged Contingency	878.0	956.0	0.06329	-	BENTON - WICHITA 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1793.0	1793.0	0.06166	-	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1793.0	1793.0	0.06166	-	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	560.0	560.0	0.06101	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_015	-	Non-Converged Contingency	717.1	717.1	0.05757	-	HOLCOMB - SETAB 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1192.0	1192.0	0.05712	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	956.0	956.0	0.05712	-	G15063_T 345.00 - WOODRING 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.05678	-	GEN520947 1-HUGO1
2	17G	G16_015	-	Non-Converged Contingency	343.79	343.79	0.05658	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	762.5	762.5	0.05637	-	MINGO - SETAB 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	785.0	785.0	0.05593	-	MINGO - RED WILLOW 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_015	-	Non-Converged Contingency	1039.0	1195.0	0.05473	-	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.05437	-	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	560.0	644.0	0.05207	-	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G16_015	-	Non-Converged Contingency	726.6	726.6	0.05119	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1413.0	1517.0	0.05119	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	501.95	501.95	0.05029	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1505.0	1793.0	0.05005	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1505.0	1793.0	0.05005	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1505.0	1793.0	0.05005	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1035.0	1035.0	0.04735	-	G14_001T 345.00 - WICHITA 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1504.0	1792.0	0.04708	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1504.0	1792.0	0.04708	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1141.0	1195.0	0.04688	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1141.0	1195.0	0.04688	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	560.0	644.0	0.04530	-	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_015	-	Non-Converged Contingency	318.7	350.57	0.04342	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	439.0	439.0	0.04191	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	502.0	502.0	0.04191	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	500.0	723.0	0.04191	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	1022.0	1143.0	0.03790	-	PITTSBURG - VALLIANT 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	318.7	350.57	0.03711	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	502.0	502.0	0.03581	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	717.0	789.0	0.03460	-	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_015	-	Non-Converged Contingency	560.0	644.0	0.03167	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_015	-	Non-Converged Contingency	560.0	644.0	0.03167	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
2	17SP	G16_015	-	Non-Converged Contingency	956.0	1042.0	0.19471	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G16_015	-	Non-Converged Contingency	1792.0	1792.0	0.19388	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.18925	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	20WP	G16_015	-	Non-Converged Contingency	1022.0	1124.0	0.18537	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G16_015	-	Non-Converged Contingency	1022.0	1124.0	0.18537	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.17413	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	20WP	G16_015	-	Non-Converged Contingency	987.2	1082.8	0.16317	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.16276	-	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G16_015	-	Non-Converged Contingency	1584.0	2098.0	0.15441	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	20WP	G16_015	-	Non-Converged Contingency	1584.0	2098.0	0.15441	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	20WP	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.14056	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	20WP	G16_015	-	Non-Converged Contingency	1792.0	1972.0	0.14056	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	20WP	G16_015	-	Non-Converged Contingency	987.16	1082.77	0.12924	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.08688	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	20WP	G16_015	-	Non-Converged Contingency	1195.0	1195.0	0.08688	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G16_015	-	Non-Converged Contingency	439.0	439.0	0.06125	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	20WP	G16_015	-	Non-Converged Contingency	450.0	450.0	0.06125	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
3	25SP	G16_015	FROM->TO	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1	525.0	525.0	1.00000	102.82	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	157.2869	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	156.8438	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3525	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3525	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1181	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1181	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.9093	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.8761	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.7223	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.682	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.5565	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.5339	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.4962	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.3543	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0243	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0243	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9104	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9104	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8157	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8013	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7213	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7127	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6739	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6524	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6386	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.5759	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.5172	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.0756	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8364	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8364	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.6032	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.6032	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3954	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3624	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.2093	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.1693	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.0444	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.0219	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.9844	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.8431	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5155	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5155	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.4021	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.4021	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3079	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2936	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.214	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2054	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1668	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1454	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1317	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.0692	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27279	219.0037	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27279	218.7841	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24971	212.6842	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24971	212.3523	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27647	206.7258	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27647	206.6	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28576	198.5451	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28576	197.214	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28309	191.0186	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28309	188.8782	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28159	182.2433	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28159	180.1336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29390	128.2336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29390	124.1314	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.29281	205.8094	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.28170	191.8466	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30572	182.1676	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30540	170.544	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.30029	165.6022	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.30606	158.3084	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.31516	130.4315	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51001	189.3334	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64297	168.3042	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64410	159.1024	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64410	159.1024	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64281	153.5899	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64281	153.5899	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20L	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51158	114.8944	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20L	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51158	114.2671	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51008	102.173	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51008	101.5739	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.51001	135.9454	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64297	117.7405	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64410	113.6018	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64410	113.6018	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64281	107.9873	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64281	107.9873	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_015	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.51001	104.648	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_015	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.64297	101.3667	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_015	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.5032	ANDRWSXFMR12
3	25SP	G16_015	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.4881	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1
3	25SP	G16_015	TO->FROM	JAL SUB - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24986	101.5772	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_015	FROM->TO	National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35703	112.072	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_015	TO->FROM	National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35703	101.898	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24986	108.4174	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35590	103.5966	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35590	103.5966	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35703	101.8537	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_015	-	Non-Converged Contingency	3975.0	4570.0	0.37267	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	20L	G16_015	-	Non-Converged Contingency	3975.0	4570.0	0.32098	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	25SP	G16_015	FROM->TO	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1	525.0	525.0	1.00000	102.8199	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	157.2869	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	156.8439	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3524	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3524	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1181	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1181	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.9095	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.8764	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.7225	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.6825	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.5566	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.5344	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.4963	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.3544	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0243	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0243	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9104	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9104	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8158	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8014	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7215	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7128	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6739	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6524	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6388	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.5759	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.5171	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.0757	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8364	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8364	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.6033	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.6033	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3956	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3627	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.2095	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.1697	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.0445	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.0224	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.9844	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.8432	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5155	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5155	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.4022	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.4022	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.308	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2937	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2142	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2055	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1668	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1454	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1319	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.0693	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27240	219.2477	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27240	218.9034	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24928	212.5533	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24928	212.4877	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27595	206.5319	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27595	206.4431	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28534	198.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28534	197.0767	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28264	191.0175	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28264	188.7404	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28107	181.83	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28107	179.8003	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	25SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29335	128.3207	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29335	124.1778	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.29274	205.5105	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.28163	191.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30563	182.0402	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30530	170.4128	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.30019	165.4035	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.30598	158.2063	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.31505	130.4862	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51000	189.3327	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64297	168.2918	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64410	159.0923	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64410	159.0923	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64281	153.5814	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64281	153.5814	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20L	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51158	114.8899	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20L	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51158	114.2626	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51008	102.1702	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51008	101.5711	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.51000	135.9449	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64297	117.7326	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64410	113.5953	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64410	113.5953	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64281	107.9819	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64281	107.9819	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_015	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.51000	104.6475	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_015	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.64297	101.3589	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_015	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.5032	ANDRWSXFMR12
4	25SP	G16_015	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.4881	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1
4	25SP	G16_015	TO->FROM	JAL SUB - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24986	101.5765	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_015	FROM->TO	National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35703	112.0825	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_015	TO->FROM	National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35703	101.9083	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24986	108.4167	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35590	103.6057	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35590	103.6057	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35703	101.8641	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_015	-	Non-Converged Contingency	3975.0	4570.0	0.36838	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	20L	G16_015	-	Non-Converged Contingency	3975.0	4570.0	0.31679	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
5	25SP	G16_015	FROM->TO	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1	525.0	525.0	1.00000	102.8198	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	157.2868	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	156.844	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3524	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3524	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1183	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1183	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.9097	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.8766	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.7227	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.6832	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.5567	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.535	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.4964	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.3545	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0243	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0243	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9105	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9105	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8158	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8015	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7218	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7129	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.674	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6524	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.639	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.5759	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.5171	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.0758	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8363	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8363	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.6034	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.6034	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3958	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3629	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.2098	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.1704	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.0446	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.023	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.9845	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.8433	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5155	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5155	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.4022	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.4022	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.308	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2938	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2144	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20WP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2056	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1669	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1454	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20L	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1321	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20SP	G16_015	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.0693	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27005	217.7095	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27005	216.9825	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24743	211.2861	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24743	210.7754	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27365	204.8525	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27365	204.7326	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28281	196.7495	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28281	195.2293	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28026	189.7734	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28026	187.2532	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27874	180.5705	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27874	178.2726	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29087	127.7475	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29087	123.5792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.29202	204.5119	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.28108	190.5492	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30486	181.3291	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30454	169.7873	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.29945	164.743	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.30521	157.4925	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.31425	130.3275	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51000	189.3317	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64296	168.253	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64409	159.062	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64409	159.062	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64280	153.5494	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64280	153.5494	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20L	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51158	114.8869	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20L	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51158	114.2595	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51008	102.1678	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20SP	G16_015	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51008	101.5686	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.51000	135.9442	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64296	117.7077	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64409	113.5758	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64409	113.5758	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64280	107.9614	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_015	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64280	107.9614	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_015	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.51000	104.6468	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_015	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.64296	101.3343	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_015	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.5032	ANDRWSXFMR12
5	25SP	G16_015	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.4881	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1
5	25SP	G16_015	TO->FROM	JAL SUB - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24986	101.5736	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_015	FROM->TO	National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35704	112.1161	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_015	TO->FROM	National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35704	101.9414	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24986	108.4137	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35591	103.6331	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35591	103.6331	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_015	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35704	101.8972	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
6	17G	G16_015	FROM->TO	National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.38033	112.2897	ANDREWS 6345.00 - HOBBS 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
6	17G	G16_015	TO->FROM	National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.38033	101.9184	ANDREWS 6345.00 - HOBBS 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04045	134.8992	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04045	134.8992	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04392	134.6979	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04392	134.6979	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03965	128.3548	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03854	127.7295	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04118	127.661	BENTON - WICHITA 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03854	127.4225	45TH ST4 138.00 - COWSKIN 138KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03854	127.2833	P12:138:WERE:COWS-GECT_138::
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03853	127.178	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03871	126.4992	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03862	125.4675	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03849	124.8042	P13:069-138:WERE:COWS_TX-1::
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03965	124.2296	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03566	124.0696	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03867	123.948	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03862	123.6644	HOOVER NORTH - LAKERIDGE 138KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03189	123.5737	BASE CASE
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03642	123.1204	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03862	122.7663	P12:138:WERE:GECT-HOOV_138::
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03538	122.7403	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03566	122.2075	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03858	121.9709	P13:069-138:WERE:HOOV_TX-3::
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04006	121.728	G1524G1525 345.00 - WICHITA 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04006	121.728	G1524G1525 345.00 - WICHITA 345KV CKT 2
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03844	120.9253	CENTENNIAL - COWSKIN 138KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03965	120.3171	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03889	120.2295	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03783	119.9313	BENTON - WICHITA 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03532	119.0053	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03844	118.9201	CENTENNIAL - WACO 138KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03532	118.8266	45TH ST4 138.00 - COWSKIN 138KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03532	118.8045	P12:138:WERE:COWS-GECT_138::
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03642	118.801	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03680	118.4731	59TH ST - EL PASO 138KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03549	118.3679	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03844	118.1161	P12:138:WERE:COWS-WACO_138::
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03642	118.1056	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03851	118.0921	HOOVER NORTH - HOOVERS4 138.00 138KV CKT Z1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03862	117.8872	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03682	117.787	G1524G1525 345.00 - WICHITA 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03682	117.787	G1524G1525 345.00 - WICHITA 345KV CKT 2
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04014	117.7543	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04014	117.7543	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03541	117.495	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03680	117.4633	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03834	117.3473	EL PASO - ROSE HILL 138KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03527	117.3171	P13:069-138:WERE:COWS_TX-1::
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03890	117.2911	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03887	117.272	P12:138:WERE:CRSW-OGE_138::
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03887	117.2234	CRESWELL - MIDLTNT4 138.00 138KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03680	117.1887	P12:138:WERE:ELPA-MURR_138::
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03885	117.0374	G15088_T 345.00 - MOORE 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03953	117.0111	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03833	116.9291	P13:069-138:WERE:HOOV_TX-1::
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03476	116.9275	BASE CASE
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03791	116.8679	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03864	116.8584	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03818	116.718	ROSE HILL - WOLF CREEK 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03547	116.6981	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04390	116.5592	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04390	116.5592	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03889	116.5553	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03566	116.5498	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03887	116.5159	P12:138:OKGE:3TERM7
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03541	116.5112	HOOVER NORTH - LAKERIDGE 138KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03887	116.4998	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03851	116.4653	BENTON (BENT TX-1) 345/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03186	116.3675	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03852	116.3582	BENTON (BENT TX-2) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03686	116.1856	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03541	116.0367	P12:138:WERE:GECT-HOOV_138::
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03537	115.4596	P13:069-138:WERE:HOOV_TX-3::
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03686	115.4299	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03524	114.8487	CENTENNIAL - COWSKIN 138KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03631	114.5751	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03572	114.1873	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03578	113.9963	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03727	113.9607	CIRCLE - MULLERGREN 230KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03727	113.9607	CIRCLE - MULLERGREN 230KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03583	113.918	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03583	113.918	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03524	113.6187	CENTENNIAL - WACO 138KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03572	113.5247	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03853	113.3111	BASE CASE
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03853	113.311	BASE CASE
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03572	113.3078	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03624	113.2618	MINGO - RED WILLOW 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03624	113.2618	MINGO - RED WILLOW 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03538	113.2416	GEN542955 1-LACYGNE UNIT #1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03524	113.1395	P12:138:WERE:COWS-WACO_138::
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03618	111.8761	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03853	110.0059	GEN539670 4-JUDSON LARGE GENERATOR
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03853	109.9287	GEN587023 1-G16-003-GEN10.6500
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03853	109.8174	GEN587044 1-G16-005-GEN10.6900
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03538	109.778	BASE CASE
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04093	109.688	GREENSBURG - SSTARTP3 115.00 115KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03800	109.4672	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03903	109.261	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03903	109.261	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03656	109.0721	GILL ENERGY CENTER SOUTH - GILL ENERGY CENTER WEST 138KV CKT Z1
0	20WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03604	108.8982	BASE CASE
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03800	108.6575	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04008	108.4549	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03938	108.3452	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03938	108.3452	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03938	108.3452	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03938	108.3452	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03510	108.3193	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03591	108.0031	MILAN 4 - MILAN TAP 138KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03800	107.9989	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03853	107.9483	GEN531447 1-HOLCOMB GENERATOR
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03618	107.7826	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03742	107.6641	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03773	107.3279	BENTON - WICHITA 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03742	107.1773	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03485	106.9167	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03538	106.653	GEN539762 1-SSWIND 1 34.500
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03538	106.6282	GEN560693 1-G11-008-1 0.6900
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03538	106.6264	GEN587044 1-G16-005-GEN10.6900
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03538	106.5675	GEN587343 1-G16-049-GEN10.6500
0	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03510	106.4337	BASE CASE
0	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03897	106.1342	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03375	106.0705	GILL ENERGY CENTER SOUTH - GILL ENERGY CENTER WEST 138KV CKT Z1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03485	105.8975	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03509	105.6285	G16-005-TAP 345.00 - THISTLE7 345.00 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03509	105.6285	G16-005-TAP 345.00 - THISTLE7 345.00 345KV CKT 2
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03759	105.489	BARBER 3 115.00 - MEDICINE LODGE 115KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03759	105.489	BARBER 3 115.00 - MEDICINE LODGE 115KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03485	105.3809	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03538	105.2383	GEN587313 1-G16-046-GEN10.6900
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03742	104.9791	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03500	104.8885	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03759	104.8391	P12:115:MKEC:MEDICINELODGE-SHOOTINGSTARTAP::
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03538	104.8211	GEN531447 1-HOLCOMB GENERATOR
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03500	104.6908	45TH ST4 138.00 - COWSKIN 138KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03500	104.6085	P12:138:WERE:COWS-GECT_138::
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03591	104.5611	MAYFLD 4 138.00 - MILAN 4 138KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03591	104.4427	CLDWELL4 138.00 - MAYFLD 4 138.00 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03897	104.4103	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03520	104.3072	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03653	104.2135	G1524G1525 345.00 - WICHITA 345KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03653	104.2135	G1524G1525 345.00 - WICHITA 345KV CKT 2
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03591	104.163	BLF-CTY4 138.00 - CLDWELL4 138.00 138KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03759	104.0832	GREENSBURG - SSTARTP3 115.00 115KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03618	104.0514	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03591	103.9375	P12:138:MKEC:HARPER-BLUFFCITY::
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03545	103.9278	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03591	103.9013	ANTHONY4 138.00 - BLF-CTY4 138.00 138KV CKT 1
0	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03591	103.628	ANTHONY4 138.00 - HARPER 138KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03494	103.2657	P13:069-138:WERE:COWS_TX-1::
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03510	103.2269	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03538	103.0118	GEN539630 1-FLTRDG-WG1 0.6000
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03425	102.7676	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03518	102.6598	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03425	102.3018	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.15862	102.2708	THISTLE7 345.00 (THISTLE T1) 345/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03510	102.258	HOOVER NORTH - LAKERIDGE 138KV CKT 1
0	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.15862	102.2538	FLATRDG3 - THISTLE4 138.00 138KV CKT 1
0	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.15862	102.2538	FLATRDG3 - THISTLE4 138.00 138KV CKT 1
0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03425	101.8929	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03510	101.8324	P12:138:WERE:GECT-HOOV_138::
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03506	101.3602	P13:069-138:WERE:HOOV_TX-3::
0	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04032	101.2703	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03493	100.9213	CENTENNIAL - COWSKIN 138KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03600	100.7791	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	20SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03968	100.5934	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03544	100.548	G15088_T 345.00 - MOORE 345KV CKT 1
0	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03868	100.4853	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04032	100.2873	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03545	100.2655	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03521	100.0667	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03790	100.0541	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03546	100	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03964	100	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03964	100	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04029	99.9	BENTON - WICHITA 345KV CKT 1
0	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04017	99.9	G1524G1525 345.00 - WICHITA 345KV CKT 1
0	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04017	99.9	G1524G1525 345.00 - WICHITA 345KV CKT 2
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03493	99.8	CENTENNIAL - WACO 138KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03521	99.4	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03493	99.4	P12:138:WERE:COWS-WACO_138::
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03513	99.3	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03697	99.2	CIRCLE - MULLERGREN 230KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03697	99.2	CIRCLE - MULLERGREN 230KV CKT 1
0	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03552	99.2	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.04045	111.2862	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.04045	111.2862	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.03189	106.0647	BASE CASE
0	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.03566	102.919	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.03642	102.2897	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.03538	102.0157	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.03566	101.5166	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.03783	99.9	BENTON - WICHITA 345KV CKT 1
0	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.03532	99.3	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1
0	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.03532	99.2	45TH ST4 138.00 - COWSKIN 138KV CKT 1
0	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.03532	99.1	P12:138:WERE:COWS-GECT_138::
0	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.03642	99	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27713	124.8094	CIRCLE - MULLERGREN 230KV CKT 1
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27713	124.8094	CIRCLE - MULLERGREN 230KV CKT 1
0	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27793	123.4318	CIRCLE - MULLERGREN 230KV CKT 1
0	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27793	123.4318	CIRCLE - MULLERGREN 230KV CKT 1
0	17G	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27873	121.5426	CIRCLE - MULLERGREN 230KV CKT 1
0	17G	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27873	121.5426	CIRCLE - MULLERGREN 230KV CKT 1
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.32982	121.2888	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.32982	121.2888	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
0	16WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27874	118.7692	CIRCLE - MULLERGREN 230KV CKT 1
0	16WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27874	118.7692	CIRCLE - MULLERGREN 230KV CKT 1
0	17SP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27864	116.4529	CIRCLE - MULLERGREN 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27864	116.4529	CIRCLE - MULLERGREN 230KV CKT 1
0	20SP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27814	114.3271	CIRCLE - MULLERGREN 230KV CKT 1
0	20SP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27814	114.3271	CIRCLE - MULLERGREN 230KV CKT 1
0	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.33124	110.4779	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
0	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.33124	110.4779	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.28724	107.9755	CIRCLE - MULLERGREN 230KV CKT 1
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.28724	107.9755	CIRCLE - MULLERGREN 230KV CKT 1
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.26897	107.5284	CIRCLE (CIRC TX-1) 230/115/13.8KV TRANSFORMER CKT 1
0	17G	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.33195	107.1245	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
0	17G	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.33195	107.1245	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27092	106.1465	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	16WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.33191	105.1529	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
0	16WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.33191	105.1529	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
0	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.26968	104.7682	CIRCLE (CIRC TX-1) 230/115/13.8KV TRANSFORMER CKT 1
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27184	104.5445	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27095	104.2692	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27095	103.8007	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27095	103.8007	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27113	103.7231	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27113	103.7231	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27184	103.6686	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17G	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.28790	103.267	CIRCLE - MULLERGREN 230KV CKT 1
0	17G	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.28790	103.267	CIRCLE - MULLERGREN 230KV CKT 1
0	17G	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27040	103.2391	CIRCLE (CIRC TX-1) 230/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27155	103.1693	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	17G	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27218	102.1022	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.33713	101.8209	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.33713	101.8209	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
0	17G	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27249	101.5734	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	17G	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27249	101.5734	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27176	101.5238	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27176	101.5238	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27092	101.4962	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27250	101.2988	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	16WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27038	101.0855	CIRCLE (CIRC TX-1) 230/115/13.8KV TRANSFORMER CKT 1
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27109	100.6559	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27109	100.6559	MINGO - RED WILLOW 345KV CKT 1
0	16WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27220	100.626	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27250	100.3671	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	16WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27254	99.8	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	16WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27254	99.8	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27171	99.1	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27171	99.1	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_016	FROM->TO	KINSLEY - PAWNEE-EDWARDS_JCT 115KV CKT 1	76.0	76.0	1.00000	99.3	BASE CASE
0	20L	G16_016	FROM->TO	KINSLEY - PAWNEE-EDWARDS_JCT 115KV CKT 1	76.0	76.0	1.00000	99.3	BASE CASE
0	17G	G16_016	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03702	143.3409	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	20SP	G16_016	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03683	130.3239	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	17SP	G16_016	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03720	126.9444	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	16WP	G16_016	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03597	123.3506	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	25SP	G16_016	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03636	120.1313	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	20L	G16_016	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03636	118.8543	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	20WP	G16_016	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03731	114.0308	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	17G	G16_016	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.06953	103.5791	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17G	G16_016	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.06953	100.6488	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17G	G16_016	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03702	150.3397	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	20SP	G16_016	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03683	139.7556	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	17SP	G16_016	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03720	135.6949	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	25SP	G16_016	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03636	129.8862	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	16WP	G16_016	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03597	129.3604	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	20L	G16_016	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03636	121.1773	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	20WP	G16_016	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03731	120.5679	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	16WP	G16_016	-	Non-Converged Contingency	726.6	726.6	0.07155	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17G	G16_016	-	Non-Converged Contingency	726.6	726.6	0.07269	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17G	G16_016	-	Non-Converged Contingency	956.09	1051.7	0.06742	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	17SP	G16_016	-	Non-Converged Contingency	726.6	726.6	0.07127	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_016	-	Non-Converged Contingency	726.6	726.6	0.07912	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_016	-	Non-Converged Contingency	726.6	726.6	0.07912	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20SP	G16_016	-	Non-Converged Contingency	726.6	726.6	0.07413	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20SP	G16_016	-	Non-Converged Contingency	956.09	1051.7	0.06836	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_016	-	Non-Converged Contingency	726.6	726.6	0.07501	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_016	-	Non-Converged Contingency	956.09	1051.7	0.06610	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_016	FROM->TO	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1	330.0	350.0	0.06789	104.6862	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	G16_016	FROM->TO	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1	330.0	350.0	0.06789	101.8884	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17G	G16_016	FROM->TO	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1	330.0	350.0	0.06910	100.7392	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20SP	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03683	120.7599	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	20SP	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03683	118.7331	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	17G	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03702	117.482	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	17G	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03702	116.3281	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	17SP	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03720	116.3173	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	25SP	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03636	116.1149	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	17SP	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03720	115.0664	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	25SP	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03636	114.6339	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	16WP	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03597	101.0687	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	16WP	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03597	100.0558	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04353	135.6174	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04353	135.6174	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04006	132.4091	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04006	132.4091	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03945	129.3743	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03826	128.5685	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04083	128.518	BENTON - WICHITA 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03825	128.3221	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03826	128.2263	45TH ST4 138.00 - COWSKIN 138KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03826	128.1055	P12:138:WERE:COWS-GECT_138::
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03842	127.336	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03834	126.3028	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03820	125.6425	P13:069-138:WERE:COWS_TX-1::
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03945	125.1634	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03838	124.7836	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03834	124.501	HOOVER NORTH - LAKERIDGE 138KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03834	123.6031	P12:138:WERE:GECT-HOOV_138::
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03830	122.8075	P13:069-138:WERE:HOOV_TX-3::
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03975	122.5979	G1524G1525 345.00 - WICHITA 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03975	122.5979	G1524G1525 345.00 - WICHITA 345KV CKT 2
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03816	121.7586	CENTENNIAL - COWSKIN 138KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03622	121.7407	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03865	121.2451	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03509	121.1904	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03945	121.1601	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03136	120.6821	BASE CASE
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03530	120.4832	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03816	119.7757	CENTENNIAL - WACO 138KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03974	119.5059	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03974	119.5059	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03654	119.2062	59TH ST - EL PASO 138KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03816	118.9528	P12:138:WERE:COWS-WACO_138::
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03822	118.9349	HOOVER NORTH - HOOVERS4 138.00 138KV CKT Z1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03530	118.7771	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03837	118.6613	G15052_T 345.00 - ROSE HILL 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03654	118.2249	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03806	118.1682	EL PASO - ROSE HILL 138KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03865	118.1652	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03860	118.0786	P12:138:WERE:CRSW-OGE_138::
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03860	118.0331	CRESWELL - MIDLTNT4 138.00 138KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03654	117.9513	P12:138:WERE:ELPA-MURR_138::
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03748	117.9054	BENTON - WICHITA 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03837	117.8445	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03920	117.7995	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03855	117.797	G15088_T 345.00 - MOORE 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03805	117.7655	P13:069-138:WERE:HOOV_TX-1::
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03765	117.5236	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03789	117.5155	ROSE HILL - WOLF CREEK 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03622	117.4632	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03865	117.4543	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03860	117.3384	P12:138:OKGE:3TERM7
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03860	117.3021	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03823	117.2849	BENTON (BENT TX-1) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03503	117.2214	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03823	117.1824	BENTON (BENT TX-2) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03503	117.0596	45TH ST4 138.00 - COWSKIN 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03503	116.9984	P12:138:WERE:COWS-GECT_138::
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03622	116.7573	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03520	116.6797	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03650	115.905	G1524G1525 345.00 - WICHITA 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03650	115.905	G1524G1525 345.00 - WICHITA 345KV CKT 2
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03512	115.847	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03498	115.6184	P13:069-138:WERE:COWS_TX-1::
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03518	114.9955	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03512	114.826	HOOVER NORTH - LAKERIDGE 138KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03512	114.3503	P12:138:WERE:GECT-HOOV_138::
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03825	114.1358	BASE CASE
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03825	114.1357	BASE CASE
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03530	113.8662	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03508	113.7773	P13:069-138:WERE:HOOV_TX-3::
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03135	113.7354	BASE CASE
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03647	113.7235	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03424	113.6969	BASE CASE
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03597	113.482	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03495	113.1477	CENTENNIAL - COWSKIN 138KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03647	113.0286	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03547	112.7602	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04337	112.6298	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04337	112.6298	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03599	112.5549	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03550	112.361	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03547	112.0795	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03693	112.0139	CIRCLE - MULLERGREN 230KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03693	112.0139	CIRCLE - MULLERGREN 230KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03495	111.9426	CENTENNIAL - WACO 138KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03547	111.7972	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03509	111.6469	GEN542955 1-LACYGNE UNIT #1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03495	111.4664	P12:138:WERE:COWS-WACO_138::
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03597	111.4219	MINGO - RED WILLOW 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03597	111.4219	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03798	111.0979	G16-005-TAP 345.00 - THISTLE7 345.00 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03798	111.0979	G16-005-TAP 345.00 - THISTLE7 345.00 345KV CKT 2
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03825	110.9415	GEN539670 4-JUDSON LARGE GENERATOR
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03825	110.8651	GEN587044 1-G16-005-GEN10.6900
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03825	110.5778	GEN587023 1-G16-003-GEN10.6500
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04068	110.46	GREENSBURG - SSTARTP3 115.00 115KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03772	110.2347	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03921	110.2159	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03921	110.2159	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03888	110.0586	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03888	110.0586	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03888	110.0581	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03888	110.0581	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03481	110.048	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03630	109.8225	GILL ENERGY CENTER SOUTH - GILL ENERGY CENTER WEST 138KV CKT Z1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03969	109.6197	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03772	109.4223	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03597	109.3293	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03737	108.9501	BENTON - WICHITA 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03825	108.8635	GEN531447 1-HOLCOMB GENERATOR
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03565	108.7711	MILAN 4 - MILAN TAP 138KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03772	108.7702	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03713	108.4893	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03509	108.1224	BASE CASE
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03713	107.994	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03470	106.405	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03470	106.1882	45TH ST4 138.00 - COWSKIN 138KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03470	106.1051	P12:138:WERE:COWS-GECT_138::
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03490	105.8094	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03713	105.8071	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03621	105.7562	G1524G1525 345.00 - WICHITA 345KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03621	105.7562	G1524G1525 345.00 - WICHITA 345KV CKT 2
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03520	105.5887	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03597	105.476	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03565	105.3217	MAYFLD 4 138.00 - MILAN 4 138KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03457	105.2601	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03565	105.2025	CLDWELL4 138.00 - MAYFLD 4 138.00 138KV CKT 1
2	20WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03530	105.0233	BASE CASE
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03565	104.9232	BLF-CTY4 138.00 - CLDWELL4 138.00 138KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03465	104.7634	P13:069-138:WERE:COWS_TX-1::
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03481	104.7207	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03565	104.6714	P12:138:MKEC:HARPER-BLUFFCITY::
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03565	104.6624	ANTHONY4 138.00 - BLF-CTY4 138.00 138KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03349	104.4922	GILL ENERGY CENTER SOUTH - GILL ENERGY CENTER WEST 138KV CKT Z1
2	17SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03565	104.3888	ANTHONY4 138.00 - HARPER 138KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03457	104.2204	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03488	104.1551	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03509	103.9379	GEN587313 1-G16-046-GEN10.6900
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03735	103.9053	BARBER 3 115.00 - MEDICINE LODGE 115KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03735	103.9053	BARBER 3 115.00 - MEDICINE LODGE 115KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03481	103.7513	HOOVER NORTH - LAKERIDGE 138KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03457	103.6876	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03485	103.4436	G16-005-TAP 345.00 - THISTLE7 345.00 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03485	103.4436	G16-005-TAP 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03509	103.3281	GEN531447 1-HOLCOMB GENERATOR
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03481	103.3274	P12:138:WERE:GECT-HOOV_138::
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03735	103.2478	P12:115:MKEC:MEDICINELODGE-SHOOTINGSTARTAP::
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03477	102.8538	P13:069-138:WERE:HOOV_TX-3::
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03735	102.4929	GREENSBURG - SSTARTP3 115.00 115KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03463	102.3888	CENTENNIAL - COWSKIN 138KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03567	102.2134	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
2	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03447	102.034	BASE CASE
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03513	101.9386	G15088_T 345.00 - MOORE 345KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03520	101.7881	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03494	101.7712	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03520	101.5444	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03509	101.4197	GEN539630 1-FLTRDG-WG1 0.6000
2	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03850	101.348	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03463	101.2875	CENTENNIAL - WACO 138KV CKT 1
2	20SP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03932	101.2143	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03396	101.0111	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03494	101.0108	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03463	100.9015	P12:138:WERE:COWS-WACO_138::
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03488	100.7091	G15052_T 345.00 - ROSE HILL 345KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03662	100.6823	CIRCLE - MULLERGREN 230KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03662	100.6823	CIRCLE - MULLERGREN 230KV CKT 1
2	16WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03524	100.6756	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03396	100.5456	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
2	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03396	100.1539	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	20WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04383	99.8	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	20WP	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.04383	99.8	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.15827	99.6	FLATRDG3 - THISTLE4 138.00 138KV CKT 1
2	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.15827	99.6	FLATRDG3 - THISTLE4 138.00 138KV CKT 1
2	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.03850	99.6	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	20L	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110.0	110.0	0.15827	99.5	THISTLE7 345.00 (THISTLE T1) 345/138/13.8KV TRANSFORMER CKT 1
2	20SP	G16_016	TO->FROM	ELLSWTP3 115.00 - MULLERGREN 115KV CKT 1	89.8	89.8	0.05099	99.3	RICE 6 230.00 (RICE T1) 230/115/12.47KV TRANSFORMER CKT 1
2	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.04006	109.3918	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.04006	109.3918	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.03136	103.7912	BASE CASE
2	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.03622	101.2723	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.03509	100.8244	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.03530	100.2213	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27669	119.9853	CIRCLE - MULLERGREN 230KV CKT 1
2	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27669	119.9853	CIRCLE - MULLERGREN 230KV CKT 1
2	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27742	118.6379	CIRCLE - MULLERGREN 230KV CKT 1
2	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27742	118.6379	CIRCLE - MULLERGREN 230KV CKT 1
2	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.32939	117.1803	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
2	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.32939	117.1803	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
2	17G	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27822	116.9269	CIRCLE - MULLERGREN 230KV CKT 1
2	17G	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27822	116.9269	CIRCLE - MULLERGREN 230KV CKT 1
2	16WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27825	114.7194	CIRCLE - MULLERGREN 230KV CKT 1
2	16WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27825	114.7194	CIRCLE - MULLERGREN 230KV CKT 1
2	17SP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27818	112.281	CIRCLE - MULLERGREN 230KV CKT 1
2	17SP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27818	112.281	CIRCLE - MULLERGREN 230KV CKT 1
2	20SP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27763	110.0913	CIRCLE - MULLERGREN 230KV CKT 1
2	20SP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27763	110.0913	CIRCLE - MULLERGREN 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.33073	106.8584	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
2	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.33073	106.8584	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
2	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.28694	104.8276	CIRCLE - MULLERGREN 230KV CKT 1
2	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.28694	104.8276	CIRCLE - MULLERGREN 230KV CKT 1
2	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.26863	103.8665	CIRCLE (CIRC TX-1) 230/115/13.8KV TRANSFORMER CKT 1
2	17G	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.33142	103.4993	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
2	17G	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.33142	103.4993	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
2	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27061	102.2522	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
2	16WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.33140	101.4842	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
2	16WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.33140	101.4842	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
2	17G	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.28760	100.8917	CIRCLE - MULLERGREN 230KV CKT 1
2	17G	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.28760	100.8917	CIRCLE - MULLERGREN 230KV CKT 1
2	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.26928	100.7424	CIRCLE (CIRC TX-1) 230/115/13.8KV TRANSFORMER CKT 1
2	17G	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27000	99.8	CIRCLE (CIRC TX-1) 230/115/13.8KV TRANSFORMER CKT 1
2	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27082	99.8	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27082	99.8	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	20WP	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27118	99.8	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
2	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.27148	99.4	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.33682	99.2	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
2	20L	G16_016	TO->FROM	HUNTSVILLE - ST_JOHN 115KV CKT 1	80.0	80.0	0.33682	99.2	MEDICINE LODGE (BARBER 4) 138/115/2.72KV TRANSFORMER CKT 1
2	20L	G16_016	FROM->TO	KINSLEY - PAWNEE-EDWARDS_JCT 115KV CKT 1	76.0	76.0	1.00000	99.4	BASE CASE
2	20L	G16_016	FROM->TO	KINSLEY - PAWNEE-EDWARDS_JCT 115KV CKT 1	76.0	76.0	1.00000	99.3	BASE CASE
2	17G	G16_016	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03640	139.4216	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	20SP	G16_016	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03619	131.2115	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	17SP	G16_016	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03662	128.6974	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	16WP	G16_016	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03534	126.2922	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	25SP	G16_016	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03572	118.0735	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	20WP	G16_016	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03669	117.4504	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	20L	G16_016	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03573	113.3178	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	17G	G16_016	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.06764	100.1282	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	G16_016	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03640	146.4666	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	20SP	G16_016	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03619	140.6458	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	17SP	G16_016	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03662	137.4132	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	16WP	G16_016	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03534	132.2795	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	25SP	G16_016	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03572	127.8251	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	20WP	G16_016	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03669	123.9928	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	20L	G16_016	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03573	115.6443	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	20L	G16_016	FROM->TO	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1	330.0	350.0	0.06646	100.8125	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	20SP	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03619	121.4882	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	20SP	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03619	119.4137	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	17SP	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03662	116.9452	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	17SP	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03662	115.7993	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	17G	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03640	115.1714	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	25SP	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03572	115.0483	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	17G	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03640	114.1471	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	25SP	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03572	113.5793	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	16WP	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03534	102.8823	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	16WP	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03534	101.7792	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	20WP	G16_016	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03669	99.4	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	20SP	G16_016	TO->FROM	ELLSWTP3 115.00 - MULLERGREN 115KV CKT 1	89.8	89.8	0.05092	99.3	RICE 6 230.00 (RICE T1) 230/115/12.47KV TRANSFORMER CKT 1
3	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.04678	105.0159	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
3	17G	G16_016	FROM->TO	HARPER - MILAN TAP 138KV CKT 1	138.6	143.4	0.04678	105.0159	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
3	20L	G16_016	FROM->TO	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1	330.0	350.0	0.06634	100.8243	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320.0	320.0	0.06158	118.2185	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320.0	320.0	0.06158	116.7536	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	25SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320.0	320.0	0.06154	113.1971	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320.0	320.0	0.06718	103.2655	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320.0	320.0	0.06718	102.7266	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320.0	320.0	0.06718	102.5834	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	20SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06081	112.7297	FT RANDAL - FT THOMPSON 230KV CKT 1
0	25SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06077	109.0517	FT RANDAL - FT THOMPSON 230KV CKT 1
0	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06592	99.6	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06592	99.1	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	20SP	G16_017	FROM->TO	FT THOMPSON - LAKE PLATT 230KV CKT 1	352.0	352.0	0.06081	106.4311	FT RANDAL - FT THOMPSON 230KV CKT 1
0	25SP	G16_017	FROM->TO	FT THOMPSON - LAKE PLATT 230KV CKT 1	352.0	352.0	0.06077	103.2514	FT RANDAL - FT THOMPSON 230KV CKT 1
0	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.52675	110.161	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.52675	106.7158	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.52691	110.1857	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.52691	106.7465	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08486	148.2605	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08025	147.6879	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08503	146.8195	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08530	146.8139	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08889	146.3126	LETCHER - SIOUX FALLS 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08667	146.2364	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09092	146.1829	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08664	145.6013	MINGO - RED WILLOW 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08662	145.5204	RAUN - SIOUX CITY 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08596	145.5141	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08733	145.4359	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09070	145.2676	FT THOMPSON - LETCHER 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08554	145.2413	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	145.1716	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	145.0032	GEN640009 1-COOPER NUCLEAR STATION
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	144.8756	GEN336153 1-WATERFORD UNIT#3
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08584	144.6951	HOSKINS - SHELL CREEK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08812	144.6686	HANLON - SIOUX FALLS 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	144.6391	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08691	144.6371	RASMUSN - UTICA JCT 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	144.6264	GEN335831 1-RIVERBEND UNIT#1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08686	144.4488	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08738	144.4336	FT RANDAL - UTICA JCT 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	144.4139	GEN563222 1-G15088_3 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	144.3886	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09043	144.3588	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08686	144.2794	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08669	144.2176	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	144.1982	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	144.0429	GEN645012 2-NEBRASKA CITY 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08666	144.0415	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08598	144.0361	SIDNEY - STEGALL 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08703	144.0338	CLEARWATER - ONEILL 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	144.0145	GEN645011 1-NEBRASKA CITY 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08713	143.9652	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08661	143.94	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.9386	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.9382	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.9342	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.9245	GEN337653 1-WHITE BLUFF UNIT #2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.8674	GEN501801 1-DOLET HILLS UNIT1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.8546	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.85	GEN338143 1-INDEPENDENCE UNIT #1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.836	AINSWORTH - VALENTINE 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08639	143.831	HOSKINS - SHELL CREEK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08633	143.8267	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08631	143.8221	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08729	143.8055	STAPLETON - THEDFORD 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08713	143.7948	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08654	143.7658	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08703	143.7291	CLEARWATER - NELIGH 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.7097	GEN563222 1-G15088_3 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08735	143.7039	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08810	143.7028	HURON - WATERTOWN 230KV CKT 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.6969	GEN641089 2-ENERGY CENTER 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.6814	GEN335206 1-NELSON UNIT 6
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.6809	GEN336251 1-NINEMILE POINT UNIT#4
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	143.6711	CALLAWAY - MAXWELL 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	143.6668	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.6573	GEN336831 1-BAXTER WILSON SES
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.6429	GEN501813 1-RODEMACHER UNIT 3
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.6418	GEN587353 1-G16-050-GEN10.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08698	143.6374	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08742	143.6292	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08742	143.6291	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08685	143.6288	AINSWORTH - BASSETT 7115.00 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.6189	GEN344897 4-1LAB G4 20.000
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.6165	GEN344894 1-1LAB G1 20.000
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.6164	GEN344895 2-1LAB G2 20.000
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.6163	GEN344896 3-1LAB G3 20.000
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.615	GEN337041 1-GERALD ANDRUS

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08604	143.614	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.608	GEN542962 2-IATAN UNIT #2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.6065	GEN336252 1-NINEMILE POINT UNIT#5
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08631	143.599	GAVINS POINT - HARTINGTON 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08752	143.596	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08810	143.5951	CARPENTER - HURON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.5896	GEN336191 1-LITTLE GYPSY UNIT#3
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.5804	GEN501812 1-RODEMACHER UNIT 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08792	143.5646	OAHE - PHILIP TAP 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08810	143.5534	CARPENTER - WATERTOWN 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09107	143.5317	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09107	143.5316	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08742	143.5262	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.5216	GEN345671 2-1RUSH G2 18.000
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08662	143.519	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.5155	GEN345670 1-1RUSH G1 18.000
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08669	143.4987	FT RANDAL - SPENCER 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08604	143.4986	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08742	143.4902	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08685	143.4866	BASSETT 7115.00 - STUART 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08742	143.4836	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08752	143.4667	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.4615	GEN338388 1-1PLUM PT U1 23.000
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08669	143.4542	ONEILL - SPENCER 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08752	143.4497	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08715	143.4303	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08773	143.4293	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08685	143.4133	ATKINSON - STUART 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08664	143.4018	MINGO - SETAB 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08705	143.4	WINNER - WITTEN 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.3928	GEN335204 1-NELSON UNIT 4
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.3871	GEN336464 1-MICHOUD UNIT #3
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09103	143.3701	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.3676	GEN334440 1-SABINE UNIT 4
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.3517	GEN334441 1-SABINE UNIT 5
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08623	143.3381	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08661	143.3335	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.3208	GEN336801 1-BAXTER WILSON UNIT #1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	143.311	GEN337653 1-WHITE BLUFF UNIT #2
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	143.2981	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08631	143.2759	BELDEN - HARTINGTON 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	143.2748	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	143.2722	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08623	143.2644	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08625	143.2643	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08623	143.2642	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.2567	GEN335614 1-WILLOW GLENN UNIT#4
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08735	143.2516	PAHOJA - SIOUX FALLS 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.2427	GEN335206 1-NELSON UNIT 6
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.2128	GEN334433 1-SABINE UNIT 3
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08729	143.2029	STAPLETON - THEDFORD 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08655	143.1668	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.1521	GEN336222 1-LITTLE GYPSY UNIT#2
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08631	143.151	BELDEN - HARTINGTON 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.1375	GEN587363 1-G16-055-GEN10.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08623	143.1357	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	143.123	AINSWORTH - AINSWORTH 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09092	143.0809	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.0708	GEN587443 1-G16-064-GEN10.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08621	143.0615	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.0416	GEN336151 1-WATERFORD UNIT#1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	143.0416	GEN336152 1-WATERFORD UNIT#2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08705	143.0293	GREGORY - WINNER 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08699	143.0064	GRIMES - LEHIGH 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08650	142.9926	JEFFREY - NORTH PLATTE 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	142.991	GEN303007 1-1BC2 U2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08685	142.9784	ATKINSON - EMMET 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08661	142.9775	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	142.9613	GEN303006 1-1BC2 U1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08729	142.9604	MAXWELL - STAPLETON 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08735	142.9543	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.9498	GEN563222 1-G15088_3 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08693	142.9449	FT RANDAL - WHITE SWAN 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08693	142.9382	TYNDALL - WHITE SWAN 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	142.9211	GEN334441 1-SABINE UNIT 5
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	142.9174	GEN641089 2-ENERGY CENTER 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	142.9142	GEN303008 1-1BC2 U3
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08693	142.9103	TYNDALL - WHITE SWAN 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08678	142.9095	MT VERN - STORLA 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08664	142.9094	GRANITE FALLS - WILLMAR 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08735	142.9092	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08623	142.9068	G16234&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	142.8985	GEN336170 1-GULF OXY U4
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08730	142.895	CLEARWATER - ONEILL 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	142.8927	BISMARK - WEBER 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	142.8789	GEN501812 1-RODEMACHER UNIT 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	142.8784	GEN501811 1-RODEMACHER UNIT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	142.8751	GRAND FORKS - PICKERT 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	142.8618	BROKEN BOW - CALLAWAY 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08715	142.8596	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.8547	GEN501801 1-DOLET HILLS UNIT1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08693	142.8341	MARTIN - SHANNON 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08706	142.8262	GREGORY - WINNER 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.11068	142.8224	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.11061	142.8167	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	142.8137	GEN587353 1-G16-050-GEN10.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08730	142.7968	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08724	142.773	MENNO JCT - UTICA 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08682	142.7652	GRANT - MITCHELL 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	142.7561	JAMES TOWN - WEBER 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08730	142.7504	CLEARWATER - NELIGH 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08638	142.7408	BLOOMFIELD - GAVINS POINT 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08720	142.7318	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	142.7255	AXTELL - SWEETWATER 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08678	142.7179	MT VERN - STORLA 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08735	142.6875	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08710	142.6642	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	142.6439	GEN334433 1-SABINE UNIT 3
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08716	142.6269	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08716	142.6268	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08642	142.6087	LELAND OLDS - STANTON 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08651	142.5814	JEFFREY - NORTH PLATTE 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08654	142.5778	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08682	142.5581	MENNO JCT - TRIPP JCT 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.5507	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.5327	GEN336252 1-NINEMILE POINT UNIT#5
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.486	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.4855	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.4833	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08686	142.4793	ATKINSON - EMMET 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.4733	GEN501813 1-RODEMACHER UNIT 3
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08665	142.456	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08710	142.4519	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.4512	GEN645012 2-NEBRASKA CITY 2
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08694	142.4491	MARTIN - SHANNON 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08665	142.4437	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08638	142.4211	BLOOMFIELD - GAVINS POINT 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.4011	GEN344897 4-1LAB G4 20.000
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.3958	GEN344894 1-1LAB G1 20.000
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.3952	GEN344896 3-1LAB G3 20.000
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08641	142.3431	KELLY - SHELL CREEK 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08702	142.3426	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.3339	GEN336831 1-BAXTER WILSON SES
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08699	142.3175	JAMES TOWN - WEBER 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08724	142.3121	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08641	142.3084	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08709	142.308	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08709	142.3079	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.3068	GEN336251 1-NINEMILE POINT UNIT#4
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.2961	GEN344895 2-1LAB G2 20.000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	142.2897	GEN336191 1-LITTLE GYPSY UNIT#3
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08701	142.2795	COLUMEAST - SHELL CREEK 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.2754	GEN587353 1-G16-050-GEN10.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.2743	GEN645011 1-NEBRASKA CITY 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.2742	GEN345670 1-1RUSH G1 18.000
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.2737	GEN345671 2-1RUSH G2 18.000
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.2527	GEN337041 1-GERALD ANDRUS
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.2485	GEN641089 2-ENERGY CENTER 2
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08682	142.2476	GRANT - MITCHELL 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09071	142.2395	FT THOMPSON - LETCHER 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08669	142.2313	CHADRON - DUNLAP 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.2278	GEN335206 1-NELSON UNIT 6
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08685	142.2194	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08685	142.2193	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08699	142.1954	BISMARK - WEBER 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08711	142.1883	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08770	142.146	STAPLETON - THEDFORD 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.1358	GEN501812 1-RODEMACHER UNIT 2
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08658	142.1292	G15088_T 345.00 - PAULINE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08638	142.1288	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08661	142.1212	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.1196	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08701	142.114	PRAIRIE - RAMSEY 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08716	142.104	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08716	142.1039	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	142.1022	GEN334440 1-SABINE UNIT 4
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08658	142.0452	G15088_T 345.00 - MOORE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08658	142.0155	G15088_T 345.00 - PAULINE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	141.9984	GEN335614 1-WILLOW GLENN UNIT#4
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	141.9419	BASE CASE
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	141.9397	GEN336801 1-BAXTER WILSON UNIT #1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08649	141.9285	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08698	141.9212	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.9	GEN336191 1-LITTLE GYPSY UNIT#3
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08791	141.8661	NF
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.8583	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	141.8491	GEN587363 1-G16-055-GEN10.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08729	141.8395	MAXWELL - STAPLETON 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08664	141.8392	HOLCOMB - SETAB 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08665	141.8296	HANKINSON - WAHPETON 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.8291	GEN338388 1-1PLUM PT U1 23.000
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08702	141.8106	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08697	141.81	CALLAWAY - MAXWELL 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	141.7668	GEN587443 1-G16-064-GEN10.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.7378	GEN335614 1-WILLOW GLENN UNIT#4
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08626	141.7372	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.7326	GEN336801 1-BAXTER WILSON UNIT #1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.732	GEN336464 1-MICHOUD UNIT #3
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.7296	GEN334441 1-SABINE UNIT 5
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.7105	GEN335204 1-NELSON UNIT 4
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08642	141.7085	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08700	141.6987	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08702	141.6951	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08665	141.6933	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08574	141.6515	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.6385	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08729	141.6257	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08729	141.6256	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.6209	ANSON 115/17.5KV TRANSFORMER CKT 4
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08703	141.6171	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08703	141.617	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08645	141.6149	LOUP CITY - ST LIBORY 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08710	141.6006	AINSWORTH - STUART 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	141.5967	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	141.5945	BROKEN BOW - CALLAWAY 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.5866	GEN587363 1-G16-055-GEN10.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08706	141.5695	BURR - CANBY 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08689	141.5592	GAVINS POINT - HARTINGTON 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08701	141.5555	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	141.5404	CRETE - FRIEND 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.5223	GEN587443 1-G16-064-GEN10.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08657	141.5191	AURORA - GRAND ISLAND 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08702	141.5188	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	141.5167	FIELD SOUTH - WILMARTH 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08715	141.5166	EAGLE - MARTIN 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.5097	GEN334433 1-SABINE UNIT 3
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08697	141.5006	ARNOLD - HAZLETON 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08693	141.4919	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.4843	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.4838	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08657	141.4733	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08698	141.467	AUDUBON - HUBBARD 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	141.4627	FIELD NORTH - FIELD SOUTH 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08738	141.441	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.4375	GEN336222 1-LITTLE GYPSY UNIT#2
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08725	141.4338	FT RANDAL - WHITE SWAN 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08738	141.419	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08738	141.419	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08641	141.4173	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08692	141.4172	JEFFREY - NORTH PLATTE 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.4136	GEN303007 1-1BC2 U2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08653	141.409	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.4072	GEN303006 1-1BC2 U1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08727	141.4065	MT VERN - STORLA 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08653	141.4059	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08723	141.4036	AINSWORTH - AINSWORTH 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08666	141.3972	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08725	141.3857	TYNDALL - WHITE SWAN 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08703	141.3817	7PALM TAP 345.00 - SUB T 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08664	141.3517	MINGO - RED WILLOW 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08715	141.3508	EAGLE - PHILIP 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08702	141.3493	ELM CREEK - MONTICELLO 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.349	GEN336152 1-WATERFORD UNIT#2
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.3484	GEN336151 1-WATERFORD UNIT#1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08704	141.3475	GENOA 161 - SENECA 161 161KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.3405	GEN336170 1-GULF OXY U4
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08770	141.3397	MAXWELL - STAPLETON 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.3392	GEN303008 1-1BC2 U3
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08654	141.3323	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08703	141.3301	PALXFRASBTHI
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08710	141.328	ATKINSON - STUART 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08694	141.3187	HIGHLND 3 345.00 - LAKEFIELD 3 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08699	141.3151	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08705	141.2968	MN VALLEY TAP - PANTHER 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08625	141.2617	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.2605	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08711	141.2379	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08654	141.2359	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08562	141.2355	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08635	141.2324	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08635	141.231	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08725	141.2284	MARTIN - SHANNON 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08665	141.224	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.1921	GEN636641 1-LOUISA UNIT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.1907	GEN501811 1-RODEMACHER UNIT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08711	141.1569	CHADRON - DUNLAP 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08701	141.1476	NELIGH - PETERSBRG.N7115.00 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08653	141.1359	AS KING - EAU CLAIRE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08689	141.1241	BELDEN - HARTINGTON 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.1128	AXTELL - SWEETWATER 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08665	141.089	MINGO - RED WILLOW 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08625	141.0878	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	141.0873	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	141.0731	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08662	141.068	RAUN - SIOUX CITY 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08710	141.0642	ATKINSON - EMMET 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08697	141.0341	BROKEN BOW - CALLAWAY 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	141.0258	GEN652345 W-G07_023IS_2 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	141.0156	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08714	141.0012	STEGALL - STEGALL TRANSFORMER 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.9993	GEN615021 1-GRE-ER 14G 16.000
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08633	140.9754	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.9653	GEN615052 1-CAMBRIDGE GENERATING STATION
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08687	140.9567	KELLY - SHELL CREEK 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08621	140.9385	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08687	140.9352	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08687	140.9352	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.9202	GEN652414 4-FT PECK
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.9202	GEN652415 5-FT PECK
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.9143	GEN587583 1-J432-GEN1 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08630	140.9119	103RD & ROKEBY - MOORE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08660	140.8987	COOPER - FAIRPORT 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.8672	GEN600067 9-HIGH BRIDGE
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08654	140.86	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08662	140.8484	G16-055-TAP 115.00 - HILDRETH 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.8284	GEN659272 2-GROTON 2G13.800
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.8059	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.771	GEN659273 2-GROTON SYNC COND
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.771	GEN659294 1-WILTONCOL9
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08670	140.7506	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.7501	GEN659274 1-GROTON
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.7395	GEN659162 4-RED WLCK
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.7395	GEN659163 5-BLACK WDCK
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.7372	GEN659192 6-LYNN
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.7058	BASE CASE
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.7001	GEN660016 1-B_H WIND 0.7000
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.6025	GEN659291 1-FT MP COLLECTOR
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08641	140.5992	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.5926	GEN662101 1-WESSINGTON190.5750
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08673	140.5666	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08651	140.5632	GRIMES - LEHIGH 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.5448	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.5418	GEN652545 7-BIG BEND
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08730	140.5333	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08704	140.5128	G15088_T 345.00 - MOORE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.5091	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08654	140.4724	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08654	140.471	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.4521	GEN659270 1-WEST SW
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08687	140.4442	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08687	140.4442	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08616	140.4404	COLUMWEST - KELLY 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	140.4394	CRETE - FRIEND 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08653	140.4311	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.4101	GEN562872 1-G15046_3 0.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08673	140.4099	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09102	140.4085	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08629	140.3933	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08657	140.3931	AURORA - GRAND ISLAND 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08627	140.3797	COOPER - MOORE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08658	140.3751	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08646	140.3717	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08575	140.3617	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.3388	GEN615015 1-GRE-SPRITWDG13.200
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.3333	GEN 11104 1-J262_GEN 0.6000
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.3333	GEN 11108 1-J263_GEN 0.6000
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08635	140.3297	GRAND ISLAND - HASTINGS 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08645	140.3202	LOUP CITY - ST LIBORY 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08609	140.3019	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	140.301	BASE CASE
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	140.2993	2560-BRDLAND-LNX3345.00
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	140.2993	2561-BRDLAND-LNX3345.00
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	140.2993	BASE CASE
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08658	140.2951	COOPER - ST JOE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08603	140.2739	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08886	140.2717	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08630	140.2597	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08647	140.2575	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	140.2542	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08622	140.2395	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08561	140.2196	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08658	140.1796	FORMAN - HANKINSON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08644	140.1653	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	140.1621	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08704	140.162	G15088_T 345.00 - PAULINE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09091	140.1618	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.1557	GEN910006 1-G12_012IS_3 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.151	GEN587623 1-J493-GEN1 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	140.1501	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.1349	GEN587593 1-J460-GEN1 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08886	140.1333	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08635	140.1326	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08635	140.1313	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08625	140.1181	SUB 3454 - WAGENER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08878	140.1026	GLENHAM - L3 HAWDON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08886	140.099	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.0765	GEN 10648 1-G830_GEN 0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	140.0708	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08886	140.0676	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09043	140.0593	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	140.0414	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.0308	GEN563232 1-G15089_3 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	140.0303	GEN587053 1-G16-007-GEN10.6500
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08669	140.0248	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08669	140.0248	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08886	140.0148	GLENHAM - WHITLOK 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08603	140.0111	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	139.973	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.9284	GEN652544 5-BIG BEND
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	139.9281	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08703	139.9094	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.8886	GEN652543 3-BIG BEND
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.8878	GEN652542 1-BIG BEND
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08729	139.8866	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08701	139.8496	CRETE - FRIEND 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08701	139.8479	AURORA - GRAND ISLAND 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08621	139.8442	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08697	139.8324	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08697	139.8323	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08685	139.8296	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08697	139.8295	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08697	139.8294	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08651	139.8237	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08672	139.8232	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08689	139.8217	LOUP CITY - ST LIBORY 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08702	139.8046	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08658	139.7967	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.7746	GEN659010 4-G07_027IS_2 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.7582	GEN659194 1-NDPRAIRWND1W0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.7564	GEN659366 3-WILTON 3 W0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.7501	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.7484	GEN652460 4-GARRISON
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.7464	GEN652461 5-GARRISON
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.744	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08909	139.7419	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08660	139.7246	COOPER - FAIRPORT 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08661	139.717	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.692	GEN652457 1-GARRISON
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.692	GEN652458 2-GARRISON
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.692	GEN652459 3-GARRISON
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08773	139.6898	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08662	139.6884	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08661	139.6663	FORMAN - OAKES 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08672	139.6611	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08654	139.6577	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08679	139.6547	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08679	139.6546	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08679	139.6534	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08679	139.6532	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08810	139.6092	HURON - WATERTOWN 230KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08626	139.5988	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.5805	GEN659403 1-NDSUNFLWR W0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08658	139.5586	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08660	139.5566	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.5533	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	139.5475	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	139.5475	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08810	139.5405	CARPENTER - WATERTOWN 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08669	139.5027	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08660	139.4865	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08660	139.4775	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.4664	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.4648	GEN659353 1-DEERCREK CTG18.000
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08646	139.4572	BYRON - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08636	139.4509	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08660	139.4466	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.4295	GEN659354 1-DEERCREK STG18.000
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08671	139.4261	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08671	139.4261	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.4204	GEN659273 2-GROTON SYNC COND
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.4204	GEN659294 1-WILTONCOL9
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.4188	GEN652906 1-G09_006IS_3 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08655	139.4093	AUDUBON - SHEYNNE 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	139.4025	COOPER - ST JOE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.3979	GEN659274 1-GROTON
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.3902	GEN659162 4-RED WLCK
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.3902	GEN659163 5-BLACK WDCK
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.3889	GEN659192 6-LYNN
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08665	139.3832	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08665	139.3831	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08616	139.3812	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08661	139.3713	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.3627	GEN660001 2-ABERDEEN SIEBRECHT
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.362	GEN600050 1-FEP
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.357	GEN659290 1-EDGECOL
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.3556	GEN 11123 1-G736-GEN1 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.3478	GEN 11133 1-J442-GEN1 0.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08696	139.3419	BONDURANT - MONTEZUMA 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.3328	GEN660016 1-B_H WIND 0.7000
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	139.3287	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08662	139.3253	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08662	139.3253	P12:115:UMZB:# 119 #: IN NE.
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08713	139.3169	P13:230-345:NPPD:STEGALL3:KV3A
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.3116	GEN652345 W-G07_023IS_2 0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	139.3085	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08660	139.3021	HENNING - INMANN 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.302	GEN659411 1-CAMPBLCNTY W0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08662	139.2947	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.2876	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08706	139.2839	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.2827	GEN587583 1-J432-GEN1 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08710	139.2757	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08710	139.2756	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08710	139.2676	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08664	139.2543	MINGO - SETAB 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08702	139.2523	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.2482	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.236	GEN600063 1-COLVILLE GEN 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.236	GEN600064 2-COLVILLE GEN 2
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.231	GEN600043 7-BLUE LAKE5
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.231	GEN600044 8-BLUE LAKE6
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.2286	GEN600006 1-AS KING
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08661	139.2267	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08682	139.2157	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08644	139.2098	CENTER - COYOTE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08646	139.2089	BYRON - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.2063	GEN659291 1-FT MP COLLECTOR
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08703	139.2034	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.1927	GEN600014 4-BLACK DOG GEN 4
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.1907	GEN652410 3-FT PECK

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.1884	EMERY 161/18.0KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.1806	GEN600011 5-BLACK DOG GEN 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.1784	GEN652907 1-G09_007IS_3 0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08885	139.1779	GLENHAM - WHITLOK 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.1773	GEN662101 1-WESSINGTON190.5750
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.1729	GEN600065 7-HIGH BRIDGE
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.1729	GEN600066 8-HIGH BRIDGE
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08661	139.1682	MN VALLEY TAP - PANTHER 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08704	139.1679	COOPER - FAIRPORT 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08704	139.1679	COOPER - FAIRPORT 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08687	139.1676	DRAYTON - LETELLIER 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08665	139.1643	HANKINSON - WAHPETON 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.163	GEN600071 10-RIVER SIDE
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.1626	GEN600070 9-RIVER SIDE
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.1482	GEN659270 1-WEST SW
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.1435	GEN600007 7-RIVERSIDE GEN 7
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	139.1202	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	139.115	BALTA - RAMSEY 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08926	139.1146	BISMARK - L3 HAWDON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08629	139.1143	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.1135	GEN562872 1-G15046_3 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08654	139.1068	KARLSTAD - WINGER 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.0996	GEN659296 2-SDPRAIRWND1W0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08885	139.0952	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	139.0844	AUDUBON - HUBBARD 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.0831	GEN600017 C-LS POWER CT
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.0789	GEN652414 4-FT PECK
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.0789	GEN652415 5-FT PECK
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08811	139.0729	P12:230:UMZW:# 166 #: PL IN SD. TAP
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08811	139.0729	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08652	139.0706	FARGO - SHEYNNE 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08877	139.0574	GLENHAM - L3 HAWDON 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08703	139.0524	STMDSJFAFACO
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.051	SHEYENNE SVC - SHEYNNE 115KV CKT Z
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08703	139.0422	COPSTJCPFRSJ
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08703	139.0422	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	139.0388	GEN659272 2-GROTON 2G13.800
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	139.0362	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08885	139.0344	OAHE - SULLEY BUTTE 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08658	139.0111	PRAIRIE - RAMSEY 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08658	138.9973	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	138.9939	PRAIRIE - WINGER 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.9929	GEN615021 1-GRE-ER 14G 16.000
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08885	138.9857	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08650	138.9787	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.9784	GEN660016 1-B_H WIND 0.7000
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	138.9657	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08885	138.9649	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	138.9589	BUFFALO RIDGE - YANKEE 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08642	138.9455	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.9436	GEN659274 1-GROTON
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.9358	GEN 11104 1-J262_GEN 0.6000
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.9358	GEN 11108 1-J263_GEN 0.6000
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08677	138.9275	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08677	138.9272	103RD & ROKEBY - MOORE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08633	138.9238	HIGHLND 3 345.00 - RAUN 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08661	138.9176	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.9169	BURR - CANBY 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08662	138.9117	MCLEOD - PANTHER 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.9074	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08705	138.9028	P12:115:UMZW:# 172 #: WI IN SD.
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.9006	GEN615052 1-CAMBRIDGE GENERATING STATION
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	138.8978	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.8949	GEN652557 4-OAHE
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.8948	GEN652556 2-OAHE
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.8948	GEN652558 6-OAHE
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.8905	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.8879	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08748	138.8806	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	138.8654	ELM CREEK - MONTICELLO 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.861	GEN910006 1-G12_012IS_3 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	138.8471	ARNOLD - HAZLETON 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08669	138.8434	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.8434	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08629	138.841	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.8165	GEN659273 2-GROTON SYNC COND
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.8165	GEN659294 1-WILTONCOL9
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.8071	GEN652559 1-OAHE
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.8019	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.7775	GEN587053 1-G16-007-GEN10.6500
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.7733	GEN587623 1-J493-GEN1 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.7709	GEN659110 1-LELAND OLDS UNIT1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.7651	GEN 10648 1-G830_GEN 0.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.7638	GEN662101 1-WESSINGTON190.5750
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08672	138.7391	COOPER - MOORE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.7342	GEN659291 1-FT MP COLLECTOR
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.7289	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.7201	GEN600067 9-HIGH BRIDGE
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.7188	GEN659192 6-LYNN
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.7183	GEN659162 4-RED WLCK
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.7183	GEN659163 5-BLACK WDCK
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.7154	GEN652545 7-BIG BEND
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08649	138.7008	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.6909	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.6856	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.6796	GEN563232 1-G15089_3 0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08642	138.6792	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.6407	GEN615010 1-STANTON4
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.6207	GEN659141 1-K10215A
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.59	GEN652544 5-BIG BEND
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.578	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.5778	GEN652543 3-BIG BEND
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.5773	GEN652542 1-BIG BEND
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.551	GEN652173 1-G09_001IS_2 0.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.4867	GEN563232 1-G15089_3 0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.4527	GEN659010 4-G07_027IS_2 0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.4466	GEN659194 1-NDPRAIRWND1W0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.4423	GEN659366 3-WILTON 3 W0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.4343	GEN652461 5-GARRISON
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.4333	GEN652460 4-GARRISON
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.4255	GEN659270 1-WEST SW
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08702	138.4205	COOPER - ST JOE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.4194	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.4	GEN600005 1-MONTICELLO
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.3795	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.3719	BLAIR - GRANITE FALLS 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.3697	GEN652457 1-GARRISON
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.3697	GEN652458 2-GARRISON
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.3697	GEN652459 3-GARRISON
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.3675	GEN562872 1-G15046_3 0.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.3498	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.3498	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08629	138.3407	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08702	138.3312	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08702	138.3308	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.315	GEN615015 1-GRE-SPRITWDG13.200
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.3091	GEN 11104 1-J262_GEN 0.6000
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.3091	GEN 11108 1-J263_GEN 0.6000
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.302	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.2712	GEN587623 1-J493-GEN1 0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.2609	GEN659403 1-NDSUNFLWR W0.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.245	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.208	GEN659407 1-ANTELPHILLSW0.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08702	138.1982	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.1847	GEN652906 1-G09_006IS_3 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.1828	GEN587653 1-J526-GEN1 0.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.1644	CENTER 230/22.0KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08641	138.163	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.16	LADISH 115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	138.124	GEN910006 1-G12_012IS_3 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.0794	GEN652559 1-OAHE
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08653	138.0731	AS KING - EAU CLAIRE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.0677	BASE CASE
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.0241	GEN659411 1-CAMPBLCNTY W0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.0235	GEN600004 2-PRAIRIE ISLAND G2
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	138.0155	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08642	138.0096	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08651	137.9882	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08661	137.9826	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08625	137.9691	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.9467	GEN587633 1-J510-GEN1 18.000
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.946	GEN587053 1-G16-007-GEN10.6500
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.9409	GEN652907 1-G09_007IS_3 0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.9341	GEN 11123 1-G736-GEN1 0.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08673	137.931	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.927	GEN 11133 1-J442-GEN1 0.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.8726	GEN 10648 1-G830_GEN 0.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.8564	GEN652543 3-BIG BEND
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.8548	GEN652542 1-BIG BEND
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.8499	GEN652906 1-G09_006IS_3 0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08642	137.8479	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.8413	GEN659296 2-SDPRAIRWND1W0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08673	137.8338	NOBLES - SPLIT ROCK 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08646	137.7665	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.6847	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.6585	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08730	137.6549	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08730	137.649	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08658	137.6275	FORMAN - HANKINSON 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08665	137.6233	MINGO - SETAB 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.5979	GEN652907 1-G09_007IS_3 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.5893	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.5799	GEN652556 2-OAHE
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.5799	GEN652557 4-OAHE
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.5799	GEN652558 6-OAHE
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.5645	GEN600006 1-AS KING
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08653	137.5566	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.5504	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.5473	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.5277	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.4772	GEN659194 1-NDPRAIRWND1W0.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.4563	GEN659010 4-G07_027IS_2 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08653	137.4538	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08653	137.4504	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.4443	GEN652460 4-GARRISON
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.4443	GEN652461 5-GARRISON
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.4438	GEN659366 3-WILTON 3 W0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.4202	GEN659110 1-LELAND OLDS UNIT1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.416	GEN659118 1-LARAMIE RIVER UNIT1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08669	137.4155	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08669	137.4155	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09044	137.3949	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08635	137.3642	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08635	137.3627	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08645	137.362	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08907	137.3578	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.3539	GEN652457 1-GARRISON
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.3539	GEN652458 2-GARRISON
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.3539	GEN652459 3-GARRISON
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.3509	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	137.3444	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.3276	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.3264	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08625	137.2944	SUB 3454 - WAGENER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.2814	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.2814	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.2596	GEN659141 1-K10215A
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.2525	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08672	137.2484	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08686	137.2447	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.2349	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08926	137.2328	GLENHAM - L3 HAWDON 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.2158	GEN659403 1-NDSUNFLWR W0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08661	137.2102	FORMAN - OAKES 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08661	137.2079	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08658	137.197	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08654	137.1961	BONDURANT - MONTEZUMA 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08660	137.1557	COOPER - FAIRPORT 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08703	137.1496	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08936	137.1451	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	137.1352	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08651	137.118	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.1032	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08672	137.0871	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	137.05	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08773	137.0433	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08621	137.0238	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08936	137.0023	GLENHAM - WHITLOK 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08810	136.963	HURON - WATERTOWN 230KV CKT 2
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08658	136.9568	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	136.9456	GEN659296 2-SDPRAIRWND1W0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	136.9402	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	136.9233	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.9164	GEN659407 1-ANTELPHILLSW0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08630	136.9147	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08660	136.9081	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08660	136.9059	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08936	136.896	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08669	136.8932	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08810	136.8928	CARPENTER - WATERTOWN 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08660	136.8914	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	136.8875	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	136.8875	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	136.8831	GEN652559 1-OAHE
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.8551	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.8537	SHEYENNE SVC - SHEYNNE 115KV CKT Z
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	136.8145	BALTA - RAMSEY 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	136.808	AUDUBON - SHEYNNE 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.7929	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	136.783	GEN600004 2-PRAIRIE ISLAND G2
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08660	136.7793	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	136.7775	GEN659411 1-CAMPBLCNTY W0.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	136.7772	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.7701	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.7689	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.7629	GEN587653 1-J526-GEN1 0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08654	136.7577	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08662	136.7493	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08662	136.7493	P12:115:UMZB:# 119 #: IN NE.
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	136.7414	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08936	136.7287	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08936	136.7049	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08633	136.6992	HIGHLND 3 345.00 - RAUN 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.6922	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	136.6763	GEN652556 2-OAHE
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	136.6763	GEN652557 4-OAHE
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	136.6763	GEN652558 6-OAHE
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08936	136.6749	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08936	136.6749	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08660	136.6497	HENNING - INMANN 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08645	136.6478	CENTER - COYOTE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08710	136.619	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08710	136.6189	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08710	136.6116	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08658	136.6075	PRAIRIE - RAMSEY 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	136.5954	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08661	136.5854	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08647	136.5712	BYRON - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08661	136.5553	MN VALLEY TAP - PANTHER 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08657	136.541	PRAIRIE - WINGER 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.5217	GEN587633 1-J510-GEN1 18.000
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08682	136.4912	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08886	136.4895	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08886	136.4895	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08652	136.4608	FARGO - SHEYNNE 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	136.4511	AUDUBON - HUBBARD 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08664	136.4319	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08654	136.3904	KARLSTAD - WINGER 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	136.382	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08647	136.3801	BYRON - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.38	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	136.3764	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08803	136.3741	P12:230:UMZW:# 166 #: PL IN SD. TAP
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08803	136.3741	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.3628	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.3608	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.3584	BURR - CANBY 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.343	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08656	136.3416	BALTA - MCHENRY 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	136.3392	GEN600006 1-AS KING
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08714	136.3227	P13:230-345:NPPD:STEGALL3:KV3A
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	136.3211	BUFFALO RIDGE - YANKEE 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08747	136.3039	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08661	136.3029	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	136.2757	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.2669	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08662	136.2633	MCLEOD - PANTHER 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08706	136.256	P12:115:UMZW:# 172 #: WI IN SD.
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	136.2146	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08669	136.1914	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	136.1683	GEN659110 1-LELAND OLDS UNIT1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08636	136.165	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.0773	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.0503	GEN659111 2-LELAND OLDS UNIT2
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	136.0315	GEN659141 1-K10215A
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	136.0005	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	135.9495	GEN615010 1-STANTON4
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08642	135.8788	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	135.8491	STANTON 230/18.0KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	135.6497	STANTON 230/18.0KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	135.6284	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	135.6284	GEN659107 2-ANTELOPE VALLEY UNIT2
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	135.6093	GEN600005 1-MONTICELLO
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	135.5843	GEN659118 1-LARAMIE RIVER UNIT1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	135.546	GEN657749 1-YOUNG 1 GENERATOR
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08641	135.5207	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08662	135.4796	SUB 3455 - SUB 3740 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	135.4284	BASE CASE
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	135.4233	GEN659407 1-ANTELPHILLSW0.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	135.3304	GEN659118 1-LARAMIE RIVER UNIT1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08660	135.2487	SUB 3456 - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12206	135.1299	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	135.0173	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08907	134.9562	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12206	134.9398	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	134.9236	GEN587033 1-G16-004-GEN10.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	134.8829	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	134.8503	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08654	134.8167	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	134.8166	GEN600000 1-SHERBURNECNTY G1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	134.8153	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08654	134.8133	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	134.7873	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08648	134.7863	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08635	134.7098	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08635	134.7083	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08660	134.6724	COOPER - FAIRPORT 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08633	134.6678	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	134.6455	GEN659125 1-COVEY
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	134.634	COYOTE 345/24.0KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08654	134.5855	BONDURANT - MONTEZUMA 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	134.5572	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08659	134.5392	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08625	134.4879	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08630	134.4788	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	134.4647	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	134.4634	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	134.4154	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08621	134.3591	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12202	134.323	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	134.1617	GEN659103 1-ANTELOPE VALLEY UNIT1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	134.1617	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	134.0951	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	134.0911	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	134.037	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08885	134.0122	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08885	134.0122	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	133.7868	GEN600001 2-SHERBURNE CNTY G2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	133.6944	GEN615001 1-COAL CREEK
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	133.6861	GEN600002 3-SHERBURNE CNTY G3
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	133.6245	GEN615002 2-COAL CREEK
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	133.5334	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	133.4142	GEN661015 1-COYOTE
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	133.3773	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	133.3764	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	133.3372	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	133.1919	STANTON 230/18.0KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	133.1781	GEN620315 1-BIG STONE GEN
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12704	133.1186	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	133.0961	GEN587133 1-G16-017-GEN10.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	133.046	GEN659125 1-COVEY
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	133.0135	GEN657748 1-YOUNG 2 GENERATOR
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	132.9015	GEN659111 2-LELAND OLDS UNIT2
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08256	132.9013	MCCOOL - MOORE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12299	132.5499	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12299	132.4665	2810X2
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	132.4455	GEN659103 1-ANTELOPE VALLEY UNIT1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	132.4455	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	132.2478	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	132.1947	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	132.094	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	131.804	GEN587133 1-G16-017-GEN10.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	131.7494	GEN587293 1-G16-044-GEN10.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	131.4751	GEN659125 1-COVEY
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	131.4024	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12299	130.9403	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	130.5751	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13315	130.5344	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	130.4916	GEN615001 1-COAL CREEK
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	130.3859	GEN615002 2-COAL CREEK
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	130.1203	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	129.9771	GEN587133 1-G16-017-GEN10.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13781	129.5249	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	129.4228	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	129.3537	GEN562714 1-G15_023_4 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	129.3537	GEN562715 1-G15_023_5 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13759	128.6487	STORLA - WESSINGTON 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12202	128.4342	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	127.9477	GEN562714 1-G15_023_4 0.6900
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	127.9477	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08166	127.9377	GRAND ISLAND - MCCOOL 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13250	127.6069	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13250	127.4418	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13250	127.4249	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13250	127.4249	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13575	127.3375	HANLON - STORLA 230KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	127.1043	GEN562714 1-G15_023_4 0.6900
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	127.1043	GEN562715 1-G15_023_5 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13789	126.648	FT THOMPSON - LETCHER 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13789	126.648	FT THOMPSON - LETCHER 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13165	125.9588	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13165	125.9588	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13049	125.6308	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13049	125.4581	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13049	125.4569	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13149	125.2095	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13036	125.0696	SPLIT ROCK - WHITE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13036	125.0696	SPLIT ROCK - WHITE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13911	125.0065	FT RANDAL - FT THOMPSON 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13911	125.0065	FT RANDAL - FT THOMPSON 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13893	124.9424	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13893	124.9424	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13077	124.8525	G09_001IST 345.00 - GROTON 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13112	124.731	CENTER - JAMESTOWN 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13523	124.7231	LETCHER - SIOUX FALLS 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12634	124.7016	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13162	124.6819	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13315	124.6716	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13133	124.647	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13893	124.6018	FT RANDAL - LAKE PLATT 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13599	124.4888	NUNDRWD - WAYSIDE 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12801	124.4338	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12801	124.4304	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13170	124.4097	AS KING - EAU CLAIRE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12801	124.3917	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13273	124.2424	FT RANDAL - SIOUX CITY 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.16301	124.1641	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.16292	124.1552	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	124.1491	GEN635024 4-WALTER SCOTT UNIT 4
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13149	124.128	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	123.9492	GEN652353 2-GR PRAIRIEG 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13125	123.7616	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13125	123.7616	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.11634	123.7465	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	123.7202	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13125	123.7017	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	123.6993	GEN635023 3-WALTER SCOTT UNIT 3
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	123.6621	GEN344225 1-1CAL G1 25.000
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13125	123.6381	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13223	123.5886	RASMUSN - UTICA JCT 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13401	123.5862	HANLON - SIOUX FALLS 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	123.5503	GEN336153 1-WATERFORD UNIT#3
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13155	123.5349	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13168	123.5212	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13162	123.4877	ELLENDALE - OAKES 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13162	123.4877	ELLENDALE - OAKES 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13179	123.4439	GRIMES - LEHIGH 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13134	123.3823	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13162	123.3795	FORMAN - OAKES 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	123.3744	GEN641089 2-ENERGY CENTER 2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13223	123.3437	RASMUSN - SIOUX CITY 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13689	123.3163	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13123	123.2896	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	123.2565	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	123.2512	GEN335831 1-RIVERBEND UNIT#1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	123.2135	GEN336821 1-GRAND GULF UNIT
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	123.1832	GEN337653 1-WHITE BLUFF UNIT #2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13226	123.172	PAHOJA - SIOUX FALLS 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13163	123.1303	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13178	123.0352	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13134	123.021	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08663	123.0102	GEN652353 2-GR PRAIRIEG 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13200	122.9985	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13164	122.9938	FORMAN - HANKINSON 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.9674	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12913	122.9526	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13002	122.9287	SIDNEY - STEGALL 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.9108	GEN587353 1-G16-050-GEN10.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13759	122.9039	FT THOMPSON - WESSINGTON 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13759	122.9039	FT THOMPSON - WESSINGTON 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13391	122.8967	CARPENTER - HURON 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13178	122.8554	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13138	122.8118	CHISAGO COUNTY - FORBES 500KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.8009	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13391	122.786	HURON - WATERTOWN 230KV CKT 2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13391	122.786	HURON - WATERTOWN 230KV CKT 2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13226	122.774	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13138	122.7398	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.7347	GEN501801 1-DOLET HILLS UNIT1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13185	122.7165	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.7101	GEN563222 1-G15088_3 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13391	122.7019	CARPENTER - WATERTOWN 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13391	122.7019	CARPENTER - WATERTOWN 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13158	122.7012	BYRON - NORTH ROCHESTER 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13196	122.6835	RAUN - SIOUX CITY 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13196	122.6835	RAUN - SIOUX CITY 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13108	122.6552	HOSKINS - SHELL CREEK 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13185	122.6517	MISSION - ST FRANCIS 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.6365	GEN337652 1-WHITE BLUFF UNIT #1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13272	122.6242	FT RANDAL - UTICA JCT 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.58	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13189	122.5601	HANKINSON - WAHPETON 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.547	GEN338146 1-INDEPENDENCE UNIT #2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.5438	GEN338143 1-INDEPENDENCE UNIT #1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13185	122.5414	HARMONY - ST FRANCIS 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13188	122.5163	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13188	122.5163	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13185	122.4559	HARMONY - VALENTINE 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13177	122.4487	COLUMEAST - SHELL CREEK 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13159	122.4392	BYRON - PLEASANT VALLEY 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13216	122.4123	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13216	122.4123	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13177	122.3803	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.3662	GEN501813 1-RODEMACHER UNIT 3
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13177	122.3638	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13216	122.363	FT RANDAL - SPENCER 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13189	122.3525	BLAIR - GRANITE FALLS 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13189	122.3525	BLAIR - GRANITE FALLS 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13160	122.2731	CENTER - COYOTE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13746	122.2457	FT THOMPSON - HURON 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13746	122.2457	FT THOMPSON - HURON 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13746	122.2457	FT THOMPSON - HURON 230KV CKT 2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13746	122.2457	FT THOMPSON - HURON 230KV CKT 2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13216	122.2437	ONEILL - SPENCER 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.2231	GEN335206 1-NELSON UNIT 6
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13116	122.1546	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13173	122.1362	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13142	122.1252	GAVINS POINT - HARTINGTON 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13185	122.1077	AINSWORTH - VALENTINE 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.1064	GEN501812 1-RODEMACHER UNIT 2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.1062	GEN344897 4-1LAB G4 20.000
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.1039	GEN344894 1-1LAB G1 20.000
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.1037	GEN344896 3-1LAB G3 20.000
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13178	122.0833	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13198	122.0763	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.071	GEN344895 2-1LAB G2 20.000
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.0675	GEN642067 1-PLATTE
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.0629	GEN587363 1-G16-055-GEN10.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13198	122.0612	CLEARWATER - ONEILL 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13070	122.0409	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.0296	GEN345670 1-1RUSH G1 18.000
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	122.0294	GEN345671 2-1RUSH G2 18.000
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13128	122.0276	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13142	122.0248	GARRISON - JAMES TOWN 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13182	122.0207	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13198	122.0001	CLEARWATER - NELIGH 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13176	121.9909	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13070	121.9784	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13070	121.9782	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.9769	GEN336252 1-NINEMILE POINT UNIT#5

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.9368	GEN336831 1-BAXTER WILSON SES
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.9299	GEN587443 1-G16-064-GEN10.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13188	121.9088	DENISON - SIOUX CITY 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13166	121.887	FARGO - JAMES TOWN 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13070	121.8785	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.8731	GEN337041 1-GERALD ANDRUS
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13216	121.8678	MENNO JCT - TRIPP JCT 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13166	121.8621	FARGO - JAMES TOWN 230KV CKT 2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13203	121.8617	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13203	121.8617	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13172	121.8447	AUDUBON - SHEYNNE 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13172	121.8382	BISMARK - JAMES TOWN 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.8342	GEN334440 1-SABINE UNIT 4
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13172	121.8091	JAMES TOWN - WEBER 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13463	121.8052	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13172	121.7981	BISMARK - WEBER 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13463	121.7961	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13463	121.7956	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.7944	GEN336251 1-NINEMILE POINT UNIT#4
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13178	121.7932	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.7844	P13:115-230:NPPD:NUCOR-3
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.7824	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13216	121.7682	MENNO JCT - UTICA 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13203	121.7665	NOBLES - SPLIT ROCK 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13203	121.76	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13203	121.76	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13176	121.7584	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13142	121.7384	BELDEN - HARTINGTON 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13177	121.7364	BALTA - RAMSEY 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13178	121.7216	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.7212	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.7206	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13216	121.7129	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.7113	P13:230-345:NPPD:NUCOR-1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.6921	GEN303007 1-1BC2 U2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.6919	GEN336191 1-LITTLE GYPSY UNIT#3
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.6894	GEN303006 1-1BC2 U1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.6888	GEN335204 1-NELSON UNIT 4
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13178	121.6845	ELM CREEK - MONTICELLO 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.6796	GEN531447 1-HOLCOMB GENERATOR
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.6734	P13:115-345:NPPD:NUCOR-2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13175	121.6663	BALTA - RUGBY 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13173	121.6633	BALTA - MCHENRY 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13181	121.6578	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13177	121.65	JAMES TOWN - PICKERT 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.6448	GEN336801 1-BAXTER WILSON UNIT #1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13178	121.6419	HENNING - INMANN 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.6376	GEN335614 1-WILLOW GLENN UNIT#4
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.6356	GEN303008 1-1BC2 U3
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.6343	GEN336170 1-GULF OXY U4
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.6269	GEN336464 1-MICHOUD UNIT #3
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.6187	GEN334441 1-SABINE UNIT 5
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13180	121.6157	GENOA 161 - SENECA 161 161KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13176	121.6147	PRAIRIE - RAMSEY 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13172	121.6127	ARNOLD - HAZLETON 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13181	121.6104	NORTH LA CROSSE (10008630_001) 345/161/34.5KV TRANSFORMER CKT 9
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.5912	GEN501811 1-RODEMACHER UNIT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13150	121.5866	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13180	121.5785	COAL CREEK - UNDERWOOD 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13147	121.5593	HELENA - SHEAS LK3 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13184	121.5492	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13070	121.5469	G16234&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13343	121.5465	GAVINS POINT - YANKON JCT 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13343	121.5465	GAVINS POINT - YANKON JCT 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13176	121.5393	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13173	121.5358	AUDUBON - HUBBARD 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.5339	GEN334433 1-SABINE UNIT 3
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.5338	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13184	121.5259	MN VALLEY TAP - PANTHER 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.5235	GEN334071 1-LEWIS CREEK 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.5223	WHITE BLUFF 500/26.0KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.5188	GEN334070 1-LEWIS CREEK 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13179	121.5186	CENTER - SQUARE BUTTE 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13150	121.5163	LELAND OLDS - STANTON 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13150	121.5163	LELAND OLDS - STANTON 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.5138	GEN523972 1-HARRINGTON GEN #2 24 KV
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.5137	GEN523971 1-HARRINGTON GEN #1 24 KV
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13182	121.5134	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13182	121.5134	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13177	121.5126	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.5125	GEN338388 1-1PLUM PT U1 23.000
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13177	121.5081	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13188	121.5046	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13188	121.5046	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.5045	GEN337766 1-TRACTEBEL UNIT S1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.4937	GEN562547 1-G14_039_3 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13222	121.4895	MT VERN - STORLA 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13212	121.4886	GRANT - MITCHELL 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13212	121.4886	GRANT - MITCHELL 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13177	121.483	ALBION - PETERSBURG 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13205	121.4742	AINSWORTH - CALAMUS 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13205	121.4725	P12:115:NPPD:1090:AINSWND7:THEDFRD7:BTB
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.4657	GEN501910 1-ACADIA UNIT ST1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13205	121.4638	CALAMUS - THEDFORD 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13180	121.4636	PALXFRASBTHI
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.4547	GEN523973 1-HARRINGTON GEN #3 24 KV
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.4488	GEN336222 1-LITTLE GYPSY UNIT#2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.442	GEN659118 1-LARAMIE RIVER UNIT1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.441	GEN641086 1-ENERGY CENTER
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13127	121.4366	P13:115-230:TSGT:SIDNEY-KV1A
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.4313	GEN563212 1-G15087_3 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	121.4284	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13232	121.4177	MARTIN - SHANNON 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13188	121.3549	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13116	121.2722	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.9368	BASE CASE
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13164	120.8297	KELLY - SHELL CREEK 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13164	120.825	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13164	120.825	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13184	120.6764	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13161	120.6221	HOSKINS - RAUN 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13161	120.6221	HOSKINS - RAUN 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.5895	CIRCLE - MULLERGREN 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.5895	CIRCLE - MULLERGREN 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.5637	GEN635214 4-NEAL UNIT 4
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13184	120.5631	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13184	120.5631	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.5316	GEN300003 1-THOMAS HILL UNIT 3
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.5254	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13142	120.5057	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13142	120.5057	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13182	120.5017	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13184	120.4925	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.4837	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13184	120.4826	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.476	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13208	120.473	MINGO - SETAB 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13208	120.473	MINGO - SETAB 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.4684	G16-063-TAP 345.00 - HUGO 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13178	120.4666	AURORA - GRAND ISLAND 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.4659	LYDIA - VALLIANT 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.4659	LYDIA - VALLIANT 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13222	120.4556	VICTORY HILL (VICTORYHL T1) 230/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13222	120.4556	VICTORY HILL (VICTORYHL T1) 230/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.4404	GEN587153 1-G16-021-GEN10.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13176	120.4371	MOORE - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13176	120.4371	MOORE - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13208	120.4269	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13178	120.4085	FAIRBURY - HARBINE 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.4038	G15066_T 345.00 - SOONER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.4015	GEN660001 2-ABERDEEN SIEBRECHT
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13168	120.3925	CENTRAL CITY - SILVER CREEK 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3924	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3919	GEN590010 1-ERCOT EQUIVALENCE
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3914	917X
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3854	CLKREACT5 161.00 - CRYSTLK5 161.00 161KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.385	GEN652546 1-FT RANDAL
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3828	GEN672369 3-MERIDIAN GENERATOR 3 ST
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3783	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13294	120.3753	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13178	120.3706	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3704	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13178	120.3678	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3671	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3668	GEN590011 2-ERCOT EQUIVALENCE
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13184	120.3563	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3525	GEN600013 3-BLACK DOG GEN 3
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13182	120.3495	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3493	GEN652548 5-FT RANDAL
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3493	GEN652549 7-FT RANDAL
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3479	GEN620115 1-HRDLKGEN 0.6000
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3468	GEN620323 2-HOOT LAKE 2 GEN
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13182	120.3424	LOUP CITY - NORTH LOUP 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13190	120.3393	P12:115:UMZW:# 172 #: WI IN SD.
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3374	GEN652547 3-FT RANDAL
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3348	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3249	GEN600125 2-FEP ST G 13.800
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3201	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13202	120.3188	AXTELL - PAULINE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3186	GEN563302 1-G15096_3 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13171	120.3102	SEWARD - TAMORA 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.31	GEN300007 1-NEW MADRID UNIT 2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13173	120.3092	BONDURANT - MONTEZUMA 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13177	120.308	CRETE - FRIEND 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.3039	GEN300006 1-NEW MADRID UNIT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.2936	GEN672384 1-CENTENNIAL WINDFARM
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.2844	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13164	120.2835	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13164	120.2835	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.2794	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.2774	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13180	120.2718	COPSTJCPFRSJ
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13180	120.2718	STMDSJFAFACO
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13171	120.2702	P12:115:NPPD:1155:YORK 7:SEWARD 7:BTB
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.2692	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.2692	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13171	120.2652	TAMORA - YORK 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.2635	GEN657964 1-ASH2GEN9 0.5750
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.2472	GEN600018 S-LS POWER STEAM
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.2316	GEN659290 1-EDGECOL
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.2218	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13175	120.2045	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13164	120.2039	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13164	120.2039	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13151	120.1983	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.1963	GEN652410 3-FT PECK
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13172	120.1928	HILLS - MONTEZUMA 345KV CKT 1
0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08707	120.1786	GEN652353 2-GR PRAIRIEG 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.1489	GEN672348 2-CORY COGEN GENERATOR 2 GT2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.1488	GEN672347 1-CORY COGEN GENERATOR 1 GT1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13168	120.1428	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13230	120.1409	MINGO - RED WILLOW 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13230	120.1409	MINGO - RED WILLOW 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.1391	GEN672350 1-NIPAWIN GENERATOR 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.1391	GEN672351 2-NIPAWIN GENERATOR 2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.1391	GEN672352 3-NIPAWIN GENERATOR 3
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.137	GEN600012 2-BLACK DOG GEN 2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.1244	GEN652414 4-FT PECK
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.1244	GEN652415 5-FT PECK
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.1213	GEN509403 1-PIRKEY GENERATION

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.1122	GEN652345 W-G07_023IS_2 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.1084	GEN620324 3-HOOT LAKE 3 GEN
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.1079	GEN615032 2-PLEASANT VALLEY
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.1076	GEN657600 1-L1GEN3 9 0.5750
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13177	120.1058	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.0781	LADISH 115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.0553	GEN672349 3-CORY COGEN GENERATOR 3 ST
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.0527	GEN672367 1-MERIDIAN GENERATOR 1 GT1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.0527	GEN672368 2-MERIDIAN GENERATOR 2 GT2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.0525	GEN659353 1-DEERCREK CTG18.000
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.046	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.0429	GEN672339 16-QE 16G 13.800
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.0429	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13170	120.039	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13170	120.039	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.0363	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.011	GEN600050 1-FEP
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	120.0025	GEN652558 6-OAHE
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.9876	GEN587583 1-J432-GEN1 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.9745	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.9621	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.9595	GEN659273 2-GROTON SYNC COND
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.9595	GEN659294 1-WILTONCOL9
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13175	119.953	FALLOW 3 345.00 - GRIMES 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.9498	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.9091	GEN600065 7-HIGH BRIDGE
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.9091	GEN600066 8-HIGH BRIDGE
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.9064	GEN672393 2-NBECST2G 13.800
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13497	119.8804	OAHE - SULLEY BUTTE 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13090	119.8613	COLUMWEST - KELLY 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.86	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.8588	GEN659192 6-LYNN
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.8575	GEN659162 4-RED WLCK
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.8575	GEN659163 5-BLACK WDCK
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.8487	GEN657985 1-ASH1GEN9 0.5750
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13485	119.8413	GLENHAM - L3 HAWDON 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13170	119.8344	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13179	119.8262	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.8213	GEN600014 4-BLACK DOG GEN 4
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.8211	GEN600067 9-HIGH BRIDGE
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.8171	GEN600011 5-BLACK DOG GEN 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.816	GEN600071 10-RIVER SIDE
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.8158	GEN600070 9-RIVER SIDE
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.8001	GEN600007 7-RIVERSIDE GEN 7
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.7963	GEN652906 1-G09_006IS_3 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13497	119.7878	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.7826	CENTER 230/22.0KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13497	119.7753	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13497	119.7751	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.7744	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.772	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13497	119.7478	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13497	119.7478	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.7462	GEN660016 1-B_H WIND 0.7000
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.741	GEN600017 C-LS POWER CT
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.7081	GEN681522 3-GENOA 3
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13497	119.6989	GLENHAM - WHITLOK 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.6949	GEN659291 1-FT MP COLLECTOR
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.6853	GEN662101 1-WESSINGTON190.5750
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.6827	GEN615052 1-CAMBRIDGE GENERATING STATION
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.6732	GEN652907 1-G09_007IS_3 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.6472	GEN 11104 1-J262_GEN 0.6000
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.6472	GEN 11108 1-J263_GEN 0.6000
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.6269	GEN562872 1-G15046_3 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.5989	GEN615015 1-GRE-SPRITWDG13.200
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13206	119.5349	AXTELL - SWEETWATER 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.4921	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.4604	GEN910006 1-G12_012IS_3 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.4058	GEN615021 1-GRE-ER 14G 16.000
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.404	GEN587623 1-J493-GEN1 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.3411	GEN 10648 1-G830_GEN 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.3039	GEN672304 4-BOUNDARY DAM GENERATOR 4
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.3038	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.3038	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13149	119.2786	SUB 3454 - WAGENER 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13149	119.2786	SUB 3454 - WAGENER 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.2155	GEN587053 1-G16-007-GEN10.6500
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13154	119.1091	103RD & ROKEBY - MOORE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13154	119.1091	103RD & ROKEBY - MOORE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.078	GEN652461 5-GARRISON
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.0779	GEN652460 4-GARRISON
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.0566	GEN672392 1-NBECGT1G 18.000
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.0515	GEN587593 1-J460-GEN1 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.0176	GEN652457 1-GARRISON
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.0176	GEN652458 2-GARRISON
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	119.0176	GEN652459 3-GARRISON
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13149	118.9924	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	118.9849	GEN659010 4-G07_027IS_2 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	118.9678	GEN659366 3-WILTON 3 W0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	118.9389	GEN659194 1-NDPRAIRWND1W0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13150	118.9204	COOPER - MOORE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	118.9152	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	118.8105	GEN659403 1-NDSUNFLWR W0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09091	118.7085	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	118.7039	GEN681542 6-JP MADGETT
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	118.6533	GEN659110 1-LELAND OLDS UNIT1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13196	118.6038	G15088_T 345.00 - PAULINE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13090	118.5953	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	118.5343	GEN659411 1-CAMPBLCNTY W0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	118.423	GEN563232 1-G15089_3 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	118.3753	GEN659296 2-SDPRAIRWND1W0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	118.3133	GEN652559 1-OAHE
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	118.2483	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	118.2167	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	118.0826	GEN652556 2-OAHE
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	118.0528	GEN652557 5-OAHE
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	117.9889	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	117.912	GEN659453 1-GI1414GEN W0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	117.7775	GEN615010 1-STANTON4
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	117.6806	GEN659141 1-K10215A
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	117.6266	GEN652173 1-G09_001IS_2 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	117.4269	GEN672321 1-SHAND GENERATOR 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	117.3997	GEN600004 2-PRAIRIE ISLAND G2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	117.3938	GEN600003 1-PRAIRIE ISLAND G1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	117.3481	GEN672310 1-POPLAR RIVER GENERATOR 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	117.348	GEN672311 2-POPLAR RIVER GENERATOR 2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	117.3129	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	117.2488	GEN659407 1-ANTELPHILLSW0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	117.0755	GEN600006 1-AS KING
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13196	116.8798	G15088_T 345.00 - MOORE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.18084	116.8491	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.18084	116.8356	2810X2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	116.826	GEN657749 1-YOUNG 1 GENERATOR
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	116.6343	GEN587033 1-G16-004-GEN10.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	116.462	GEN600005 1-MONTICELLO
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09408	116.3404	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	116.2968	GEN659111 2-LELAND OLDS UNIT2
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.18084	116.1664	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	115.9728	GEN579459 1-G16-075-GEN10.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	115.9193	GEN659103 1-ANTELOPE VALLEY UNIT1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	115.9193	GEN659107 2-ANTELOPE VALLEY UNIT2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08299	115.7001	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08836	115.6817	SPLIT ROCK - WHITE 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	115.6677	GEN600000 1-SHERBURNECNTY G1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09390	115.6628	STORLA - WESSINGTON 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09267	115.0245	HANLON - STORLA 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	114.9173	GEN600001 2-SHERBURNE CNTY G2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08951	114.7674	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08951	114.7674	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08785	114.7309	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	114.6611	GEN620315 1-BIG STONE GEN
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09419	114.3935	FT THOMPSON - LETCHER 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09419	114.3935	FT THOMPSON - LETCHER 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	114.3662	GEN600002 3-SHERBURNE CNTY G3
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	114.2595	GEN661015 1-COYOTE
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08858	114.196	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09091	114.1163	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	114.0335	GEN635024 4-WALTER SCOTT UNIT 4
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	113.8311	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08834	113.8039	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08966	113.7459	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	113.6755	GEN657748 1-YOUNG 2 GENERATOR
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08966	113.5815	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	113.5666	GEN635023 3-WALTER SCOTT UNIT 3
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09456	113.4127	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09456	113.4127	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09444	113.375	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09444	113.375	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08918	113.3677	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08918	113.3333	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08918	113.2818	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08989	113.2508	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09226	113.1938	LETCHER - SIOUX FALLS 230KV CKT 1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	113.1834	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	113.1406	GEN336821 1-GRAND GULF UNIT
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08989	113.1391	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09444	113.1364	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09057	113.1126	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08989	113.1048	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08989	113.1048	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	113.0785	GEN640009 1-COOPER NUCLEAR STATION
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	113.0736	GEN587293 1-G16-044-GEN10.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08911	112.8339	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	112.8196	GEN344225 1-1CAL G1 25.000
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	112.8138	GEN659125 1-COVEY
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08911	112.7605	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08911	112.7596	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09012	112.6094	RASMUSN - UTICA JCT 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	112.5702	GEN563222 1-G15088_3 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08858	112.5326	G09_001IST 345.00 - GROTON 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08906	112.4889	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09006	112.4485	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	112.4443	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09012	112.4156	RASMUSN - SIOUX CITY 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	112.4129	GEN336153 1-WATERFORD UNIT#3
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08901	112.381	HOSKINS - SHELL CREEK 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09142	112.3596	HANLON - SIOUX FALLS 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	112.2651	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08981	112.2497	RAUN - SIOUX CITY 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	112.2013	GEN335831 1-RIVERBEND UNIT#1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	112.1588	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08942	112.1035	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09006	112.0991	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	112.0699	GEN641089 2-ENERGY CENTER 2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08861	112.062	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08981	112.0301	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08861	112.0045	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09087	112.0035	NUNDRWD - WAYSIDE 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08971	111.9703	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08981	111.9307	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08981	111.9307	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08861	111.9086	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.8985	GEN587353 1-G16-050-GEN10.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.8819	GEN337653 1-WHITE BLUFF UNIT #2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.11327	111.8469	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.11321	111.8439	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09024	111.8166	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.816	GEN645012 2-NEBRASKA CITY 2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09024	111.8037	CLEARWATER - ONEILL 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09060	111.8026	FT RANDAL - UTICA JCT 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08977	111.7872	MINGO - RED WILLOW 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08977	111.7872	MINGO - RED WILLOW 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.7636	GEN501801 1-DOLET HILLS UNIT1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.7557	GEN337652 1-WHITE BLUFF UNIT #1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09024	111.7524	CLEARWATER - NELIGH 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.744	GEN645011 1-NEBRASKA CITY 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09390	111.742	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09390	111.742	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.7328	GEN338143 1-INDEPENDENCE UNIT #1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.7328	GEN338146 1-INDEPENDENCE UNIT #2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08980	111.726	BLAIR - GRANITE FALLS 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08980	111.726	BLAIR - GRANITE FALLS 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.7172	GEN542962 2-IATAN UNIT #2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09003	111.7123	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09050	111.6728	STAPLETON - THEDFORD 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.6095	GEN587363 1-G16-055-GEN10.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.5801	GEN501813 1-RODEMACHER UNIT 3
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.5762	GEN587443 1-G16-064-GEN10.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08947	111.5467	GAVINS POINT - HARTINGTON 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08910	111.544	SIDNEY - STEGALL 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.5393	GEN344897 4-1LAB G4 20.000
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.539	GEN344894 1-1LAB G1 20.000
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.5388	GEN344896 3-1LAB G3 20.000
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.51	GEN344895 2-1LAB G2 20.000
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.4993	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.4829	GEN345670 1-1RUSH G1 18.000
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.4828	GEN345671 2-1RUSH G2 18.000
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.4815	GEN335206 1-NELSON UNIT 6
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09141	111.4666	CARPENTER - HURON 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.447	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08990	111.4397	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08990	111.4397	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08977	111.4368	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08977	111.4368	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08978	111.4222	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.407	GEN336252 1-NINEMILE POINT UNIT#5
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.4006	GEN501812 1-RODEMACHER UNIT 2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09003	111.3852	BASSETT 7115.00 - STUART 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09141	111.3839	HURON - WATERTOWN 230KV CKT 2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09141	111.3839	HURON - WATERTOWN 230KV CKT 2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.3687	GEN336831 1-BAXTER WILSON SES
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09003	111.3668	AINSWORTH - BASSETT 7115.00 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08990	111.3628	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08990	111.3628	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09003	111.3467	ATKINSON - STUART 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09027	111.3447	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08982	111.3362	DENISON - SIOUX CITY 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.333	GEN337041 1-GERALD ANDRUS
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09141	111.3326	CARPENTER - WATERTOWN 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09141	111.3326	CARPENTER - WATERTOWN 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08948	111.319	GARRISON - JAMES TOWN 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.317	GEN542957 1-IATAN UNIT #1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09028	111.3084	WINNER - WITTEN 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.3	GEN336251 1-NINEMILE POINT UNIT#4
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09003	111.2963	ATKINSON - EMMET 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09000	111.2792	MENNO JCT - TRIPP JCT 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08986	111.2792	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08986	111.2792	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09050	111.2767	MAXWELL - STAPLETON 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.2717	P13:115-230:NPPD:NUCOR-3
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.2702	GEN334440 1-SABINE UNIT 4
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.2486	GEN562547 1-G14_039_3 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09003	111.2473	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08947	111.2419	BELDEN - HARTINGTON 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08966	111.2409	FARGO - JAMES TOWN 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.2377	P13:230-345:NPPD:NUCOR-1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08966	111.223	FARGO - JAMES TOWN 230KV CKT 2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09000	111.2111	MENNO JCT - UTICA 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08972	111.1984	BISMARK - JAMES TOWN 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.1959	GEN336191 1-LITTLE GYPSY UNIT#3

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08986	111.1867	FT RANDAL - SPENCER 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.1856	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08971	111.185	CALLAWAY - MAXWELL 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08972	111.183	JAMES TOWN - WEBER 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08972	111.1753	BISMARK - WEBER 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.1644	GEN335204 1-NELSON UNIT 4
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09000	111.1539	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08978	111.1506	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09028	111.1505	GREGORY - WINNER 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.1495	GEN563212 1-G15087_3 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09028	111.1471	P12:115:UMZW:# 172 #: WI IN SD.
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08942	111.1441	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.1421	GEN336801 1-BAXTER WILSON UNIT #1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.1379	GEN335614 1-WILLOW GLENN UNIT#4
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.132	GEN336464 1-MICHOUD UNIT #3
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.1302	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08986	111.1288	ONEILL - SPENCER 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.1268	GEN334441 1-SABINE UNIT 5
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.1228	GEN303007 1-1BC2 U2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.1193	GEN303006 1-1BC2 U1
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	111.1155	GEN587133 1-G16-017-GEN10.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08954	111.0968	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09035	111.0963	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	111.0924	GEN642067 1-PLATTE
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08966	111.0732	JEFFREY - NORTH PLATTE 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09035	111.0636	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08980	110.764	AXTELL - SWEETWATER 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08884	110.6192	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	110.5896	BASE CASE
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08882	110.363	COLUMWEST - KELLY 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08957	110.3177	KELLY - SHELL CREEK 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08957	110.3156	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08957	110.3156	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08964	110.1915	P12:115:NPPD:1254:CENCITY7:COLMBUS7:BTB
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08973	110.1731	AURORA - GRAND ISLAND 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08974	110.1688	FAIRBURY - HARBINE 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08970	110.1367	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08970	110.1367	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08975	110.1266	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08974	110.0873	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08964	110.0857	CENTRAL CITY - CLARKS 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08974	110.0658	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	110.0623	GEN652345 W-G07_023IS_2 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	110.0417	GEN672367 1-MERIDIAN GENERATOR 1 GT1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	110.0417	GEN672368 2-MERIDIAN GENERATOR 2 GT2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	110.0273	GEN600046 1-MECST
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	110.0229	GEN652414 4-FT PECK
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	110.0229	GEN652415 5-FT PECK
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08973	110.0165	CRETE - FRIEND 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	110.0149	GEN600047 1-MECCT1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08958	110.0081	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08958	110.0081	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	110.0072	GEN672349 3-CORY COGEN GENERATOR 3 ST
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	110.0032	GEN659353 1-DEERCREK CTG18.000
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	110.0032	GEN659354 1-DEERCREK STG18.000
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9991	GEN672339 16-QE 16G 13.800
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9991	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9649	GEN659272 2-GROTON 2G13.800
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.96	GEN659274 1-GROTON
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9537	GEN659273 2-GROTON SYNC COND
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9536	GEN659294 1-WILTONCOL9
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9526	GEN672393 2-NBECST2G 13.800
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9406	GEN587583 1-J432-GEN1 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9356	GEN600065 7-HIGH BRIDGE
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9356	GEN600066 8-HIGH BRIDGE
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9342	GEN600014 4-BLACK DOG GEN 4
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12797	109.9339	MCCOOL - MOORE 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9275	GEN600011 5-BLACK DOG GEN 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9226	GEN600070 9-RIVER SIDE
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9226	GEN600071 10-RIVER SIDE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9151	GEN659162 4-RED WLCK
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9151	GEN659163 5-BLACK WDCK
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9148	GEN659192 6-LYNN
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9126	GEN600007 7-RIVERSIDE GEN 7
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.9096	GEN681522 3-GENOA 3
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08958	109.9008	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08958	109.9008	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.893	GEN657985 1-ASH1GEN9 0.5750
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.8879	GEN600017 C-LS POWER CT
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.8635	GEN659270 1-WEST SW
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08964	109.8559	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08964	109.847	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08937	109.8457	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08937	109.8457	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08975	109.8384	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08976	109.8364	COOPER - FAIRPORT 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.822	GEN615052 1-CAMBRIDGE GENERATING STATION
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.8081	GEN660016 1-B_H WIND 0.7000
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09223	109.7943	OAHE - SULLEY BUTTE 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09214	109.7524	GLENHAM - L3 HAWDON 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08975	109.7485	G15088_T 345.00 - MOORE 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.7351	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.7304	GEN659291 1-FT MP COLLECTOR
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.7243	GEN662101 1-WESSINGTON190.5750
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.7221	GEN 11104 1-J262_GEN 0.6000
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.7221	GEN 11108 1-J263_GEN 0.6000
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.7209	GEN562872 1-G15046_3 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09223	109.7186	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09223	109.7183	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09223	109.7183	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08975	109.7003	COPSTJCPFRSJ
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08975	109.7003	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08975	109.7003	STMDSJFAFACO
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09223	109.6903	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09223	109.6903	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.6873	GEN615015 1-GRE-SPRITWDG13.200
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.6648	GEN600067 9-HIGH BRIDGE
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.6614	GEN615021 1-GRE-ER 14G 16.000
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.09223	109.6503	GLENHAM - WHITLOK 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.6131	GEN657705 X-DRAYTON
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.5962	GEN587623 1-J493-GEN1 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.5429	GEN910006 1-G12_012IS_3 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.5099	GEN672304 4-BOUNDARY DAM GENERATOR 4
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.5099	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.5098	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.5073	GEN587053 1-G16-007-GEN10.6500
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.4998	GEN 10648 1-G830_GEN 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08974	109.4816	COOPER - ST JOE 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.4675	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08975	109.4353	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08975	109.4264	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.4244	GEN672392 1-NBECGT1G 18.000
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.421	GEN681542 6-JP MADGETT
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.3741	GEN652460 4-GARRISON
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.3741	GEN652461 5-GARRISON
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.339	GEN652457 1-GARRISON
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.339	GEN652458 2-GARRISON
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.339	GEN652459 3-GARRISON
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08941	109.3338	SUB 3454 - WAGENER 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08941	109.3338	SUB 3454 - WAGENER 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.3316	GEN587593 1-J460-GEN1 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08975	109.329	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.3201	GEN659010 4-G07_027IS_2 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.309	GEN659366 3-WILTON 3 W0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.2764	GEN659194 1-NDPRAIRWND1W0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.1805	GEN659403 1-NDSUNFLWR W0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08942	109.1755	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.1319	GEN 11123 1-G736-GEN1 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.129	GEN 11133 1-J442-GEN1 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08882	109.103	COLUMWEST - GRAND ISLAND 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08947	109.0867	103RD & ROKEBY - MOORE 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08947	109.0867	103RD & ROKEBY - MOORE 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.0844	GEN652559 1-OAHE
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	109.0278	GEN652906 1-G09_006IS_3 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.979	GEN563232 1-G15089_3 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.9784	GEN659411 1-CAMPBLCNTY W0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.9629	GEN659110 1-LELAND OLDS UNIT1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.8531	GEN652907 1-G09_007IS_3 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.849	GEN659296 2-SDPRAIRWND1W0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08942	108.7781	COOPER - MOORE 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.624	GEN652556 2-OAHE
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.6233	GEN652558 6-OAHE
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.6037	GEN652557 5-OAHE
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.5711	GEN600004 2-PRAIRIE ISLAND G2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.5676	GEN600003 1-PRAIRIE ISLAND G1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.5427	GEN659453 1-GI1414GEN W0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.4742	GEN615010 1-STANTON4
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.4657	GEN652173 1-G09_001IS_2 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.43	GEN659141 1-K10215A
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.3559	GEN587653 1-J526-GEN1 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.3291	GEN600006 1-AS KING
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.2583	GEN672321 1-SHAND GENERATOR 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.2369	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.2307	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.2092	GEN672310 1-POPLAR RIVER GENERATOR 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.2092	GEN672311 2-POPLAR RIVER GENERATOR 2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.1815	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.1765	GEN659407 1-ANTELPHILLSW0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	108.1497	GEN587633 1-J510-GEN1 18.000
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	107.8563	GEN657749 1-YOUNG 1 GENERATOR
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	107.8171	GEN620315 1-BIG STONE GEN
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	107.8002	GEN587033 1-G16-004-GEN10.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	107.7937	GEN659118 1-LARAMIE RIVER UNIT1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	107.6602	GEN600005 1-MONTICELLO
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12709	107.6065	GRAND ISLAND - MCCOOL 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	107.4756	GEN600000 1-SHERBURNECNTY G1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12627	107.4427	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12627	107.4347	2810X2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	107.2502	GEN659111 2-LELAND OLDS UNIT2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	107.2273	GEN579459 1-G16-075-GEN10.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12627	107.2203	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	106.9757	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	106.9757	GEN659107 2-ANTELOPE VALLEY UNIT2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	106.7581	GEN600001 2-SHERBURNE CNTY G2
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	106.6572	GEN600002 3-SHERBURNE CNTY G3
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	106.1523	GEN661015 1-COYOTE
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	105.7716	GEN657748 1-YOUNG 2 GENERATOR
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	105.7215	GEN562714 1-G15_023_4 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	105.7215	GEN562715 1-G15_023_5 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	105.5917	GEN587293 1-G16-044-GEN10.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	105.2784	GEN659125 1-COVEY
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.12627	104.8913	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	104.3847	GEN615001 1-COAL CREEK
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	104.3007	GEN615002 2-COAL CREEK
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	104.0204	GEN587133 1-G16-017-GEN10.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08566	99.8	MCCOOL - MOORE 345KV CKT 1
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	99.7	GEN562714 1-G15_023_4 0.6900
0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.08979	99.7	GEN562715 1-G15_023_5 0.6900
0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.13183	99.6	GEN652353 2-GR PRAIRIEG 0.6900
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08486	147.1956	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08025	146.6069	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08503	146.0134	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08530	145.7846	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08889	145.3239	LETCHER - SIOUX FALLS 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09092	145.2023	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08667	145.1902	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08664	144.5417	MINGO - RED WILLOW 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08596	144.5151	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08554	144.4643	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08733	144.4404	FT RANDAL - SIOUX CITY 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09070	144.2641	FT THOMPSON - LETCHER 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	143.988	GEN640009 1-COOPER NUCLEAR STATION
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	143.9093	GEN336153 1-WATERFORD UNIT#3
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08812	143.6766	HANLON - SIOUX FALLS 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08691	143.6482	RASMUSN - UTICA JCT 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08686	143.4501	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	143.42	GEN563222 1-G15088_3 0.6900
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09043	143.377	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08686	143.307	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08639	143.0881	HOSKINS - SHELL CREEK 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08598	143.0801	SIDNEY - STEGALL 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08703	143.062	CLEARWATER - ONEILL 115KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08666	143.0519	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08631	143.0451	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08713	143.0117	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	142.9616	GEN542951 5-HAWTHORN UNIT #5
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	142.9374	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08742	142.911	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08742	142.9109	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08698	142.9028	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	142.89	AINSWORTH - VALENTINE 115KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08713	142.8336	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08742	142.8192	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08633	142.8052	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08729	142.8024	STAPLETON - THEDFORD 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08742	142.7797	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08742	142.7776	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08656	142.6884	CALLAWAY - MAXWELL 115KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08685	142.6434	AINSWORTH - BASSETT 7115.00 115KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08604	142.6187	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	142.6036	GEN337653 1-WHITE BLUFF UNIT #2
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	142.5908	GEN337652 1-WHITE BLUFF UNIT #1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	142.5685	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	142.5642	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08604	142.5038	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08685	142.4944	BASSETT 7115.00 - STUART 115KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08715	142.4257	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08685	142.4218	ATKINSON - STUART 115KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08664	142.3828	MINGO - SETAB 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09103	142.375	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08661	142.3322	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08625	142.3182	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08699	142.2869	GRIMES - LEHIGH 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	142.1595	GEN587363 1-G16-055-GEN10.6900
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	142.1497	GEN501801 1-DOLET HILLS UNIT1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	142.1476	GEN335206 1-NELSON UNIT 6
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.11068	142.1324	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.11061	142.1273	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09092	142.0863	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	142.0739	GEN587443 1-G16-064-GEN10.6900
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08729	142.0712	STAPLETON - THEDFORD 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08724	142.0705	MENNO JCT - UTICA 115KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08650	142.001	JEFFREY - NORTH PLATTE 115KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08685	141.997	ATKINSON - EMMET 115KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08661	141.9873	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08720	141.9774	NOBLES - SPLIT ROCK 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	141.9629	GEN542957 1-IATAN UNIT #1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08729	141.9448	MAXWELL - STAPLETON 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08716	141.9074	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08716	141.9073	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08656	141.868	BROKEN BOW - CALLAWAY 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.833	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08693	141.8324	TYNDALL - WHITE SWAN 115KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	141.8264	GEN542955 1-LACYGNE UNIT #1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	141.819	GEN334441 1-SABINE UNIT 5
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.804	GEN336252 1-NINEMILE POINT UNIT#5
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	141.782	GEN501812 1-RODEMACHER UNIT 2
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08665	141.7582	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08665	141.7437	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.7422	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.7417	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.7399	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.7333	GEN501813 1-RODEMACHER UNIT 3
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08715	141.7057	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	141.6976	AXTELL - SWEETWATER 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.6737	GEN344897 4-1LAB G4 20.000
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.6685	GEN344894 1-1LAB G1 20.000
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.6679	GEN344896 3-1LAB G3 20.000
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08702	141.635	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08678	141.6265	MT VERN - STORLA 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08699	141.6092	JAMES TOWN - WEBER 230KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	141.6014	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08724	141.6011	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.5933	GEN336831 1-BAXTER WILSON SES
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.11064	141.5891	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.11058	141.5881	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.5661	GEN336251 1-NINEMILE POINT UNIT#4
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.5488	GEN344895 2-1LAB G2 20.000
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	141.5452	GEN334433 1-SABINE UNIT 3
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.5291	GEN345670 1-1RUSH G1 18.000
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.5286	GEN345671 2-1RUSH G2 18.000
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.5165	GEN337041 1-GERALD ANDRUS
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08642	141.5058	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08685	141.5035	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08685	141.5035	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.5007	GEN335206 1-NELSON UNIT 6
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08699	141.4805	BISMARK - WEBER 230KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	141.4696	GEN336222 1-LITTLE GYPSY UNIT#2
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08909	141.4552	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08701	141.3999	PRAIRIE - RAMSEY 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.3975	GEN501812 1-RODEMACHER UNIT 2
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.3821	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08770	141.379	STAPLETON - THEDFORD 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08716	141.3725	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08716	141.3725	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.3599	GEN334440 1-SABINE UNIT 4
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08694	141.3595	MARTIN - SHANNON 115KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08641	141.3548	KELLY - SHELL CREEK 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08641	141.3189	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.306	GEN542962 2-IATAN UNIT #2
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	141.2589	GEN336152 1-WATERFORD UNIT#2
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	141.2588	GEN336151 1-WATERFORD UNIT#1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	141.2336	GEN338388 1-1PLUM PT U1 23.000
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08697	141.1908	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08697	141.1907	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08719	141.1894	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08719	141.1894	FT THOMPSON - OAHE 230KV CKT 2
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	141.1892	GEN336191 1-LITTLE GYPSY UNIT#3
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08698	141.1864	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	141.1701	GEN303007 1-1BC2 U2
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.1613	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	141.1594	GEN303006 1-1BC2 U1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.154	GEN336191 1-LITTLE GYPSY UNIT#3
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08669	141.1416	CHADRON - DUNLAP 115KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08721	141.1178	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08721	141.1178	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09071	141.1147	FT THOMPSON - LETCHER 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08730	141.1098	BROADLAND - HURON 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08730	141.1097	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08791	141.0933	NF
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08702	141.0881	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	141.0793	GEN338388 1-1PLUM PT U1 23.000
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08730	141.0777	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08730	141.0656	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08697	141.0534	CALLAWAY - MAXWELL 115KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08658	141.0086	G15088_T 345.00 - MOORE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08658	141.0055	G15088_T 345.00 - PAULINE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.9958	GEN335614 1-WILLOW GLENN UNIT#4
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.9863	GEN334441 1-SABINE UNIT 5
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.9854	GEN336801 1-BAXTER WILSON UNIT #1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.9798	GEN336464 1-MICHOUD UNIT #3
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	140.9691	UTICA JCT - VFODNES 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.9669	GEN335204 1-NELSON UNIT 4
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08665	140.9658	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08702	140.9582	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	140.9576	BASE CASE
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.9012	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08729	140.9006	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08729	140.9006	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	140.8922	GEN335614 1-WILLOW GLENN UNIT#4
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08675	140.8914	P13:230-345:NPPD:SIDNEY 3:KV2A
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.8822	ANSON 115/17.5KV TRANSFORMER CKT 4
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08675	140.8816	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	140.8737	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08677	140.8684	HOSKINS - RAUN 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08677	140.8684	HOSKINS - RAUN 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08659	140.8646	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08675	140.8637	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08706	140.8429	BURR - CANBY 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08703	140.8361	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08703	140.836	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.8242	GEN587363 1-G16-055-GEN10.6900
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	140.8166	GEN336801 1-BAXTER WILSON UNIT #1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08679	140.8147	OGALLALA - SIDNEY 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	140.7988	FIELD SOUTH - WILMARTH 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08715	140.7833	EAGLE - MARTIN 115KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08626	140.7617	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.76	GEN587443 1-G16-064-GEN10.6900
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.7578	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.7574	GEN334433 1-SABINE UNIT 3
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.757	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	140.741	GEN587363 1-G16-055-GEN10.6900
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08698	140.7326	AUDUBON - HUBBARD 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08687	140.7166	MAXWELL - NORTH PLATTE 115KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08660	140.7154	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08738	140.7103	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08642	140.7076	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08729	140.7034	MAXWELL - STAPLETON 115KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08664	140.7011	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08659	140.6889	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08738	140.6864	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08738	140.6864	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08710	140.6853	BISON - HETINGER 230KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	140.6588	GEN587443 1-G16-064-GEN10.6900
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08574	140.6433	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	140.6431	GEN531447 1-HOLCOMB GENERATOR
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08770	140.6319	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08770	140.6319	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08770	140.6297	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08770	140.6297	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08715	140.6222	EAGLE - PHILIP 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.618	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08719	140.5967	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08678	140.596	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08772	140.5824	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08772	140.5824	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08772	140.5824	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08772	140.5824	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08770	140.5669	MAXWELL - STAPLETON 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08703	140.5543	MINGO - SETAB 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08703	140.5542	MINGO - SETAB 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.4827	AINSWORTH WIND 34KV SWITCHED SHUNT
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.4823	GEN642067 1-PLATTE
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08697	140.4693	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08697	140.4693	P12:230:UMZW:# 158 #: MH IN ND.
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08656	140.4687	BROKEN BOW - CALLAWAY 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.4573	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08653	140.4302	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08653	140.4271	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.4241	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08799	140.3896	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08698	140.3192	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.3186	AXTELL - SWEETWATER 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08701	140.3122	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08664	140.3074	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	140.2982	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	140.2982	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 2
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.11067	140.28	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08625	140.2769	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.11060	140.2746	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08664	140.2711	MINGO - RED WILLOW 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08666	140.264	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08704	140.2568	ALBION - SPALDING 115KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08562	140.2475	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08635	140.2465	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08635	140.2451	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08698	140.2408	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08654	140.2166	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08687	140.2058	KELLY - SHELL CREEK 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08687	140.188	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08687	140.188	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08654	140.1205	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	140.0898	GEN531447 1-HOLCOMB GENERATOR
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	140.0734	BROKEN BOW - CROOKED CREEK 115KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08662	140.0623	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08664	139.9716	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	139.9489	KEARNEY 115KV SWITCHED SHUNT
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08621	139.9485	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08712	139.927	BISON - MAURINE 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08630	139.9197	103RD & ROKEBY - MOORE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	139.8566	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08688	139.854	MAXWELL - NORTH PLATTE 115KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08665	139.8487	MINGO - RED WILLOW 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08633	139.8286	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08654	139.7442	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	139.7415	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08662	139.7278	G16-055-TAP 115.00 - HILDRETH 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08687	139.708	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08687	139.7079	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08704	139.6997	G15088_T 345.00 - MOORE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08673	139.6714	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08616	139.6695	COLUMWEST - KELLY 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	139.6555	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08670	139.6387	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	139.617	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08733	139.6076	MAXWELL - NORTH PLATTE 115KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	139.5952	BASE CASE
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	139.5775	GEN600045 4-ANSON
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	139.5535	BASE CASE
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08651	139.5532	GRIMES - LEHIGH 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	139.5512	1222-AINSWORTH WIND
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	139.5512	1303-KEARNEY
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	139.5512	2560-BRDLAND-LNX3345.00
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	139.5512	2561-BRDLAND-LNX3345.00
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	139.5512	BASE CASE
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08609	139.5479	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08627	139.402	COOPER - MOORE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08704	139.3905	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08646	139.3659	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08654	139.3645	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08654	139.3633	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08658	139.3206	COOPER - ST JOE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09102	139.2918	FT RANDAL - FT THOMPSON 230KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08575	139.2411	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08659	139.1847	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08659	139.1717	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08603	139.1514	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08630	139.149	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08647	139.1435	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08561	139.1066	COLUMWEST - GRAND ISLAND 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	139.0956	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08697	139.0829	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08697	139.0829	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08697	139.0801	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08697	139.08	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08659	139.0633	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09043	139.0508	FT THOMPSON - WESSINGTON 230KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09091	139.0452	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08635	139.0166	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08635	139.0154	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08625	139	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08659	138.9638	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08679	138.8998	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08679	138.8995	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08679	138.8984	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08679	138.8981	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08703	138.8967	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08603	138.8928	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08799	138.8203	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08799	138.8203	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08685	138.8068	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08729	138.787	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08909	138.7686	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08621	138.7322	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08671	138.6821	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08671	138.682	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08665	138.6326	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08665	138.6326	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08616	138.627	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08660	138.6161	COOPER - FAIRPORT 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08626	138.6018	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	138.5644	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	138.473	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08661	138.3369	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08662	138.2995	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08662	138.2995	P12:115:UMZB:# 119 #: IN NE.
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08659	138.2975	COOPER - ST JOE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	138.2214	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08659	138.2187	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08664	138.2157	MINGO - SETAB 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08659	138.2032	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08677	138.1909	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08677	138.1906	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	138.1345	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	138.0494	GEN659273 2-GROTON SYNC COND
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	138.0494	GEN659294 1-WILTONCOL9
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08665	138.044	HANKINSON - WAHPETON 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	138.0319	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08672	138.0054	COOPER - MOORE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.9508	GEN659192 6-LYNN
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.9503	GEN659162 4-RED WLCK
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.9503	GEN659163 5-BLACK WDCK
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	137.8981	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08661	137.8955	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08650	137.8641	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08659	137.793	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.779	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08629	137.7278	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.6564	GEN659270 1-WEST SW
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.6144	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.5951	GEN562872 1-G15046_3 0.6900
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.5878	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.5807	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.5806	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08649	137.5792	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.553	GEN615015 1-GRE-SPRITWDG13.200
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08642	137.5523	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.5453	GEN 11104 1-J262_GEN 0.6000
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.5453	GEN 11108 1-J263_GEN 0.6000
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.5135	GEN587623 1-J493-GEN1 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.4177	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.3866	CENTER 230/22.0KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.3846	LADISH 115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.3498	GEN910006 1-G12_012IS_3 0.6900
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08719	137.3134	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08719	137.3134	FT THOMPSON - OAHE 230KV CKT 2
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08721	137.2752	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08721	137.2752	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	137.2514	BLAIR - GRANITE FALLS 230KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08629	137.2242	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08909	137.1774	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.1732	GEN587053 1-G16-007-GEN10.6500
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08673	137.1686	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08641	137.1495	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	137.0978	GEN 10648 1-G830_GEN 0.6900
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	137.0599	BASE CASE
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08642	136.9872	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08653	136.9577	AS KING - EAU CLAIRE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08661	136.8586	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08651	136.8566	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08625	136.8523	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	136.7714	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	136.7682	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08642	136.7276	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08673	136.7089	NOBLES - SPLIT ROCK 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	136.699	GEN659194 1-NDPRAIRWND1W0.6900
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	136.677	GEN659010 4-G07_027IS_2 0.6900
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08730	136.6738	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08730	136.6671	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	136.6648	GEN652460 4-GARRISON
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	136.6648	GEN652461 5-GARRISON
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	136.6645	GEN659366 3-WILTON 3 W0.6900
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08730	136.6579	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08646	136.6372	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	136.6029	GEN579459 1-G16-075-GEN10.6900
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	136.5715	GEN652457 1-GARRISON
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	136.5715	GEN652458 2-GARRISON
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	136.5715	GEN652459 3-GARRISON
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	136.4949	GEN659118 1-LARAMIE RIVER UNIT1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08926	136.4591	GLENHAM - L3 HAWDON 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08653	136.4459	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08653	136.4424	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08665	136.4401	MINGO - SETAB 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	136.4316	GEN659403 1-NDSUNFLWR W0.6900
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08653	136.4303	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08936	136.3716	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08635	136.3566	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08635	136.3551	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	136.3501	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08625	136.2839	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08907	136.2746	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09044	136.2647	FT THOMPSON - WESSINGTON 230KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08645	136.2361	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08936	136.2261	GLENHAM - WHITLOK 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08660	136.1559	COOPER - FAIRPORT 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08672	136.1235	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08936	136.1137	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08686	136.1015	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08621	136.0173	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	136.0163	GEN600004 2-PRAIRIE ISLAND G2
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08703	136.0155	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	136.0104	GEN600003 1-PRAIRIE ISLAND G1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	135.9902	GEN659411 1-CAMPBLCNTY W0.6900
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08651	135.9892	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	135.9647	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08936	135.9438	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08936	135.9208	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08630	135.9007	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08936	135.893	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08936	135.893	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	135.8128	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08669	135.758	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08662	135.6031	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08662	135.6031	P12:115:UMZB:# 119 #: IN NE.
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	135.5939	GEN652173 1-G09_001IS_2 0.6900
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	135.5652	GEN600006 1-AS KING
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08886	135.4809	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08886	135.4809	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	135.41	GEN659453 1-GI1414GEN W0.6900
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	135.3716	GEN659110 1-LELAND OLDS UNIT1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08664	135.2782	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	135.2521	GEN579459 1-G16-075-GEN10.6900
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	135.2336	GEN659141 1-K10215A
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	135.2019	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08661	135.1578	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	135.1491	GEN615010 1-STANTON4
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	135.0643	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	134.8812	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	134.8493	STANTON 230/18.0KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	134.8324	STANTON 230/18.0KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	134.8284	GEN600005 1-MONTICELLO
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08664	134.8268	P12:345:SPS:J07.1.FINN.HITCH
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08664	134.8116	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	134.7421	GEN657749 1-YOUNG 1 GENERATOR
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08664	134.7399	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08642	134.7309	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	134.6345	GEN659118 1-LARAMIE RIVER UNIT1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	134.6126	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	134.5438	GEN659118 1-LARAMIE RIVER UNIT1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08719	134.4548	FT THOMPSON - OAHE 230KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08719	134.4548	FT THOMPSON - OAHE 230KV CKT 2
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08722	134.4299	FT THOMPSON - OAHE 230KV CKT 3
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08722	134.4299	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08641	134.3844	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08662	134.3392	SUB 3455 - SUB 3740 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	134.2993	BASE CASE
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08729	134.165	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08729	134.1644	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08729	134.1518	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	134.1356	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12206	134.1255	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	134.105	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	134.0978	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	134.0843	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	134.0741	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	134.0524	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	134.0469	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	134.0307	GEN600000 1-SHERBURNECNTY G1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	134.0219	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	133.9952	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	133.9657	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	133.937	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12206	133.9061	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08907	133.8377	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	133.8177	GEN587293 1-G16-044-GEN10.6900
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	133.8046	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	133.783	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	133.7377	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08654	133.6873	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08654	133.6839	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	133.6118	GEN659125 1-COVEY
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08635	133.5812	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08635	133.5797	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08660	133.5479	COOPER - FAIRPORT 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08659	133.4158	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	133.411	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08625	133.3564	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08630	133.3436	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08621	133.2313	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12202	133.1733	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	133.0146	GEN659103 1-ANTELOPE VALLEY UNIT1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	133.0146	GEN659107 2-ANTELOPE VALLEY UNIT2
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	132.9953	GEN600001 2-SHERBURNE CNTY G2
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	132.8942	GEN600002 3-SHERBURNE CNTY G3
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08885	132.8847	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08885	132.8847	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	132.6673	GEN615001 1-COAL CREEK
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	132.6028	GEN661015 1-COYOTE
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	132.5974	GEN615002 2-COAL CREEK
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	132.3975	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	132.3831	GEN620315 1-BIG STONE GEN
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12704	132.2508	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	132.2268	GEN587293 1-G16-044-GEN10.6900
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	132.2032	GEN657748 1-YOUNG 2 GENERATOR
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	132.0823	GEN587133 1-G16-017-GEN10.6900
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	132.0769	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	132.0523	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	131.8942	GEN659125 1-COVEY
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08256	131.885	MCCOOL - MOORE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12299	131.7803	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12299	131.6976	2810X2
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	131.6178	GEN659103 1-ANTELOPE VALLEY UNIT1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	131.6178	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	131.1156	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	131.0706	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	131.0546	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	130.9531	GEN615001 1-COAL CREEK
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	130.9207	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	130.6689	GEN587133 1-G16-017-GEN10.6900
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	130.6439	GEN659125 1-COVEY
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12299	130.1071	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	129.6672	GEN615001 1-COAL CREEK
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13315	129.6642	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	129.5616	GEN615002 2-COAL CREEK
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	129.1731	GEN587133 1-G16-017-GEN10.6900
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	128.9777	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13781	128.6654	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	128.5486	GEN562714 1-G15_023_4 0.6900
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	128.5486	GEN562715 1-G15_023_5 0.6900
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	128.2772	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13759	127.7935	STORLA - WESSINGTON 230KV CKT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12202	127.3141	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	127.0088	GEN562714 1-G15_023_4 0.6900
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	127.0088	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08166	126.9344	GRAND ISLAND - MCCOOL 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13250	126.761	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13250	126.593	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13250	126.576	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13250	126.576	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	126.5465	GEN562714 1-G15_023_4 0.6900
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	126.5465	GEN562715 1-G15_023_5 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13575	126.477	HANLON - STORLA 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13789	125.7844	FT THOMPSON - LETCHER 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13789	125.7844	FT THOMPSON - LETCHER 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13165	125.0858	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13165	125.0858	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13049	124.8078	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13049	124.6343	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13049	124.633	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13149	124.3584	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13036	124.2278	SPLIT ROCK - WHITE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13036	124.2278	SPLIT ROCK - WHITE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13911	124.1583	FT RANDAL - FT THOMPSON 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13911	124.1583	FT RANDAL - FT THOMPSON 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13893	124.0957	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13893	124.0957	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13077	124.0198	G09_001IST 345.00 - GROTON 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13112	123.8967	CENTER - JAMESTOWN 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13523	123.863	LETCHER - SIOUX FALLS 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13162	123.8312	ARROWHEAD - ARROWHEAD 230 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13315	123.8154	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13133	123.8072	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12634	123.7982	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13893	123.7539	FT RANDAL - LAKE PLATT 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13599	123.6443	NUNDRWD - WAYSIDE 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12801	123.588	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12801	123.5848	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13170	123.556	AS KING - EAU CLAIRE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12801	123.5468	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13273	123.3833	FT RANDAL - SIOUX CITY 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.16301	123.339	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.16292	123.33	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	123.2893	GEN635024 4-WALTER SCOTT UNIT 4
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13149	123.2762	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	123.0058	GEN652353 2-GR PRAIRIEG 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13125	122.9079	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13125	122.9079	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.11634	122.9058	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	122.869	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13125	122.8485	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	122.8418	GEN635023 3-WALTER SCOTT UNIT 3
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	122.8083	GEN344225 1-1CAL G1 25.000
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13125	122.7865	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13223	122.7343	RASMUSN - UTICA JCT 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13401	122.7335	HANLON - SIOUX FALLS 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	122.6995	GEN336153 1-WATERFORD UNIT#3
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13155	122.6847	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13168	122.6695	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13162	122.6507	ELLENDALE - OAKES 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13162	122.6507	ELLENDALE - OAKES 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13179	122.5854	GRIMES - LEHIGH 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13162	122.5431	FORMAN - OAKES 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13134	122.5386	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	122.5301	GEN641089 2-ENERGY CENTER 2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13223	122.4899	RASMUSN - SIOUX CITY 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13689	122.4723	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13123	122.4468	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	122.4029	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	122.4008	GEN335831 1-RIVERBEND UNIT#1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	122.3635	GEN336821 1-GRAND GULF UNIT
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	122.3332	GEN337653 1-WHITE BLUFF UNIT #2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13226	122.3171	PAHOJA - SIOUX FALLS 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13163	122.2878	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13178	122.1832	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13134	122.1794	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13164	122.1516	FORMAN - HANKINSON 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13200	122.142	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	122.1262	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12913	122.1083	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13002	122.0828	SIDNEY - STEGALL 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	122.0641	GEN587353 1-G16-050-GEN10.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13759	122.0556	FT THOMPSON - WESSINGTON 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13759	122.0556	FT THOMPSON - WESSINGTON 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13391	122.0485	CARPENTER - HURON 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13178	122.0042	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13138	121.9701	CHISAGO COUNTY - FORBES 500KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.9616	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08663	121.9491	GEN652353 2-GR PRAIRIEG 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13391	121.9393	HURON - WATERTOWN 230KV CKT 2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13391	121.9393	HURON - WATERTOWN 230KV CKT 2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13226	121.9209	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13138	121.8974	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.8861	GEN501801 1-DOLET HILLS UNIT1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13185	121.873	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13391	121.8556	CARPENTER - WATERTOWN 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13391	121.8556	CARPENTER - WATERTOWN 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.8552	GEN563222 1-G15088_3 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13158	121.8522	BYRON - NORTH ROCHESTER 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13196	121.8337	RAUN - SIOUX CITY 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13196	121.8337	RAUN - SIOUX CITY 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13185	121.8069	MISSION - ST FRANCIS 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13108	121.7937	HOSKINS - SHELL CREEK 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.7867	GEN337652 1-WHITE BLUFF UNIT #1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13272	121.7725	FT RANDAL - UTICA JCT 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13189	121.7141	HANKINSON - WAHPETON 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.6974	GEN338146 1-INDEPENDENCE UNIT #2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13185	121.6968	HARMONY - ST FRANCIS 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.6942	GEN338143 1-INDEPENDENCE UNIT #1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13188	121.6623	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13188	121.6623	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13185	121.611	HARMONY - VALENTINE 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13177	121.5972	COLUMEAST - SHELL CREEK 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13159	121.5914	BYRON - PLEASANT VALLEY 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13216	121.565	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13216	121.565	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13177	121.5263	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.5174	GEN501813 1-RODEMACHER UNIT 3
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13216	121.5157	FT RANDAL - SPENCER 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13177	121.5068	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13189	121.5062	BLAIR - GRANITE FALLS 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13189	121.5062	BLAIR - GRANITE FALLS 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13160	121.4303	CENTER - COYOTE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13746	121.3977	FT THOMPSON - HURON 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13746	121.3977	FT THOMPSON - HURON 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13746	121.3977	FT THOMPSON - HURON 230KV CKT 2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13746	121.3977	FT THOMPSON - HURON 230KV CKT 2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13216	121.397	ONEILL - SPENCER 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.3737	GEN335206 1-NELSON UNIT 6
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13116	121.3073	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13173	121.2893	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13142	121.2771	GAVINS POINT - HARTINGTON 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13185	121.2631	AINSWORTH - VALENTINE 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.258	GEN344897 4-1LAB G4 20.000
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.2574	GEN501812 1-RODEMACHER UNIT 2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.2557	GEN344894 1-1LAB G1 20.000
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.2555	GEN344896 3-1LAB G3 20.000
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13178	121.2352	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13198	121.2284	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.2222	GEN344895 2-1LAB G2 20.000
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.2219	GEN587363 1-G16-055-GEN10.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.2178	GEN642067 1-PLATTE
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13198	121.2134	CLEARWATER - ONEILL 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13070	121.1953	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13128	121.1838	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13142	121.1821	GARRISON - JAMES TOWN 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.1818	GEN345670 1-1RUSH G1 18.000
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.1816	GEN345671 2-1RUSH G2 18.000
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13182	121.1742	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13198	121.1535	CLEARWATER - NELIGH 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13176	121.1464	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13070	121.1339	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13070	121.1337	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.1283	GEN336252 1-NINEMILE POINT UNIT#5
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.0886	GEN587443 1-G16-064-GEN10.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.0884	GEN336831 1-BAXTER WILSON SES
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13188	121.0575	DENISON - SIOUX CITY 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13166	121.0437	FARGO - JAMES TOWN 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13070	121.0332	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	121.0249	GEN337041 1-GERALD ANDRUS
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13216	121.0227	MENNO JCT - TRIPP JCT 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13166	121.0184	FARGO - JAMES TOWN 230KV CKT 2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13203	121.0142	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13203	121.0142	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13172	121.001	AUDUBON - SHEYNNE 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.9875	GEN334440 1-SABINE UNIT 4
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13172	120.987	BISMARK - JAMES TOWN 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13172	120.966	JAMES TOWN - WEBER 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13463	120.9601	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13463	120.9519	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13463	120.9515	STEGALL - STEGALL-LNX3230.00 230KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13178	120.9476	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.9466	GEN336251 1-NINEMILE POINT UNIT#4
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.9358	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.9351	P13:115-230:NPPD:NUCOR-3
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13216	120.9224	MENNO JCT - UTICA 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13203	120.9175	NOBLES - SPLIT ROCK 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13203	120.912	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13203	120.912	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13176	120.9076	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13142	120.8902	BELDEN - HARTINGTON 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.8775	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.8769	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13216	120.8679	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.8628	P13:230-345:NPPD:NUCOR-1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.8447	GEN303007 1-1BC2 U2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.8445	GEN336191 1-LITTLE GYPSY UNIT#3
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.842	GEN303006 1-1BC2 U1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.8415	GEN335204 1-NELSON UNIT 4
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.8358	GEN531447 1-HOLCOMB GENERATOR
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.7976	GEN336801 1-BAXTER WILSON UNIT #1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.7905	GEN335614 1-WILLOW GLENN UNIT#4
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.7884	GEN303008 1-1BC2 U3
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.7871	GEN336170 1-GULF OXY U4
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.7797	GEN336464 1-MICHOUD UNIT #3
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.7725	GEN334441 1-SABINE UNIT 5
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.7447	GEN501811 1-RODEMACHER UNIT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13150	120.7402	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13294	120.7396	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13188	120.6618	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13188	120.6618	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.6068	GEN659118 1-LARAMIE RIVER UNIT1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.5838	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13188	120.5118	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13116	120.4165	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	120.0924	BASE CASE
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13164	119.9815	KELLY - SHELL CREEK 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13164	119.9769	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13164	119.9769	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13294	119.9416	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13294	119.9416	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13294	119.9397	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13294	119.932	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13294	119.9302	BROADLAND - HURON 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13294	119.9301	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13294	119.9301	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.8548	GEN635213 3-NEAL UNIT 3
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13161	119.7751	HOSKINS - RAUN 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13161	119.7751	HOSKINS - RAUN 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.7273	GEN635214 4-NEAL UNIT 4
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13184	119.7172	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13184	119.7172	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.6846	GEN300003 1-THOMAS HILL UNIT 3
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13184	119.645	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.6379	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13184	119.6351	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13208	119.6256	MINGO - SETAB 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13208	119.6256	MINGO - SETAB 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13178	119.6208	AURORA - GRAND ISLAND 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.5988	GEN587153 1-G16-021-GEN10.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13176	119.5923	MOORE - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13176	119.5923	MOORE - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13208	119.577	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13178	119.5613	FAIRBURY - HARBINE 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.5592	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13168	119.5487	CENTRAL CITY - SILVER CREEK 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.5482	GEN590010 1-ERCOT EQUIVALENCE
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.5476	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.547	917X
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13294	119.5404	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.5327	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.5248	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.5232	GEN590011 2-ERCOT EQUIVALENCE
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.5226	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13178	119.5213	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13178	119.5207	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13184	119.5078	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13182	119.5059	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13182	119.4986	LOUP CITY - NORTH LOUP 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13190	119.4968	P12:115:UMZW:# 172 #: WI IN SD.
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13202	119.4721	AXTELL - PAULINE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.4641	GEN300007 1-NEW MADRID UNIT 2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13177	119.4622	CRETE - FRIEND 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.458	GEN300006 1-NEW MADRID UNIT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13164	119.4404	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13164	119.4404	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.4384	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08707	119.4358	GEN652353 2-GR PRAIRIEG 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.4349	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.4344	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.4254	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.4254	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.3882	GEN659290 1-EDGECOL
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.3801	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13175	119.363	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13151	119.3554	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13164	119.3535	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13164	119.3535	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.3523	GEN652410 3-FT PECK
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.3055	GEN672347 1-CORY COGEN GENERATOR 1 GT1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.3055	GEN672348 2-CORY COGEN GENERATOR 2 GT2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13168	119.2991	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.2959	GEN672350 1-NIPAWIN GENERATOR 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.2959	GEN672351 2-NIPAWIN GENERATOR 2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.2959	GEN672352 3-NIPAWIN GENERATOR 3
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.295	GEN600012 2-BLACK DOG GEN 2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13230	119.2903	MINGO - RED WILLOW 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13230	119.2903	MINGO - RED WILLOW 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.2804	GEN652414 4-FT PECK
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.2804	GEN652415 5-FT PECK
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.2782	GEN509403 1-PIRKEY GENERATION
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.2698	GEN652345 W-G07_023IS_2 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.2667	GEN620324 3-HOOT LAKE 3 GEN
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.2662	GEN615032 2-PLEASANT VALLEY
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.2641	GEN657600 1-L1GEN3 9 0.5750
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13177	119.264	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.2329	LADISH 115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.2159	GEN659353 1-DEERCREK CTG18.000
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.2121	GEN672349 3-CORY COGEN GENERATOR 3 ST
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.2097	GEN672367 1-MERIDIAN GENERATOR 1 GT1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.2097	GEN672368 2-MERIDIAN GENERATOR 2 GT2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.1998	GEN672339 16-QE 16G 13.800
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.1998	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.1997	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13170	119.1987	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13170	119.1987	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.1903	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.1694	GEN600050 1-FEP
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.1593	GEN652558 6-OAHE
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.1466	GEN587583 1-J432-GEN1 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.1315	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.1208	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.1156	GEN659273 2-GROTON SYNC COND
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.1156	GEN659294 1-WILTONCOL9
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13175	119.1127	FALLOW 3 345.00 - GRIMES 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.1066	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.0677	GEN600065 7-HIGH BRIDGE
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.0677	GEN600066 8-HIGH BRIDGE
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.0636	GEN672393 2-NBECST2G 13.800
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13497	119.0394	OAHE - SULLEY BUTTE 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.0189	LANSING WEST 161/22.0KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.015	GEN659192 6-LYNN
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.0138	GEN659162 4-RED WLCK
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.0138	GEN659163 5-BLACK WDCK
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13090	119.0138	COLUMWEST - KELLY 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	119.0059	GEN657985 1-ASH1GEN9 0.5750
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13485	119	GLENHAM - L3 HAWDON 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13170	118.9938	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13179	118.9806	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.9803	GEN600014 4-BLACK DOG GEN 4
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.9799	GEN600067 9-HIGH BRIDGE
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.976	GEN600011 5-BLACK DOG GEN 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.9748	GEN600071 10-RIVER SIDE
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.9746	GEN600070 9-RIVER SIDE
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.9589	GEN600007 7-RIVERSIDE GEN 7
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.9559	GEN652906 1-G09_006IS_3 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13497	118.9471	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13497	118.9346	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.9345	CENTER 230/22.0KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13497	118.9344	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.9291	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.9268	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13497	118.9073	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13497	118.9073	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.9061	GEN660016 1-B_H WIND 0.7000
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.9001	GEN600017 C-LS POWER CT
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.8675	GEN681522 3-GENOA 3
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13497	118.8585	GLENHAM - WHITLOK 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.8553	GEN659291 1-FT MP COLLECTOR
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.8469	GEN662101 1-WESSINGTON190.5750
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.8415	GEN615052 1-CAMBRIDGE GENERATING STATION
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.8333	GEN652907 1-G09_007IS_3 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.8038	GEN 11104 1-J262_GEN 0.6000
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.8038	GEN 11108 1-J263_GEN 0.6000
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.7831	GEN562872 1-G15046_3 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.7556	GEN615015 1-GRE-SPRITWDG13.200
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13206	118.6864	AXTELL - SWEETWATER 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.6461	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.6168	GEN910006 1-G12_012IS_3 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.5656	GEN615021 1-GRE-ER 14G 16.000
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.5634	GEN587623 1-J493-GEN1 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.4977	GEN 10648 1-G830_GEN 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.4622	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.4622	GEN672304 4-BOUNDARY DAM GENERATOR 4
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.4622	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13149	118.4374	SUB 3454 - WAGENER 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13149	118.4374	SUB 3454 - WAGENER 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.3732	GEN587053 1-G16-007-GEN10.6500
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13154	118.264	103RD & ROKEBY - MOORE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13154	118.264	103RD & ROKEBY - MOORE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.2345	GEN652461 5-GARRISON
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.2344	GEN652460 4-GARRISON
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.2154	GEN672392 1-NBECGT1G 18.000
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.2139	GEN587593 1-J460-GEN1 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.1742	GEN652457 1-GARRISON
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.1742	GEN652458 2-GARRISON
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.1742	GEN652459 3-GARRISON
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.1417	GEN659010 4-G07_027IS_2 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13149	118.1415	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.1246	GEN659366 3-WILTON 3 W0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.0958	GEN659194 1-NDPRAIRWND1W0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13150	118.0752	COOPER - MOORE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	118.0701	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	117.9674	GEN659403 1-NDSUNFLWR W0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09091	117.8781	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	117.8664	GEN681542 6-JP MADGETT
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	117.81	GEN659110 1-LELAND OLDS UNIT1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13196	117.7547	G15088_T 345.00 - PAULINE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13090	117.7509	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	117.6926	GEN659411 1-CAMPBLCNTY W0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	117.5911	GEN563232 1-G15089_3 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	117.5401	GEN659296 2-SDPRAIRWND1W0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	117.4728	GEN652559 1-OAHE
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	117.4097	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	117.3779	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	117.2422	GEN652556 2-OAHE
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	117.2126	GEN652557 5-OAHE
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	117.151	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	117.0695	GEN659453 1-GI1414GEN W0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	116.9359	GEN615010 1-STANTON4
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	116.8383	GEN659141 1-K10215A
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	116.79	GEN652173 1-G09_001IS_2 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	116.5892	GEN672321 1-SHAND GENERATOR 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	116.5663	GEN600004 2-PRAIRIE ISLAND G2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	116.5604	GEN600003 1-PRAIRIE ISLAND G1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	116.5106	GEN672310 1-POPLAR RIVER GENERATOR 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	116.5105	GEN672311 2-POPLAR RIVER GENERATOR 2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	116.4754	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	116.4056	GEN659407 1-ANTELPHILLSW0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	116.243	GEN600006 1-AS KING
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.18084	116.0332	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.18084	116.0194	2810X2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13196	116.0113	G15088_T 345.00 - MOORE 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	115.985	GEN657749 1-YOUNG 1 GENERATOR
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	115.7923	GEN587033 1-G16-004-GEN10.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	115.6309	GEN600005 1-MONTICELLO
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09408	115.5231	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	115.4556	GEN659111 2-LELAND OLDS UNIT2
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.18084	115.3077	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	115.1287	GEN579459 1-G16-075-GEN10.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	115.0779	GEN659103 1-ANTELOPE VALLEY UNIT1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	115.0779	GEN659107 2-ANTELOPE VALLEY UNIT2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08836	114.8809	SPLIT ROCK - WHITE 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09390	114.8456	STORLA - WESSINGTON 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	114.8389	GEN600000 1-SHERBURNECNTY G1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08299	114.7503	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09267	114.2011	HANLON - STORLA 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	114.0906	GEN600001 2-SHERBURNE CNTY G2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08951	113.9271	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08951	113.9271	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08785	113.8521	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	113.8356	GEN620315 1-BIG STONE GEN
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09419	113.5681	FT THOMPSON - LETCHER 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09419	113.5681	FT THOMPSON - LETCHER 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	113.5412	GEN600002 3-SHERBURNE CNTY G3
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	113.4207	GEN661015 1-COYOTE
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08858	113.3972	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09091	113.294	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	113.1885	GEN635024 4-WALTER SCOTT UNIT 4
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	113.0067	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08834	112.9494	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08966	112.9279	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	112.8383	GEN657748 1-YOUNG 2 GENERATOR
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08966	112.7637	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	112.7247	GEN635023 3-WALTER SCOTT UNIT 3
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09456	112.599	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09456	112.599	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09444	112.562	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09444	112.562	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08918	112.5457	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08918	112.511	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08918	112.4591	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08989	112.4364	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09226	112.3674	LETCHER - SIOUX FALLS 230KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	112.3611	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	112.33	GEN336821 1-GRAND GULF UNIT
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08989	112.3223	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09444	112.3217	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08989	112.2879	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08989	112.2879	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09057	112.2848	FT RANDAL - SIOUX CITY 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	112.2363	GEN587293 1-G16-044-GEN10.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	112.2172	GEN640009 1-COOPER NUCLEAR STATION
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08911	112.0308	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	111.9999	GEN344225 1-1CAL G1 25.000
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	111.9748	GEN659125 1-COVEY
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08911	111.9567	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08911	111.9556	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09012	111.7846	RASMUSN - UTICA JCT 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	111.7385	GEN563222 1-G15088_3 0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08858	111.7238	G09_001IST 345.00 - GROTON 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08906	111.6459	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	111.6327	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09006	111.6235	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	111.6003	GEN336153 1-WATERFORD UNIT#3
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09012	111.5909	RASMUSN - SIOUX CITY 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08901	111.5434	HOSKINS - SHELL CREEK 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09142	111.5382	HANLON - SIOUX FALLS 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	111.4333	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08981	111.4276	RAUN - SIOUX CITY 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	111.388	GEN335831 1-RIVERBEND UNIT#1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	111.3461	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08942	111.2889	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09006	111.2752	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	111.2515	GEN641089 2-ENERGY CENTER 2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09087	111.2063	NUNDRWD - WAYSIDE 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08981	111.1834	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08971	111.1451	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08981	111.1031	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08981	111.1031	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	111.0905	GEN587353 1-G16-050-GEN10.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	111.0676	GEN337653 1-WHITE BLUFF UNIT #2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.11327	111.0481	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.11321	111.045	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09024	110.9933	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09024	110.9804	CLEARWATER - ONEILL 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09060	110.979	FT RANDAL - UTICA JCT 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.9738	GEN645012 2-NEBRASKA CITY 2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.9505	GEN501801 1-DOLET HILLS UNIT1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.941	GEN337652 1-WHITE BLUFF UNIT #1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08977	110.9386	MINGO - RED WILLOW 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08977	110.9386	MINGO - RED WILLOW 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09024	110.9293	CLEARWATER - NELIGH 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09390	110.9232	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09390	110.9232	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.9173	GEN338146 1-INDEPENDENCE UNIT #2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.9172	GEN338143 1-INDEPENDENCE UNIT #1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08980	110.9085	BLAIR - GRANITE FALLS 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08980	110.9085	BLAIR - GRANITE FALLS 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.9032	GEN645011 1-NEBRASKA CITY 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09003	110.8858	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.8827	GEN542962 2-IATAN UNIT #2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09050	110.8447	STAPLETON - THEDFORD 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.7967	GEN587363 1-G16-055-GEN10.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.7653	GEN501813 1-RODEMACHER UNIT 3
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.7619	GEN587443 1-G16-064-GEN10.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08947	110.7262	GAVINS POINT - HARTINGTON 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.7203	GEN344897 4-1LAB G4 20.000
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.7199	GEN344894 1-1LAB G1 20.000
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.7198	GEN344896 3-1LAB G3 20.000
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.691	GEN344895 2-1LAB G2 20.000
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08909	110.6899	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.6749	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.6664	GEN335206 1-NELSON UNIT 6
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.6643	GEN345670 1-1RUSH G1 18.000
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.6641	GEN345671 2-1RUSH G2 18.000
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09141	110.6482	CARPENTER - HURON 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.6286	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08990	110.6209	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08990	110.6209	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08978	110.6062	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08977	110.6015	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08977	110.6015	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.5912	GEN336252 1-NINEMILE POINT UNIT#5
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.5852	GEN501812 1-RODEMACHER UNIT 2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09141	110.5665	HURON - WATERTOWN 230KV CKT 2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09141	110.5665	HURON - WATERTOWN 230KV CKT 2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09003	110.5588	BASSETT 7115.00 - STUART 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.5527	GEN336831 1-BAXTER WILSON SES
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08990	110.5435	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08990	110.5435	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09003	110.5417	AINSWORTH - BASSETT 7115.00 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09003	110.5205	ATKINSON - STUART 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.5168	GEN337041 1-GERALD ANDRUS
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09027	110.515	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09141	110.5149	CARPENTER - WATERTOWN 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09141	110.5149	CARPENTER - WATERTOWN 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08982	110.5136	DENISON - SIOUX CITY 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09028	110.491	WINNER - WITTEN 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.4884	GEN542957 1-IATAN UNIT #1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.4839	GEN336251 1-NINEMILE POINT UNIT#4
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09003	110.4704	ATKINSON - EMMET 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09000	110.4622	MENNO JCT - TRIPP JCT 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.4544	GEN334440 1-SABINE UNIT 4
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09050	110.449	MAXWELL - STAPLETON 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.4489	P13:115-230:NPPD:NUCOR-3
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.4258	GEN562547 1-G14_039_3 0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08947	110.4222	BELDEN - HARTINGTON 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09003	110.4175	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.4157	P13:230-345:NPPD:NUCOR-1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08971	110.3583	CALLAWAY - MAXWELL 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.3416	MINGO - SETAB 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.3416	MINGO - SETAB 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08977	110.3387	AXTELL - PAULINE 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	110.3282	GEN563212 1-G15087_3 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	110.2839	GEN587133 1-G16-017-GEN10.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	109.7714	BASE CASE
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08957	109.4928	KELLY - SHELL CREEK 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08957	109.491	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08957	109.491	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08975	109.2768	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08964	109.2675	CENTRAL CITY - CLARKS 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08974	109.2672	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08974	109.2458	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08973	109.1962	CRETE - FRIEND 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08958	109.1794	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08958	109.1794	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12797	109.0944	MCCOOL - MOORE 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08958	109.0889	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08958	109.0889	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	109.0699	GEN600017 C-LS POWER CT
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	109.0434	GEN659270 1-WEST SW
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08964	109.0368	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08937	109.0324	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08937	109.0324	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08964	109.0321	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08976	109.0292	COOPER - FAIRPORT 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08975	109.0151	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	109.0041	GEN615052 1-CAMBRIDGE GENERATING STATION
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.9904	GEN660016 1-B_H WIND 0.7000
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09223	108.9776	OAHE - SULLEY BUTTE 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09214	108.9357	GLENHAM - L3 HAWDON 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.9155	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.9129	GEN659291 1-FT MP COLLECTOR
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.9079	GEN662101 1-WESSINGTON190.5750
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.9032	GEN 11104 1-J262_GEN 0.6000
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.9032	GEN 11108 1-J263_GEN 0.6000
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09223	108.9021	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09223	108.9017	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09223	108.9017	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.9003	GEN562872 1-G15046_3 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08975	108.8937	COPSTJCPFRSJ
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08975	108.8937	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08975	108.8937	STMDSJFAFACO
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09223	108.8739	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09223	108.8739	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.8684	GEN615015 1-GRE-SPRITWDG13.200
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08975	108.85	G15088_T 345.00 - MOORE 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.8468	GEN600067 9-HIGH BRIDGE
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.8433	GEN615021 1-GRE-ER 14G 16.000
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09223	108.834	GLENHAM - WHITLOK 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.7943	GEN657705 X-DRAYTON
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.778	GEN587623 1-J493-GEN1 0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.7225	GEN910006 1-G12_012IS_3 0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.7215	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.692	GEN672304 4-BOUNDARY DAM GENERATOR 4
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.692	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.6919	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.6865	GEN587053 1-G16-007-GEN10.6500
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08974	108.6808	COOPER - ST JOE 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.6802	GEN 10648 1-G830_GEN 0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08975	108.6333	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08975	108.6237	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.6065	GEN672392 1-NBECGT1G 18.000
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.6035	GEN681542 6-JP MADGETT
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.5525	GEN652460 4-GARRISON
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.5525	GEN652461 5-GARRISON
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08975	108.5274	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.5173	GEN652457 1-GARRISON
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.5173	GEN652458 2-GARRISON
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.5173	GEN652459 3-GARRISON
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08941	108.517	SUB 3454 - WAGENER 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08941	108.517	SUB 3454 - WAGENER 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.5153	GEN587593 1-J460-GEN1 0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.4985	GEN659010 4-G07_027IS_2 0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.4874	GEN659366 3-WILTON 3 W0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.4547	GEN659194 1-NDPRAIRWND1W0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.3589	GEN659403 1-NDSUNFLWR W0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08942	108.3464	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.3142	GEN 11123 1-G736-GEN1 0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.3113	GEN 11133 1-J442-GEN1 0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08882	108.282	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.266	GEN652559 1-OAHE
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08947	108.2641	103RD & ROKEBY - MOORE 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08947	108.2641	103RD & ROKEBY - MOORE 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.2132	GEN652906 1-G09_006IS_3 0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.1634	GEN563232 1-G15089_3 0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.1583	GEN659411 1-CAMPBLCNTY W0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.1411	GEN659110 1-LELAND OLDS UNIT1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.0387	GEN652907 1-G09_007IS_3 0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	108.0334	GEN659296 2-SDPRAIRWND1W0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08942	107.9584	COOPER - MOORE 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.8047	GEN652556 2-OAHE
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.804	GEN652558 6-OAHE
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.7844	GEN652557 5-OAHE
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.7539	GEN600004 2-PRAIRIE ISLAND G2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.7504	GEN600003 1-PRAIRIE ISLAND G1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.7206	GEN659453 1-GI1414GEN W0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.6541	GEN615010 1-STANTON4
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.6443	GEN652173 1-G09_001IS_2 0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.6072	GEN659141 1-K10215A
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.5373	GEN587653 1-J526-GEN1 0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.5116	GEN600006 1-AS KING
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.4392	GEN672321 1-SHAND GENERATOR 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.4252	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.4187	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.3901	GEN672311 2-POPLAR RIVER GENERATOR 2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.39	GEN672310 1-POPLAR RIVER GENERATOR 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.3623	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.352	GEN659407 1-ANTELPHILLSW0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.331	GEN587633 1-J510-GEN1 18.000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.0357	GEN659118 1-LARAMIE RIVER UNIT1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107.0355	GEN657749 1-YOUNG 1 GENERATOR
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	107	GEN620315 1-BIG STONE GEN
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	106.9746	GEN587033 1-G16-004-GEN10.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	106.8428	GEN600005 1-MONTICELLO
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12709	106.773	GRAND ISLAND - MCCOOL 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	106.6581	GEN600000 1-SHERBURNECNTY G1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12627	106.6413	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12627	106.6333	2810X2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	106.4234	GEN659111 2-LELAND OLDS UNIT2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	106.4108	GEN579459 1-G16-075-GEN10.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12627	106.3856	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	106.1481	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	106.1481	GEN659107 2-ANTELOPE VALLEY UNIT2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	105.9403	GEN600001 2-SHERBURNE CNTY G2
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	105.8395	GEN600002 3-SHERBURNE CNTY G3
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	105.3364	GEN661015 1-COYOTE
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	105.0884	GEN562714 1-G15_023_4 0.6900
0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13183	105.0884	GEN562715 1-G15_023_5 0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	104.9586	GEN657748 1-YOUNG 2 GENERATOR
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	104.7696	GEN587293 1-G16-044-GEN10.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	104.4597	GEN659125 1-COVEY
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.12627	104.0856	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	103.5811	GEN615001 1-COAL CREEK
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	103.4979	GEN615002 2-COAL CREEK
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	103.2135	GEN587133 1-G16-017-GEN10.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	99	GEN562714 1-G15_023_4 0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08979	99	GEN562715 1-G15_023_5 0.6900
0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08566	99	MCCOOL - MOORE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	138.4693	GEN562714 1-G15_023_4 0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	138.4693	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14259	138.1269	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13978	138.1092	LETCHER - SIOUX FALLS 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13733	137.5671	AINSWORTH - VALENTINE 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	137.5324	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	137.4502	GEN562714 1-G15_023_4 0.6900
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	137.4502	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	137.4486	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	137.2067	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	137.0578	GEN336153 1-WATERFORD UNIT#3
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13679	137.0049	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	136.9384	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	136.8594	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13480	136.8121	SIDNEY - STEGALL 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13769	136.7795	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14219	136.6475	FT THOMPSON - LETCHER 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	136.6404	GEN335831 1-RIVERBEND UNIT#1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13836	136.6352	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13904	136.4223	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	136.4012	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13836	136.397	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13365	136.3497	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	136.3459	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13703	136.3436	FT RANDAL - SPENCER 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13703	136.3047	ONEILL - SPENCER 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13875	136.0132	HANLON - SIOUX FALLS 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	135.9975	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13716	135.8843	RASMUSN - UTICA JCT 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	135.7865	GEN562714 1-G15_023_4 0.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	135.7865	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14189	135.7269	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	135.7112	GEN501801 1-DOLET HILLS UNIT1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13710	135.6814	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	135.6766	GEN337653 1-WHITE BLUFF UNIT #2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13774	135.6624	FT RANDAL - UTICA JCT 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	135.6324	GEN337653 1-WHITE BLUFF UNIT #2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	135.6156	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13710	135.5409	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14007	135.5232	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14007	135.523	NAPA JCT7 115.00 - UTICA 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	135.5113	GEN338146 1-INDEPENDENCE UNIT #2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	135.5109	GEN338143 1-INDEPENDENCE UNIT #1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	135.5005	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	135.4872	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14007	135.4346	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13946	135.4185	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13910	135.4169	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14015	135.4064	OAHE - PHILIP TAP 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13904	135.3956	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14007	135.3923	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14007	135.3798	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13904	135.3475	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13689	135.2766	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	135.27	GEN336251 1-NINEMILE POINT UNIT#4
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	135.2691	GEN501813 1-RODEMACHER UNIT 3
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	135.2494	GEN335206 1-NELSON UNIT 6
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	135.2415	GEN336831 1-BAXTER WILSON SES
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	135.1889	GEN336252 1-NINEMILE POINT UNIT#5
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13910	135.1791	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13910	135.1714	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	135.1549	GEN337041 1-GERALD ANDRUS
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13558	135.1528	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13888	135.1332	HOSKINS - SHELL CREEK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13685	135.1202	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	135.0754	GEN501812 1-RODEMACHER UNIT 2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13558	135.0598	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13558	135.0594	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	134.8813	GEN344897 4-1LAB G4 20.000
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	134.8811	GEN334440 1-SABINE UNIT 4
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	134.8782	GEN344894 1-1LAB G1 20.000
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	134.8782	GEN344895 2-1LAB G2 20.000
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	134.8781	GEN344896 3-1LAB G3 20.000
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13558	134.8685	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	134.8029	GEN587353 1-G16-050-GEN10.6900
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.17399	134.7844	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.17389	134.7758	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	134.759	GEN345670 1-1RUSH G1 18.000
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	134.7578	GEN345671 2-1RUSH G2 18.000
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13567	134.742	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13876	134.7338	CARPENTER - HURON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	134.6981	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	134.6562	GEN336801 1-BAXTER WILSON UNIT #1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13643	134.6255	GAVINS POINT - HARTINGTON 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	134.6131	GEN335614 1-WILLOW GLENN UNIT#4
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13982	134.5158	MENNO JCT - UTICA 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13680	134.4837	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13819	134.4618	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14274	134.4414	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13558	134.4069	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	134.396	GEN531447 1-HOLCOMB GENERATOR
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13607	134.3446	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13758	134.3423	MARTIN - SHANNON 115KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13975	134.3326	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13644	134.2813	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13970	134.2736	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13970	134.2734	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13607	134.2106	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13994	134.2038	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	134.1976	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13733	134.1752	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13698	134.0897	CHADRON - DUNLAP 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14259	134.0842	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13951	133.9177	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13948	133.8895	JAMES TOWN - WEBER 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	133.8629	GEN587363 1-G16-055-GEN10.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	133.8168	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13678	133.8074	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	133.803	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	133.8026	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13928	133.785	LELAND OLDS - STANTON 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13928	133.7849	LELAND OLDS - STANTON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13627	133.7798	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	133.7255	GEN659118 1-LARAMIE RIVER UNIT1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13948	133.7249	BISMARK - WEBER 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13646	133.6617	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	133.651	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13951	133.6487	PRAIRIE - RAMSEY 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	133.6475	GEN587443 1-G16-064-GEN10.6900
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	133.6036	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	133.5984	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13745	133.5331	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.17203	133.5197	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.17194	133.5184	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13968	133.5084	CLEARWATER - NELIGH 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	133.4082	GEN645011 1-NEBRASKA CITY 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13968	133.4071	CLEARWATER - ONEILL 115KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	133.3482	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	133.3412	GEN645012 2-NEBRASKA CITY 2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	133.3093	GEN640009 1-COOPER NUCLEAR STATION
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	133.2999	GEN542962 2-IATAN UNIT #2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	133.287	GEN531447 1-HOLCOMB GENERATOR
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13968	133.2794	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13664	133.2384	KELLY - SHELL CREEK 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13745	133.229	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13664	133.2057	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	133.2047	GEN563222 1-G15088_3 0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	133.1915	GEN542957 1-IATAN UNIT #1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13947	133.1538	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13947	133.1537	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13693	133.1318	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	133.0582	GEN542951 5-HAWTHORN UNIT #5
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	133.0536	GEN542955 1-LACYGNE UNIT #1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13987	133.0316	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13987	133.0315	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13690	133.0194	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	132.9958	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	132.9712	ANSON 115/17.5KV TRANSFORMER CKT 4
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13686	132.9709	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13679	132.9639	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13957	132.951	BURR - CANBY 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14315	132.9109	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13972	132.8673	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13898	132.8592	P13:230-345:NPPD:SIDNEY 3:KV2A
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13923	132.8532	HOSKINS - RAUN 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13923	132.8532	HOSKINS - RAUN 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13898	132.849	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13905	132.835	OGALLALA - SIDNEY 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13898	132.8328	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13661	132.8149	AINSWORTH - BASSETT 7115.00 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13661	132.7999	ATKINSON - STUART 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13792	132.721	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13792	132.721	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	132.6789	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13786	132.6658	BROADLAND - HURON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13786	132.6657	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	132.6626	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	132.662	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	132.6605	BASE CASE
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13661	132.6472	BASSETT 7115.00 - STUART 115KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	132.6299	GEN542951 5-HAWTHORN UNIT #5
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13797	132.6292	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13797	132.6292	FT THOMPSON - OAHE 230KV CKT 4
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13786	132.618	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13661	132.6084	ATKINSON - EMMET 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13786	132.6075	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13661	132.5693	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14086	132.556	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14086	132.556	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14086	132.5489	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14086	132.5489	FT THOMPSON - OAHE 230KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13683	132.5347	CALLAWAY - MAXWELL 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13662	132.4806	STAPLETON - THEDFORD 115KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14091	132.4736	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14091	132.4736	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14091	132.4736	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14091	132.4736	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13659	132.4686	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13682	132.463	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	132.4587	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13828	132.3916	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13662	132.3751	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14209	132.3737	FT THOMPSON - LETCHER 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13973	132.3547	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	132.3433	GEN587153 1-G16-021-GEN10.6900
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14187	132.3383	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13684	132.31	HANKINSON - WAHPETON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	132.3045	GEN300002 1-THOMAS HILL UNIT 2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	132.2564	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13639	132.2553	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13679	132.2508	HOLCOMB - SETAB 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13942	132.2162	KELLY - SHELL CREEK 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13942	132.2009	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13942	132.2007	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	132.1962	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13678	132.1737	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13678	132.1699	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13659	132.1453	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	132.1181	GEN600045 4-ANSON
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13682	132.1123	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	132.0808	GEN645012 2-NEBRASKA CITY 2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	132.0764	GEN642067 1-PLATTE
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	132.0576	AINSWORTH WIND 34KV SWITCHED SHUNT
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13586	132.0407	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	132.0292	GEN636641 1-LOUISA UNIT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13683	132.0113	AXTELL - PAULINE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	132.0017	GEN542962 2-IATAN UNIT #2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13642	131.9745	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.9667	GEN659118 1-LARAMIE RIVER UNIT1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.9665	GEN645011 1-NEBRASKA CITY 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13678	131.9597	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	131.9295	GEN590010 1-ERCOT EQUIVALENCE
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13969	131.9224	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.8941	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13949	131.885	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	131.8728	GEN590011 2-ERCOT EQUIVALENCE
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13651	131.8661	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.8512	GEN542957 1-IATAN UNIT #1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13957	131.8388	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.8326	GEN542955 1-LACYGNE UNIT #1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13928	131.8302	AINSWORTH - AINSWORTH 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13703	131.8258	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13703	131.8258	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13949	131.7897	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.7864	GEN542955 1-LACYGNE UNIT #1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	131.7585	GEN300003 1-THOMAS HILL UNIT 3
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.758	GEN542951 5-HAWTHORN UNIT #5
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.7203	GEN542957 1-IATAN UNIT #1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.72	GEN640016 1-KINGSLEY HYDRO
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.7131	GEN542956 2-LACYGNE UNIT #2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	131.7116	GEN300007 1-NEW MADRID UNIT 2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	131.7042	GEN300006 1-NEW MADRID UNIT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.6974	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13955	131.6878	GERALD GENTLEMAN STATION (GGS T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13955	131.6877	GERALD GENTLEMAN STATION (GGS T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13964	131.6852	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13949	131.6715	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.6658	GEN587363 1-G16-055-GEN10.6900
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13968	131.6592	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKEI
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13955	131.6566	GERALD GENTLEMAN STATION (GGS T2) 345/230/13.8KV TRANSFORMER CKT 2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13955	131.6565	GERALD GENTLEMAN STATION (GGS T2) 345/230/13.8KV TRANSFORMER CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.6496	KEARNEY 115KV SWITCHED SHUNT
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13648	131.635	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13947	131.6278	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	131.5853	AS KING - EAU CLAIRE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.541	GEN542956 2-LACYGNE UNIT #2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	131.5406	GEN659353 1-DEERCREK CTG18.000
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13679	131.5392	MINGO - SETAB 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13822	131.5345	MISSION - WITTEN 115KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	131.534	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13940	131.5092	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13940	131.5091	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13968	131.5003	BONESTEEL - GREGORY 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	131.4956	GEN659354 1-DEERCREK STG18.000
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	131.4939	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.4936	GEN587443 1-G16-064-GEN10.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.4609	GEN659118 1-LARAMIE RIVER UNIT1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13654	131.4324	COLUMBUS - SILVER CREEK 115KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.3998	GEN642067 1-PLATTE
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.3974	GEN514806 1-SOONER UNIT 2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.3941	GEN514805 1-SOONER UNIT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13674	131.3809	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13873	131.3528	COLUMWEST - KELLY 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13631	131.3493	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.3188	GEN587233 1-G16-037-GEN10.6900
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.3004	BASE CASE
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.2968	1222-AINSWORTH WIND
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.2968	1303-KEARNEY
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.2968	2560-BRDLAND-LNX3345.00
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.2968	2561-BRDLAND-LNX3345.00
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.2968	BASE CASE
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.2787	GEN515042 1-SEMINOLE 3G
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.2596	GEN515040 1-SEMINOLE 1G
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	131.2568	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.17195	131.2537	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.17186	131.2487	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13649	131.245	COOPER - MOORE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13671	131.2359	JEFFREY - NORTH PLATTE 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13679	131.2284	RAUN - SIOUX CITY 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13954	131.2184	AINSWORTH - STUART 115KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13919	131.2162	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.2124	GEN515041 1-SEMINOLE 2G
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.2	GEN509394 1-FLINT CREEK
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13960	131.1955	CALLAWAY - MAXWELL 115KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13940	131.1897	STAPLETON - THEDFORD 115KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13673	131.1747	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13649	131.1715	ATKINSON - EMMET 115KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.1713	GEN509416 1-TURK GENERATION
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13954	131.1622	ATKINSON - EMMET 115KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.1588	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.1588	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	131.1584	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.1472	GEN512688 2-GRDA1 GSU2 22
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13953	131.1418	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13953	131.1418	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13954	131.1407	ATKINSON - STUART 115KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13953	131.1407	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13953	131.1406	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.1379	GEN640028 1-COLUMCOGENERATION
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.1343	GEN515226 1-MUSKOGEE 6G
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.1335	GEN515225 1-MUSKOGEE 5G
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.1217	GEN515223 1-MUSKOGEE 4G
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.1068	GEN511840 1-NORTHEASTERN STATION #3
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.1008	GEN513601 1-GRECCTG_1 20.000
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.096	GEN511842 1-RIVERSIDE STATION #1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.0844	GEN511839 1-NORTHEASTERN STATION #2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.0798	GEN640019 1-SHELDON STATION UNIT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.0696	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.0641	GEN511843 1-RIVERSIDE STATION #2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13677	131.0639	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13658	131.0619	G15088_T 345.00 - PAULINE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	131.0546	GEN509403 1-PIRKEY GENERATION
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.0542	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.0497	GEN541151 3-SIBLEY GENERATING UNIT #3
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.0164	GEN509416 1-TURK GENERATION
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	131.0051	GEN645041 1-CASS COUNTY 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13637	130.9465	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.9431	GOTHENBURG - JEFFREY 115KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.9265	BROKEN BOW - CROOKED CREEK 115KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13669	130.9211	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13960	130.912	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.883	GEN645042 2-CASS COUNTY 2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.8716	GEN509403 1-PIRKEY GENERATION
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13936	130.8514	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13936	130.8513	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	130.8483	GEN300002 1-THOMAS HILL UNIT 2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	130.8437	GEN660016 1-B_H WIND 0.7000
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	130.8422	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13960	130.8421	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13651	130.8342	STAPLETON - THEDFORD 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	130.8318	GEN659291 1-FT MP COLLECTOR
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13661	130.825	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.8195	GEN645033 3-SARPY COUNTY 3
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13651	130.8078	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.801	GEN509406 1-WELSH #3
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.8008	GEN509404 1-WELSH #1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	130.7916	GEN662101 1-WESSINGTON190.5750
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	130.7883	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.7701	GEN640016 1-KINGSLEY HYDRO
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13661	130.7601	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	130.7543	GEN652545 7-BIG BEND
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	130.7318	GEN587153 1-G16-021-GEN10.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13694	130.7051	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	130.7025	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13786	130.698	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13671	130.6902	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13968	130.6818	GREGORY - WINNER 115KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.6509	GEN509398 1-KNOXLEE #5
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13960	130.6482	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13960	130.6481	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13665	130.6429	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.635	GEN509409 1-WILKES #3
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13669	130.632	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	130.6049	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13665	130.5979	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13951	130.5952	LOUP CITY - NORTH LOUP 115KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13665	130.5952	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	130.5611	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13963	130.5597	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.5555	GEN587153 1-G16-021-GEN10.6900
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13965	130.5493	AXTELL - PAULINE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.5419	BASE CASE
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.5141	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13968	130.5117	MISSION - WITTEN 115KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.4952	GEN300002 1-THOMAS HILL UNIT 2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13646	130.4933	G15088_T 345.00 - PAULINE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13968	130.4883	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.4876	GEN587093 1-G16-023-GEN10.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.4876	GEN587193 1-G16-029-GEN10.6900
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13968	130.4844	WINNER - WITTEN 115KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	130.4748	GEN600045 4-ANSON
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13637	130.4628	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13678	130.4502	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13836	130.4443	P13:230-345:NPPD:STEGALL3:KV3A
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13873	130.4387	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13957	130.427	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13661	130.4246	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	130.4174	GEN590010 1-ERCOT EQUIVALENCE
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13963	130.384	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13920	130.3814	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13920	130.3814	SUB 3454 - WAGENER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	130.3597	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.357	GEN300011 1-ST FRANCIS UNIT 2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13952	130.352	GLENHAM - L3 HAWDON 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.3506	GEN600045 4-ANSON
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13660	130.3463	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.3445	GEN300010 1-ST FRANCIS UNIT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13963	130.3388	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.3353	GEN300015 1-1SGPDEL 18.000
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14262	130.3317	FT RANDAL - FT THOMPSON 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.3124	GEN505432 1-SIKESTON
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13963	130.3093	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13672	130.3055	AXTELL - PAULINE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13632	130.2811	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	130.2773	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13957	130.2545	COOPER - ST JOE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13963	130.2439	GLENHAM - WHITLOK 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	130.216	GEN590011 2-ERCOT EQUIVALENCE
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13655	130.2132	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13674	130.1849	FORMAN - HANKINSON 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13647	130.1788	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13654	130.1649	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13574	130.1422	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13957	130.1397	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13656	130.1386	AXTELL - SWEETWATER 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13957	130.135	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	130.1325	GEN300003 1-THOMAS HILL UNIT 3
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13957	130.1272	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	130.1133	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14189	130.1034	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14315	130.0934	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13957	130.0892	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	130.0664	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13637	130.0643	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13968	130.0559	P12:115:UMZW:# 172 #: WI IN SD.
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	130.0467	GEN300007 1-NEW MADRID UNIT 2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	130.0366	GEN300006 1-NEW MADRID UNIT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14247	130.0308	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13963	130.0276	MINGO - SETAB 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13963	130.0275	MINGO - SETAB 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13680	129.9944	MINGO - RED WILLOW 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13630	129.9453	SUB 3454 - WAGENER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13675	129.9426	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.9264	GEN652544 5-BIG BEND
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13928	129.8874	COOPER - MOORE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13927	129.8846	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13927	129.8842	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	129.8833	GEN300006 1-NEW MADRID UNIT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13673	129.867	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.8578	GEN652543 3-BIG BEND
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.8568	GEN652542 1-BIG BEND
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13639	129.8365	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	129.8076	GEN300003 1-THOMAS HILL UNIT 3
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13595	129.7888	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13894	129.7704	NF
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13693	129.7677	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13616	129.7551	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13722	129.7423	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13666	129.7307	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	129.7	GEN590010 1-ERCOT EQUIVALENCE
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	129.6984	GEN300007 1-NEW MADRID UNIT 2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13952	129.6885	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13663	129.666	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.6354	GEN659010 4-G07_027IS_2 0.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13668	129.6351	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13808	129.6286	MISSION - WITTEN 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.6111	GEN563232 1-G15089_3 0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.6098	GEN659194 1-NDPRAIRWND1W0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.6095	GEN659366 3-WILTON 3 W0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13678	129.6091	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.5948	GEN652460 4-GARRISON

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.5892	GEN652461 5-GARRISON
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.5827	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.5746	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13669	129.5694	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.5659	GEN652907 1-G09_007IS_3 0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13693	129.5652	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13819	129.5616	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13678	129.5596	FORMAN - OAKES 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.5189	GEN652458 2-GARRISON
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.5189	GEN652459 3-GARRISON
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.5188	GEN652457 1-GARRISON
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13876	129.5049	HURON - WATERTOWN 230KV CKT 2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13595	129.4851	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	129.4781	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	129.4589	GEN590011 2-ERCOT EQUIVALENCE
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	129.4572	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14056	129.4483	P12:230:UMZW:# 166 #: PL IN SD. TAP
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14056	129.4483	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13680	129.4388	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13674	129.4227	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13676	129.4174	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13876	129.4166	CARPENTER - WATERTOWN 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13676	129.4164	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13676	129.4164	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.3937	GEN659403 1-NDSUNFLWR W0.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13774	129.373	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13942	129.3564	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13677	129.3439	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13665	129.3407	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	129.333	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13677	129.3323	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.3175	GEN 11123 1-G736-GEN1 0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.3075	GEN 11133 1-J442-GEN1 0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13658	129.2987	BYRON - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13676	129.278	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13671	129.24	AUDUBON - SHEYNNE 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13648	129.2004	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13676	129.1026	HENNING - INMANN 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13745	129.0778	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13745	129.0777	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.0737	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13745	129.0676	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	129.0432	GEN659411 1-CAMPBLCNTY W0.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13625	129.0288	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13678	129.0124	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13706	129.0098	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13658	129.0098	G15088_T 345.00 - MOORE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13659	128.9697	BYRON - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13680	128.9685	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	128.9528	GEN652906 1-G09_006IS_3 0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13679	128.9431	MN VALLEY TAP - PANTHER 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	128.9407	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13942	128.9301	AXTELL - SWEETWATER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	128.9187	GEN600006 1-AS KING
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13659	128.9052	CENTER - COYOTE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13671	128.8955	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13702	128.8689	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13669	128.8434	KARLSTAD - WINGER 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13675	128.8421	BALTA - RAMSEY 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13950	128.8278	GLENHAM - WHITLOK 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13671	128.814	AUDUBON - HUBBARD 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13666	128.8069	FARGO - SHEYNNE 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13642	128.7929	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13674	128.7859	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	128.7667	SHEYENNE SVC - SHEYNNE 115KV CKT Z
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	128.7561	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13950	128.7323	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13674	128.7275	PRAIRIE - RAMSEY 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	128.727	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	128.7268	GEN652907 1-G09_007IS_3 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	128.7267	GEN659296 2-SDPRAIRWND1W0.6900
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	128.7219	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13678	128.7176	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13698	128.7159	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13671	128.6933	PRAIRIE - WINGER 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13939	128.6869	GLENHAM - L3 HAWDON 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13950	128.6567	OAHE - SULLEY BUTTE 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13675	128.6521	BUFFALO RIDGE - YANKEE 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13652	128.6457	LELAND OLDS - STANTON 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	128.6446	GEN662101 1-WESSINGTON190.5750
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13950	128.6008	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	128.6004	BURR - CANBY 115KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13950	128.573	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	128.5507	GEN652556 2-OAHE
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	128.5507	GEN652557 4-OAHE
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	128.5507	GEN652558 6-OAHE
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13679	128.5429	P13:115-230:NPPD:WAYSIDE4:T1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13672	128.5409	HANKINSON - WAHPETON 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	128.5306	CENTER 230/22.0KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	128.4991	GEN652559 1-OAHE
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	128.4746	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	128.4532	GEN615010 1-STANTON4
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	128.4197	GEN563232 1-G15089_3 0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13679	128.3989	FRANKS - HUBEN 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13919	128.3922	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	128.3734	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	128.325	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13652	128.2557	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	128.2324	GEN659110 1-LELAND OLDS UNIT1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	128.2211	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13691	128.1946	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13691	128.1946	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	128.1897	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	128.1785	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	128.1386	GEN 10648 1-G830_GEN 0.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13626	128.1116	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13650	128.1016	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	128.0542	GEN587053 1-G16-007-GEN10.6500
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13641	128.0537	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	128.046	GEN652545 7-BIG BEND
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	128.0421	GEN659141 1-K10215A
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.9079	GEN652544 5-BIG BEND
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.8756	GEN652543 3-BIG BEND
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.8751	GEN652542 1-BIG BEND
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	127.8254	GEN587653 1-J526-GEN1 0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	127.8	GEN600005 1-MONTICELLO
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	127.745	GEN652173 1-G09_001IS_2 0.6900
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	127.7305	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	127.7264	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	127.7139	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.713	GEN652907 1-G09_007IS_3 0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13792	127.7015	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13792	127.7015	FT THOMPSON - OAHE 230KV CKT 2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.6772	GEN659010 4-G07_027IS_2 0.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.6646	GEN659194 1-NDPRAIRWND1W0.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.6615	GEN659366 3-WILTON 3 W0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13797	127.6482	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13797	127.6482	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.6472	GEN652461 5-GARRISON
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.646	GEN652460 4-GARRISON
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	127.6311	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13942	127.599	G15088_T 345.00 - MOORE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.5861	BLAIR - GRANITE FALLS 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.5662	GEN652457 1-GARRISON
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.5662	GEN652458 2-GARRISON
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.5662	GEN652459 3-GARRISON
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.5544	GEN563232 1-G15089_3 0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	127.5372	BASE CASE
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	127.5178	GEN587633 1-J510-GEN1 18.000
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13626	127.5094	J290_SUB 230.00 - RUGBY 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13662	127.4788	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.4525	GEN659403 1-NDSUNFLWR W0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	127.449	GEN659407 1-ANTELPHILLSW0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13680	127.4025	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13680	127.4025	P12:115:UMZB:# 119 #: IN NE.
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13656	127.3638	AS KING - EAU CLAIRE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14315	127.3238	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.3177	GEN652559 1-OAHE
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.2731	GEN 11123 1-G736-GEN1 0.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.2652	GEN 11133 1-J442-GEN1 0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	127.2262	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	127.1856	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.1635	GEN659411 1-CAMPBLCNTY W0.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.1373	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13682	127.1308	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	127.1271	GEN600003 1-PRAIRIE ISLAND G1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13653	127.0818	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13620	127.0683	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	127.055	RAUN - SIOUX CITY 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13679	127.053	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13641	127.0167	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13678	126.9958	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13659	126.9886	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13683	126.9414	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13682	126.9125	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13786	126.8786	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13786	126.8729	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	126.8675	GEN659296 2-SDPRAIRWND1W0.6900
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13786	126.8601	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13649	126.7545	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13642	126.7528	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13656	126.7326	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	126.6905	GEN587033 1-G16-004-GEN10.6900
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	126.6808	GEN659296 2-SDPRAIRWND1W0.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13663	126.6424	FORMAN - HANKINSON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	126.6395	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	126.6243	GEN652556 2-OAHE
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	126.6243	GEN652557 4-OAHE
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	126.6243	GEN652558 6-OAHE
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	126.5887	EMERY 161/18.0KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	126.575	GEN600006 1-AS KING
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	126.5035	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	126.5035	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14178	126.4618	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	126.3967	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13648	126.3796	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13645	126.3752	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13679	126.3506	MINGO - SETAB 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13664	126.3123	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	126.3004	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	126.2704	GEN659110 1-LELAND OLDS UNIT1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13662	126.2639	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13828	126.2461	P13:230-345:NPPD:STEGALL3:KV3A
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	126.2393	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13682	126.2213	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	126.1253	FORMAN - OAKES 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	126.1231	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	126.0705	GEN659141 1-K10215A
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13654	126.031	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13682	126.0246	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	125.9552	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13659	125.9472	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13807	125.9313	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	125.9074	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	125.8813	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	125.8797	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13865	125.8783	HURON - WATERTOWN 230KV CKT 2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13663	125.8528	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14022	125.8459	P12:230:UMZW:# 166 #: PL IN SD. TAP
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14022	125.8459	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13367	125.8427	MCCOOL - MOORE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	125.8379	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13666	125.7967	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13865	125.793	CARPENTER - WATERTOWN 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13665	125.7797	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13666	125.7785	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13665	125.7784	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13665	125.7784	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	125.7456	GEN587653 1-J526-GEN1 0.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	125.6934	SHEYENNE SVC - SHEYNNE 115KV CKT Z
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13660	125.6526	AUDUBON - SHEYNNE 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13664	125.6411	BALTA - RAMSEY 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13665	125.6223	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13657	125.6214	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13669	125.6036	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	125.6032	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	125.6005	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	125.5892	GEN615010 1-STANTON4
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13963	125.5529	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13963	125.5529	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	125.5083	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13665	125.4635	HENNING - INMANN 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13734	125.4508	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13734	125.4508	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13669	125.4422	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13734	125.4418	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	125.4375	GEN587633 1-J510-GEN1 18.000
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13635	125.4314	HIGHLND 3 345.00 - RAUN 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	125.4028	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13663	125.3985	PRAIRIE - RAMSEY 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13647	125.3965	CENTER - COYOTE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13648	125.3755	BYRON - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	125.3656	MN VALLEY TAP - PANTHER 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13661	125.3131	PRAIRIE - WINGER 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13695	125.294	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	125.2508	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13655	125.2308	FARGO - SHEYNNE 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13660	125.2186	AUDUBON - HUBBARD 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13691	125.2052	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	125.1965	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	125.1856	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13660	125.167	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13658	125.1416	KARLSTAD - WINGER 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13648	125.1406	BYRON - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13687	125.1106	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	125.0651	GEN657749 1-YOUNG 1 GENERATOR
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13662	125.0299	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	125.0193	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13668	125.0087	MCLEOD - PANTHER 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	124.9933	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13680	124.9614	MINGO - RED WILLOW 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	124.9224	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	124.92	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	124.9109	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	124.9003	GEN600005 1-MONTICELLO
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13668	124.8866	P13:115-230:NPPD:WAYSIDE4:T1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13637	124.8261	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	124.7746	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	124.7502	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	124.7239	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	124.7088	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	124.6426	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	124.6006	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13651	124.3364	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	124.3321	GEN659111 2-LELAND OLDS UNIT2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	124.0807	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	123.9578	BASE CASE
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13782	123.9494	FT THOMPSON - OAHE 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13782	123.9494	FT THOMPSON - OAHE 230KV CKT 2
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	123.9374	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13668	123.9258	SUB 3455 - SUB 3740 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13787	123.9137	FT THOMPSON - OAHE 230KV CKT 3
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13787	123.9137	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13668	123.8443	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13668	123.8443	P12:115:UMZB:# 119 #: IN NE.
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	123.8367	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	123.8068	GEN600000 1-SHERBURNECNTY G1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	123.8018	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	123.7728	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	123.7561	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	123.739	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	123.7228	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	123.7228	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13669	123.7216	P12:115:TSGT:GRANTNB7-OGALALA7_2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	123.7179	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	123.6861	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	123.6474	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	123.6232	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13774	123.5823	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13774	123.5813	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13774	123.5673	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13671	123.5465	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	123.4967	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	123.4602	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13647	123.4112	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.18715	123.3962	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	123.2493	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13651	123.2239	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.18715	123.1773	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13635	123.0938	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	123.0227	EMERY 161/18.0KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13630	123.0113	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13637	123.0015	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	122.9871	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	122.9871	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13668	122.9854	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	122.8857	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	122.7676	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14299	122.7496	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	122.7111	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13665	122.534	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13665	122.5198	P12:345:SPS:J07.1.FINN.HITCH
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	122.4282	GEN587293 1-G16-044-GEN10.6900
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	122.357	GEN600001 2-SHERBURNE CNTY G2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	122.3496	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	122.3156	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	122.3115	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	122.308	GEN659125 1-COVEY
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13307	122.2785	GRAND ISLAND - MCCOOL 345KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.18695	122.2774	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	122.2426	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13950	122.2398	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13950	122.2398	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	122.2135	GEN600002 3-SHERBURNE CNTY G3
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13667	122.0992	MINGO - SETAB 345KV CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	122.0012	GEN615001 1-COAL CREEK
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	121.9102	GEN615002 2-COAL CREEK
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	121.7969	GEN659103 1-ANTELOPE VALLEY UNIT1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	121.7969	GEN659107 2-ANTELOPE VALLEY UNIT2
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	121.7906	GEN620315 1-BIG STONE GEN
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	121.2524	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	121.2197	STANTON 230/18.0KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.19100	120.8461	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	120.8434	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13668	120.7957	MINGO - RED WILLOW 345KV CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.19100	120.7408	2810X2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	120.5937	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	120.5226	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	120.3244	GEN659125 1-COVEY
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	120.3145	GEN587133 1-G16-017-GEN10.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	120.1893	GEN659103 1-ANTELOPE VALLEY UNIT1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	120.1893	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	120.0709	GEN615001 1-COAL CREEK
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	119.4894	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	119.3232	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	118.988	GEN587293 1-G16-044-GEN10.6900
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	118.7619	GEN659125 1-COVEY
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	118.743	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	118.5887	GEN587133 1-G16-017-GEN10.6900
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.19100	118.474	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	118.3159	GEN615001 1-COAL CREEK
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	118.203	GEN615002 2-COAL CREEK
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	117.9513	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	116.9011	GEN587133 1-G16-017-GEN10.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	116.8834	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	115.5183	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.18695	114.0285	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13681	107.3731	GEN652353 2-GR PRAIRIEG 0.6900
0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13670	106.0136	GEN652353 2-GR PRAIRIEG 0.6900
0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.13958	103.1739	GEN652353 2-GR PRAIRIEG 0.6900
0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14360	102.9819	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14801	101.0481	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14779	100.2158	STORLA - WESSINGTON 230KV CKT 1
0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14053	100	SPLIT ROCK - WHITE 345KV CKT 1
0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14231	99.5	GEN562714 1-G15_023_4 0.6900
0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14231	99.5	GEN562715 1-G15_023_5 0.6900
0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.14607	99.2	HANLON - STORLA 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	138.6631	GEN562714 1-G15_023_4 0.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	138.6631	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14259	138.3932	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13978	138.3896	LETCHER - SIOUX FALLS 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13733	137.7984	AINSWORTH - VALENTINE 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	137.7812	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	137.7223	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	137.478	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	137.3119	GEN336153 1-WATERFORD UNIT#3
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	137.2915	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13679	137.2669	RAUN - SIOUX CITY 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	137.2372	GEN562714 1-G15_023_4 0.6900
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	137.2372	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13769	137.074	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13480	137.0579	SIDNEY - STEGALL 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14219	136.9459	FT THOMPSON - LETCHER 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	136.9001	GEN335831 1-RIVERBEND UNIT#1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13836	136.8718	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	136.6953	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	136.6843	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	136.6648	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13904	136.6636	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13836	136.6372	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13703	136.6225	FT RANDAL - SPENCER 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13365	136.5956	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13703	136.5783	ONEILL - SPENCER 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13875	136.2896	HANLON - SIOUX FALLS 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	136.2545	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13716	136.1729	RASMUSN - UTICA JCT 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	136.1304	GEN562714 1-G15_023_4 0.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	136.1304	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14189	136.0065	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13710	135.9768	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.9751	GEN501801 1-DOLET HILLS UNIT1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.9415	GEN337653 1-WHITE BLUFF UNIT #2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13774	135.9393	FT RANDAL - UTICA JCT 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13710	135.8285	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.7667	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.7536	GEN338143 1-INDEPENDENCE UNIT #1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13910	135.6649	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13904	135.6553	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14015	135.654	OAHE - PHILIP TAP 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13904	135.6076	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.5355	GEN336251 1-NINEMILE POINT UNIT#4
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.5333	GEN501813 1-RODEMACHER UNIT 3
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13689	135.5279	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.5109	GEN335206 1-NELSON UNIT 6
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.5074	GEN336831 1-BAXTER WILSON SES
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.4571	GEN336252 1-NINEMILE POINT UNIT#5
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	135.4416	GEN337653 1-WHITE BLUFF UNIT #2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13910	135.4393	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	135.4252	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13910	135.4237	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.4213	GEN337041 1-GERALD ANDRUS
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13685	135.4137	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13558	135.4133	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.3381	GEN501812 1-RODEMACHER UNIT 2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	135.3212	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13558	135.3207	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13558	135.3203	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	135.3202	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14007	135.3158	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14007	135.3157	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14007	135.231	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13946	135.2278	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14007	135.1914	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14007	135.1779	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.1487	GEN334440 1-SABINE UNIT 4
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.1468	GEN344897 4-1LAB G4 20.000
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.1437	GEN344894 1-1LAB G1 20.000
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.1437	GEN344895 2-1LAB G2 20.000
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.1436	GEN344896 3-1LAB G3 20.000
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13558	135.1313	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.0803	GEN587353 1-G16-050-GEN10.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13567	135.0765	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.0257	GEN345670 1-1RUSH G1 18.000
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	135.0244	GEN345671 2-1RUSH G2 18.000
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13876	135.0045	CARPENTER - HURON 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	134.98	COLUMEAST - SHELL CREEK 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13888	134.9632	HOSKINS - SHELL CREEK 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	134.9245	GEN336801 1-BAXTER WILSON UNIT #1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13643	134.9013	GAVINS POINT - HARTINGTON 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	134.8826	GEN335614 1-WILLOW GLENN UNIT#4
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13680	134.7692	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14274	134.7384	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13558	134.6731	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	134.6668	GEN531447 1-HOLCOMB GENERATOR
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13607	134.6361	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13644	134.6153	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13758	134.6105	MARTIN - SHANNON 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.17399	134.5407	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.17389	134.5311	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13607	134.5031	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	134.4705	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13733	134.4347	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14259	134.3826	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13698	134.3594	CHADRON - DUNLAP 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13982	134.3284	MENNO JCT - UTICA 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13975	134.1518	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	134.1434	GEN587363 1-G16-055-GEN10.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	134.0931	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13970	134.0929	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13970	134.0928	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13678	134.0876	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	134.0794	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	134.079	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13994	134.0525	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13627	134.0315	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	133.9906	GEN659118 1-LARAMIE RIVER UNIT1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13646	133.9466	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	133.9207	GEN344897 4-1LAB G4 20.000
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	133.9141	GEN344894 1-1LAB G1 20.000
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	133.9136	GEN344896 3-1LAB G3 20.000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13745	133.817	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.17203	133.7471	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.17194	133.746	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13951	133.7382	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13948	133.7034	JAMES TOWN - WEBER 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	133.6892	GEN645011 1-NEBRASKA CITY 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	133.6243	GEN645012 2-NEBRASKA CITY 2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	133.6037	GEN640009 1-COOPER NUCLEAR STATION
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13928	133.5948	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13928	133.5947	LELAND OLDS - STANTON 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	133.5808	GEN542962 2-IATAN UNIT #2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13948	133.5392	BISMARK - WEBER 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13664	133.5251	KELLY - SHELL CREEK 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13745	133.5201	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13664	133.4923	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	133.4727	GEN542957 1-IATAN UNIT #1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	133.4668	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13951	133.4621	PRAIRIE - RAMSEY 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13693	133.434	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	133.4181	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	133.3932	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13968	133.3407	CLEARWATER - NELIGH 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	133.34	GEN542951 5-HAWTHORN UNIT #5
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	133.3365	GEN542955 1-LACYGNE UNIT #1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13690	133.3194	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13686	133.2708	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13679	133.2568	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13968	133.2371	CLEARWATER - ONEILL 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	133.1538	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14315	133.138	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	133.1188	GEN531447 1-HOLCOMB GENERATOR
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13968	133.1133	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13661	133.095	AINSWORTH - BASSETT 7115.00 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13661	133.0798	ATKINSON - STUART 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	133.0363	GEN563222 1-G15088_3 0.6900
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13947	132.9941	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13947	132.994	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	132.9721	GEN542951 5-HAWTHORN UNIT #5
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13792	132.9669	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13792	132.9669	FT THOMPSON - OAHE 230KV CKT 2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	132.9432	BASE CASE
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13661	132.9276	BASSETT 7115.00 - STUART 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13786	132.8933	BROADLAND - HURON 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13786	132.8931	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13661	132.8922	ATKINSON - EMMET 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13797	132.8767	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13797	132.8767	FT THOMPSON - OAHE 230KV CKT 4
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13661	132.8583	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13987	132.8558	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13987	132.8558	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13786	132.8446	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13786	132.836	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13683	132.8265	CALLAWAY - MAXWELL 115KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13659	132.8111	COLUMEAST - SHELL CREEK 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	132.8017	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	132.7773	ANSON 115/17.5KV TRANSFORMER CKT 4
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13957	132.7743	BURR - CANBY 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13662	132.7675	STAPLETON - THEDFORD 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13682	132.7482	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13828	132.7332	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14209	132.7175	FT THOMPSON - LETCHER 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13972	132.7007	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13898	132.6994	P13:230-345:NPPD:SIDNEY 3:KV2A
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13923	132.6909	HOSKINS - RAUN 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13923	132.6909	HOSKINS - RAUN 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13898	132.6895	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13662	132.6757	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13905	132.6752	OGALLALA - SIDNEY 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13898	132.6743	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	132.6163	GEN587153 1-G16-021-GEN10.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13684	132.5938	HANKINSON - WAHPETON 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	132.5907	GEN300002 1-THOMAS HILL UNIT 2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13639	132.5532	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	132.5421	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13679	132.5369	HOLCOMB - SETAB 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	132.5125	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	132.4962	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	132.4956	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	132.4845	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13678	132.4604	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13678	132.4553	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13659	132.4337	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13682	132.4069	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	132.3865	GEN600045 4-ANSON
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14086	132.3455	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14086	132.3455	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14086	132.3381	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14086	132.3381	FT THOMPSON - OAHE 230KV CKT 2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13586	132.3248	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13683	132.3042	AXTELL - PAULINE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	132.2846	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14091	132.2635	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14091	132.2635	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14091	132.2634	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14091	132.2634	FT THOMPSON - OAHE 230KV CKT 4
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13642	132.2634	SUB 3454 - WAGENER 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13678	132.2455	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	132.2174	GEN590010 1-ERCOT EQUIVALENCE
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13973	132.1993	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13651	132.1732	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	132.1605	GEN590011 2-ERCOT EQUIVALENCE
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14187	132.149	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13703	132.1387	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13703	132.1387	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	132.1291	GEN542955 1-LACYGNE UNIT #1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	132.0609	GEN542957 1-IATAN UNIT #1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13942	132.0549	KELLY - SHELL CREEK 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	132.0452	GEN300003 1-THOMAS HILL UNIT 3
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13942	132.0401	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13942	132.04	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	132.0381	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	132.0061	GEN587363 1-G16-055-GEN10.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	131.9991	GEN300007 1-NEW MADRID UNIT 2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	131.9918	GEN300006 1-NEW MADRID UNIT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.9264	GEN642067 1-PLATTE
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13648	131.9254	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.9178	GEN645012 2-NEBRASKA CITY 2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.9048	AINSWORTH WIND 34KV SWITCHED SHUNT
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	131.8938	AS KING - EAU CLAIRE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.8822	GEN542956 2-LACYGNE UNIT #2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	131.8732	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.8604	GEN636641 1-LOUISA UNIT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.8404	GEN542962 2-IATAN UNIT #2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13679	131.8378	MINGO - SETAB 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	131.8351	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.8332	GEN587443 1-G16-064-GEN10.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13822	131.8244	MISSION - WITTEN 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.8215	GEN659118 1-LARAMIE RIVER UNIT1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	131.821	GEN659353 1-DEERCREK CTG18.000
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.8047	GEN645011 1-NEBRASKA CITY 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.798	GEN659118 1-LARAMIE RIVER UNIT1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	131.7772	GEN659354 1-DEERCREK STG18.000
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13969	131.7723	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.7411	GEN642067 1-PLATTE
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.7379	GEN514806 1-SOONER UNIT 2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13949	131.7356	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.7344	GEN514805 1-SOONER UNIT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.7328	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.6891	GEN542957 1-IATAN UNIT #1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13957	131.6884	CROOKED CREEK - RIVERDALE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.6712	GEN542955 1-LACYGNE UNIT #1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13674	131.6678	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13928	131.6575	AINSWORTH - AINSWORTH 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13949	131.6415	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13631	131.635	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.6186	GEN515042 1-SEMINOLE 3G
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.599	GEN515040 1-SEMINOLE 1G
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.5978	GEN542951 5-HAWTHORN UNIT #5
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	131.5971	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.17195	131.5909	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.17186	131.586	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13671	131.5753	JEFFREY - NORTH PLATTE 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.5654	GEN640016 1-KINGSLEY HYDRO
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.5529	GEN542956 2-LACYGNE UNIT #2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.5525	GEN515041 1-SEMINOLE 2G
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13679	131.5478	RAUN - SIOUX CITY 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13649	131.5419	COOPER - MOORE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13964	131.5405	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13955	131.5346	GERALD GENTLEMAN STATION (GGS T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13955	131.5345	GERALD GENTLEMAN STATION (GGS T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13949	131.5182	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13673	131.5177	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13649	131.5105	ATKINSON - EMMET 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13955	131.5038	GERALD GENTLEMAN STATION (GGS T2) 345/230/13.8KV TRANSFORMER CKT 2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13955	131.5037	GERALD GENTLEMAN STATION (GGS T2) 345/230/13.8KV TRANSFORMER CKT 2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.5	GEN509394 1-FLINT CREEK
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.4988	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.4988	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	131.4983	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.4961	KEARNEY 115KV SWITCHED SHUNT
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13968	131.4953	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKEI
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.4863	GEN512688 2-GRDA1 GSU2 22
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.4777	GEN640028 1-COLUMCOGENERATION
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13947	131.4736	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.4735	GEN515226 1-MUSKOGEE 6G
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.4733	GEN515225 1-MUSKOGEE 5G
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.4613	GEN515223 1-MUSKOGEE 4G
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.4462	GEN511840 1-NORTHEASTERN STATION #3
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.4404	GEN513601 1-GRECCTG_1 20.000
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.4352	GEN511842 1-RIVERSIDE STATION #1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.4234	GEN511839 1-NORTHEASTERN STATION #2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.4082	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.4047	GEN511843 1-RIVERSIDE STATION #2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.3891	GEN541151 3-SIBLEY GENERATING UNIT #3
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13677	131.3854	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13940	131.3619	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13940	131.3619	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13658	131.3609	G15088_T 345.00 - PAULINE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.3561	GEN509416 1-TURK GENERATION
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.3448	GEN645041 1-CASS COUNTY 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13968	131.3378	BONESTEEL - GREGORY 115KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.2671	BROKEN BOW - CROOKED CREEK 115KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13669	131.2606	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13637	131.241	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.2383	GEN509394 1-FLINT CREEK
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.222	GEN645042 2-CASS COUNTY 2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.2106	GEN509403 1-PIRKEY GENERATION
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13873	131.2032	COLUMWEST - KELLY 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13651	131.1738	STAPLETON - THEDFORD 115KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13661	131.1646	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.1586	GEN645033 3-SARPY COUNTY 3
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.1483	BASE CASE
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.1446	1222-AINSWORTH WIND
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.1446	1303-KEARNEY
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.1446	2560-BRDLAND-LNX3345.00
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.1446	2561-BRDLAND-LNX3345.00
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.1446	BASE CASE
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.1399	GEN509406 1-WELSH #3
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.1397	GEN509404 1-WELSH #1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	131.1344	GEN660016 1-B_H WIND 0.7000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	131.1264	GEN659291 1-FT MP COLLECTOR
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13651	131.123	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	131.1081	GEN640016 1-KINGSLEY HYDRO
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13661	131.0996	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	131.0829	GEN662101 1-WESSINGTON190.5750
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13919	131.0719	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13954	131.059	AINSWORTH - STUART 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13960	131.0476	CALLAWAY - MAXWELL 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13940	131.0379	STAPLETON - THEDFORD 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	131.0352	GEN652545 7-BIG BEND
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13671	131.029	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13694	131.0251	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	131.0193	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	131.0164	GEN509416 1-TURK GENERATION
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13954	131.0078	ATKINSON - EMMET 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13953	130.9891	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13953	130.9891	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13953	130.988	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13953	130.9879	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13954	130.986	ATKINSON - STUART 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13786	130.975	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	130.9737	GEN509409 1-WILKES #3
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13669	130.971	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13665	130.968	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13665	130.9361	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13665	130.9334	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	130.9207	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	130.8992	GEN509403 1-PIRKEY GENERATION
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	130.8939	GEN587153 1-G16-021-GEN10.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	130.8801	BASE CASE
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13963	130.8578	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	130.8525	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	130.8331	GEN300002 1-THOMAS HILL UNIT 2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13646	130.8321	G15088_T 345.00 - PAULINE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	130.8252	GEN587093 1-G16-023-GEN10.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	130.8252	GEN587193 1-G16-029-GEN10.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13678	130.7882	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13661	130.7634	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13637	130.7626	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13960	130.7616	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13836	130.7493	P13:230-345:NPPD:STEGALL3:KV3A
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13936	130.7004	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13936	130.7003	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	130.6979	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	130.6951	GEN300011 1-ST FRANCIS UNIT 2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	130.6949	GEN300002 1-THOMAS HILL UNIT 2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13960	130.693	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	130.6909	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	130.6873	GEN600045 4-ANSON
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	130.6828	GEN300010 1-ST FRANCIS UNIT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13963	130.6818	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	130.6734	GEN300015 1-1SGPDEL 18.000
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14262	130.6701	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13660	130.6668	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13952	130.6504	GLENHAM - L3 HAWDON 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	130.6504	GEN505432 1-SIKESTON
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13672	130.6435	AXTELL - PAULINE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13963	130.6373	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	130.6313	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13632	130.6213	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13963	130.6077	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	130.5782	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	130.5654	GEN587153 1-G16-021-GEN10.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13963	130.5416	GLENHAM - WHITLOK 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13968	130.5315	GREGORY - WINNER 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13655	130.5305	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13647	130.517	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13654	130.5027	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13960	130.4986	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13960	130.4985	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13674	130.4878	FORMAN - HANKINSON 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13574	130.4801	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13656	130.4596	AXTELL - SWEETWATER 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	130.4558	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	130.4516	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13951	130.4409	LOUP CITY - NORTH LOUP 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14189	130.4274	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	130.411	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13965	130.4019	AXTELL - PAULINE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13637	130.4015	103RD & ROKEBY - MOORE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	130.3869	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14247	130.3685	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13968	130.3629	MISSION - WITTEN 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13968	130.3399	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13968	130.3361	WINNER - WITTEN 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13680	130.3179	MINGO - RED WILLOW 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	130.3095	GEN600045 4-ANSON
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13873	130.2891	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13630	130.2834	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13957	130.2783	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	130.2636	GEN590010 1-ERCOT EQUIVALENCE
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13675	130.2526	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13920	130.2336	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13920	130.2336	SUB 3454 - WAGENER 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	130.2246	GEN652544 5-BIG BEND
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	130.2196	GEN300006 1-NEW MADRID UNIT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13673	130.1891	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	130.158	GEN652543 3-BIG BEND
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	130.157	GEN652542 1-BIG BEND
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13639	130.1452	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	130.1444	GEN300003 1-THOMAS HILL UNIT 3
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13595	130.1264	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13957	130.1154	COOPER - ST JOE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	130.1	GEN590010 1-ERCOT EQUIVALENCE
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13616	130.0907	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13693	130.0857	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13722	130.0777	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	130.0673	GEN590011 2-ERCOT EQUIVALENCE
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13666	130.0535	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	130.0347	GEN300007 1-NEW MADRID UNIT 2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13663	130.0026	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13957	129.9966	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13957	129.992	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13957	129.989	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	129.9798	GEN300003 1-THOMAS HILL UNIT 3
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13668	129.9716	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13808	129.9649	MISSION - WITTEN 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13957	129.953	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13678	129.9194	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13968	129.9132	P12:115:UMZW:# 172 #: WI IN SD.
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	129.8949	GEN300007 1-NEW MADRID UNIT 2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	129.8909	GEN563232 1-G15089_3 0.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13669	129.8887	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	129.8849	GEN300006 1-NEW MADRID UNIT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13693	129.8847	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13963	129.8823	MINGO - SETAB 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13963	129.8822	MINGO - SETAB 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13819	129.8808	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	129.8806	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	129.8725	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13678	129.8703	FORMAN - OAKES 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	129.8405	GEN652457 1-GARRISON
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	129.8405	GEN652458 2-GARRISON
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	129.8405	GEN652459 3-GARRISON
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13876	129.8235	HURON - WATERTOWN 230KV CKT 2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13595	129.8212	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	129.7946	GEN590011 2-ERCOT EQUIVALENCE
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14056	129.7626	P12:230:UMZW:# 166 #: PL IN SD. TAP
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14056	129.7626	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13680	129.7616	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13674	129.7451	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13928	129.7441	COOPER - MOORE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13927	129.7416	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13927	129.7411	103RD & ROKEBY - MOORE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13676	129.737	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13676	129.737	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13876	129.7364	CARPENTER - WATERTOWN 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13676	129.7329	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	129.7157	GEN659403 1-NDSUNFLWR W0.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13774	129.7071	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13665	129.6764	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	129.6687	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13677	129.6632	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13677	129.6517	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	129.637	GEN 11123 1-G736-GEN1 0.6900
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13894	129.6287	NF
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	129.6272	GEN 11133 1-J442-GEN1 0.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13658	129.6187	BYRON - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13676	129.5946	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13671	129.5548	AUDUBON - SHEYNNE 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13952	129.5405	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13648	129.5208	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	129.4777	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13676	129.4199	HENNING - INMANN 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13745	129.3983	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13745	129.3982	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	129.3913	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13745	129.3882	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13625	129.3651	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	129.3644	GEN659411 1-CAMPBLCNTY W0.6900
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	129.3361	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13678	129.3335	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13706	129.3276	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13658	129.3276	G15088_T 345.00 - MOORE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	129.2998	GEN659353 1-DEERCREK CTG18.000
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13659	129.2913	BYRON - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13680	129.2901	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13679	129.264	MN VALLEY TAP - PANTHER 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	129.2268	GEN600006 1-AS KING
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13671	129.2164	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13942	129.2111	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13702	129.1901	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13950	129.1619	GLENHAM - WHITLOK 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13674	129.1066	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	129.0909	GEN660016 1-B_H WIND 0.7000
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13950	129.0662	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	129.0387	GEN659296 2-SDPRAIRWND1W0.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13678	129.0386	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13698	129.0362	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13939	129.0208	GLENHAM - L3 HAWDON 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13950	128.9908	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	128.9789	GEN662101 1-WESSINGTON190.5750
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13950	128.9346	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13950	128.9068	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	128.8754	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13672	128.8754	HANKINSON - WAHPETON 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	128.8648	GEN652556 2-OAHE
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	128.8648	GEN652557 4-OAHE
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	128.8648	GEN652558 6-OAHE
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13679	128.8625	P13:115-230:NPPD:WAYSIDE4:T1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	128.8192	GEN652559 1-OAHE
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	128.8188	GEN652906 1-G09_006IS_3 0.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	128.7948	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13942	128.7912	AXTELL - SWEETWATER 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	128.7736	GEN615010 1-STANTON4
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	128.7689	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13679	128.719	FRANKS - HUBEN 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	128.6656	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	128.6448	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	128.6354	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	128.5942	GEN652907 1-G09_007IS_3 0.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13652	128.5891	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	128.5524	GEN659110 1-LELAND OLDS UNIT1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	128.5406	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13691	128.529	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13691	128.529	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	128.5117	GEN587593 1-J460-GEN1 0.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	128.5096	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13626	128.4441	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13650	128.4356	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	128.4257	CENTER 230/22.0KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	128.4057	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13641	128.3882	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	128.388	GEN587053 1-G16-007-GEN10.6500
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	128.3784	GEN652545 7-BIG BEND
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	128.362	GEN659141 1-K10215A
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	128.3534	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	128.2939	GEN652906 1-G09_006IS_3 0.6900
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13919	128.2557	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	128.2529	GEN563232 1-G15089_3 0.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	128.2407	GEN652544 5-BIG BEND
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	128.2084	GEN652543 3-BIG BEND
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	128.2079	GEN652542 1-BIG BEND
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	128.1443	GEN587653 1-J526-GEN1 0.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	128.1	GEN600005 1-MONTICELLO
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	128.0636	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	128.0457	GEN652907 1-G09_007IS_3 0.6900
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	128.0307	GEN 10648 1-G830_GEN 0.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	128.0104	GEN659010 4-G07_027IS_2 0.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	127.9977	GEN659194 1-NDPRAIRWND1W0.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13792	127.9951	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13792	127.9951	FT THOMPSON - OAHE 230KV CKT 2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	127.9947	GEN659366 3-WILTON 3 W0.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	127.9803	GEN652461 5-GARRISON
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	127.9792	GEN652460 4-GARRISON
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	127.9494	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13797	127.9427	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13797	127.9427	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	127.9188	BLAIR - GRANITE FALLS 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	127.8993	GEN652459 3-GARRISON
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	127.8992	GEN652457 1-GARRISON
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	127.8992	GEN652458 2-GARRISON
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	127.8852	GEN563232 1-G15089_3 0.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	127.8555	BASE CASE
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13626	127.8414	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	127.8361	GEN587633 1-J510-GEN1 18.000
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13662	127.7981	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	127.785	GEN659403 1-NDSUNFLWR W0.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	127.7677	GEN659407 1-ANTELPHILLSW0.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13680	127.7212	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13680	127.7212	P12:115:UMZB:# 119 #: IN NE.
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13656	127.6947	AS KING - EAU CLAIRE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	127.6499	GEN652559 1-OAHE
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	127.6293	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	127.6253	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14315	127.6142	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	127.6054	GEN 11123 1-G736-GEN1 0.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	127.5974	GEN 11133 1-J442-GEN1 0.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	127.5442	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	127.4952	GEN659411 1-CAMPBLCNTY W0.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	127.4684	GEN600004 2-PRAIRIE ISLAND G2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	127.4582	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13682	127.4481	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13942	127.4479	G15088_T 345.00 - MOORE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13653	127.4142	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13620	127.3992	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	127.3871	RAUN - SIOUX CITY 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13679	127.3705	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13641	127.3473	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13678	127.3133	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13659	127.3061	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13683	127.2729	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13682	127.2302	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	127.1983	GEN659296 2-SDPRAIRWND1W0.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13786	127.1749	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13786	127.1691	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13786	127.1576	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	127.0915	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13649	127.0862	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13642	127.0692	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13656	127.0644	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	127.0078	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13663	126.9724	FORMAN - HANKINSON 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	126.9551	GEN652556 2-OAHE
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	126.9551	GEN652557 4-OAHE
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	126.9551	GEN652558 6-OAHE
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	126.9255	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	126.9052	GEN600006 1-AS KING
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	126.9051	EMERY 161/18.0KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	126.8197	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	126.8197	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14250	126.8172	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14178	126.7933	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	126.7127	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13645	126.7058	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13648	126.696	103RD & ROKEBY - MOORE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13679	126.6671	MINGO - SETAB 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13664	126.642	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	126.6171	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	126.6012	GEN659110 1-LELAND OLDS UNIT1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13662	126.5943	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13828	126.5742	P13:230-345:NPPD:STEGALL3:KV3A
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	126.57	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13682	126.5516	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	126.4549	FORMAN - OAKES 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	126.4528	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	126.4009	GEN659141 1-K10215A
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13654	126.3613	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13682	126.3545	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	126.2847	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13659	126.2766	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13807	126.2615	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	126.2227	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13865	126.208	HURON - WATERTOWN 230KV CKT 2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	126.197	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	126.1953	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13663	126.1833	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14022	126.1748	P12:230:UMZW:# 166 #: PL IN SD. TAP
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14022	126.1748	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	126.1672	GEN652173 1-G09_001IS_2 0.6900
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13367	126.1594	MCCOOL - MOORE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13666	126.1259	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13865	126.1225	CARPENTER - WATERTOWN 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13665	126.1087	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13666	126.1075	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13665	126.1075	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13665	126.1075	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	126.0752	GEN587653 1-J526-GEN1 0.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	126.0227	SHEYENNE SVC - SHEYNNE 115KV CKT Z
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13660	125.9812	AUDUBON - SHEYNNE 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13664	125.9699	BALTA - RAMSEY 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13665	125.9514	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13657	125.9513	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13669	125.9335	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	125.9296	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13963	125.8671	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13963	125.8671	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	125.8395	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13665	125.7923	HENNING - INMANN 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13734	125.7794	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13734	125.7793	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13669	125.771	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13734	125.7704	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	125.7667	GEN587633 1-J510-GEN1 18.000
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13635	125.7606	HIGHLND 3 345.00 - RAUN 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	125.7314	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13663	125.7266	PRAIRIE - RAMSEY 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13647	125.725	CENTER - COYOTE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13648	125.7042	BYRON - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	125.6942	MN VALLEY TAP - PANTHER 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13661	125.6415	PRAIRIE - WINGER 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13695	125.622	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13655	125.5589	FARGO - SHEYNNE 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13660	125.546	AUDUBON - HUBBARD 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13691	125.5342	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	125.5249	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	125.5149	GEN615010 1-STANTON4
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	125.4991	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	125.4958	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13660	125.4952	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13658	125.4692	KARLSTAD - WINGER 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13648	125.4689	BYRON - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13687	125.4385	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13662	125.358	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	125.3481	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13668	125.336	MCLEOD - PANTHER 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	125.3214	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13680	125.2767	MINGO - RED WILLOW 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	125.2389	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13668	125.2139	P13:115-230:NPPD:WAYSIDE4:T1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	125.1849	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13637	125.1546	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	125.1182	FRANKS - HUBEN 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	125.0996	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	125.0801	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	125.0515	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	125.0222	STANTON 230/18.0KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	124.9979	GEN657749 1-YOUNG 1 GENERATOR
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	124.9701	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	124.9128	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	124.8444	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	124.7936	GEN600005 1-MONTICELLO
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	124.7154	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13651	124.6646	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	124.6452	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	124.2838	BASE CASE
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13782	124.2735	FT THOMPSON - OAHE 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13782	124.2735	FT THOMPSON - OAHE 230KV CKT 2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13668	124.2527	SUB 3455 - SUB 3740 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	124.2487	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13787	124.2378	FT THOMPSON - OAHE 230KV CKT 3
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13787	124.2378	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13668	124.1706	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13668	124.1706	P12:115:UMZB:# 119 #: IN NE.
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	124.1615	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	124.1263	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	124.1012	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	124.0851	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	124.0674	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13669	124.0472	P12:115:TSGT:GRANTNB7-OGALALA7_2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	124.0466	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	124.0347	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	124.0347	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	124.0121	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	123.9402	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13774	123.9059	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13774	123.9047	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13774	123.8907	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13671	123.8717	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	123.8299	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	123.7926	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13647	123.7367	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	123.7075	GEN600000 1-SHERBURNECNTY G1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.18715	123.7049	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	123.5744	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13651	123.5482	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.18715	123.4892	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13635	123.4184	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	123.347	EMERY 161/18.0KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13630	123.3356	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13637	123.3261	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	123.3151	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	123.3108	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	123.3108	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13668	123.3093	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	123.2898	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	123.2094	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	123.0918	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14299	123.0718	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	123.0349	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13665	122.8589	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13665	122.8435	P12:345:SPS:J07.1.FINN.HITCH
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	122.7375	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	122.6734	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	122.6388	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	122.6347	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	122.6173	GEN659125 1-COVEY
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.18695	122.6021	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13307	122.5884	GRAND ISLAND - MCCOOL 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	122.5652	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13950	122.5619	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13950	122.5619	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13667	122.4227	MINGO - SETAB 345KV CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	122.31	GEN615001 1-COAL CREEK
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	122.2658	GEN600001 2-SHERBURNE CNTY G2
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	122.2188	GEN615002 2-COAL CREEK
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	122.1227	GEN600002 3-SHERBURNE CNTY G3
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	122.1198	GEN659103 1-ANTELOPE VALLEY UNIT1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	122.1198	GEN659107 2-ANTELOPE VALLEY UNIT2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	121.7072	GEN620315 1-BIG STONE GEN
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	121.5729	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	121.5409	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13668	121.1201	MINGO - RED WILLOW 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	120.9127	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	120.8431	GEN587293 1-G16-044-GEN10.6900
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	120.8088	GEN659111 2-LELAND OLDS UNIT2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.19100	120.7098	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	120.6446	GEN659125 1-COVEY
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	120.6171	GEN587133 1-G16-017-GEN10.6900
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.19100	120.6073	2810X2
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	120.1586	GEN659103 1-ANTELOPE VALLEY UNIT1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	120.1586	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	119.8067	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	119.625	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	118.9554	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	118.9033	GEN587133 1-G16-017-GEN10.6900
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	118.7387	GEN659125 1-COVEY
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	118.6776	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.19100	118.4623	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	118.2951	GEN615001 1-COAL CREEK
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	118.1828	GEN615002 2-COAL CREEK
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	117.8904	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	117.195	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	116.8203	GEN587133 1-G16-017-GEN10.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	115.8273	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.18695	114.332	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13681	107.5737	GEN652353 2-GR PRAIRIEG 0.6900
0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13670	106.2914	GEN652353 2-GR PRAIRIEG 0.6900
0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14360	102.9724	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.13958	102.961	GEN652353 2-GR PRAIRIEG 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14801	101.0205	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14779	100.1844	STORLA - WESSINGTON 230KV CKT 1
0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14053	99.9	SPLIT ROCK - WHITE 345KV CKT 1
0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14231	99.5	GEN562714 1-G15_023_4 0.6900
0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14231	99.5	GEN562715 1-G15_023_5 0.6900
0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.14607	99.2	HANLON - STORLA 230KV CKT 1
0	16WP	G16_017	-	Non-Converged Contingency	0.0	0.0	0.39549	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	16WP	G16_017	-	Non-Converged Contingency	0.0	0.0	0.26366	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	16WP	G16_017	-	Non-Converged Contingency	0.0	0.0	0.26366	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	16WP	G16_017	-	Non-Converged Contingency	720.0	720.0	0.13183	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	16WP	G16_017	-	Non-Converged Contingency	720.0	720.0	0.13183	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	16WP	G16_017	-	Non-Converged Contingency	720.0	720.0	0.13183	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	16WP	G16_017	-	Non-Converged Contingency	720.0	720.0	0.13183	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	16WP	G16_017	-	Non-Converged Contingency	720.0	720.0	0.13183	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	16WP	G16_017	-	Non-Converged Contingency	720.0	720.0	0.13183	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	16WP	G16_017	-	Non-Converged Contingency	720.0	720.0	0.13183	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	20L	G16_017	-	Non-Converged Contingency	0.0	0.0	1.15926	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20WP	G16_017	-	Non-Converged Contingency	0.0	0.0	0.28462	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	20WP	G16_017	-	Non-Converged Contingency	720.0	720.0	0.14231	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	20WP	G16_017	-	Non-Converged Contingency	720.0	720.0	0.14231	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	25SP	G16_017	-	Non-Converged Contingency	0.0	0.0	0.08602	-	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	25SP	G16_017	-	Non-Converged Contingency	1732.1	2165.1	0.03719	-	FORBES - ROSEAU 500KV CKT 1
0	25SP	G16_017	-	Non-Converged Contingency	1732.1	2165.1	0.03719	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	25SP	G16_017	-	Non-Converged Contingency	1732.1	2165.1	0.03719	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	20SP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04661	122.6292	BASE CASE
0	25SP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04754	120.672	BASE CASE
0	20L	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04394	113.9692	BASE CASE
0	20WP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04123	113.9642	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20WP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04123	113.829	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20WP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04123	113.8274	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20L	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05737	113.2336	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20L	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05737	113.1301	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20L	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.05737	113.1286	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20WP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04270	112.5598	BASE CASE
0	17SP	G16_020	TO->FROM	CLINTON JUNCTION - ELK CITY 138KV CKT 1	136.0	152.0	0.03426	107.1886	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20SP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11015	173.566	BASE CASE
0	17SP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11091	171.3292	BASE CASE
0	20WP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10979	171.2705	BASE CASE
0	16WP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11098	167.6299	BASE CASE
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11122	165.7341	BASE CASE
0	25SP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11046	156.7486	BASE CASE
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11128	148.2829	BASE CASE
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10926	136.2649	BASE CASE
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10438	128.0053	BASE CASE
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11246	114.9273	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10689	112.1659	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.09573	111.4033	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10750	111.1018	FAIRVIEW - OKEENE 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.12480	110.9516	MOORELAND - PIC4 138.00 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.12480	110.9223	P12:138:WFEC:MSL12
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.12480	110.8503	CEDARDALE - PIC4 138.00 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.12480	110.6677	CEDARDALE - OKEENE 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10689	110.6537	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11416	110.181	BUFBEAR2 - BUFFALO 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11043	110.0273	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11043	110.0273	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11043	110.0273	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11043	110.0273	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10950	109.8214	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10718	109.6424	G15063_T 345.00 - WOODRING 345KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11416	109.4215	BUFFALO - WEST 69KV CKT 1
0	20SP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.04049	109.3216	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11399	109.0455	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11399	108.9118	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10718	108.8866	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11399	108.8113	IMO TAP - MEN TAP 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11416	108.795	FREEDOM - WEST 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.12482	108.3395	P12:138:WFEC:MSL14
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.12482	108.2852	BEARCAT 138.00 - MOORELAND 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.13226	108.2181	GLASS MOUNTAIN - MOORELAND 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10750	108.1601	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10750	108.1533	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
0	20SP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.03694	108.1097	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10976	108.0666	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10976	108.0666	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.12482	107.878	BEARCAT 138.00 - NINE MILE 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.13226	107.864	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.15947	107.7563	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.15947	107.756	WOODWARD - WWPAR4 138.00 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11409	107.7449	DEWEY - SOUTHARD 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11698	107.7071	ELK CITY - RED HILLS WIND 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11698	107.7071	ELK CITY - RED HILLS WIND 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11416	107.6973	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10926	107.6699	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10976	107.5647	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10976	107.4438	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10976	107.4438	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11409	107.3745	ROMAN NOSE - SOUTHARD 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.12482	107.1576	MOREWOOD SW - NINE MILE 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11020	107.0917	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11673	106.9275	DOVER SW - OKEENE 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10750	106.8073	CARMEN - EAGLE CHIEF 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11416	106.709	ALVA - WINCH_TAP 69.000 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10926	106.6004	GEN514805 1-SOONER UNIT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11020	106.5509	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11416	106.4926	FT SUPPLY - STOCKHOLM2 69.000 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10841	106.4415	CIMARRON - MINCO 345KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10734	106.3867	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11416	106.3773	BUFBEAR2 - STOCKHOLM2 69.000 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11030	106.3556	CLEO JCT - RINGWOOD 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11030	106.3531	CLEO CORNER - CLEO JCT 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10734	106.2279	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10734	106.1692	ALINETP2 69.000 - ALVA 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11134	106.1409	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.15552	105.2419	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.15552	105.2415	WOODWARD - WWPAR4 138.00 138KV CKT 1
0	20SP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.04049	104.8337	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.05006	104.2251	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11939	104.0737	MOORELAND - PIC4 138.00 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11939	104.0565	P12:138:WFEC:MSL12
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11939	103.9768	CEDARDALE - PIC4 138.00 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11939	103.8714	CEDARDALE - OKEENE 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10219	103.7485	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10903	103.0299	BUFBEAR2 - BUFFALO 69KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10462	102.8483	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10190	102.627	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10903	102.5642	BUFFALO - WEST 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10188	102.5609	CZYCRVT2 69.000 - SALINE 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10894	102.5124	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10926	102.4665	GEN515393 1-OGEWND2G
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10913	102.4461	CRESWELL - MIDLTNT4 138.00 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11290	102.4427	IODINE - MOORELAND 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10848	102.4313	P12:138:OKGE:3TERM7
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10894	102.3839	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10828	102.3538	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10828	102.3518	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10219	102.3242	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.12096	102.3165	P12:138:WFEC:MSL14
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10926	102.3065	GEN525561 1-TOLK GEN #1 24 KV
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.12096	102.2708	BEARCAT 138.00 - MOORELAND 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.12174	102.2367	DEWEY - TALOGA 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10903	102.1199	FREEDOM - WEST 69KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10861	102.0857	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10926	102.0055	GEN587023 1-G16-003-GEN10.6500
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10487	101.9589	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10487	101.9589	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10487	101.9589	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10487	101.9589	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11290	101.94	FT SUPPLY - IODINE 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10861	101.9286	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10861	101.8788	IMO TAP - MEN TAP 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10190	101.8765	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.12096	101.8542	BEARCAT 138.00 - NINE MILE 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10848	101.8341	P12:138:WERE:CRSW-OGE_138::
0	20WP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.03694	101.8048	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11261	101.7914	ELK CITY - RED HILLS WIND 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11261	101.7914	ELK CITY - RED HILLS WIND 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.05515	101.7528	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11246	101.5306	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10232	101.4973	FAIRVIEW - OKEENE 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10188	101.4671	CZYCRVT2 69.000 - KNOBHILL 69KV CKT 1
0	25SP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.03694	101.4056	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10926	101.3772	GEN515389 1-TLGWND-WTG1 0.7000
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10903	101.3377	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.12610	101.1666	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.12096	101.1454	MOREWOOD SW - NINE MILE 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10890	101.0701	DEWEY - SOUTHARD 138KV CKT 1
0	17SP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.03690	101.0393	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10390	101.0116	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	25SP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.04049	100.9589	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.12610	100.9189	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10448	100.9006	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10448	100.8983	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10448	100.8983	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10531	100.86	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10531	100.86	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10890	100.8575	ROMAN NOSE - SOUTHARD 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10438	100.8496	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11106	100.6873	DOVER SW - OKEENE 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10926	100.6787	GEN515365 1-CENT 21 0.7000
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10903	100.6315	ALVA - WINCH_TAP 69.000 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10926	100.5535	GEN520922 1-SLEEPING BEAR
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10390	100.453	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10438	100.4404	GEN514805 1-SOONER UNIT 1
0	17SP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.04064	100.3062	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10232	100.2845	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10232	100.2791	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10457	100.2649	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10457	100.2649	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.11222	100.2281	ALVA - ALVA 69KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10535	99.8	CLEO CORNER - CLEO JCT 69KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10535	99.8	CLEO JCT - RINGWOOD 69KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10253	99.7	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10438	99.6	GEN514806 1-SOONER UNIT 2
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10253	99.6	ALINETP2 69.000 - ALVA 69KV CKT 1
0	20L	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10253	99.6	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10926	99.5	GEN515787 1-OKLA WIND ENERGY CENTER
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.14407	99.1	FPL SWITCH - MOORELAND 138KV CKT 1
0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143.0	187.0	0.10750	99	ALVA - CHEROKEE SW 69KV CKT 1
0	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06498	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06498	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06329	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06329	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04906	104.4987	BASE CASE
0	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05522	104.3491	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05347	103.6936	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04693	103.443	BASE CASE
0	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04906	101.4903	GEN587433 1-G16-063-GEN10.6900
0	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04693	100.7184	GEN587433 1-G16-063-GEN10.6900
0	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05571	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05571	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04906	99.9	GEN509416 1-TURK GENERATION
0	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05085	99.8	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05085	99.5	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05085	99.3	917X
0	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04154	99.3	P12:138:WFEC:MSL03
0	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04875	99.3	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04693	99.3	GEN509403 1-PIRKEY GENERATION
0	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04693	99.1	GEN509416 1-TURK GENERATION
0	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04906	99	GEN501801 1-DOLET HILLS UNIT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04875	99	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G16_020	FROM->TO	LULA - TUPELO TAP 138KV CKT 1	120.0	120.0	0.03763	100.0648	PITTSBURG - SEMINOLE 345KV CKT 1
0	17G	G16_020	FROM->TO	LULA - TUPELO TAP 138KV CKT 1	120.0	120.0	0.03763	100.0648	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_020	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.10979	117.0566	BASE CASE
0	20SP	G16_020	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.11015	116.7257	BASE CASE
0	17SP	G16_020	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.11091	116.0445	BASE CASE
0	16WP	G16_020	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.11098	114.8007	BASE CASE
0	17G	G16_020	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.11122	112.919	BASE CASE
0	25SP	G16_020	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.11046	105.0615	BASE CASE
0	20L	G16_020	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200.0	234.0	0.11128	100.9714	BASE CASE
0	16WP	G16_020	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.09803	112.8138	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_020	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.09968	110.6909	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_020	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.09803	107.5838	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G16_020	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.09968	105.3493	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.05265	109.3158	PITTSBURG - SEMINOLE 345KV CKT 1
0	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.05265	109.3158	PITTSBURG - SEMINOLE 345KV CKT 1
0	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.05450	107.0549	PITTSBURG - VALLIANT 345KV CKT 1
0	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.05450	107.0549	PITTSBURG - VALLIANT 345KV CKT 1
0	20WP	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03631	106.7999	HUGO (HUGO 1) 345/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03601	105.1673	HUGO (HUGO 1) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.04766	103.0747	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.04221	101.7551	GEN520947 1-HUGO1
0	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.04766	99.5	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17SP	G16_020	TO->FROM	CLINTON JUNCTION - ELK CITY 138KV CKT 1	136.0	152.0	0.03429	106.1497	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06334	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06334	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06526	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06526	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05381	104.6637	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04721	104.4426	BASE CASE
2	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04965	104.1902	BASE CASE
2	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05579	104.0601	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04721	101.6398	GEN587433 1-G16-063-GEN10.6900
2	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04965	101.2449	GEN587433 1-G16-063-GEN10.6900
2	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04889	100.27	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04721	100.2225	GEN509403 1-PIRKEY GENERATION
2	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04721	100.1495	GEN509416 1-TURK GENERATION
2	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05385	100	PITTSBURG - VALLIANT 345KV CKT 1
2	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05385	100	PITTSBURG - VALLIANT 345KV CKT 1
2	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04889	100	G15066_T 345.00 - SOONER 345KV CKT 1
2	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05623	99.9	PITTSBURG - VALLIANT 345KV CKT 1
2	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05623	99.9	PITTSBURG - VALLIANT 345KV CKT 1
2	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04889	99.8	917X
2	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04965	99.6	GEN509416 1-TURK GENERATION
2	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05129	99.5	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03956	99.3	P12:138:WFEC:MSL03
2	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05129	99.2	G15066_T 345.00 - SOONER 345KV CKT 1
2	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04721	99.1	GEN501801 1-DOLET HILLS UNIT1
2	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05129	99	917X
2	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04221	99	P12:138:WFEC:MSL03
2	17G	G16_020	FROM->TO	LULA - TUPELO TAP 138KV CKT 1	120.0	120.0	0.03729	99.8	PITTSBURG - SEMINOLE 345KV CKT 1
2	17G	G16_020	FROM->TO	LULA - TUPELO TAP 138KV CKT 1	120.0	120.0	0.03729	99.8	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G16_020	FROM->TO	LULA - TUPELO TAP 138KV CKT 1	120.0	120.0	0.02968	99.8	HUGO (HUGO 1) 345/138/13.8KV TRANSFORMER CKT 1
2	16WP	G16_020	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.09659	113.031	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G16_020	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.09854	112.8149	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G16_020	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.09659	107.766	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	G16_020	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.09854	107.4531	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.05208	108.9656	PITTSBURG - SEMINOLE 345KV CKT 1
2	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.05208	108.9655	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03605	108.7064	HUGO (HUGO 1) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.05399	106.7068	PITTSBURG - VALLIANT 345KV CKT 1
2	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.05399	106.7067	PITTSBURG - VALLIANT 345KV CKT 1
2	16WP	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03571	105.3904	HUGO (HUGO 1) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.04727	102.6946	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.04178	101.4726	GEN520947 1-HUGO1
2	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.04727	99.2	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
3	17SP	G16_020	TO->FROM	CLINTON JUNCTION - ELK CITY 138KV CKT 1	136.0	152.0	0.03429	106.1497	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
3	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06334	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
3	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06334	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
3	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06526	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06526	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
3	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05381	104.6637	CIMARRON - DRAPER LAKE 345KV CKT 1
3	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04721	104.4426	BASE CASE
3	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04965	104.1902	BASE CASE
3	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05579	104.0601	CIMARRON - DRAPER LAKE 345KV CKT 1
3	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04721	101.6398	GEN587433 1-G16-063-GEN10.6900
3	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04965	101.2449	GEN587433 1-G16-063-GEN10.6900
3	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04889	100.27	CLEVELAND - G15066_T 345.00 345KV CKT 1
3	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04721	100.2225	GEN509403 1-PIRKEY GENERATION
3	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04721	100.1495	GEN509416 1-TURK GENERATION
3	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05385	100	PITTSBURG - VALLIANT 345KV CKT 1
3	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05385	100	PITTSBURG - VALLIANT 345KV CKT 1
3	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04889	100	G15066_T 345.00 - SOONER 345KV CKT 1
3	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05623	99.9	PITTSBURG - VALLIANT 345KV CKT 1
3	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05623	99.9	PITTSBURG - VALLIANT 345KV CKT 1
3	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04889	99.8	917X
3	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04965	99.6	GEN509416 1-TURK GENERATION
3	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05129	99.5	CLEVELAND - G15066_T 345.00 345KV CKT 1
3	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03956	99.3	P12:138:WFEC:MSL03
3	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05129	99.2	G15066_T 345.00 - SOONER 345KV CKT 1
3	20WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04721	99.1	GEN501801 1-DOLET HILLS UNIT1
3	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05129	99	917X
3	16WP	G16_020	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04221	99	P12:138:WFEC:MSL03
3	17G	G16_020	FROM->TO	LULA - TUPELO TAP 138KV CKT 1	120.0	120.0	0.03729	99.8	PITTSBURG - SEMINOLE 345KV CKT 1
3	17G	G16_020	FROM->TO	LULA - TUPELO TAP 138KV CKT 1	120.0	120.0	0.03729	99.8	PITTSBURG - SEMINOLE 345KV CKT 1
3	20WP	G16_020	FROM->TO	LULA - TUPELO TAP 138KV CKT 1	120.0	120.0	0.02968	99.8	HUGO (HUGO 1) 345/138/13.8KV TRANSFORMER CKT 1
3	16WP	G16_020	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.09659	113.0309	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
3	20WP	G16_020	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.09854	112.8149	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
3	16WP	G16_020	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.09659	107.766	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
3	20WP	G16_020	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.09854	107.4531	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
3	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.05208	108.9656	PITTSBURG - SEMINOLE 345KV CKT 1
3	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.05208	108.9656	PITTSBURG - SEMINOLE 345KV CKT 1
3	20WP	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03605	108.7063	HUGO (HUGO 1) 345/138/13.8KV TRANSFORMER CKT 1
3	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.05399	106.7068	PITTSBURG - VALLIANT 345KV CKT 1
3	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.05399	106.7068	PITTSBURG - VALLIANT 345KV CKT 1
3	16WP	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03571	105.3904	HUGO (HUGO 1) 345/138/13.8KV TRANSFORMER CKT 1
3	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.04727	102.6946	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
3	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.04178	101.4726	GEN520947 1-HUGO1
3	17G	G16_020	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.04727	99.2	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07495	117.7326	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07495	116.7709	COLUMEAST - SHELL CREEK 345KV CKT 1
0	25SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07455	113.2086	COLUMEAST - SHELL CREEK 345KV CKT 1
0	25SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07455	112.4583	COLUMEAST - SHELL CREEK 345KV CKT 1
0	17SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07447	112.2367	COLUMEAST - SHELL CREEK 345KV CKT 1
0	17SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07447	111.6786	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20WP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.08108	108.488	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20WP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.08108	106.932	COLUMEAST - SHELL CREEK 345KV CKT 1
0	16WP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07572	106.8547	COLUMEAST - SHELL CREEK 345KV CKT 1
0	16WP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07572	104.8174	COLUMEAST - SHELL CREEK 345KV CKT 1
0	17G	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07467	101.1322	COLUMEAST - SHELL CREEK 345KV CKT 1
0	17G	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07467	99.4	COLUMEAST - SHELL CREEK 345KV CKT 1
0	17G	G16_021	FROM->TO	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	320.0	320.0	0.15890	99.6	HOSKINS - RAUN 345KV CKT 1
0	17G	G16_021	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.04492	109.8553	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	20WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04161	133.1186	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04901	130.5344	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04860	129.5249	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04880	128.6487	STORLA - WESSINGTON 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04932	127.6069	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04932	127.4418	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04932	127.4249	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04932	127.4249	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04897	127.3375	HANLON - STORLA 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04856	126.648	FT THOMPSON - LETCHER 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04856	126.648	FT THOMPSON - LETCHER 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05849	125.9588	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05849	125.9588	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04999	125.6308	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04999	125.4581	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04999	125.4569	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05087	125.2095	HAZLETON - MITCHLCO3 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04923	125.0696	SPLIT ROCK - WHITE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04923	125.0696	SPLIT ROCK - WHITE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04792	125.0065	FT RANDAL - FT THOMPSON 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04792	125.0065	FT RANDAL - FT THOMPSON 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04798	124.9424	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04798	124.9424	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04994	124.8525	G09_001IST 345.00 - GROTON 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05017	124.731	CENTER - JAMESTOWN 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04923	124.7231	LETCHER - SIOUX FALLS 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.03531	124.7016	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05045	124.6819	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04901	124.6716	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05019	124.647	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04798	124.6018	FT RANDAL - LAKE PLATT 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05830	124.4888	NUNDRWD - WAYSIDE 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05185	124.4338	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05185	124.4304	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05051	124.4097	AS KING - EAU CLAIRE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05185	124.3917	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04943	124.2424	FT RANDAL - SIOUX CITY 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04778	124.1641	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04779	124.1552	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	124.1491	GEN635024 4-WALTER SCOTT UNIT 4
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05087	124.128	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04801	123.7616	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04801	123.7616	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.03966	123.7465	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	123.7202	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04801	123.7017	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	123.6993	GEN635023 3-WALTER SCOTT UNIT 3
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	123.6621	GEN344225 1-1CAL G1 25.000
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04801	123.6381	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04974	123.5886	RASMUSN - UTICA JCT 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04958	123.5862	HANLON - SIOUX FALLS 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	123.5503	GEN336153 1-WATERFORD UNIT#3
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05065	123.5349	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05063	123.5212	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05021	123.4877	ELLENDALE - OAKES 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05021	123.4877	ELLENDALE - OAKES 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05235	123.4439	GRIMES - LEHIGH 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05022	123.3823	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05021	123.3795	FORMAN - OAKES 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	123.3744	GEN641089 2-ENERGY CENTER 2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04974	123.3437	RASMUSN - SIOUX CITY 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05791	123.3163	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05020	123.2896	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	123.2565	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	123.2512	GEN335831 1-RIVERBEND UNIT#1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	123.2135	GEN336821 1-GRAND GULF UNIT
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	123.1832	GEN337653 1-WHITE BLUFF UNIT #2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04942	123.172	PAHOJA - SIOUX FALLS 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05023	123.1303	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05046	123.0352	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05022	123.021	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05050	122.9985	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05023	122.9938	FORMAN - HANKINSON 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.9674	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05133	122.9526	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05160	122.9287	SIDNEY - STEGALL 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.9108	GEN587353 1-G16-050-GEN10.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04880	122.9039	FT THOMPSON - WESSINGTON 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04880	122.9039	FT THOMPSON - WESSINGTON 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04998	122.8967	CARPENTER - HURON 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05046	122.8554	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05018	122.8118	CHISAGO COUNTY - FORBES 500KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.8009	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04998	122.786	HURON - WATERTOWN 230KV CKT 2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04998	122.786	HURON - WATERTOWN 230KV CKT 2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04942	122.774	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05018	122.7398	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.7347	GEN501801 1-DOLET HILLS UNIT1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05032	122.7165	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.7101	GEN563222 1-G15088_3 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04998	122.7019	CARPENTER - WATERTOWN 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04998	122.7019	CARPENTER - WATERTOWN 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05051	122.7012	BYRON - NORTH ROCHESTER 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04899	122.6835	RAUN - SIOUX CITY 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04899	122.6835	RAUN - SIOUX CITY 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.07650	122.6552	HOSKINS - SHELL CREEK 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05032	122.6517	MISSION - ST FRANCIS 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.6365	GEN337652 1-WHITE BLUFF UNIT #1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04963	122.6242	FT RANDAL - UTICA JCT 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.58	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05028	122.5601	HANKINSON - WAHPETON 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.547	GEN338146 1-INDEPENDENCE UNIT #2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.5438	GEN338143 1-INDEPENDENCE UNIT #1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05032	122.5414	HARMONY - ST FRANCIS 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05861	122.5163	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05861	122.5163	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05032	122.4559	HARMONY - VALENTINE 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05954	122.4487	COLUMEAST - SHELL CREEK 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05052	122.4392	BYRON - PLEASANT VALLEY 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04950	122.4123	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04950	122.4123	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05082	122.3803	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.3662	GEN501813 1-RODEMACHER UNIT 3
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05082	122.3638	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04950	122.363	FT RANDAL - SPENCER 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05024	122.3525	BLAIR - GRANITE FALLS 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05024	122.3525	BLAIR - GRANITE FALLS 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05023	122.2731	CENTER - COYOTE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04983	122.2457	FT THOMPSON - HURON 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04983	122.2457	FT THOMPSON - HURON 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04983	122.2457	FT THOMPSON - HURON 230KV CKT 2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04983	122.2457	FT THOMPSON - HURON 230KV CKT 2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04950	122.2437	ONEILL - SPENCER 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.2231	GEN335206 1-NELSON UNIT 6
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04877	122.1546	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05034	122.1362	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04941	122.1252	GAVINS POINT - HARTINGTON 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05032	122.1077	AINSWORTH - VALENTINE 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.1064	GEN501812 1-RODEMACHER UNIT 2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.1062	GEN344897 4-1LAB G4 20.000
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.1039	GEN344894 1-1LAB G1 20.000
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.1037	GEN344896 3-1LAB G3 20.000
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05046	122.0833	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04837	122.0763	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.071	GEN344895 2-1LAB G2 20.000
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.0675	GEN642067 1-PLATTE
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.0629	GEN587363 1-G16-055-GEN10.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04837	122.0612	CLEARWATER - ONEILL 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05050	122.0409	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.0296	GEN345670 1-1RUSH G1 18.000
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.0294	GEN345671 2-1RUSH G2 18.000
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05022	122.0276	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05023	122.0248	GARRISON - JAMES TOWN 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	122.0207	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04837	122.0001	CLEARWATER - NELIGH 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.9909	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05050	121.9784	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05050	121.9782	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.9769	GEN336252 1-NINEMILE POINT UNIT#5
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.9368	GEN336831 1-BAXTER WILSON SES
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.9299	GEN587443 1-G16-064-GEN10.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05092	121.9088	DENISON - SIOUX CITY 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05023	121.887	FARGO - JAMES TOWN 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05050	121.8785	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.8731	GEN337041 1-GERALD ANDRUS
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04994	121.8678	MENNO JCT - TRIPP JCT 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05023	121.8621	FARGO - JAMES TOWN 230KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05026	121.8617	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05026	121.8617	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05024	121.8447	AUDUBON - SHEYNNE 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05022	121.8382	BISMARK - JAMES TOWN 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.8342	GEN334440 1-SABINE UNIT 4
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05022	121.8091	JAMES TOWN - WEBER 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05513	121.8052	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05022	121.7981	BISMARK - WEBER 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05513	121.7961	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05513	121.7956	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.7944	GEN336251 1-NINEMILE POINT UNIT#4
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05026	121.7932	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.7844	P13:115-230:NPPD:NUCOR-3
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.7824	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04994	121.7682	MENNO JCT - UTICA 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05051	121.7665	NOBLES - SPLIT ROCK 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05026	121.76	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05026	121.76	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05036	121.7584	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04941	121.7384	BELDEN - HARTINGTON 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05024	121.7364	BALTA - RAMSEY 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05026	121.7216	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.7212	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.7206	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04994	121.7129	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.7113	P13:230-345:NPPD:NUCOR-1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.6921	GEN303007 1-1BC2 U2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.6919	GEN336191 1-LITTLE GYPSY UNIT#3
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.6894	GEN303006 1-1BC2 U1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.6888	GEN335204 1-NELSON UNIT 4
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05023	121.6845	ELM CREEK - MONTICELLO 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.6796	GEN531447 1-HOLCOMB GENERATOR
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.6734	P13:115-345:NPPD:NUCOR-2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05024	121.6663	BALTA - RUGBY 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05024	121.6633	BALTA - MCHENRY 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05031	121.6578	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.65	JAMES TOWN - PICKERT 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.6448	GEN336801 1-BAXTER WILSON UNIT #1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05026	121.6419	HENNING - INMANN 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.6376	GEN335614 1-WILLOW GLENN UNIT#4
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.6356	GEN303008 1-1BC2 U3
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.6343	GEN336170 1-GULF OXY U4
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.6269	GEN336464 1-MICHOUD UNIT #3
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.6187	GEN334441 1-SABINE UNIT 5
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05033	121.6157	GENOA 161 - SENECA 161 161KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05024	121.6147	PRAIRIE - RAMSEY 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05057	121.6127	ARNOLD - HAZLETON 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05031	121.6104	NORTH LA CROSSE (10008630_001) 345/161/34.5KV TRANSFORMER CKT 9
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.5912	GEN501811 1-RODEMACHER UNIT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04931	121.5866	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05024	121.5785	COAL CREEK - UNDERWOOD 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04976	121.5593	HELENA - SHEAS LK3 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05028	121.5492	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05050	121.5469	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04865	121.5465	GAVINS POINT - YANKON JCT 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04865	121.5465	GAVINS POINT - YANKON JCT 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05020	121.5393	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.5358	AUDUBON - HUBBARD 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.5339	GEN334433 1-SABINE UNIT 3
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.5338	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05028	121.5259	MN VALLEY TAP - PANTHER 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.5235	GEN334071 1-LEWIS CREEK 2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.5223	WHITE BLUFF 500/26.0KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.5188	GEN334070 1-LEWIS CREEK 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05023	121.5186	CENTER - SQUARE BUTTE 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05022	121.5163	LELAND OLDS - STANTON 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05022	121.5163	LELAND OLDS - STANTON 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.5138	GEN523972 1-HARRINGTON GEN #2 24 KV
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.5137	GEN523971 1-HARRINGTON GEN #1 24 KV
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05031	121.5134	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05031	121.5134	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05221	121.5126	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.5125	GEN338388 1-1PLUM PT U1 23.000
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05221	121.5081	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05092	121.5046	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05092	121.5046	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.5045	GEN337766 1-TRACTEBEL UNIT S1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.4937	GEN562547 1-G14_039_3 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05005	121.4895	MT VERN - STORLA 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05018	121.4886	GRANT - MITCHELL 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05018	121.4886	GRANT - MITCHELL 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05221	121.483	ALBION - PETERSBURG 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05268	121.4742	AINSWORTH - CALAMUS 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05268	121.4725	P12:115:NPPD:1090:AINSWND7:THEDFRD7:BTB
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.4657	GEN501910 1-ACADIA UNIT ST1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05268	121.4638	CALAMUS - THEDFORD 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05062	121.4636	PALXFRASBTHI
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.4547	GEN523973 1-HARRINGTON GEN #3 24 KV
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.4488	GEN336222 1-LITTLE GYPSY UNIT#2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.442	GEN659118 1-LARAMIE RIVER UNIT1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.441	GEN641086 1-ENERGY CENTER
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05056	121.4366	P13:115-230:TSGT:SIDNEY-KV1A
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.4313	GEN563212 1-G15087_3 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	121.4284	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05106	121.4177	MARTIN - SHANNON 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05092	121.3549	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04782	121.2722	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.9368	BASE CASE
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05256	120.8297	KELLY - SHELL CREEK 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05256	120.825	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05256	120.825	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05030	120.6764	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.03774	120.6221	HOSKINS - RAUN 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.03774	120.6221	HOSKINS - RAUN 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05037	120.5895	CIRCLE - MULLERGREN 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05037	120.5895	CIRCLE - MULLERGREN 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.5637	GEN635214 4-NEAL UNIT 4
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05032	120.5631	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05032	120.5631	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.5316	GEN300003 1-THOMAS HILL UNIT 3
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05031	120.5254	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05045	120.5057	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05045	120.5057	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05034	120.5017	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05029	120.4925	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05035	120.4837	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05029	120.4826	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05031	120.476	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05240	120.473	MINGO - SETAB 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05240	120.473	MINGO - SETAB 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05028	120.4684	G16-063-TAP 345.00 - HUGO 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05063	120.4666	AURORA - GRAND ISLAND 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05028	120.4659	LYDIA - VALLIANT 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05028	120.4659	LYDIA - VALLIANT 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05064	120.4556	VICTORY HILL (VICTORYHL T1) 230/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05064	120.4556	VICTORY HILL (VICTORYHL T1) 230/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.4404	GEN587153 1-G16-021-GEN10.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05335	120.4371	MOORE - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05335	120.4371	MOORE - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05225	120.4269	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05059	120.4085	FAIRBURY - HARBINE 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05029	120.4038	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.4015	GEN660001 2-ABERDEEN SIEBRECHT
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05245	120.3925	CENTRAL CITY - SILVER CREEK 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05029	120.3924	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.3919	GEN590010 1-ERCOT EQUIVALENCE
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05029	120.3914	917X
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.3854	CLKREACT5 161.00 - CRYSTLK5 161.00 161KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.385	GEN652546 1-FT RANDAL
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.3828	GEN672369 3-MERIDIAN GENERATOR 3 ST

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05048	120.3783	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05030	120.3753	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05059	120.3706	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05030	120.3704	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05037	120.3678	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05029	120.3671	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.3668	GEN590011 2-ERCOT EQUIVALENCE
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05029	120.3563	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.3525	GEN600013 3-BLACK DOG GEN 3
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05033	120.3495	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.3493	GEN652548 5-FT RANDAL
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.3493	GEN652549 7-FT RANDAL
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.3479	GEN620115 1-HRDLKGEN 0.6000
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.3468	GEN620323 2-HOOT LAKE 2 GEN
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05253	120.3424	LOUP CITY - NORTH LOUP 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05049	120.3393	P12:115:UMZW:# 172 #: WI IN SD.
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.3374	GEN652547 3-FT RANDAL
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.3348	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.3249	GEN600125 2-FEP ST G 13.800
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.3201	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05197	120.3188	AXTELL - PAULINE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.3186	GEN563302 1-G15096_3 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05122	120.3102	SEWARD - TAMORA 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.31	GEN300007 1-NEW MADRID UNIT 2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05012	120.3092	BONDURANT - MONTEZUMA 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05058	120.308	CRETE - FRIEND 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.3039	GEN300006 1-NEW MADRID UNIT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.2936	GEN672384 1-CENTENNIAL WINDFARM
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05035	120.2844	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05054	120.2835	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05054	120.2835	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05029	120.2794	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.2774	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05045	120.2718	COPSTJCPFRSJ
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05045	120.2718	STMDSJFAFACO
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05122	120.2702	P12:115:NPPD:1155:YORK 7:SEWARD 7:BTB
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05029	120.2692	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05029	120.2692	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05122	120.2652	TAMORA - YORK 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.2635	GEN657964 1-ASH2GEN9 0.5750
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.2472	GEN600018 S-LS POWER STEAM
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.2316	GEN659290 1-EDGECOL
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.2218	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05037	120.2045	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04954	120.2039	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04954	120.2039	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04880	120.1983	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.1963	GEN652410 3-FT PECK
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05017	120.1928	HILLS - MONTEZUMA 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.1489	GEN672348 2-CORY COGEN GENERATOR 2 GT2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.1488	GEN672347 1-CORY COGEN GENERATOR 1 GT1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05245	120.1428	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05414	120.1409	MINGO - RED WILLOW 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05414	120.1409	MINGO - RED WILLOW 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.1391	GEN672350 1-NIPAWIN GENERATOR 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.1391	GEN672351 2-NIPAWIN GENERATOR 2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.1391	GEN672352 3-NIPAWIN GENERATOR 3
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.137	GEN600012 2-BLACK DOG GEN 2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.1244	GEN652414 4-FT PECK
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.1244	GEN652415 5-FT PECK
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.1213	GEN509403 1-PIRKEY GENERATION
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.1122	GEN652345 W-G07_023IS_2 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.1084	GEN620324 3-HOOT LAKE 3 GEN
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.1079	GEN615032 2-PLEASANT VALLEY
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.1076	GEN657600 1-L1GEN3 9 0.5750
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05027	120.1058	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.0781	LADISH 115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.0553	GEN672349 3-CORY COGEN GENERATOR 3 ST
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.0527	GEN672367 1-MERIDIAN GENERATOR 1 GT1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.0527	GEN672368 2-MERIDIAN GENERATOR 2 GT2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.0525	GEN659353 1-DEERCREK CTG18.000
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05035	120.046	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.0429	GEN672339 16-QE 16G 13.800
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.0429	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05248	120.039	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05248	120.039	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05048	120.0363	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.011	GEN600050 1-FEP
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	120.0025	GEN652558 6-OAHE
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.9876	GEN587583 1-J432-GEN1 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.9745	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.9621	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.9595	GEN659273 2-GROTON SYNC COND
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.9595	GEN659294 1-WILTONCOL9
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05037	119.953	FALLOW 3 345.00 - GRIMES 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.9498	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.9091	GEN600065 7-HIGH BRIDGE
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.9091	GEN600066 8-HIGH BRIDGE
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.9064	GEN672393 2-NBECST2G 13.800
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05007	119.8804	OAHE - SULLEY BUTTE 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.06416	119.8613	COLUMWEST - KELLY 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.86	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.8588	GEN659192 6-LYNN
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.8575	GEN659162 4-RED WLCK
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.8575	GEN659163 5-BLACK WDCK
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.8487	GEN657985 1-ASH1GEN9 0.5750
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05007	119.8413	GLENHAM - L3 HAWDON 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05248	119.8344	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05052	119.8262	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.8213	GEN600014 4-BLACK DOG GEN 4
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.8211	GEN600067 9-HIGH BRIDGE
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.8171	GEN600011 5-BLACK DOG GEN 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.816	GEN600071 10-RIVER SIDE
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.8158	GEN600070 9-RIVER SIDE
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.8001	GEN600007 7-RIVERSIDE GEN 7
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.7963	GEN652906 1-G09_006IS_3 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05007	119.7878	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.7826	CENTER 230/22.0KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05007	119.7753	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05007	119.7751	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.7744	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.772	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05007	119.7478	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05007	119.7478	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.7462	GEN660016 1-B_H WIND 0.7000
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.741	GEN600017 C-LS POWER CT
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.7081	GEN681522 3-GENOA 3
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05007	119.6989	GLENHAM - WHITLOK 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.6949	GEN659291 1-FT MP COLLECTOR
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.6853	GEN662101 1-WESSINGTON190.5750
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.6827	GEN615052 1-CAMBRIDGE GENERATING STATION
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.6732	GEN652907 1-G09_007IS_3 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.6472	GEN 11104 1-J262_GEN 0.6000
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.6472	GEN 11108 1-J263_GEN 0.6000
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.6269	GEN562872 1-G15046_3 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.5989	GEN615015 1-GRE-SPRITWDG13.200
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05416	119.5349	AXTELL - SWEETWATER 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.4921	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.4604	GEN910006 1-G12_012IS_3 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.4058	GEN615021 1-GRE-ER 14G 16.000
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.404	GEN587623 1-J493-GEN1 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.3411	GEN 10648 1-G830_GEN 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.3039	GEN672304 4-BOUNDARY DAM GENERATOR 4
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.3038	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.3038	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05168	119.2786	SUB 3454 - WAGENER 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05168	119.2786	SUB 3454 - WAGENER 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.2155	GEN587053 1-G16-007-GEN10.6500
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05193	119.1091	103RD & ROKEBY - MOORE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05193	119.1091	103RD & ROKEBY - MOORE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.078	GEN652461 5-GARRISON
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.0779	GEN652460 4-GARRISON
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.0566	GEN672392 1-NBECGT1G 18.000
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.0515	GEN587593 1-J460-GEN1 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.0176	GEN652457 1-GARRISON
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.0176	GEN652458 2-GARRISON
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	119.0176	GEN652459 3-GARRISON
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05148	118.9924	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	118.9849	GEN659010 4-G07_027IS_2 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	118.9678	GEN659366 3-WILTON 3 W0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	118.9389	GEN659194 1-NDPRAIRWND1W0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04790	118.9204	COOPER - MOORE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	118.9152	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	118.8105	GEN659403 1-NDSUNFLWR W0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	118.7039	GEN681542 6-JP MADGETT
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	118.6533	GEN659110 1-LELAND OLDS UNIT1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05454	118.6038	G15088_T 345.00 - PAULINE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.06416	118.5953	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	118.5343	GEN659411 1-CAMPBLCNTY W0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	118.423	GEN563232 1-G15089_3 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	118.3753	GEN659296 2-SDPRAIRWND1W0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	118.3133	GEN652559 1-OAHE
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	118.2483	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	118.2167	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	118.0826	GEN652556 2-OAHE
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	118.0528	GEN652557 5-OAHE
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	117.9889	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	117.912	GEN659453 1-GI1414GEN W0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	117.7775	GEN615010 1-STANTON4
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	117.6806	GEN659141 1-K10215A
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	117.6266	GEN652173 1-G09_001IS_2 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	117.4269	GEN672321 1-SHAND GENERATOR 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	117.3997	GEN600004 2-PRAIRIE ISLAND G2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	117.3938	GEN600003 1-PRAIRIE ISLAND G1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	117.3481	GEN672310 1-POPLAR RIVER GENERATOR 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	117.348	GEN672311 2-POPLAR RIVER GENERATOR 2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	117.3129	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	117.2488	GEN659407 1-ANTELPHILLSW0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	117.0755	GEN600006 1-AS KING
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05454	116.8798	G15088_T 345.00 - MOORE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04954	116.8491	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04954	116.8356	2810X2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	116.826	GEN657749 1-YOUNG 1 GENERATOR
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	116.6343	GEN587033 1-G16-004-GEN10.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	116.462	GEN600005 1-MONTICELLO
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	116.2968	GEN659111 2-LELAND OLDS UNIT2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04954	116.1664	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	115.9728	GEN579459 1-G16-075-GEN10.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	115.9193	GEN659103 1-ANTELOPE VALLEY UNIT1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	115.9193	GEN659107 2-ANTELOPE VALLEY UNIT2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	115.6677	GEN600000 1-SHERBURNECNTY G1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	114.9173	GEN600001 2-SHERBURNE CNTY G2
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	114.6611	GEN620315 1-BIG STONE GEN
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	114.3662	GEN600002 3-SHERBURNE CNTY G3
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	114.2595	GEN661015 1-COYOTE
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	113.8311	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	113.6755	GEN657748 1-YOUNG 2 GENERATOR
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	113.1834	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	113.0736	GEN587293 1-G16-044-GEN10.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	112.8138	GEN659125 1-COVEY
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	111.1155	GEN587133 1-G16-017-GEN10.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04954	110.5209	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04954	109.9565	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04954	109.9433	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.06024	109.9339	MCCOOL - MOORE 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.06133	107.6065	GRAND ISLAND - MCCOOL 345KV CKT 1
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	105.7215	GEN562714 1-G15_023_4 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	105.7215	GEN562715 1-G15_023_5 0.6900
0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.05025	99.6	GEN652353 2-GR PRAIRIEG 0.6900
0	20WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04161	132.2508	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04901	129.6642	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04860	128.6654	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04880	127.7935	STORLA - WESSINGTON 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04932	126.761	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04932	126.593	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04932	126.576	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04932	126.576	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04897	126.477	HANLON - STORLA 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04856	125.7844	FT THOMPSON - LETCHER 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04856	125.7844	FT THOMPSON - LETCHER 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05849	125.0858	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05849	125.0858	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04999	124.8078	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04999	124.6343	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04999	124.633	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05087	124.3584	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04923	124.2278	SPLIT ROCK - WHITE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04923	124.2278	SPLIT ROCK - WHITE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04792	124.1583	FT RANDAL - FT THOMPSON 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04792	124.1583	FT RANDAL - FT THOMPSON 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04798	124.0957	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04798	124.0957	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04994	124.0198	G09_001IST 345.00 - GROTON 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05017	123.8967	CENTER - JAMESTOWN 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04923	123.863	LETCHER - SIOUX FALLS 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05045	123.8312	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04901	123.8154	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05019	123.8072	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.03531	123.7982	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04798	123.7539	FT RANDAL - LAKE PLATT 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05830	123.6443	NUNDRWD - WAYSIDE 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05185	123.588	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05185	123.5848	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05051	123.556	AS KING - EAU CLAIRE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05185	123.5468	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04943	123.3833	FT RANDAL - SIOUX CITY 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04778	123.339	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04779	123.33	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	123.2893	GEN635024 4-WALTER SCOTT UNIT 4
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05087	123.2762	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04801	122.9079	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04801	122.9079	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.03966	122.9058	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	122.869	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04801	122.8485	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	122.8418	GEN635023 3-WALTER SCOTT UNIT 3
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	122.8083	GEN344225 1-1CAL G1 25.000
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04801	122.7865	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04974	122.7343	RASMUSN - UTICA JCT 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04958	122.7335	HANLON - SIOUX FALLS 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	122.6995	GEN336153 1-WATERFORD UNIT#3
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05065	122.6847	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05063	122.6695	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05021	122.6507	ELLENDALE - OAKES 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05021	122.6507	ELLENDALE - OAKES 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05235	122.5854	GRIMES - LEHIGH 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05021	122.5431	FORMAN - OAKES 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05022	122.5386	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	122.5301	GEN641089 2-ENERGY CENTER 2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04974	122.4899	RASMUSN - SIOUX CITY 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05791	122.4723	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05020	122.4468	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	122.4029	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	122.4008	GEN335831 1-RIVERBEND UNIT#1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	122.3635	GEN336821 1-GRAND GULF UNIT
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	122.3332	GEN337653 1-WHITE BLUFF UNIT #2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04942	122.3171	PAHOJA - SIOUX FALLS 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05023	122.2878	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05046	122.1832	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05022	122.1794	J290_SUB 230.00 - RUGBY 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05023	122.1516	FORMAN - HANKINSON 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05050	122.142	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	122.1262	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05133	122.1083	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05160	122.0828	SIDNEY - STEGALL 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	122.0641	GEN587353 1-G16-050-GEN10.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04880	122.0556	FT THOMPSON - WESSINGTON 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04880	122.0556	FT THOMPSON - WESSINGTON 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04998	122.0485	CARPENTER - HURON 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05046	122.0042	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05018	121.9701	CHISAGO COUNTY - FORBES 500KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.9616	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04998	121.9393	HURON - WATERTOWN 230KV CKT 2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04998	121.9393	HURON - WATERTOWN 230KV CKT 2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04942	121.9209	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05018	121.8974	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.8861	GEN501801 1-DOLET HILLS UNIT1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05032	121.873	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04998	121.8556	CARPENTER - WATERTOWN 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04998	121.8556	CARPENTER - WATERTOWN 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.8552	GEN563222 1-G15088_3 0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05051	121.8522	BYRON - NORTH ROCHESTER 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04899	121.8337	RAUN - SIOUX CITY 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04899	121.8337	RAUN - SIOUX CITY 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05032	121.8069	MISSION - ST FRANCIS 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07650	121.7937	HOSKINS - SHELL CREEK 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.7867	GEN337652 1-WHITE BLUFF UNIT #1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04963	121.7725	FT RANDAL - UTICA JCT 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05028	121.7141	HANKINSON - WAHPETON 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.6974	GEN338146 1-INDEPENDENCE UNIT #2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05032	121.6968	HARMONY - ST FRANCIS 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.6942	GEN338143 1-INDEPENDENCE UNIT #1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05861	121.6623	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05861	121.6623	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05032	121.611	HARMONY - VALENTINE 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05954	121.5972	COLUMEAST - SHELL CREEK 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05052	121.5914	BYRON - PLEASANT VALLEY 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04950	121.565	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04950	121.565	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05082	121.5263	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.5174	GEN501813 1-RODEMACHER UNIT 3
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04950	121.5157	FT RANDAL - SPENCER 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05082	121.5068	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05024	121.5062	BLAIR - GRANITE FALLS 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05024	121.5062	BLAIR - GRANITE FALLS 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05023	121.4303	CENTER - COYOTE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04983	121.3977	FT THOMPSON - HURON 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04983	121.3977	FT THOMPSON - HURON 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04983	121.3977	FT THOMPSON - HURON 230KV CKT 2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04983	121.3977	FT THOMPSON - HURON 230KV CKT 2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04950	121.397	ONEILL - SPENCER 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.3737	GEN335206 1-NELSON UNIT 6
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04877	121.3073	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05034	121.2893	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04941	121.2771	GAVINS POINT - HARTINGTON 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05032	121.2631	AINSWORTH - VALENTINE 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.258	GEN344897 4-1LAB G4 20.000
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.2574	GEN501812 1-RODEMACHER UNIT 2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.2557	GEN344894 1-1LAB G1 20.000
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.2555	GEN344896 3-1LAB G3 20.000
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05046	121.2352	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04837	121.2284	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.2222	GEN344895 2-1LAB G2 20.000
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.2219	GEN587363 1-G16-055-GEN10.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.2178	GEN642067 1-PLATTE
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04837	121.2134	CLEARWATER - ONEILL 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05050	121.1953	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05022	121.1838	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05023	121.1821	GARRISON - JAMES TOWN 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.1818	GEN345670 1-1RUSH G1 18.000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.1816	GEN345671 2-1RUSH G2 18.000
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.1742	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04837	121.1535	CLEARWATER - NELIGH 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.1464	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05050	121.1339	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05050	121.1337	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.1283	GEN336252 1-NINEMILE POINT UNIT#5
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.0886	GEN587443 1-G16-064-GEN10.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.0884	GEN336831 1-BAXTER WILSON SES
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05092	121.0575	DENISON - SIOUX CITY 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05023	121.0437	FARGO - JAMES TOWN 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05050	121.0332	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	121.0249	GEN337041 1-GERALD ANDRUS
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04994	121.0227	MENNO JCT - TRIPP JCT 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05023	121.0184	FARGO - JAMES TOWN 230KV CKT 2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05026	121.0142	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05026	121.0142	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05024	121.001	AUDUBON - SHEYNNE 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.9875	GEN334440 1-SABINE UNIT 4
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05022	120.987	BISMARK - JAMES TOWN 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05022	120.966	JAMES TOWN - WEBER 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05513	120.9601	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05513	120.9519	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05513	120.9515	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05026	120.9476	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.9466	GEN336251 1-NINEMILE POINT UNIT#4
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.9358	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.9351	P13:115-230:NPPD:NUCOR-3
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04994	120.9224	MENNO JCT - UTICA 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05051	120.9175	NOBLES - SPLIT ROCK 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05026	120.912	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05026	120.912	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05036	120.9076	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04941	120.8902	BELDEN - HARTINGTON 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.8775	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.8769	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04994	120.8679	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.8628	P13:230-345:NPPD:NUCOR-1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.8447	GEN303007 1-1BC2 U2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.8445	GEN336191 1-LITTLE GYPSY UNIT#3
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.842	GEN303006 1-1BC2 U1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.8415	GEN335204 1-NELSON UNIT 4
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.8358	GEN531447 1-HOLCOMB GENERATOR
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.7976	GEN336801 1-BAXTER WILSON UNIT #1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.7905	GEN335614 1-WILLOW GLENN UNIT#4
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.7884	GEN303008 1-1BC2 U3
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.7871	GEN336170 1-GULF OXY U4
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.7797	GEN336464 1-MICHOUD UNIT #3
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.7725	GEN334441 1-SABINE UNIT 5
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.7447	GEN501811 1-RODEMACHER UNIT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04931	120.7402	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05030	120.7396	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05092	120.6618	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05092	120.6618	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.6068	GEN659118 1-LARAMIE RIVER UNIT1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.5838	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05092	120.5118	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04782	120.4165	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	120.0924	BASE CASE
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05256	119.9815	KELLY - SHELL CREEK 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05256	119.9769	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05256	119.9769	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05030	119.9416	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05030	119.9416	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05030	119.9397	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05030	119.932	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05030	119.9302	BROADLAND - HURON 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05030	119.9301	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05030	119.9301	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.8548	GEN635213 3-NEAL UNIT 3

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.03774	119.7751	HOSKINS - RAUN 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.03774	119.7751	HOSKINS - RAUN 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.7273	GEN635214 4-NEAL UNIT 4
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05032	119.7172	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05032	119.7172	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.6846	GEN300003 1-THOMAS HILL UNIT 3
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05029	119.645	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05035	119.6379	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05029	119.6351	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05240	119.6256	MINGO - SETAB 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05240	119.6256	MINGO - SETAB 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05063	119.6208	AURORA - GRAND ISLAND 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.5988	GEN587153 1-G16-021-GEN10.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05335	119.5923	MOORE - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05335	119.5923	MOORE - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05225	119.577	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05059	119.5613	FAIRBURY - HARBINE 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05029	119.5592	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05245	119.5487	CENTRAL CITY - SILVER CREEK 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.5482	GEN590010 1-ERCOT EQUIVALENCE
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05029	119.5476	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05029	119.547	917X
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05030	119.5404	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05048	119.5327	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05030	119.5248	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.5232	GEN590011 2-ERCOT EQUIVALENCE
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05029	119.5226	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05059	119.5213	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05037	119.5207	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05029	119.5078	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05033	119.5059	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05253	119.4986	LOUP CITY - NORTH LOUP 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05049	119.4968	P12:115:UMZW:# 172 #: WI IN SD.
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05197	119.4721	AXTELL - PAULINE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.4641	GEN300007 1-NEW MADRID UNIT 2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05058	119.4622	CRETE - FRIEND 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.458	GEN300006 1-NEW MADRID UNIT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05054	119.4404	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05054	119.4404	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05035	119.4384	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05029	119.4349	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.4344	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05029	119.4254	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05029	119.4254	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.3882	GEN659290 1-EDGECOL
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.3801	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05037	119.363	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04880	119.3554	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04954	119.3535	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04954	119.3535	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.3523	GEN652410 3-FT PECK
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.3055	GEN672347 1-CORY COGEN GENERATOR 1 GT1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.3055	GEN672348 2-CORY COGEN GENERATOR 2 GT2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05245	119.2991	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.2959	GEN672350 1-NIPAWIN GENERATOR 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.2959	GEN672351 2-NIPAWIN GENERATOR 2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.2959	GEN672352 3-NIPAWIN GENERATOR 3
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.295	GEN600012 2-BLACK DOG GEN 2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05414	119.2903	MINGO - RED WILLOW 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05414	119.2903	MINGO - RED WILLOW 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.2804	GEN652414 4-FT PECK
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.2804	GEN652415 5-FT PECK
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.2782	GEN509403 1-PIRKEY GENERATION
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.2698	GEN652345 W-G07_023IS_2 0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.2667	GEN620324 3-HOOT LAKE 3 GEN
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.2662	GEN615032 2-PLEASANT VALLEY
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.2641	GEN657600 1-L1GEN3 9 0.5750
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05027	119.264	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.2329	LADISH 115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.2159	GEN659353 1-DEERCREK CTG18.000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.2121	GEN672349 3-CORY COGEN GENERATOR 3 ST
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.2097	GEN672367 1-MERIDIAN GENERATOR 1 GT1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.2097	GEN672368 2-MERIDIAN GENERATOR 2 GT2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.1998	GEN672339 16-QE 16G 13.800
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.1998	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05035	119.1997	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05248	119.1987	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05248	119.1987	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05048	119.1903	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.1694	GEN600050 1-FEP
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.1593	GEN652558 6-OAHE
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.1466	GEN587583 1-J432-GEN1 0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.1315	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.1208	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.1156	GEN659273 2-GROTON SYNC COND
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.1156	GEN659294 1-WILTONCOL9
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05037	119.1127	FALLOW 3 345.00 - GRIMES 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.1066	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.0677	GEN600065 7-HIGH BRIDGE
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.0677	GEN600066 8-HIGH BRIDGE
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.0636	GEN672393 2-NBECST2G 13.800
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05007	119.0394	OAHE - SULLEY BUTTE 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.0189	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.015	GEN659192 6-LYNN
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06416	119.0138	COLUMWEST - KELLY 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.0138	GEN659162 4-RED WLCK
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.0138	GEN659163 5-BLACK WDCK
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	119.0059	GEN657985 1-ASH1GEN9 0.5750
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05007	119	GLENHAM - L3 HAWDON 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05248	118.9938	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05052	118.9806	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.9803	GEN600014 4-BLACK DOG GEN 4
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.9799	GEN600067 9-HIGH BRIDGE
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.976	GEN600011 5-BLACK DOG GEN 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.9748	GEN600071 10-RIVER SIDE
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.9746	GEN600070 9-RIVER SIDE
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.9589	GEN600007 7-RIVERSIDE GEN 7
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.9559	GEN652906 1-G09_006IS_3 0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05007	118.9471	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05007	118.9346	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.9345	CENTER 230/22.0KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05007	118.9344	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.9291	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.9268	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05007	118.9073	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05007	118.9073	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.9061	GEN660016 1-B_H WIND 0.7000
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.9001	GEN600017 C-LS POWER CT
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.8675	GEN681522 3-GENOA 3
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05007	118.8585	GLENHAM - WHITLOK 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.8553	GEN659291 1-FT MP COLLECTOR
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.8469	GEN662101 1-WESSINGTON190.5750
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.8415	GEN615052 1-CAMBRIDGE GENERATING STATION
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.8333	GEN652907 1-G09_007IS_3 0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.8038	GEN 11104 1-J262_GEN 0.6000
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.8038	GEN 11108 1-J263_GEN 0.6000
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.7831	GEN562872 1-G15046_3 0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.7556	GEN615015 1-GRE-SPRITWDG13.200
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05416	118.6864	AXTELL - SWEETWATER 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.6461	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.6168	GEN910006 1-G12_012IS_3 0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.5656	GEN615021 1-GRE-ER 14G 16.000
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.5634	GEN587623 1-J493-GEN1 0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.4977	GEN 10648 1-G830_GEN 0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.4622	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.4622	GEN672304 4-BOUNDARY DAM GENERATOR 4
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.4622	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05168	118.4374	SUB 3454 - WAGENER 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05168	118.4374	SUB 3454 - WAGENER 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.3732	GEN587053 1-G16-007-GEN10.6500

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05193	118.264	103RD & ROKEBY - MOORE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05193	118.264	103RD & ROKEBY - MOORE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.2345	GEN652461 5-GARRISON
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.2344	GEN652460 4-GARRISON
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.2154	GEN672392 1-NBECGT1G 18.000
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.2139	GEN587593 1-J460-GEN1 0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.1742	GEN652457 1-GARRISON
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.1742	GEN652458 2-GARRISON
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.1742	GEN652459 3-GARRISON
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.1417	GEN659010 4-G07_027IS_2 0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05148	118.1415	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.1246	GEN659366 3-WILTON 3 W0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.0958	GEN659194 1-NDPRAIRWND1W0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04790	118.0752	COOPER - MOORE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	118.0701	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	117.9674	GEN659403 1-NDSUNFLWR W0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	117.8664	GEN681542 6-JP MADGETT
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	117.81	GEN659110 1-LELAND OLDS UNIT1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05454	117.7547	G15088_T 345.00 - PAULINE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06416	117.7509	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	117.6926	GEN659411 1-CAMPBLCNTY W0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	117.5911	GEN563232 1-G15089_3 0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	117.5401	GEN659296 2-SDPRAIRWND1W0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	117.4728	GEN652559 1-OAHE
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	117.4097	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	117.3779	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	117.2422	GEN652556 2-OAHE
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	117.2126	GEN652557 5-OAHE
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	117.151	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	117.0695	GEN659453 1-GI1414GEN W0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	116.9359	GEN615010 1-STANTON4
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	116.8383	GEN659141 1-K10215A
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	116.79	GEN652173 1-G09_001IS_2 0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	116.5892	GEN672321 1-SHAND GENERATOR 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	116.5663	GEN600004 2-PRAIRIE ISLAND G2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	116.5604	GEN600003 1-PRAIRIE ISLAND G1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	116.5106	GEN672310 1-POPLAR RIVER GENERATOR 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	116.5105	GEN672311 2-POPLAR RIVER GENERATOR 2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	116.4754	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	116.4056	GEN659407 1-ANTELPHILLSW0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	116.243	GEN600006 1-AS KING
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04954	116.0332	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04954	116.0194	Z810X2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05454	116.0113	G15088_T 345.00 - MOORE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	115.985	GEN657749 1-YOUNG 1 GENERATOR
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	115.7923	GEN587033 1-G16-004-GEN10.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	115.6309	GEN600005 1-MONTICELLO
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	115.4556	GEN659111 2-LELAND OLDS UNIT2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04954	115.3077	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	115.1287	GEN579459 1-G16-075-GEN10.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	115.0779	GEN659103 1-ANTELOPE VALLEY UNIT1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	115.0779	GEN659107 2-ANTELOPE VALLEY UNIT2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	114.8389	GEN600000 1-SHERBURNECNTY G1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	114.0906	GEN600001 2-SHERBURNE CNTY G2
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	113.8356	GEN620315 1-BIG STONE GEN
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	113.5412	GEN600002 3-SHERBURNE CNTY G3
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	113.4207	GEN661015 1-COYOTE
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	113.0067	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	112.8383	GEN657748 1-YOUNG 2 GENERATOR
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	112.3611	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	112.2363	GEN587293 1-G16-044-GEN10.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	111.9748	GEN659125 1-COVEY
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	110.2839	GEN587133 1-G16-017-GEN10.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04954	109.7444	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04954	109.137	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04954	109.1234	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06024	109.0944	MCCOOL - MOORE 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06133	106.773	GRAND ISLAND - MCCOOL 345KV CKT 1
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	105.0884	GEN562714 1-G15_023_4 0.6900
0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05025	105.0884	GEN562715 1-G15_023_5 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	138.4693	GEN562714 1-G15_023_4 0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	138.4693	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06734	138.1269	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06867	138.1092	LETCHER - SIOUX FALLS 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07043	137.5671	AINSWORTH - VALENTINE 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	137.5324	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	137.4502	GEN562714 1-G15_023_4 0.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	137.4502	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	137.4486	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	137.2067	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	137.0578	GEN336153 1-WATERFORD UNIT#3
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06847	137.0049	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	136.9384	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	136.8594	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07131	136.8121	SIDNEY - STEGALL 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06890	136.7795	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06789	136.6475	FT THOMPSON - LETCHER 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	136.6404	GEN335831 1-RIVERBEND UNIT#1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07276	136.6352	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07461	136.4223	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	136.4012	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07276	136.397	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07034	136.3497	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	136.3459	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06898	136.3436	FT RANDAL - SPENCER 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06898	136.3047	ONEILL - SPENCER 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06908	136.0132	HANLON - SIOUX FALLS 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	135.9975	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06926	135.8843	RASMUSN - UTICA JCT 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	135.7865	GEN562714 1-G15_023_4 0.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	135.7865	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06816	135.7269	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	135.7112	GEN501801 1-DOLET HILLS UNIT1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06895	135.6814	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	135.6766	GEN337653 1-WHITE BLUFF UNIT #2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06913	135.6624	FT RANDAL - UTICA JCT 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	135.6324	GEN337653 1-WHITE BLUFF UNIT #2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	135.6156	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06895	135.5409	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07109	135.5232	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07109	135.523	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	135.5113	GEN338146 1-INDEPENDENCE UNIT #2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	135.5109	GEN338143 1-INDEPENDENCE UNIT #1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	135.5005	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	135.4872	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07109	135.4346	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07246	135.4185	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07014	135.4169	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07212	135.4064	OAHE - PHILIP TAP 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07461	135.3956	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07109	135.3923	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07109	135.3798	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07461	135.3475	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06917	135.2766	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	135.27	GEN336251 1-NINEMILE POINT UNIT#4
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	135.2691	GEN501813 1-RODEMACHER UNIT 3
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	135.2494	GEN335206 1-NELSON UNIT 6
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	135.2415	GEN336831 1-BAXTER WILSON SES
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	135.1889	GEN336252 1-NINEMILE POINT UNIT#5
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07014	135.1791	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07014	135.1714	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	135.1549	GEN337041 1-GERALD ANDRUS
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07014	135.1528	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09818	135.1332	HOSKINS - SHELL CREEK 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07015	135.1202	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	135.0754	GEN501812 1-RODEMACHER UNIT 2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07014	135.0598	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07014	135.0594	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	134.8813	GEN344897 4-1LAB G4 20.000
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	134.8811	GEN334440 1-SABINE UNIT 4

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	134.8782	GEN344894 1-1LAB G1 20.000
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	134.8782	GEN344895 2-1LAB G2 20.000
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	134.8781	GEN344896 3-1LAB G3 20.000
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07014	134.8685	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	134.8029	GEN587353 1-G16-050-GEN10.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06810	134.7844	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06811	134.7758	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	134.759	GEN345670 1-1RUSH G1 18.000
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	134.7578	GEN345671 2-1RUSH G2 18.000
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06542	134.742	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06948	134.7338	CARPENTER - HURON 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07921	134.6981	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	134.6562	GEN336801 1-BAXTER WILSON UNIT #1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06897	134.6255	GAVINS POINT - HARTINGTON 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	134.6131	GEN335614 1-WILLOW GLENN UNIT#4
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07152	134.5158	MENNO JCT - UTICA 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07827	134.4837	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06814	134.4618	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06728	134.4414	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07014	134.4069	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	134.396	GEN531447 1-HOLCOMB GENERATOR
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06754	134.3446	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07091	134.3423	MARTIN - SHANNON 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07207	134.3326	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07784	134.2813	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	134.2736	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	134.2734	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06754	134.2106	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07096	134.2038	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	134.1976	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07043	134.1752	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07043	134.0897	CHADRON - DUNLAP 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06734	134.0842	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07183	133.9177	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07183	133.8895	JAMES TOWN - WEBER 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	133.8629	GEN587363 1-G16-055-GEN10.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	133.8168	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07002	133.8074	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	133.803	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	133.8026	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07181	133.785	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07181	133.7849	LELAND OLDS - STANTON 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06979	133.7798	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	133.7255	GEN659118 1-LARAMIE RIVER UNIT1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07183	133.7249	BISMARK - WEBER 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06885	133.6617	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	133.651	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07185	133.6487	PRAIRIE - RAMSEY 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	133.6475	GEN587443 1-G16-064-GEN10.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	133.6036	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	133.5984	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06913	133.5331	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06618	133.5197	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06619	133.5184	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07063	133.5084	CLEARWATER - NELIGH 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	133.4082	GEN645011 1-NEBRASKA CITY 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07063	133.4071	CLEARWATER - ONEILL 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	133.3482	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	133.3412	GEN645012 2-NEBRASKA CITY 2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	133.3093	GEN640009 1-COOPER NUCLEAR STATION
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	133.2999	GEN542962 2-IATAN UNIT #2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	133.287	GEN531447 1-HOLCOMB GENERATOR
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07063	133.2794	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07199	133.2384	KELLY - SHELL CREEK 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06913	133.229	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07199	133.2057	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	133.2047	GEN563222 1-G15088_3 0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	133.1915	GEN542957 1-IATAN UNIT #1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07206	133.1538	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07206	133.1537	COUNCIL BLUFFS - SUB 3456 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07080	133.1318	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	133.0582	GEN542951 5-HAWTHORN UNIT #5
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	133.0536	GEN542955 1-LACYGNE UNIT #1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07190	133.0316	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07190	133.0315	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07056	133.0194	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	132.9958	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	132.9712	ANSON 115/17.5KV TRANSFORMER CKT 4
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07031	132.9709	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06971	132.9639	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	132.951	BURR - CANBY 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07014	132.9109	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07241	132.8673	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07221	132.8592	P13:230-345:NPPD:SIDNEY 3:KV2A
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05849	132.8532	HOSKINS - RAUN 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05849	132.8532	HOSKINS - RAUN 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07221	132.849	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07220	132.835	OGALLALA - SIDNEY 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07221	132.8328	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07194	132.8149	AINSWORTH - BASSETT 7115.00 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07194	132.7999	ATKINSON - STUART 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06998	132.721	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06998	132.721	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	132.6789	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06990	132.6658	BROADLAND - HURON 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06990	132.6657	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	132.6626	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	132.662	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	132.6605	BASE CASE
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07194	132.6472	BASSETT 7115.00 - STUART 115KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	132.6299	GEN542951 5-HAWTHORN UNIT #5
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06998	132.6292	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06998	132.6292	FT THOMPSON - OAHE 230KV CKT 4
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06990	132.618	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07194	132.6084	ATKINSON - EMMET 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06990	132.6075	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07001	132.5693	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07200	132.556	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07200	132.556	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07200	132.5489	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07200	132.5489	FT THOMPSON - OAHE 230KV CKT 2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07036	132.5347	CALLAWAY - MAXWELL 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06951	132.4806	STAPLETON - THEDFORD 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07200	132.4736	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07200	132.4736	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07200	132.4736	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07200	132.4736	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07972	132.4686	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07030	132.463	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	132.4587	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07327	132.3916	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06931	132.3751	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06840	132.3737	FT THOMPSON - LETCHER 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07289	132.3547	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	132.3433	GEN587153 1-G16-021-GEN10.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07237	132.3383	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06989	132.31	HANKINSON - WAHPETON 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	132.3045	GEN300002 1-THOMAS HILL UNIT 2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06991	132.2564	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07114	132.2553	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07204	132.2508	HOLCOMB - SETAB 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07403	132.2162	KELLY - SHELL CREEK 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07403	132.2009	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07403	132.2007	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06992	132.1962	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07048	132.1737	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07011	132.1699	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07010	132.1453	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	132.1181	GEN600045 4-ANSON
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07030	132.1123	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	132.0808	GEN645012 2-NEBRASKA CITY 2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	132.0764	GEN642067 1-PLATTE
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	132.0576	AINSWORTH WIND 34KV SWITCHED SHUNT
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08312	132.0407	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	132.0292	GEN636641 1-LOUISA UNIT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07236	132.0113	AXTELL - PAULINE 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	132.0017	GEN542962 2-IATAN UNIT #2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07138	131.9745	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.9667	GEN659118 1-LARAMIE RIVER UNIT1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.9665	GEN645011 1-NEBRASKA CITY 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07011	131.9597	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	131.9295	GEN590010 1-ERCOT EQUIVALENCE
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07263	131.9224	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.8941	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07205	131.885	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	131.8728	GEN590011 2-ERCOT EQUIVALENCE
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07025	131.8661	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.8512	GEN542957 1-IATAN UNIT #1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07180	131.8388	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.8326	GEN542955 1-LACYGNE UNIT #1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07689	131.8302	AINSWORTH - AINSWORTH 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06898	131.8258	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06898	131.8258	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07205	131.7897	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.7864	GEN542955 1-LACYGNE UNIT #1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	131.7585	GEN300003 1-THOMAS HILL UNIT 3
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.758	GEN542951 5-HAWTHORN UNIT #5
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.7203	GEN542957 1-IATAN UNIT #1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.72	GEN640016 1-KINGSLEY HYDRO
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.7131	GEN542956 2-LACYGNE UNIT #2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	131.7116	GEN300007 1-NEW MADRID UNIT 2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	131.7042	GEN300006 1-NEW MADRID UNIT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.6974	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07154	131.6878	GERALD GENTLEMAN STATION (GGS T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07154	131.6877	GERALD GENTLEMAN STATION (GGS T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07230	131.6852	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07205	131.6715	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.6658	GEN587363 1-G16-055-GEN10.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07240	131.6592	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKE
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07157	131.6566	GERALD GENTLEMAN STATION (GGS T2) 345/230/13.8KV TRANSFORMER CKT 2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07157	131.6565	GERALD GENTLEMAN STATION (GGS T2) 345/230/13.8KV TRANSFORMER CKT 2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.6496	KEARNEY 115KV SWITCHED SHUNT
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07155	131.635	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07127	131.6278	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07006	131.5853	AS KING - EAU CLAIRE 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.541	GEN542956 2-LACYGNE UNIT #2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	131.5406	GEN659353 1-DEERCREK CTG18.000
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07325	131.5392	MINGO - SETAB 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07112	131.5345	MISSION - WITTEN 115KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.534	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07134	131.5092	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07134	131.5091	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07240	131.5003	BONESTEEL - GREGORY 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	131.4956	GEN659354 1-DEERCREK STG18.000
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07056	131.4939	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.4936	GEN587443 1-G16-064-GEN10.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.4609	GEN659118 1-LARAMIE RIVER UNIT1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07259	131.4324	COLUMBUS - SILVER CREEK 115KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.3998	GEN642067 1-PLATTE
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.3974	GEN514806 1-SOONER UNIT 2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.3941	GEN514805 1-SOONER UNIT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07013	131.3809	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08556	131.3528	COLUMWEST - KELLY 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06982	131.3493	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.3188	GEN587233 1-G16-037-GEN10.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.3004	BASE CASE
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.2968	1222-AINSWORTH WIND
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.2968	1303-KEARNEY
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.2968	2560-BRDLAND-LNX3345.00
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.2968	2561-BRDLAND-LNX3345.00

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.2968	BASE CASE
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.2787	GEN515042 1-SEMINOLE 3G
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.2596	GEN515040 1-SEMINOLE 1G
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.2568	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06667	131.2537	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06668	131.2487	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06789	131.245	COOPER - MOORE 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07045	131.2359	JEFFREY - NORTH PLATTE 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06847	131.2284	RAUN - SIOUX CITY 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07447	131.2184	AINSWORTH - STUART 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07313	131.2162	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.2124	GEN515041 1-SEMINOLE 2G
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.2	GEN509394 1-FLINT CREEK
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07220	131.1955	CALLAWAY - MAXWELL 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07147	131.1897	STAPLETON - THEDFORD 115KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07066	131.1747	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07245	131.1715	ATKINSON - EMMET 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.1713	GEN509416 1-TURK GENERATION
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07447	131.1622	ATKINSON - EMMET 115KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.1588	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.1588	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07023	131.1584	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.1472	GEN512688 2-GRDA1 GSU2 22
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07173	131.1418	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07173	131.1418	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07447	131.1407	ATKINSON - STUART 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07173	131.1407	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07173	131.1406	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.1379	GEN640028 1-COLUMCOGENERATION
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.1343	GEN515226 1-MUSKOGEE 6G
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.1335	GEN515225 1-MUSKOGEE 5G
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.1217	GEN515223 1-MUSKOGEE 4G
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.1068	GEN511840 1-NORTHEASTERN STATION #3
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.1008	GEN513601 1-GRECCTG_1 20.000
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.096	GEN511842 1-RIVERSIDE STATION #1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.0844	GEN511839 1-NORTHEASTERN STATION #2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.0798	GEN640019 1-SHELDON STATION UNIT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.0696	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.0641	GEN511843 1-RIVERSIDE STATION #2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07328	131.0639	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07438	131.0619	G15088_T 345.00 - PAULINE 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.0546	GEN509403 1-PIRKEY GENERATION
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07041	131.0542	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.0497	GEN541151 3-SIBLEY GENERATING UNIT #3
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.0164	GEN509416 1-TURK GENERATION
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.0051	GEN645041 1-CASS COUNTY 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07202	130.9465	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07042	130.9431	GOTHENBURG - JEFFREY 115KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07053	130.9265	BROKEN BOW - CROOKED CREEK 115KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07039	130.9211	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07231	130.912	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.883	GEN645042 2-CASS COUNTY 2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.8716	GEN509403 1-PIRKEY GENERATION
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07208	130.8514	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07208	130.8513	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	130.8483	GEN300002 1-THOMAS HILL UNIT 2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	130.8437	GEN660016 1-B_H WIND 0.7000
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07192	130.8422	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07231	130.8421	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07003	130.8342	STAPLETON - THEDFORD 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	130.8318	GEN659291 1-FT MP COLLECTOR
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07058	130.825	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.8195	GEN645033 3-SARPY COUNTY 3
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07025	130.8078	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.801	GEN509406 1-WELSH #3
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.8008	GEN509404 1-WELSH #1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	130.7916	GEN662101 1-WESSINGTON190.5750
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	130.7883	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.7701	GEN640016 1-KINGSLEY HYDRO
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07058	130.7601	G13-010T 345.00 - POST ROCK 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	130.7543	GEN652545 7-BIG BEND
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	130.7318	GEN587153 1-G16-021-GEN10.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07017	130.7051	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07011	130.7025	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06990	130.698	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07081	130.6902	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07240	130.6818	GREGORY - WINNER 115KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.6509	GEN509398 1-KNOXLEE #5
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07231	130.6482	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07231	130.6481	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07197	130.6429	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.635	GEN509409 1-WILKES #3
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07043	130.632	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07192	130.6049	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07018	130.5979	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07449	130.5952	LOUP CITY - NORTH LOUP 115KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07018	130.5952	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07193	130.5611	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06959	130.5597	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.5555	GEN587153 1-G16-021-GEN10.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07436	130.5493	AXTELL - PAULINE 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.5419	BASE CASE
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07044	130.5141	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07240	130.5117	MISSION - WITTEN 115KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.4952	GEN300002 1-THOMAS HILL UNIT 2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07497	130.4933	G15088_T 345.00 - PAULINE 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07240	130.4883	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.4876	GEN587093 1-G16-023-GEN10.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.4876	GEN587193 1-G16-029-GEN10.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07240	130.4844	WINNER - WITTEN 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	130.4748	GEN600045 4-ANSON
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06982	130.4628	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06968	130.4502	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07276	130.4443	P13:230-345:NPPD:STEGALL3:KV3A
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08556	130.4387	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07199	130.427	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07058	130.4246	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	130.4174	GEN590010 1-ERCOT EQUIVALENCE
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06959	130.384	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07346	130.3814	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07346	130.3814	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07064	130.3597	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.357	GEN300011 1-ST FRANCIS UNIT 2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06959	130.352	GLENHAM - L3 HAWDON 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.3506	GEN600045 4-ANSON
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07019	130.3463	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.3445	GEN300010 1-ST FRANCIS UNIT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06959	130.3388	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.3353	GEN300015 1-1SGPDEL 18.000
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06780	130.3317	FT RANDAL - FT THOMPSON 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	130.3124	GEN505432 1-SIKESTON
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06959	130.3093	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07284	130.3055	AXTELL - PAULINE 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07834	130.2811	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	130.2773	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07191	130.2545	COOPER - ST JOE 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06959	130.2439	GLENHAM - WHITLOK 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	130.216	GEN590011 2-ERCOT EQUIVALENCE
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07007	130.2132	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06985	130.1849	FORMAN - HANKINSON 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07056	130.1788	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07259	130.1649	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08384	130.1422	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07199	130.1397	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07441	130.1386	AXTELL - SWEETWATER 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07184	130.135	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	130.1325	GEN300003 1-THOMAS HILL UNIT 3
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07184	130.1272	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07100	130.1133	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06816	130.1034	FT THOMPSON - WESSINGTON 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07014	130.0934	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07184	130.0892	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07013	130.0664	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07211	130.0643	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07240	130.0559	P12:115:UMZW:# 172 #: WI IN SD.
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	130.0467	GEN300007 1-NEW MADRID UNIT 2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	130.0366	GEN300006 1-NEW MADRID UNIT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06787	130.0308	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07519	130.0276	MINGO - SETAB 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07519	130.0275	MINGO - SETAB 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07604	129.9944	MINGO - RED WILLOW 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07193	129.9453	SUB 3454 - WAGENER 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06987	129.9426	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.9264	GEN652544 5-BIG BEND
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06998	129.8874	COOPER - MOORE 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07363	129.8846	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07363	129.8842	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	129.8833	GEN300006 1-NEW MADRID UNIT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07005	129.867	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.8578	GEN652543 3-BIG BEND
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.8568	GEN652542 1-BIG BEND
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07114	129.8365	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	129.8076	GEN300003 1-THOMAS HILL UNIT 3
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06807	129.7888	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07377	129.7704	NF
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06985	129.7677	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07031	129.7551	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07095	129.7423	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07004	129.7307	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	129.7	GEN590010 1-ERCOT EQUIVALENCE
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	129.6984	GEN300007 1-NEW MADRID UNIT 2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07214	129.6885	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07066	129.666	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.6354	GEN659010 4-G07_027IS_2 0.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07254	129.6351	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07162	129.6286	MISSION - WITTEN 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.6111	GEN563232 1-G15089_3 0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.6098	GEN659194 1-NDPRAIRWND1W0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.6095	GEN659366 3-WILTON 3 W0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.6091	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.5948	GEN652460 4-GARRISON
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.5892	GEN652461 5-GARRISON
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.5827	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.5746	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06995	129.5694	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.5659	GEN652907 1-G09_007IS_3 0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06985	129.5652	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06814	129.5616	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.5596	FORMAN - OAKES 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.5189	GEN652458 2-GARRISON
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.5189	GEN652459 3-GARRISON
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.5188	GEN652457 1-GARRISON
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06948	129.5049	HURON - WATERTOWN 230KV CKT 2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06807	129.4851	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	129.4781	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	129.4589	GEN590011 2-ERCOT EQUIVALENCE
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	129.4572	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07237	129.4483	P12:230:UMZW:# 166 #: PL IN SD. TAP
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07237	129.4483	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07827	129.4388	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07008	129.4227	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06987	129.4174	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06948	129.4166	CARPENTER - WATERTOWN 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06991	129.4164	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06991	129.4164	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.3937	GEN659403 1-NDSUNFLWR W0.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07042	129.373	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07672	129.3564	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06990	129.3439	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07129	129.3407	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07100	129.333	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06990	129.3323	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.3175	GEN 11123 1-G736-GEN1 0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.3075	GEN 11133 1-J442-GEN1 0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06997	129.2987	BYRON - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06987	129.278	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06985	129.24	AUDUBON - SHEYNNE 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06900	129.2004	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06987	129.1026	HENNING - INMANN 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06913	129.0778	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06913	129.0777	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.0737	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06913	129.0676	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	129.0432	GEN659411 1-CAMPBLCNTY W0.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07254	129.0288	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06989	129.0124	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07438	129.0098	G15088_T 345.00 - MOORE 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06954	129.0098	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06998	128.9697	BYRON - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	128.9685	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.9528	GEN652906 1-G09_006IS_3 0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06989	128.9431	MN VALLEY TAP - PANTHER 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.9407	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07625	128.9301	AXTELL - SWEETWATER 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	128.9187	GEN600006 1-AS KING
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06983	128.9052	CENTER - COYOTE 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06996	128.8955	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06835	128.8689	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06985	128.8434	KARLSTAD - WINGER 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06985	128.8421	BALTA - RAMSEY 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07011	128.8278	GLENHAM - WHITLOK 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06985	128.814	AUDUBON - HUBBARD 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06985	128.8069	FARGO - SHEYNNE 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06933	128.7929	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07000	128.7859	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	128.7667	SHEYENNE SVC - SHEYNNE 115KV CKT Z
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	128.7561	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07011	128.7323	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06985	128.7275	PRAIRIE - RAMSEY 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.727	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.7268	GEN652907 1-G09_007IS_3 0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	128.7267	GEN659296 2-SDPRAIRWND1W0.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.7219	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07002	128.7176	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07043	128.7159	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06984	128.6933	PRAIRIE - WINGER 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07011	128.6869	GLENHAM - L3 HAWDON 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07011	128.6567	OAHE - SULLEY BUTTE 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06984	128.6521	BUFFALO RIDGE - YANKEE 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06980	128.6457	LELAND OLDS - STANTON 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	128.6446	GEN662101 1-WESSINGTON190.5750
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07011	128.6008	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	128.6004	BURR - CANBY 115KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07011	128.573	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	128.5507	GEN652556 2-OAHE
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	128.5507	GEN652557 4-OAHE
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	128.5507	GEN652558 6-OAHE
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07009	128.5429	P13:115-230:NPPD:WAYSIDE4:T1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07041	128.5409	HANKINSON - WAHPETON 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.5306	CENTER 230/22.0KV TRANSFORMER CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	128.4991	GEN652559 1-OAHE
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	128.4746	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	128.4532	GEN615010 1-STANTON4
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.4197	GEN563232 1-G15089_3 0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07001	128.3989	FRANKS - HUBEN 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07313	128.3922	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.3734	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	128.325	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07035	128.2557	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	128.2324	GEN659110 1-LELAND OLDS UNIT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	128.2211	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06950	128.1946	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06950	128.1946	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	128.1897	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	128.1785	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.1386	GEN 10648 1-G830_GEN 0.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07034	128.1116	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07052	128.1016	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	128.0542	GEN587053 1-G16-007-GEN10.6500
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07077	128.0537	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	128.046	GEN652545 7-BIG BEND
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	128.0421	GEN659141 1-K10215A
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.9079	GEN652544 5-BIG BEND
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.8756	GEN652543 3-BIG BEND
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.8751	GEN652542 1-BIG BEND
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	127.8254	GEN587653 1-J526-GEN1 0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	127.8	GEN600005 1-MONTICELLO
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	127.745	GEN652173 1-G09_001IS_2 0.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	127.7305	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	127.7264	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	127.7139	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.713	GEN652907 1-G09_007IS_3 0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06998	127.7015	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06998	127.7015	FT THOMPSON - OAHE 230KV CKT 2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.6772	GEN659010 4-G07_027IS_2 0.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.6646	GEN659194 1-NDPRAIRWND1W0.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.6615	GEN659366 3-WILTON 3 W0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06998	127.6482	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06998	127.6482	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.6472	GEN652461 5-GARRISON
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.646	GEN652460 4-GARRISON
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	127.6311	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07672	127.599	G15088_T 345.00 - MOORE 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.5861	BLAIR - GRANITE FALLS 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.5662	GEN652457 1-GARRISON
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.5662	GEN652458 2-GARRISON
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.5662	GEN652459 3-GARRISON
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.5544	GEN563232 1-G15089_3 0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	127.5372	BASE CASE
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	127.5178	GEN587633 1-J510-GEN1 18.000
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07034	127.5094	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06931	127.4788	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.4525	GEN659403 1-NDSUNFLWR W0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	127.449	GEN659407 1-ANTELPHILLSW0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	127.4025	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	127.4025	P12:115:UMZB:# 119 #: IN NE.
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07057	127.3638	AS KING - EAU CLAIRE 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07014	127.3238	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.3177	GEN652559 1-OAHE
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.2731	GEN 11123 1-G736-GEN1 0.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.2652	GEN 11133 1-J442-GEN1 0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	127.2262	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	127.1856	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.1635	GEN659411 1-CAMPBLCNTY W0.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.1373	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07030	127.1308	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	127.1271	GEN600003 1-PRAIRIE ISLAND G1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07248	127.0818	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07034	127.0683	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06899	127.055	RAUN - SIOUX CITY 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07204	127.053	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07077	127.0167	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07048	126.9958	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07010	126.9886	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07068	126.9414	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07030	126.9125	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06990	126.8786	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06990	126.8729	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	126.8675	GEN659296 2-SDPRAIRWND1W0.6900
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06990	126.8601	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07070	126.7545	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07138	126.7528	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07062	126.7326	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	126.6905	GEN587033 1-G16-004-GEN10.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	126.6808	GEN659296 2-SDPRAIRWND1W0.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07037	126.6424	FORMAN - HANKINSON 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	126.6395	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	126.6243	GEN652556 2-OAHE
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	126.6243	GEN652557 4-OAHE
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	126.6243	GEN652558 6-OAHE
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	126.5887	EMERY 161/18.0KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	126.575	GEN600006 1-AS KING
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	126.5035	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	126.5035	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06868	126.4618	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	126.3967	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07155	126.3796	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07059	126.3752	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07325	126.3506	MINGO - SETAB 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07039	126.3123	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	126.3004	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	126.2704	GEN659110 1-LELAND OLDS UNIT1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07055	126.2639	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07327	126.2461	P13:230-345:NPPD:STEGALL3:KV3A
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	126.2393	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07037	126.2213	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	126.1253	FORMAN - OAKES 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	126.1231	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	126.0705	GEN659141 1-K10215A
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07056	126.031	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07037	126.0246	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	125.9552	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07062	125.9472	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06866	125.9313	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	125.9074	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	125.8813	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	125.8797	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07000	125.8783	HURON - WATERTOWN 230KV CKT 2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07060	125.8528	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07278	125.8459	P12:230:UMZW:# 166 #: PL IN SD. TAP
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07278	125.8459	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07929	125.8427	MCCOOL - MOORE 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	125.8379	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07042	125.7967	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07000	125.793	CARPENTER - WATERTOWN 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07039	125.7797	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07042	125.7785	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07043	125.7784	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07043	125.7784	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	125.7456	GEN587653 1-J526-GEN1 0.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	125.6934	SHEYENNE SVC - SHEYNNE 115KV CKT Z
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07037	125.6526	AUDUBON - SHEYNNE 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07037	125.6411	BALTA - RAMSEY 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07039	125.6223	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07047	125.6214	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07877	125.6036	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	125.6032	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	125.6005	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	125.5892	GEN615010 1-STANTON4
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06959	125.5529	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06959	125.5529	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	125.5083	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07039	125.4635	HENNING - INMANN 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06965	125.4508	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06965	125.4508	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	125.4422	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06965	125.4418	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	125.4375	GEN587633 1-J510-GEN1 18.000
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06888	125.4314	HIGHLND 3 345.00 - RAUN 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07040	125.4028	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07037	125.3985	PRAIRIE - RAMSEY 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07035	125.3965	CENTER - COYOTE 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07049	125.3755	BYRON - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07041	125.3656	MN VALLEY TAP - PANTHER 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07036	125.3131	PRAIRIE - WINGER 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07006	125.294	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	125.2508	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07037	125.2308	FARGO - SHEYNNE 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07037	125.2186	AUDUBON - HUBBARD 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06887	125.2052	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07054	125.1965	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	125.1856	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07048	125.167	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07037	125.1416	KARLSTAD - WINGER 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07050	125.1406	BYRON - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07095	125.1106	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	125.0651	GEN657749 1-YOUNG 1 GENERATOR
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07052	125.0299	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07056	125.0193	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07041	125.0087	MCLEOD - PANTHER 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	124.9933	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07604	124.9614	MINGO - RED WILLOW 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	124.9224	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	124.92	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	124.9109	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	124.9003	GEN600005 1-MONTICELLO
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07061	124.8866	P13:115-230:NPPD:WAYSIDE4:T1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06952	124.8261	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	124.7746	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	124.7502	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	124.7239	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	124.7088	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	124.6426	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	124.6006	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	124.3364	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	124.3321	GEN659111 2-LELAND OLDS UNIT2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	124.0807	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	123.9578	BASE CASE
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07050	123.9494	FT THOMPSON - OAHE 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07050	123.9494	FT THOMPSON - OAHE 230KV CKT 2
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	123.9374	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07093	123.9258	SUB 3455 - SUB 3740 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07050	123.9137	FT THOMPSON - OAHE 230KV CKT 3
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07050	123.9137	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	123.8443	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	123.8443	P12:115:UMZB:# 119 #: IN NE.
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	123.8367	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	123.8068	GEN600000 1-SHERBURNECNTY G1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	123.8018	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	123.7728	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	123.7561	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	123.739	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	123.7228	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	123.7228	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07050	123.7216	P12:115:TSGT:GRANTNB7-OGALALA7_2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	123.7179	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	123.6861	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	123.6474	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	123.6232	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07042	123.5823	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07042	123.5813	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07042	123.5673	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07081	123.5465	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	123.4967	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	123.4602	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07056	123.4112	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06842	123.3962	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07100	123.2493	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07251	123.2239	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06842	123.1773	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06888	123.0938	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	123.0227	EMERY 161/18.0KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07193	123.0113	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07211	123.0015	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	122.9871	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	122.9871	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07254	122.9854	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	122.8857	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07100	122.7676	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07065	122.7496	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	122.7111	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07129	122.534	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07129	122.5198	P12:345:SPS:J07.1.FINN.HITCH
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	122.4282	GEN587293 1-G16-044-GEN10.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	122.357	GEN600001 2-SHERBURNE CNTY G2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	122.3496	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	122.3156	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	122.3115	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	122.308	GEN659125 1-COVEY
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08033	122.2785	GRAND ISLAND - MCCOOL 345KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06891	122.2774	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	122.2426	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07011	122.2398	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07011	122.2398	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	122.2135	GEN600002 3-SHERBURNE CNTY G3
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07374	122.0992	MINGO - SETAB 345KV CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	122.0012	GEN615001 1-COAL CREEK
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	121.9102	GEN615002 2-COAL CREEK
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	121.7969	GEN659103 1-ANTELOPE VALLEY UNIT1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	121.7969	GEN659107 2-ANTELOPE VALLEY UNIT2
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	121.7906	GEN620315 1-BIG STONE GEN
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	121.2524	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	121.2197	STANTON 230/18.0KV TRANSFORMER CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07042	120.8461	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	120.8434	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07651	120.7957	MINGO - RED WILLOW 345KV CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07042	120.7408	2810X2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	120.5937	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	120.5226	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	120.3244	GEN659125 1-COVEY
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	120.3145	GEN587133 1-G16-017-GEN10.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	120.1893	GEN659103 1-ANTELOPE VALLEY UNIT1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	120.1893	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	120.0709	GEN615001 1-COAL CREEK
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	119.4894	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	119.3232	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	118.988	GEN587293 1-G16-044-GEN10.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	118.7619	GEN659125 1-COVEY
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	118.743	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	118.5887	GEN587133 1-G16-017-GEN10.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07042	118.474	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	118.3159	GEN615001 1-COAL CREEK
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	118.203	GEN615002 2-COAL CREEK
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	117.9513	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	116.9011	GEN587133 1-G16-017-GEN10.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	116.8834	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	115.5183	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06891	114.0285	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	107.3731	GEN652353 2-GR PRAIRIEG 0.6900
0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	106.0136	GEN652353 2-GR PRAIRIEG 0.6900
0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	103.1739	GEN652353 2-GR PRAIRIEG 0.6900
0	20WP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05711	102.9819	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	20WP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05690	101.0481	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	20WP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05708	100.2158	STORLA - WESSINGTON 230KV CKT 1
0	20WP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05741	100	SPLIT ROCK - WHITE 345KV CKT 1
0	20WP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05848	99.5	GEN562714 1-G15_023_4 0.6900
0	20WP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05848	99.5	GEN562715 1-G15_023_5 0.6900
0	20WP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05727	99.2	HANLON - STORLA 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	138.6631	GEN562714 1-G15_023_4 0.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	138.6631	GEN562715 1-G15_023_5 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06734	138.3932	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06867	138.3896	LETCHER - SIOUX FALLS 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07043	137.7984	AINSWORTH - VALENTINE 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	137.7812	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	137.7223	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	137.478	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	137.3119	GEN336153 1-WATERFORD UNIT#3
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	137.2915	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06847	137.2669	RAUN - SIOUX CITY 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	137.2372	GEN562714 1-G15_023_4 0.6900
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	137.2372	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06890	137.074	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07131	137.0579	SIDNEY - STEGALL 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06789	136.9459	FT THOMPSON - LETCHER 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	136.9001	GEN335831 1-RIVERBEND UNIT#1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07276	136.8718	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	136.6953	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	136.6843	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	136.6648	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07461	136.6636	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07276	136.6372	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06898	136.6225	FT RANDAL - SPENCER 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07034	136.5956	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06898	136.5783	ONEILL - SPENCER 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06908	136.2896	HANLON - SIOUX FALLS 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	136.2545	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06926	136.1729	RASMUSN - UTICA JCT 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	136.1304	GEN562714 1-G15_023_4 0.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	136.1304	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06816	136.0065	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06895	135.9768	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.9751	GEN501801 1-DOLET HILLS UNIT1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.9415	GEN337653 1-WHITE BLUFF UNIT #2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06913	135.9393	FT RANDAL - UTICA JCT 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06895	135.8285	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.7667	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.7536	GEN338143 1-INDEPENDENCE UNIT #1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07014	135.6649	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07461	135.6553	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07212	135.654	OAHE - PHILIP TAP 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07461	135.6076	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.5355	GEN336251 1-NINEMILE POINT UNIT#4
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.5333	GEN501813 1-RODEMACHER UNIT 3
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06917	135.5279	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.5109	GEN335206 1-NELSON UNIT 6
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.5074	GEN336831 1-BAXTER WILSON SES
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.4571	GEN336252 1-NINEMILE POINT UNIT#5
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	135.4416	GEN337653 1-WHITE BLUFF UNIT #2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07014	135.4393	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	135.4252	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07014	135.4237	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.4213	GEN337041 1-GERALD ANDRUS
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07015	135.4137	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07014	135.4133	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.3381	GEN501812 1-RODEMACHER UNIT 2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	135.3212	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07014	135.3207	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07014	135.3203	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	135.3202	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07109	135.3158	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07109	135.3157	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07109	135.231	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07246	135.2278	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07109	135.1914	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07109	135.1779	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.1487	GEN334440 1-SABINE UNIT 4
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.1468	GEN344897 4-1LAB G4 20.000
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.1437	GEN344894 1-1LAB G1 20.000
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.1437	GEN344895 2-1LAB G2 20.000
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.1436	GEN344896 3-1LAB G3 20.000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07014	135.1313	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.0803	GEN587353 1-G16-050-GEN10.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06542	135.0765	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.0257	GEN345670 1-1RUSH G1 18.000
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	135.0244	GEN345671 2-1RUSH G2 18.000
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06948	135.0045	CARPENTER - HURON 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07921	134.98	COLUMEAST - SHELL CREEK 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.09818	134.9632	HOSKINS - SHELL CREEK 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	134.9245	GEN336801 1-BAXTER WILSON UNIT #1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06897	134.9013	GAVINS POINT - HARTINGTON 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	134.8826	GEN335614 1-WILLOW GLENN UNIT#4
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07827	134.7692	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06728	134.7384	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07014	134.6731	G16234&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	134.6668	GEN531447 1-HOLCOMB GENERATOR
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06754	134.6361	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07784	134.6153	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07091	134.6105	MARTIN - SHANNON 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06810	134.5407	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06811	134.5311	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06754	134.5031	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	134.4705	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07043	134.4347	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06734	134.3826	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07043	134.3594	CHADRON - DUNLAP 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07152	134.3284	MENNO JCT - UTICA 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07207	134.1518	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	134.1434	GEN587363 1-G16-055-GEN10.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	134.0931	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	134.0929	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	134.0928	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07002	134.0876	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	134.0794	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	134.079	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07096	134.0525	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06979	134.0315	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	133.9906	GEN659118 1-LARAMIE RIVER UNIT1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06885	133.9466	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	133.9207	GEN344897 4-1LAB G4 20.000
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	133.9141	GEN344894 1-1LAB G1 20.000
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	133.9136	GEN344896 3-1LAB G3 20.000
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06913	133.817	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06618	133.7471	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06619	133.746	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07183	133.7382	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07183	133.7034	JAMES TOWN - WEBER 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	133.6892	GEN645011 1-NEBRASKA CITY 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	133.6243	GEN645012 2-NEBRASKA CITY 2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	133.6037	GEN640009 1-COOPER NUCLEAR STATION
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07181	133.5948	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07181	133.5947	LELAND OLDS - STANTON 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	133.5808	GEN542962 2-IATAN UNIT #2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07183	133.5392	BISMARK - WEBER 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07199	133.5251	KELLY - SHELL CREEK 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06913	133.5201	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07199	133.4923	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	133.4727	GEN542957 1-IATAN UNIT #1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	133.4668	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07185	133.4621	PRAIRIE - RAMSEY 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07080	133.434	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	133.4181	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	133.3932	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07063	133.3407	CLEARWATER - NELIGH 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	133.34	GEN542951 5-HAWTHORN UNIT #5
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	133.3365	GEN542955 1-LACYGNE UNIT #1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07056	133.3194	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07031	133.2708	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06971	133.2568	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07063	133.2371	CLEARWATER - ONEILL 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	133.1538	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07014	133.138	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	133.1188	GEN531447 1-HOLCOMB GENERATOR
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07063	133.1133	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07194	133.095	AINSWORTH - BASSETT 7115.00 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07194	133.0798	ATKINSON - STUART 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	133.0363	GEN563222 1-G15088_3 0.6900
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07206	132.9941	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07206	132.994	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	132.9721	GEN542951 5-HAWTHORN UNIT #5
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06998	132.9669	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06998	132.9669	FT THOMPSON - OAHE 230KV CKT 2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	132.9432	BASE CASE
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07194	132.9276	BASSETT 7115.00 - STUART 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06990	132.8933	BROADLAND - HURON 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06990	132.8931	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07194	132.8922	ATKINSON - EMMET 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06998	132.8767	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06998	132.8767	FT THOMPSON - OAHE 230KV CKT 4
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07001	132.8583	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07190	132.8558	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07190	132.8558	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06990	132.8446	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06990	132.836	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07036	132.8265	CALLAWAY - MAXWELL 115KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07972	132.8111	COLUMEAST - SHELL CREEK 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	132.8017	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	132.7773	ANSON 115/17.5KV TRANSFORMER CKT 4
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	132.7743	BURR - CANBY 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06951	132.7675	STAPLETON - THEDFORD 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07030	132.7482	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07327	132.7332	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06840	132.7175	FT THOMPSON - LETCHER 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07241	132.7007	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07221	132.6994	P13:230-345:NPPD:SIDNEY 3:KV2A
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.05849	132.6909	HOSKINS - RAUN 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.05849	132.6909	HOSKINS - RAUN 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07221	132.6895	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06931	132.6757	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07220	132.6752	OGALLALA - SIDNEY 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07221	132.6743	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	132.6163	GEN587153 1-G16-021-GEN10.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06989	132.5938	HANKINSON - WAHPETON 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	132.5907	GEN300002 1-THOMAS HILL UNIT 2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07114	132.5532	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06991	132.5421	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07204	132.5369	HOLCOMB - SETAB 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	132.5125	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	132.4962	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	132.4956	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06992	132.4845	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07048	132.4604	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07011	132.4553	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07010	132.4337	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07030	132.4069	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	132.3865	GEN600045 4-ANSON
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07200	132.3455	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07200	132.3455	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07200	132.3381	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07200	132.3381	FT THOMPSON - OAHE 230KV CKT 2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.08312	132.3248	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07236	132.3042	AXTELL - PAULINE 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	132.2846	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07200	132.2635	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07200	132.2635	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07200	132.2634	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07200	132.2634	FT THOMPSON - OAHE 230KV CKT 4
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07138	132.2634	SUB 3454 - WAGENER 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07011	132.2455	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	132.2174	GEN590010 1-ERCOT EQUIVALENCE
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07289	132.1993	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07025	132.1732	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	132.1605	GEN590011 2-ERCOT EQUIVALENCE
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07237	132.149	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06898	132.1387	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06898	132.1387	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	132.1291	GEN542955 1-LACYGNE UNIT #1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	132.0609	GEN542957 1-IATAN UNIT #1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07403	132.0549	KELLY - SHELL CREEK 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	132.0452	GEN300003 1-THOMAS HILL UNIT 3
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07403	132.0401	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07403	132.04	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	132.0381	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	132.0061	GEN587363 1-G16-055-GEN10.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	131.9991	GEN300007 1-NEW MADRID UNIT 2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	131.9918	GEN300006 1-NEW MADRID UNIT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.9264	GEN642067 1-PLATTE
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07155	131.9254	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.9178	GEN645012 2-NEBRASKA CITY 2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.9048	AINSWORTH WIND 34KV SWITCHED SHUNT
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07006	131.8938	AS KING - EAU CLAIRE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.8822	GEN542956 2-LACYGNE UNIT #2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.8732	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.8604	GEN636641 1-LOUISA UNIT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.8404	GEN542962 2-IATAN UNIT #2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07325	131.8378	MINGO - SETAB 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07056	131.8351	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.8332	GEN587443 1-G16-064-GEN10.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07112	131.8244	MISSION - WITTEN 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.8215	GEN659118 1-LARAMIE RIVER UNIT1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	131.821	GEN659353 1-DEERCREK CTG18.000
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.8047	GEN645011 1-NEBRASKA CITY 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.798	GEN659118 1-LARAMIE RIVER UNIT1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	131.7772	GEN659354 1-DEERCREK STG18.000
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07263	131.7723	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.7411	GEN642067 1-PLATTE
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.7379	GEN514806 1-SOONER UNIT 2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07205	131.7356	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.7344	GEN514805 1-SOONER UNIT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.7328	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.6891	GEN542957 1-IATAN UNIT #1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07180	131.6884	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.6712	GEN542955 1-LACYGNE UNIT #1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07013	131.6678	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07689	131.6575	AINSWORTH - AINSWORTH 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07205	131.6415	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06982	131.635	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.6186	GEN515042 1-SEMINOLE 3G
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.599	GEN515040 1-SEMINOLE 1G
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.5978	GEN542951 5-HAWTHORN UNIT #5
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.5971	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06667	131.5909	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06668	131.586	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07045	131.5753	JEFFREY - NORTH PLATTE 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.5654	GEN640016 1-KINGSLEY HYDRO
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.5529	GEN542956 2-LACYGNE UNIT #2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.5525	GEN515041 1-SEMINOLE 2G
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06847	131.5478	RAUN - SIOUX CITY 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06789	131.5419	COOPER - MOORE 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07230	131.5405	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07154	131.5346	GERALD GENTLEMAN STATION (GGS T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07154	131.5345	GERALD GENTLEMAN STATION (GGS T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07205	131.5182	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07066	131.5177	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07245	131.5105	ATKINSON - EMMET 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07157	131.5038	GERALD GENTLEMAN STATION (GGS T2) 345/230/13.8KV TRANSFORMER CKT 2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07157	131.5037	GERALD GENTLEMAN STATION (GGS T2) 345/230/13.8KV TRANSFORMER CKT 2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.5	GEN509394 1-FLINT CREEK
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.4988	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.4988	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07023	131.4983	CROOKED CREEK - RIVERDALE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.4961	KEARNEY 115KV SWITCHED SHUNT
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07240	131.4953	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKE
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.4863	GEN512688 2-GRDA1 GSU2 22
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.4777	GEN640028 1-COLUMCOGENERATION
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07127	131.4736	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.4735	GEN515226 1-MUSKOGEE 6G
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.4733	GEN515225 1-MUSKOGEE 5G
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.4613	GEN515223 1-MUSKOGEE 4G
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.4462	GEN511840 1-NORTHEASTERN STATION #3
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.4404	GEN513601 1-GRECCTG_1 20.000
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.4352	GEN511842 1-RIVERSIDE STATION #1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.4234	GEN511839 1-NORTHEASTERN STATION #2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.4082	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.4047	GEN511843 1-RIVERSIDE STATION #2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.3891	GEN541151 3-SIBLEY GENERATING UNIT #3
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07328	131.3854	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07134	131.3619	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07134	131.3619	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07438	131.3609	G15088_T 345.00 - PAULINE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.3561	GEN509416 1-TURK GENERATION
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.3448	GEN645041 1-CASS COUNTY 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07240	131.3378	BONESTEEL - GREGORY 115KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07053	131.2671	BROKEN BOW - CROOKED CREEK 115KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07039	131.2606	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07202	131.241	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.2383	GEN509394 1-FLINT CREEK
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.222	GEN645042 2-CASS COUNTY 2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.2106	GEN509403 1-PIRKEY GENERATION
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.08556	131.2032	COLUMWEST - KELLY 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07003	131.1738	STAPLETON - THEDFORD 115KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07058	131.1646	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.1586	GEN645033 3-SARPY COUNTY 3
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.1483	BASE CASE
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.1446	1222-AINSWORTH WIND
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.1446	1303-KEARNEY
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.1446	2560-BRDLAND-LNX3345.00
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.1446	2561-BRDLAND-LNX3345.00
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.1446	BASE CASE
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.1399	GEN509406 1-WELSH #3
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.1397	GEN509404 1-WELSH #1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	131.1344	GEN660016 1-B_H WIND 0.7000
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	131.1264	GEN659291 1-FT MP COLLECTOR
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07025	131.123	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.1081	GEN640016 1-KINGSLEY HYDRO
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07058	131.0996	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	131.0829	GEN662101 1-WESSINGTON190.5750
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07313	131.0719	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07447	131.059	AINSWORTH - STUART 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07220	131.0476	CALLAWAY - MAXWELL 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07147	131.0379	STAPLETON - THEDFORD 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	131.0352	GEN652545 7-BIG BEND
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07081	131.029	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07017	131.0251	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07011	131.0193	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.0164	GEN509416 1-TURK GENERATION
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07447	131.0078	ATKINSON - EMMET 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07173	130.9891	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07173	130.9891	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07173	130.988	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07173	130.9879	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07447	130.986	ATKINSON - STUART 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06990	130.975	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	130.9737	GEN509409 1-WILKES #3
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07043	130.971	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07197	130.968	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07018	130.9361	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07018	130.9334	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	130.9207	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	130.8992	GEN509403 1-PIRKEY GENERATION
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	130.8939	GEN587153 1-G16-021-GEN10.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	130.8801	BASE CASE
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06959	130.8578	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07044	130.8525	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	130.8331	GEN300002 1-THOMAS HILL UNIT 2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07497	130.8321	G15088_T 345.00 - PAULINE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	130.8252	GEN587093 1-G16-023-GEN10.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	130.8252	GEN587193 1-G16-029-GEN10.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06968	130.7882	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07058	130.7634	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06982	130.7626	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07231	130.7616	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07276	130.7493	P13:230-345:NPPD:STEGALL3:KV3A
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07208	130.7004	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07208	130.7003	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07064	130.6979	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	130.6951	GEN300011 1-ST FRANCIS UNIT 2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	130.6949	GEN300002 1-THOMAS HILL UNIT 2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07231	130.693	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07192	130.6909	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	130.6873	GEN600045 4-ANSON
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	130.6828	GEN300010 1-ST FRANCIS UNIT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06959	130.6818	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	130.6734	GEN300015 1-1SGPDEL 18.000
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06780	130.6701	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07019	130.6668	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06959	130.6504	GLENHAM - L3 HAWDON 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	130.6504	GEN505432 1-SIKESTON
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07284	130.6435	AXTELL - PAULINE 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06959	130.6373	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	130.6313	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07834	130.6213	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06959	130.6077	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	130.5782	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	130.5654	GEN587153 1-G16-021-GEN10.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06959	130.5416	GLENHAM - WHITLOK 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07240	130.5315	GREGORY - WINNER 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07007	130.5305	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07056	130.517	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07259	130.5027	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07231	130.4986	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07231	130.4985	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06985	130.4878	FORMAN - HANKINSON 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.08384	130.4801	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07441	130.4596	AXTELL - SWEETWATER 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07192	130.4558	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07100	130.4516	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07449	130.4409	LOUP CITY - NORTH LOUP 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06816	130.4274	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07193	130.411	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07436	130.4019	AXTELL - PAULINE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07211	130.4015	103RD & ROKEBY - MOORE 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07013	130.3869	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06787	130.3685	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07240	130.3629	MISSION - WITTEN 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07240	130.3399	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07240	130.3361	WINNER - WITTEN 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07604	130.3179	MINGO - RED WILLOW 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	130.3095	GEN600045 4-ANSON
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.08556	130.2891	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07193	130.2834	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07199	130.2783	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	130.2636	GEN590010 1-ERCOT EQUIVALENCE
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06987	130.2526	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07346	130.2336	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07346	130.2336	SUB 3454 - WAGENER 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	130.2246	GEN652544 5-BIG BEND
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	130.2196	GEN300006 1-NEW MADRID UNIT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07005	130.1891	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	130.158	GEN652543 3-BIG BEND
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	130.157	GEN652542 1-BIG BEND

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07114	130.1452	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	130.1444	GEN300003 1-THOMAS HILL UNIT 3
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06807	130.1264	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07191	130.1154	COOPER - ST JOE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	130.1	GEN590010 1-ERCOT EQUIVALENCE
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07031	130.0907	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06985	130.0857	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07095	130.0777	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	130.0673	GEN590011 2-ERCOT EQUIVALENCE
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07004	130.0535	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	130.0347	GEN300007 1-NEW MADRID UNIT 2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07066	130.0026	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07184	129.9966	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07199	129.992	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07184	129.989	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	129.9798	GEN300003 1-THOMAS HILL UNIT 3
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07254	129.9716	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07162	129.9649	MISSION - WITTEN 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07184	129.953	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	129.9194	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07240	129.9132	P12:115:UMZW:# 172 #: WI IN SD.
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	129.8949	GEN300007 1-NEW MADRID UNIT 2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	129.8909	GEN563232 1-G15089_3 0.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06995	129.8887	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	129.8849	GEN300006 1-NEW MADRID UNIT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06985	129.8847	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07519	129.8823	MINGO - SETAB 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07519	129.8822	MINGO - SETAB 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06814	129.8808	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	129.8806	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	129.8725	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	129.8703	FORMAN - OAKES 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	129.8405	GEN652457 1-GARRISON
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	129.8405	GEN652458 2-GARRISON
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	129.8405	GEN652459 3-GARRISON
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06948	129.8235	HURON - WATERTOWN 230KV CKT 2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06807	129.8212	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	129.7946	GEN590011 2-ERCOT EQUIVALENCE
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07237	129.7626	P12:230:UMZW:# 166 #: PL IN SD. TAP
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07237	129.7626	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07827	129.7616	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07008	129.7451	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06998	129.7441	COOPER - MOORE 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07363	129.7416	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07363	129.7411	103RD & ROKEBY - MOORE 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06991	129.737	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06991	129.737	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06948	129.7364	CARPENTER - WATERTOWN 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06987	129.7329	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	129.7157	GEN659403 1-NDSUNFLWR W0.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07042	129.7071	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07129	129.6764	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07100	129.6687	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06990	129.6632	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06990	129.6517	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	129.637	GEN 11123 1-G736-GEN1 0.6900
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07377	129.6287	NF
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	129.6272	GEN 11133 1-J442-GEN1 0.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06997	129.6187	BYRON - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06987	129.5946	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06985	129.5548	AUDUBON - SHEYNNE 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07214	129.5405	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06900	129.5208	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	129.4777	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06987	129.4199	HENNING - INMANN 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06913	129.3983	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06913	129.3982	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	129.3913	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06913	129.3882	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07254	129.3651	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	129.3644	GEN659411 1-CAMPBLCNTY W0.6900
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	129.3361	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06989	129.3335	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07438	129.3276	G15088_T 345.00 - MOORE 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06954	129.3276	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	129.2998	GEN659353 1-DEERCREK CTG18.000
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06998	129.2913	BYRON - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	129.2901	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06989	129.264	MN VALLEY TAP - PANTHER 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	129.2268	GEN600006 1-AS KING
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06996	129.2164	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07672	129.2111	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06835	129.1901	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07011	129.1619	GLENHAM - WHITLOK 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07000	129.1066	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	129.0909	GEN660016 1-B_H WIND 0.7000
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07011	129.0662	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	129.0387	GEN659296 2-SDPRAIRWND1W0.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07002	129.0386	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07043	129.0362	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07011	129.0208	GLENHAM - L3 HAWDON 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07011	128.9908	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	128.9789	GEN662101 1-WESSINGTON190.5750
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07011	128.9346	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07011	128.9068	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.8754	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07041	128.8754	HANKINSON - WAHPETON 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	128.8648	GEN652556 2-OAHE
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	128.8648	GEN652557 4-OAHE
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	128.8648	GEN652558 6-OAHE
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07009	128.8625	P13:115-230:NPPD:WAYSIDE4:T1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	128.8192	GEN652559 1-OAHE
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.8188	GEN652906 1-G09_006IS_3 0.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	128.7948	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07625	128.7912	AXTELL - SWEETWATER 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	128.7736	GEN615010 1-STANTON4
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07005	128.7689	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07001	128.719	FRANKS - HUBEN 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.6656	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	128.6448	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.6354	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.5942	GEN652907 1-G09_007IS_3 0.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07035	128.5891	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	128.5524	GEN659110 1-LELAND OLDS UNIT1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	128.5406	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06950	128.529	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06950	128.529	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	128.5117	GEN587593 1-J460-GEN1 0.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	128.5096	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07034	128.4441	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07052	128.4356	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.4257	CENTER 230/22.0KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.4057	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07077	128.3882	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	128.388	GEN587053 1-G16-007-GEN10.6500
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	128.3784	GEN652545 7-BIG BEND
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	128.362	GEN659141 1-K10215A
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.3534	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	128.2939	GEN652906 1-G09_006IS_3 0.6900
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07313	128.2557	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.2529	GEN563232 1-G15089_3 0.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	128.2407	GEN652544 5-BIG BEND
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	128.2084	GEN652543 3-BIG BEND
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	128.2079	GEN652542 1-BIG BEND
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	128.1443	GEN587653 1-J526-GEN1 0.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	128.1	GEN600005 1-MONTICELLO
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	128.0636	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	128.0457	GEN652907 1-G09_007IS_3 0.6900
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.0307	GEN 10648 1-G830_GEN 0.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	128.0104	GEN659010 4-G07_027IS_2 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	127.9977	GEN659194 1-NDPRAIRWND1W0.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06998	127.9951	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06998	127.9951	FT THOMPSON - OAHE 230KV CKT 2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	127.9947	GEN659366 3-WILTON 3 W0.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	127.9803	GEN652461 5-GARRISON
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	127.9792	GEN652460 4-GARRISON
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	127.9494	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06998	127.9427	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06998	127.9427	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	127.9188	BLAIR - GRANITE FALLS 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	127.8993	GEN652459 3-GARRISON
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	127.8992	GEN652457 1-GARRISON
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	127.8992	GEN652458 2-GARRISON
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	127.8852	GEN563232 1-G15089_3 0.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	127.8555	BASE CASE
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07034	127.8414	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	127.8361	GEN587633 1-J510-GEN1 18.000
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06931	127.7981	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	127.785	GEN659403 1-NDSUNFLWR W0.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	127.7677	GEN659407 1-ANTELPHILLSW0.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	127.7212	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	127.7212	P12:115:UMZB:# 119 #: IN NE.
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07057	127.6947	AS KING - EAU CLAIRE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	127.6499	GEN652559 1-OAHE
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	127.6293	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	127.6253	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07014	127.6142	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	127.6054	GEN 11123 1-G736-GEN1 0.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	127.5974	GEN 11133 1-J442-GEN1 0.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	127.5442	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	127.4952	GEN659411 1-CAMPBLCNTY W0.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	127.4684	GEN600004 2-PRAIRIE ISLAND G2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	127.4582	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07030	127.4481	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07672	127.4479	G15088_T 345.00 - MOORE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07248	127.4142	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07034	127.3992	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06899	127.3871	RAUN - SIOUX CITY 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07204	127.3705	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07077	127.3473	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07048	127.3133	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07010	127.3061	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07068	127.2729	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07030	127.2302	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	127.1983	GEN659296 2-SDPRAIRWND1W0.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06990	127.1749	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06990	127.1691	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06990	127.1576	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	127.0915	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07070	127.0862	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07138	127.0692	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07062	127.0644	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	127.0078	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07037	126.9724	FORMAN - HANKINSON 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	126.9551	GEN652556 2-OAHE
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	126.9551	GEN652557 4-OAHE
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	126.9551	GEN652558 6-OAHE
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	126.9255	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	126.9052	GEN600006 1-AS KING
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	126.9051	EMERY 161/18.0KV TRANSFORMER CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	126.8197	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	126.8197	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07161	126.8172	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06868	126.7933	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	126.7127	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07059	126.7058	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07155	126.696	103RD & ROKEBY - MOORE 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07325	126.6671	MINGO - SETAB 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07039	126.642	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	126.6171	LADISH 115/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	126.6012	GEN659110 1-LELAND OLDS UNIT1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07055	126.5943	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07327	126.5742	P13:230-345:NPPD:STEGALL3:KV3A
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	126.57	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07037	126.5516	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	126.4549	FORMAN - OAKES 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	126.4528	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	126.4009	GEN659141 1-K10215A
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07056	126.3613	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07037	126.3545	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	126.2847	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07062	126.2766	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06866	126.2615	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	126.2227	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07000	126.208	HURON - WATERTOWN 230KV CKT 2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	126.197	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	126.1953	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07060	126.1833	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07278	126.1748	P12:230:UMZW:# 166 #: PL IN SD. TAP
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07278	126.1748	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	126.1672	GEN652173 1-G09_001IS_2 0.6900
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07929	126.1594	MCCOOL - MOORE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07042	126.1259	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07000	126.1225	CARPENTER - WATERTOWN 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07039	126.1087	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07043	126.1075	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07043	126.1075	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07042	126.1075	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	126.0752	GEN587653 1-J526-GEN1 0.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	126.0227	SHEYENNE SVC - SHEYNNE 115KV CKT Z
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07037	125.9812	AUDUBON - SHEYNNE 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07037	125.9699	BALTA - RAMSEY 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07039	125.9514	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07047	125.9513	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07877	125.9335	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	125.9296	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06959	125.8671	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06959	125.8671	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	125.8395	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07039	125.7923	HENNING - INMANN 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06965	125.7794	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06965	125.7793	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	125.771	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06965	125.7704	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	125.7667	GEN587633 1-J510-GEN1 18.000
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06888	125.7606	HIGHLND 3 345.00 - RAUN 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07040	125.7314	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07037	125.7266	PRAIRIE - RAMSEY 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07035	125.725	CENTER - COYOTE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07049	125.7042	BYRON - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07041	125.6942	MN VALLEY TAP - PANTHER 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07036	125.6415	PRAIRIE - WINGER 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07006	125.622	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07037	125.5589	FARGO - SHEYNNE 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07037	125.546	AUDUBON - HUBBARD 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06887	125.5342	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07054	125.5249	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	125.5149	GEN615010 1-STANTON4
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	125.4991	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	125.4958	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07048	125.4952	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07037	125.4692	KARLSTAD - WINGER 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07050	125.4689	BYRON - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07095	125.4385	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07052	125.358	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07056	125.3481	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07041	125.336	MCLEOD - PANTHER 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	125.3214	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07604	125.2767	MINGO - RED WILLOW 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	125.2389	GRAND GULF 500/22.0KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07061	125.2139	P13:115-230:NPPD:WAYSIDE4:T1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	125.1849	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06952	125.1546	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07053	125.1182	FRANKS - HUBEN 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	125.0996	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	125.0801	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	125.0515	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	125.0222	STANTON 230/18.0KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	124.9979	GEN657749 1-YOUNG 1 GENERATOR
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	124.9701	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	124.9128	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	124.8444	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	124.7936	GEN600005 1-MONTICELLO
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07187	124.7154	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	124.6646	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	124.6452	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	124.2838	BASE CASE
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07050	124.2735	FT THOMPSON - OAHE 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07050	124.2735	FT THOMPSON - OAHE 230KV CKT 2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07093	124.2527	SUB 3455 - SUB 3740 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	124.2487	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07050	124.2378	FT THOMPSON - OAHE 230KV CKT 3
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07050	124.2378	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	124.1706	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	124.1706	P12:115:UMZB:# 119 #: IN NE.
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	124.1615	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	124.1263	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	124.1012	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	124.0851	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	124.0674	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07050	124.0472	P12:115:TSGT:GRANTNB7-OGALALA7_2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	124.0466	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	124.0347	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	124.0347	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	124.0121	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	123.9402	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07042	123.9059	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07042	123.9047	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07042	123.8907	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07081	123.8717	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	123.8299	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	123.7926	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07056	123.7367	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	123.7075	GEN600000 1-SHERBURNECNTY G1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06842	123.7049	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07100	123.5744	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07251	123.5482	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06842	123.4892	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06888	123.4184	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	123.347	EMERY 161/18.0KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07193	123.3356	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07211	123.3261	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	123.3151	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	123.3108	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	123.3108	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07254	123.3093	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	123.2898	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	123.2094	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07100	123.0918	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07065	123.0718	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	123.0349	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07129	122.8589	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07129	122.8435	P12:345:SPS:J07.1.FINN.HITCH
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	122.7375	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	122.6734	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	122.6388	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	122.6347	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	122.6173	GEN659125 1-COVEY
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06891	122.6021	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.08033	122.5884	GRAND ISLAND - MCCOOL 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	122.5652	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07011	122.5619	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07011	122.5619	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07374	122.4227	MINGO - SETAB 345KV CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	122.31	GEN615001 1-COAL CREEK
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	122.2658	GEN600001 2-SHERBURNE CNTY G2
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	122.2188	GEN615002 2-COAL CREEK
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	122.1227	GEN600002 3-SHERBURNE CNTY G3
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	122.1198	GEN659103 1-ANTELOPE VALLEY UNIT1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	122.1198	GEN659107 2-ANTELOPE VALLEY UNIT2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	121.7072	GEN620315 1-BIG STONE GEN
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	121.5729	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	121.5409	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07651	121.1201	MINGO - RED WILLOW 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	120.9127	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	120.8431	GEN587293 1-G16-044-GEN10.6900
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	120.8088	GEN659111 2-LELAND OLDS UNIT2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07042	120.7098	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	120.6446	GEN659125 1-COVEY
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	120.6171	GEN587133 1-G16-017-GEN10.6900
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07042	120.6073	2810X2
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	120.1586	GEN659103 1-ANTELOPE VALLEY UNIT1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	120.1586	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	119.8067	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	119.625	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	118.9554	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	118.9033	GEN587133 1-G16-017-GEN10.6900
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	118.7387	GEN659125 1-COVEY
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	118.6776	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07042	118.4623	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	118.2951	GEN615001 1-COAL CREEK
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	118.1828	GEN615002 2-COAL CREEK
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	117.8904	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	117.195	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	116.8203	GEN587133 1-G16-017-GEN10.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	115.8273	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06891	114.332	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	107.5737	GEN652353 2-GR PRAIRIEG 0.6900
0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	106.2914	GEN652353 2-GR PRAIRIEG 0.6900
0	20WP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.05711	102.9724	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	102.961	GEN652353 2-GR PRAIRIEG 0.6900
0	20WP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.05690	101.0205	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	20WP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.05708	100.1844	STORLA - WESSINGTON 230KV CKT 1
0	20WP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.05741	99.9	SPLIT ROCK - WHITE 345KV CKT 1
0	20WP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.05848	99.5	GEN562714 1-G15_023_4 0.6900
0	20WP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.05848	99.5	GEN562715 1-G15_023_5 0.6900
0	20WP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.05727	99.2	HANLON - STORLA 230KV CKT 1
0	20SP	G16_021	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03358	119.0015	HOSKINS - SHELL CREEK 345KV CKT 1
0	17SP	G16_021	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03426	114.4231	HOSKINS - SHELL CREEK 345KV CKT 1
0	16WP	G16_021	-	Non-Converged Contingency	0.0	0.0	0.15074	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	16WP	G16_021	-	Non-Converged Contingency	0.0	0.0	0.10049	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	16WP	G16_021	-	Non-Converged Contingency	0.0	0.0	0.10049	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	16WP	G16_021	-	Non-Converged Contingency	0.0	0.0	0.05313	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	16WP	G16_021	-	Non-Converged Contingency	720.0	720.0	0.05025	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	16WP	G16_021	-	Non-Converged Contingency	720.0	720.0	0.05025	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	16WP	G16_021	-	Non-Converged Contingency	720.0	720.0	0.05025	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	16WP	G16_021	-	Non-Converged Contingency	720.0	720.0	0.05025	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	16WP	G16_021	-	Non-Converged Contingency	720.0	720.0	0.05025	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	16WP	G16_021	-	Non-Converged Contingency	720.0	720.0	0.05025	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	16WP	G16_021	-	Non-Converged Contingency	720.0	720.0	0.05025	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	17G	G16_021	-	Non-Converged Contingency	720.0	720.0	0.05018	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	17G	G16_021	-	Non-Converged Contingency	720.0	720.0	0.05018	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	20WP	G16_021	-	Non-Converged Contingency	0.0	0.0	0.11696	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	20WP	G16_021	-	Non-Converged Contingency	720.0	720.0	0.05848	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	20WP	G16_021	-	Non-Converged Contingency	720.0	720.0	0.05848	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	25SP	G16_021	-	Non-Converged Contingency	956.09	1051.7	0.04863	-	GEN525561 1-TOLK GEN #1 24 KV
0	25SP	G16_021	-	Non-Converged Contingency	956.09	1051.7	0.04863	-	GEN525562 1-TOLK GEN #2 24 KV
0	17G	G16_021	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320.0	320.0	0.03127	133.6017	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17G	G16_021	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320.0	320.0	0.03127	133.381	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	17G	G16_021	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320.0	320.0	0.03127	133.3705	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_021	FROM->TO	RAUN - TEKAMAH 161KV CKT 1	217.0	217.0	0.03554	105.846	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	25SP	G16_021	FROM->TO	RAUN - TEKAMAH 161KV CKT 1	217.0	217.0	0.03547	104.4571	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	17G	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	400.0	0.03509	128.3068	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17G	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	400.0	0.03509	128.0512	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	17G	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	400.0	0.03509	128.0368	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	17G	G16_021	FROM->TO	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	480.0	0.03509	104.2976	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	17G	G16_021	FROM->TO	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	480.0	0.03509	104.2186	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	17G	G16_021	FROM->TO	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	480.0	0.03509	103.3081	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17G	G16_021	FROM->TO	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	480.0	0.03509	103.1549	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	17G	G16_021	FROM->TO	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	480.0	0.03509	103.0183	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	17G	G16_021	FROM->TO	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	480.0	0.03509	102.241	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	16WP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07460	106.5588	COLUMEAST - SHELL CREEK 345KV CKT 1
2	16WP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07460	104.5364	COLUMEAST - SHELL CREEK 345KV CKT 1
2	17G	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07354	100.9858	COLUMEAST - SHELL CREEK 345KV CKT 1
2	17G	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07354	99.3	COLUMEAST - SHELL CREEK 345KV CKT 1
2	17G	G16_021	FROM->TO	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	320.0	320.0	0.15929	99.6	HOSKINS - RAUN 345KV CKT 1
2	17G	G16_021	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.03862	108.5187	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04901	120.9919	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
2	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04283	113.7736	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
2	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04901	120.1461	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
2	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04283	112.9177	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07185	136.6364	BALTA - RAMSEY 230KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07246	136.0496	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07109	135.7118	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07109	135.6961	NAPA JCT7 115.00 - UTICA 115KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07109	135.5686	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07246	135.3379	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	134.92	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07152	134.5846	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07207	134.5338	NOBLES - SPLIT ROCK 345KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07211	134.4885	BYRON - PLEASANT VALLEY 345KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07187	133.7646	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07185	133.6015	PRAIRIE - RAMSEY 230KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07063	133.4369	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07185	133.3668	PRAIRIE - WINGER 230KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	133.3388	AUDUBON - HUBBARD 230KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	133.282	ANSON - SPLIT ROCK 115KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07196	133.1916	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07206	133.1806	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07190	133.0633	LAWRENCE - SIOUX FALLS 115KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	133.0505	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	133.0412	ANSON - SPLIT ROCK 115KV CKT 2
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	133.0315	ANSON 115/17.5KV TRANSFORMER CKT 4
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	133.0042	LUND - MORANVILLE 230KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	132.9696	BURR - CANBY 115KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07241	132.9391	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05849	132.9234	HOSKINS - RAUN 345KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	132.8071	AINSWORTH WIND 34KV SWITCHED SHUNT
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07221	132.6636	P13:230-345:NPPD:SIDNEY 3:KV2A
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07200	132.5029	FT THOMPSON - OAHE 230KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07200	132.5029	FT THOMPSON - OAHE 230KV CKT 2
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07200	132.4695	FT THOMPSON - OAHE 230KV CKT 3
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07200	132.4695	FT THOMPSON - OAHE 230KV CKT 4
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	132.1537	AINSWORTH WIND 34KV SWITCHED SHUNT
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07154	131.7534	GERALD GENTLEMAN STATION (GGS T1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.7439	KEARNEY 115KV SWITCHED SHUNT
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07240	131.7223	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKE
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.6948	KEARNEY 115KV SWITCHED SHUNT
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07403	131.6566	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07134	131.5097	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07187	131.5013	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07187	131.5013	P12:115:UMZB:# 119 #: IN NE.
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.4491	1222-AINSWORTH WIND
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.4491	1303-KEARNEY
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.4491	2560-BRDLAND-LNX3345.00
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.4491	2561-BRDLAND-LNX3345.00
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.4491	BASE CASE
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07173	131.1938	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07173	131.1927	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	131.0033	P12:115:TSGT:BLKWDCK7-ELSIETP7

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07231	130.9475	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07208	130.8749	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	130.811	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	130.7646	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07231	130.6854	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07240	130.54	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07346	130.3783	SUB 3454 - WAGENER 345KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07519	130.1348	MINGO - SETAB 345KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07240	130.1203	P12:115:UMZW:# 172 #: WI IN SD.
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07363	129.9532	103RD & ROKEBY - MOORE 345KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	129.5732	COYOTE 345/24.0KV TRANSFORMER CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	129.5067	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	129.4225	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.9337	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.846	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.7333	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.7305	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.7292	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.6577	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.6008	CENTER 230/22.0KV TRANSFORMER CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.5362	LADISH 115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.3709	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.2794	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	127.7709	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	127.7668	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	127.2107	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	125.2462	STANTON 230/18.0KV TRANSFORMER CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07187	124.7978	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	118.7451	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	117.9705	BIG STONE 230/24.0KV TRANSFORMER CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07185	136.3891	BALTA - RAMSEY 230KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07246	135.8459	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07109	135.5021	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07109	135.4869	NAPA JCT7 115.00 - UTICA 115KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07109	135.3607	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07246	135.149	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	134.7308	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07152	134.3864	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07207	134.3504	NOBLES - SPLIT ROCK 345KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07211	134.3066	BYRON - PLEASANT VALLEY 345KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07187	133.5771	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07185	133.4162	PRAIRIE - RAMSEY 230KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07063	133.2672	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07185	133.1852	PRAIRIE - WINGER 230KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	133.158	AUDUBON - HUBBARD 230KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	133.0882	ANSON - SPLIT ROCK 115KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07206	133.0199	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07196	133.0055	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07190	132.8874	LAWRENCE - SIOUX FALLS 115KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	132.8595	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	132.8479	ANSON - SPLIT ROCK 115KV CKT 2
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	132.8384	ANSON 115/17.5KV TRANSFORMER CKT 4
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	132.8245	LUND - MORANVILLE 230KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	132.7875	BURR - CANBY 115KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07241	132.7732	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.05849	132.7597	HOSKINS - RAUN 345KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	132.6416	AINSWORTH WIND 34KV SWITCHED SHUNT
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07221	132.5087	P13:230-345:NPPD:SIDNEY 3:KV2A
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07200	132.2853	FT THOMPSON - OAHE 230KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07200	132.2853	FT THOMPSON - OAHE 230KV CKT 2
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07200	132.2552	FT THOMPSON - OAHE 230KV CKT 3
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07200	132.2552	FT THOMPSON - OAHE 230KV CKT 4
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.9996	AINSWORTH WIND 34KV SWITCHED SHUNT
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07154	131.599	GERALD GENTLEMAN STATION (GGS T1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.588	KEARNEY 115KV SWITCHED SHUNT
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07240	131.5575	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKEI
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.5399	KEARNEY 115KV SWITCHED SHUNT
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07403	131.5052	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07134	131.3605	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07187	131.3492	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07187	131.3492	P12:115:UMZB:# 119 #: IN NE.
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.2941	1222-AINSWORTH WIND
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.2941	1303-KEARNEY
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.2941	2560-BRDLAND-LNX3345.00
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.2941	2561-BRDLAND-LNX3345.00
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	131.2941	BASE CASE
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07173	131.0406	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07173	131.0396	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	130.8521	P12:115:TSGT:BLKWDCK7-ELSIETP7
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07231	130.797	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07208	130.7242	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	130.6536	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	130.6078	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07231	130.5347	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07240	130.3905	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07346	130.2306	SUB 3454 - WAGENER 345KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07519	129.9878	MINGO - SETAB 345KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07240	129.9742	P12:115:UMZW:# 172 #: WI IN SD.
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07363	129.8077	103RD & ROKEBY - MOORE 345KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	129.5055	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	129.4506	COYOTE 345/24.0KV TRANSFORMER CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	129.4213	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.8678	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.7812	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.6769	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.6394	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.6374	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.6016	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.4948	CENTER 230/22.0KV TRANSFORMER CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.4219	LADISH 115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.351	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.2609	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	127.6689	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	127.6648	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	127.1162	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	125.1806	STANTON 230/18.0KV TRANSFORMER CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07187	124.7163	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	118.6799	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	117.9092	BIG STONE 230/24.0KV TRANSFORMER CKT 1
2	16WP	G16_021	-	Non-Converged Contingency	0.0	0.0	0.14293	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
2	16WP	G16_021	-	Non-Converged Contingency	720.0	720.0	0.07147	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	16WP	G16_021	-	Non-Converged Contingency	720.0	720.0	0.07147	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
2	16WP	G16_021	-	Non-Converged Contingency	0.0	0.0	0.05022	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17SP	G16_021	-	Non-Converged Contingency	956.0	956.0	0.15179	-	RAUN - SUB 3451 FT CAL 345KV CKT 1
2	17SP	G16_021	-	Non-Converged Contingency	0.0	0.0	0.06119	-	P13:230-345:NPPD:STEGALL3:KV3A
2	17SP	G16_021	-	Non-Converged Contingency	0.0	0.0	0.03758	-	P12:230:UMZW:# 166 #: PL IN SD. TAP
2	17SP	G16_021	-	Non-Converged Contingency	0.0	0.0	0.03758	-	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
2	17SP	G16_021	-	Non-Converged Contingency	0.0	0.0	0.03043	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17G	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	400.0	0.02991	127.2673	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	17G	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	400.0	0.02991	127.0587	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	17G	G16_021	FROM->TO	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	480.0	0.02991	103.6261	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	17G	G16_021	FROM->TO	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	480.0	0.02991	103.4717	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	17G	G16_021	FROM->TO	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	480.0	0.02991	102.5018	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	17G	G16_021	FROM->TO	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	480.0	0.02991	102.3321	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	20SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07493	116.6321	COLUMEAST - SHELL CREEK 345KV CKT 1
3	20SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07493	116.2426	COLUMEAST - SHELL CREEK 345KV CKT 1
3	17SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07445	112.3191	COLUMEAST - SHELL CREEK 345KV CKT 1
3	25SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07453	111.939	COLUMEAST - SHELL CREEK 345KV CKT 1
3	25SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07453	111.9156	COLUMEAST - SHELL CREEK 345KV CKT 1
3	17SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07445	111.9022	COLUMEAST - SHELL CREEK 345KV CKT 1
3	20WP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.08106	108.3974	COLUMEAST - SHELL CREEK 345KV CKT 1
3	20WP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.08106	106.8229	COLUMEAST - SHELL CREEK 345KV CKT 1
3	16WP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07458	106.4657	COLUMEAST - SHELL CREEK 345KV CKT 1
3	16WP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07458	104.434	COLUMEAST - SHELL CREEK 345KV CKT 1
3	17G	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07352	100.803	COLUMEAST - SHELL CREEK 345KV CKT 1
3	17G	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.07352	99.1	COLUMEAST - SHELL CREEK 345KV CKT 1
3	17G	G16_021	FROM->TO	DIXONCO 230.00 - TWIN CHURCH 230KV CKT 1	320.0	320.0	0.15932	99.9	HOSKINS - RAUN 345KV CKT 1
3	17G	G16_021	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.03878	109.473	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	25SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04860	168.2827	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04234	156.7463	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04356	150.523	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	20WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04139	132.3378	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	20WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.03942	123.0277	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04877	120.3638	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
3	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.04257	113.1782	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
3	25SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04860	166.9846	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04234	155.7054	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	25SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04356	149.3466	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	20WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04139	131.4717	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	20WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.03942	122.1891	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04877	119.5208	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
3	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04257	112.3217	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06808	141.5285	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06767	139.4067	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07782	138.6294	NUNDRWD - WAYSIDE 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06864	137.1257	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06790	137.0953	STORLA - WESSINGTON 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06811	136.149	HANLON - STORLA 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	135.7463	GEN562714 1-G15_023_4 0.6900
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	135.7463	GEN562715 1-G15_023_5 0.6900
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	135.4525	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06762	134.786	FT THOMPSON - LETCHER 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06762	134.786	FT THOMPSON - LETCHER 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	134.36	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07070	134.157	ONEILL - SPENCER 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06890	134.0911	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07070	134.0402	FT RANDAL - SPENCER 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06890	133.9859	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06808	133.93	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06890	133.8258	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06890	133.8258	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07429	133.6718	OAHE - PHILIP TAP 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06978	133.5442	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06978	133.5442	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07158	133.3502	FARGO - JAMES TOWN 230KV CKT 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06933	133.2465	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07070	133.243	PAHOJA - SIOUX FALLS 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07130	133.2255	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07157	133.2205	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	133.1571	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	133.1449	GEN336821 1-GRAND GULF UNIT
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06988	133.1145	LAKEFIELD 3 - NOBLES 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07755	133.0553	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07755	133.0553	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06701	133.0433	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06701	133.0433	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06728	132.9801	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06728	132.9801	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06932	132.8781	G09_001IST 345.00 - GROTON 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06841	132.8375	STORLA - WESSINGTON 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09786	132.8324	HOSKINS - SHELL CREEK 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06708	132.7175	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06708	132.7175	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06728	132.6586	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07159	132.6193	AUDUBON - SHEYNNE 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06728	132.5989	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07089	132.5749	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07831	132.5559	NUNDRWD - WAYSIDE 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07015	132.552	MISSION - ST FRANCIS 115KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06786	132.5272	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06787	132.5184	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07015	132.434	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07130	132.3934	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07070	132.3918	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07130	132.3514	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	132.3248	GEN562714 1-G15_023_4 0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	132.3248	GEN562715 1-G15_023_5 0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06953	132.2659	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06708	132.2581	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07015	132.1114	HARMONY - ST FRANCIS 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07155	131.9813	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07155	131.9813	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07159	131.9807	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07159	131.9807	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07205	131.975	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	131.9648	BALTA - RAMSEY 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	131.9579	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07157	131.9396	BISMARK - JAMES TOWN 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07159	131.9375	BALTA - MCHENRY 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.8442	CLEARWATER - ONEILL 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06933	131.8296	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06933	131.8247	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	131.8033	CLEARWATER - NELIGH 115KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07157	131.79	JAMES TOWN - WEBER 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06841	131.762	LETCHER - SIOUX FALLS 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06862	131.7605	HANLON - STORLA 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07015	131.7536	HARMONY - VALENTINE 115KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	131.7226	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07157	131.6933	BISMARK - WEBER 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	131.6056	GEN635024 4-WALTER SCOTT UNIT 4
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	131.496	GEN563222 1-G15088_3 0.6900
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	131.4442	GEN531447 1-HOLCOMB GENERATOR
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	131.3912	GEN344225 1-1CAL G1 25.000
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	131.3783	GEN635213 3-NEAL UNIT 3
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	131.3679	GEN640009 1-COOPER NUCLEAR STATION
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07216	131.3488	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	131.3355	GEN336153 1-WATERFORD UNIT#3
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	131.2981	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	131.2977	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	131.2771	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07180	131.25	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07180	131.25	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	131.2212	GEN659118 1-LARAMIE RIVER UNIT1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06864	131.1425	FT RANDAL - SIOUX CITY 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06974	131.1389	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07170	130.9828	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06814	130.9766	FT THOMPSON - LETCHER 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	130.9712	GEN635023 3-WALTER SCOTT UNIT 3
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07174	130.9708	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07174	130.9708	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07174	130.9708	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07174	130.9708	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.9589	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.9431	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.9426	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.903	GEN635214 4-NEAL UNIT 4
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07175	130.8933	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07175	130.8933	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07175	130.8933	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07175	130.8933	FT THOMPSON - OAHE 230KV CKT 4
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	130.8917	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07183	130.8616	P13:115-230:TSGT:SIDNEY-KV1A
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.7781	GEN587363 1-G16-055-GEN10.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	130.7255	GEN335831 1-RIVERBEND UNIT#1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06998	130.6954	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07015	130.6529	AINSWORTH - VALENTINE 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06872	130.6325	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06872	130.6325	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.624	ANSON - SPLIT ROCK 115KV CKT 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06872	130.6237	FT RANDAL - SPENCER 115KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.6199	ANSON 115/17.5KV TRANSFORMER CKT 4
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07213	130.6119	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07377	130.5471	KELLY - SHELL CREEK 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.5421	ANSON - SPLIT ROCK 115KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.5414	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07377	130.536	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07377	130.536	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	130.5338	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06872	130.4566	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07259	130.4392	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06955	130.4316	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.4065	GEN645012 2-NEBRASKA CITY 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06979	130.3774	AS KING - EAU CLAIRE 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.3672	AINSWORTH WIND 34KV SWITCHED SHUNT
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.3323	AINSWORTH WIND 34KV SWITCHED SHUNT
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.3198	GEN642067 1-PLATTE
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.3197	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07234	130.3073	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.2855	GEN542957 1-IATAN UNIT #1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.284	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.2563	GEN542962 2-IATAN UNIT #2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07204	130.238	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07179	130.1808	G13-010T 345.00 - POST ROCK 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.156	GEN542951 5-HAWTHORN UNIT #5
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.1533	GEN542955 1-LACYGNE UNIT #1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06963	130.1431	HANKINSON - WAHPETON 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06900	130.118	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07179	130.0907	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	130.086	GEN542956 2-LACYGNE UNIT #2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06882	130.0629	HANLON - SIOUX FALLS 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07153	130.0621	CROOKED CREEK - RIVERDALE 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06868	130.0349	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06821	130.0236	RAUN - SIOUX CITY 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06821	130.0236	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	129.9815	GEN640016 1-KINGSLEY HYDRO
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07659	129.9698	AINSWORTH - AINSWORTH 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07453	129.9619	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07453	129.9397	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07453	129.9369	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07020	129.9273	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06956	129.9074	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	129.8922	BLAIR - GRANITE FALLS 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	129.8922	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07108	129.8793	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07108	129.8793	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	129.7896	GEN509394 1-FLINT CREEK
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07422	129.771	AINSWORTH - STUART 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	129.722	GEN337653 1-WHITE BLUFF UNIT #2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07216	129.7062	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKE
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06900	129.7016	RASMUSN - SIOUX CITY 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06864	129.6937	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	129.6915	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	129.6915	P12:115:UMZB:# 119 #: IN NE.
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	129.6666	GEN337652 1-WHITE BLUFF UNIT #1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07422	129.6402	ATKINSON - STUART 115KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	129.6118	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06998	129.6042	ADAMS - MITCHLCO3 345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	129.5878	GEN338146 1-INDEPENDENCE UNIT #2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07101	129.5877	GRAND ISLAND - RIVERDALE 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06942	129.5842	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07194	129.5686	CALLAWAY - MAXWELL 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	129.5686	GEN338143 1-INDEPENDENCE UNIT #1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	129.5508	GEN501801 1-DOLET HILLS UNIT1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	129.5342	1222-AINSWORTH WIND
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	129.5342	2560-BRDLAND-LNX3345.00
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	129.5342	2561-BRDLAND-LNX3345.00
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	129.5342	BASE CASE
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07216	129.5148	BONESTEEL - GREGORY 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07264	129.5095	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06990	129.507	NOBLES - SPLIT ROCK 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06985	129.506	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	129.4999	GEN509416 1-TURK GENERATION
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07422	129.4975	ATKINSON - EMMET 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07264	129.4937	P13:230-345:NPPD:STEGALL3:KV3A
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07264	129.4933	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07170	129.4832	GRIMES - LEHIGH 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08527	129.4788	COLUMWEST - KELLY 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07246	129.4722	BROKEN BOW - LOUP CITY 115KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07286	129.4561	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07089	129.4504	SIDNEY - STEGALL 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	129.4395	P12:115:TSGT:BLKWDCK7-ELSIETP7
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	129.3699	GEN509403 1-PIRKEY GENERATION
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06868	129.3547	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07122	129.3308	STAPLETON - THEDFORD 115KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07148	129.3041	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07148	129.3041	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07148	129.3029	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07148	129.3029	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	129.2514	GEN336252 1-NINEMILE POINT UNIT#5
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07166	129.2444	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	129.2058	GEN336821 1-GRAND GULF UNIT
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06992	129.1884	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07204	129.1756	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07204	129.1756	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	129.1643	GEN300002 1-THOMAS HILL UNIT 2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	129.1352	GEN587153 1-G16-021-GEN10.6900
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	129.1261	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07167	129.1252	HOYT - STRANGER CREEK 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	129.1203	GEN336251 1-NINEMILE POINT UNIT#4
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	129.1146	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06942	129.1132	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07166	129.1117	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06989	129.097	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	129.0962	GEN336831 1-BAXTER WILSON SES
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07167	129.0739	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	129.0433	GEN562003 1-G11_027_3 0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	129.0424	GEN501813 1-RODEMACHER UNIT 3
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07805	129.042	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06981	129.0305	ADAMS - PLEASANT VALLEY 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06754	129.0285	FT RANDAL - FT THOMPSON 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06942	129.0185	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	129.0134	GEN337041 1-GERALD ANDRUS
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07204	129.01	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07204	129.01	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07182	128.9682	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07182	128.9682	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07409	128.9508	AXTELL - PAULINE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06790	128.9469	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06790	128.9469	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	128.9339	GEN660003 3-HURON WEST PARK
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07423	128.9338	LOUP CITY - NORTH LOUP 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06887	128.9188	FT RANDAL - UTICA JCT 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06987	128.9058	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07000	128.8902	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	128.8664	GEN600045 4-ANSON
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06959	128.834	FORMAN - HANKINSON 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06978	128.8236	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07319	128.816	SUB 3454 - WAGENER 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07319	128.816	SUB 3454 - WAGENER 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	128.7988	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09523	128.787	HOSKINS - SHELL CREEK 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.7797	GEN335206 1-NELSON UNIT 6
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06760	128.741	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07216	128.7325	GREGORY - WINNER 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07194	128.7252	OAHE - PHILIP TAP 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.7163	GEN334440 1-SABINE UNIT 4
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07186	128.7069	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07173	128.6853	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.6777	GEN659118 1-LARAMIE RIVER UNIT1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	128.6594	GEN590010 1-ERCOT EQUIVALENCE
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08527	128.6362	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.6358	GEN344897 4-1LAB G4 20.000
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.6335	GEN344894 1-1LAB G1 20.000
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.6333	GEN344895 2-1LAB G2 20.000
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.6333	GEN344896 3-1LAB G3 20.000
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06961	128.6251	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	128.6129	GEN590011 2-ERCOT EQUIVALENCE
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	128.5973	GEN300003 1-THOMAS HILL UNIT 3
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06959	128.5879	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06959	128.5879	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06989	128.5853	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06977	128.5838	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07220	128.5802	P12:230:UMZW:# 166 #: PL IN SD. TAP
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07220	128.5802	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.5748	GEN501812 1-RODEMACHER UNIT 2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07067	128.5742	MISSION - ST FRANCIS 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.5685	GEN345671 2-1RUSH G2 18.000
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07216	128.5681	MISSION - WITTEN 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.5619	GEN345670 1-1RUSH G1 18.000
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06984	128.5592	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07216	128.5555	WINNER - WITTEN 115KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07216	128.5503	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.5275	GEN336191 1-LITTLE GYPSY UNIT#3
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06781	128.5195	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07490	128.519	MINGO - SETAB 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07490	128.519	MINGO - SETAB 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	128.4398	GEN300007 1-NEW MADRID UNIT 2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	128.43	GEN300006 1-NEW MADRID UNIT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.4207	GEN587353 1-G16-050-GEN10.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06989	128.4161	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06959	128.4131	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06959	128.4131	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.4057	GEN338388 1-1PLUM PT U1 23.000
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07336	128.3887	103RD & ROKEBY - MOORE 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07336	128.3887	103RD & ROKEBY - MOORE 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07173	128.388	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06788	128.3862	GAVINS POINT - YANKON JCT 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06788	128.3862	GAVINS POINT - YANKON JCT 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.3808	GEN335204 1-NELSON UNIT 4
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06968	128.3735	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07892	128.3731	COLUMEAST - SHELL CREEK 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.3697	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.3697	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06922	128.3678	CARPENTER - HURON 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.3645	GEN334441 1-SABINE UNIT 5
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06985	128.3632	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.3598	GEN335614 1-WILLOW GLENN UNIT#4
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	128.3568	GEN562714 1-G15_023_4 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	128.3568	GEN562715 1-G15_023_5 0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.3375	GEN336464 1-MICHOUD UNIT #3
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.3371	GEN336801 1-BAXTER WILSON UNIT #1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06922	128.3369	HURON - WATERTOWN 230KV CKT 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06922	128.3369	HURON - WATERTOWN 230KV CKT 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.3184	FORMAN - OAKES 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07799	128.3071	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07799	128.3071	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06760	128.3069	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.3066	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06989	128.3063	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06972	128.2856	COOPER - MOORE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06981	128.2724	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07000	128.2708	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06964	128.2535	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06964	128.2535	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06922	128.2515	CARPENTER - WATERTOWN 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06922	128.2515	CARPENTER - WATERTOWN 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07216	128.2327	P12:115:UMZW:# 172 #: WI IN SD.
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06961	128.224	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06513	128.2119	GRAND ISLAND - SWEETWATER 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07067	128.209	HARMONY - ST FRANCIS 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06964	128.1922	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	128.1917	GEN659353 1-DEERCREK CTG18.000
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06963	128.1811	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06971	128.1632	BYRON - NORTH ROCHESTER 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.156	GEN334433 1-SABINE UNIT 3
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	128.1324	GEN659354 1-DEERCREK STG18.000
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06928	128.1248	MENNO JCT - TRIPP JCT 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06957	128.1246	FARGO - JAMES TOWN 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06871	128.1225	GAVINS POINT - HARTINGTON 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06781	128.1052	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06961	128.0985	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06959	128.0874	AUDUBON - SHEYNNE 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06957	128.0776	FARGO - JAMES TOWN 230KV CKT 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06874	128.0541	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	128.0522	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	128.0491	GEN336222 1-LITTLE GYPSY UNIT#2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06957	128.0187	GARRISON - JAMES TOWN 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.9988	GEN531447 1-HOLCOMB GENERATOR
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07188	127.9585	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06887	127.9474	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06887	127.9473	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06887	127.9473	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06961	127.9463	HENNING - INMANN 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06887	127.9378	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06887	127.9378	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.9237	GEN336151 1-WATERFORD UNIT#1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.9237	GEN336152 1-WATERFORD UNIT#2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06893	127.909	LETCHER - SIOUX FALLS 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06928	127.9041	MENNO JCT - UTICA 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07005	127.9034	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07070	127.8996	MARTIN - SHANNON 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06985	127.8822	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07643	127.8794	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07005	127.8781	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06962	127.8671	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.8633	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.8545	GEN303007 1-1BC2 U2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06906	127.8528	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07005	127.8478	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.8439	GEN303006 1-1BC2 U1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.8436	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06985	127.8412	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06928	127.8404	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	127.8258	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	127.8243	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06971	127.8145	BYRON - PLEASANT VALLEY 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06962	127.8086	MN VALLEY TAP - PANTHER 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07349	127.7989	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06970	127.773	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.7489	GEN336170 1-GULF OXY U4
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.7431	GEN303008 1-1BC2 U3
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.7404	GEN635214 4-NEAL UNIT 4
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06957	127.7395	CENTER - COYOTE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06959	127.7388	BALTA - RAMSEY 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06809	127.7305	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.7148	GEN641089 2-ENERGY CENTER 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06809	127.7024	CLEARWATER - ONEILL 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	127.6964	GEN635024 4-WALTER SCOTT UNIT 4
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06959	127.696	KARLSTAD - WINGER 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06956	127.6849	BISMARK - JAMES TOWN 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06959	127.665	AUDUBON - HUBBARD 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06958	127.6634	FARGO - SHEYNNE 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06958	127.6634	FARGO - SHEYNNE 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06974	127.6589	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07018	127.6482	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06956	127.6432	JAMES TOWN - WEBER 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06956	127.6395	BISMARK - WEBER 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.6378	GEN635213 3-NEAL UNIT 3
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06871	127.6191	BELDEN - HARTINGTON 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.6168	GEN501811 1-RODEMACHER UNIT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07018	127.604	CHADRON - DUNLAP 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06976	127.6027	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06976	127.6027	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07489	127.5666	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07025	127.5591	DENISON - SIOUX CITY 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06986	127.5534	G16-034-TAP 345.00 - KEYSTONE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06859	127.5451	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.5429	GEN334071 1-LEWIS CREEK 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.5422	GEN587363 1-G16-055-GEN10.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.5378	GEN334070 1-LEWIS CREEK 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06989	127.4922	ARNOLD - HAZLETON 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06859	127.4919	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06963	127.4759	MCLEOD - PANTHER 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.4521	GEN337766 1-TRACTEBEL UNIT S1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06983	127.4226	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.4064	GEN501910 1-ACADIA UNIT ST1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	127.3926	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.3911	GEN336221 1-LITTLE GYPSY UNIT#1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07596	127.383	AXTELL - SWEETWATER 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.3778	GEN587443 1-G16-064-GEN10.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.3731	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	127.368	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07018	127.366	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.3659	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06983	127.3635	CHADRON - WAYSIDE 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06983	127.3635	P13:115-230:NPPD:WAYSIDE4:T1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06592	127.3574	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06593	127.3556	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.3526	GEN337757 1-DUKE HOTSPRINGS STG1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	127.3499	GEN344225 1-1CAL G1 25.000
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	127.349	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06978	127.3373	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07070	127.336	GORDON - SHANNON 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	127.3325	GEN336153 1-WATERFORD UNIT#3
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.3283	GEN334432 1-SABINE UNIT 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.3282	GEN334431 1-SABINE UNIT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06990	127.3143	BISON - HETINGER 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.3067	GEN640009 1-COOPER NUCLEAR STATION
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06975	127.2886	FRANKS - HUBEN 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06916	127.2808	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	127.2606	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	127.2052	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.1906	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	127.1704	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	127.1492	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	127.1386	GEN635023 3-WALTER SCOTT UNIT 3
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.1174	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	127.1174	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06924	126.9556	FT RANDAL - SPENCER 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	126.9423	GEN645012 2-NEBRASKA CITY 2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07764	126.9306	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07764	126.9306	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07286	126.9187	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	126.9015	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	126.8518	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	126.8218	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	126.8195	GEN335831 1-RIVERBEND UNIT#1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07067	126.7251	AINSWORTH - VALENTINE 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06924	126.6988	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	126.67	GEN563232 1-G15089_3 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	126.654	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07049	126.5684	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07027	126.5613	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06944	126.5556	CROOKED CREEK - RIVERDALE 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06972	126.5301	FT THOMPSON - OAHE 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06972	126.5301	FT THOMPSON - OAHE 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06972	126.5301	FT THOMPSON - OAHE 230KV CKT 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06972	126.5301	FT THOMPSON - OAHE 230KV CKT 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07004	126.5141	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06972	126.486	FT THOMPSON - OAHE 230KV CKT 3
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06972	126.486	FT THOMPSON - OAHE 230KV CKT 3
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06972	126.486	FT THOMPSON - OAHE 230KV CKT 4
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06972	126.486	FT THOMPSON - OAHE 230KV CKT 4
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	126.4379	BASE CASE
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	126.3656	GEN652543 3-BIG BEND
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	126.364	GEN652542 1-BIG BEND
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06904	126.3102	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06904	126.3102	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06952	126.2289	RASMUSN - UTICA JCT 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06933	126.2196	HANLON - SIOUX FALLS 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	126.212	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	126.212	P12:115:UMZB:# 119 #: IN NE.
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06920	126.1944	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07168	126.193	BASSETT 7115.00 - STUART 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	126.1873	BLAIR - GRANITE FALLS 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07168	126.1763	ATKINSON - STUART 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07073	126.166	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07010	126.1227	CALLAWAY - MAXWELL 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07168	126.1223	ATKINSON - EMMET 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	126.1121	P12:115:TSGT:BLKWDCK7-ELSIETP7
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06989	126.0721	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06989	126.0721	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07168	126.07	AINSWORTH - BASSETT 7115.00 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06925	126.0683	STAPLETON - THEDFORD 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	126.0616	GEN337652 1-WHITE BLUFF UNIT #1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07087	126.0459	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07003	126.0036	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07003	126.0036	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.9835	GEN300002 1-THOMAS HILL UNIT 2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	125.9738	GEN338146 1-INDEPENDENCE UNIT #2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	125.9621	GEN338143 1-INDEPENDENCE UNIT #1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06965	125.9195	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	125.9049	GEN337653 1-WHITE BLUFF UNIT #2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07176	125.904	HOLCOMB - SETAB 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07176	125.904	HOLCOMB - SETAB 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07504	125.8965	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06984	125.8944	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06984	125.8944	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06966	125.8924	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07504	125.8917	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07022	125.8787	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07022	125.8787	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06873	125.8564	RAUN - SIOUX CITY 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07504	125.8418	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06985	125.8329	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06952	125.8324	RASMUSN - SIOUX CITY 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.8174	GEN587153 1-G16-021-GEN10.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07140	125.8127	SIDNEY - STEGALL 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07003	125.8079	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07003	125.8079	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06965	125.7954	917X
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06965	125.7687	CLEVELAND - G15066_T 345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06965	125.7649	G15066_T 345.00 - SOONER 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	125.7568	GEN501801 1-DOLET HILLS UNIT1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07000	125.7497	LARAMIE RIVER - STEGALL 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06964	125.7469	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06964	125.7469	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06964	125.7443	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06964	125.7398	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06964	125.739	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06964	125.739	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06964	125.7373	BROADLAND - HURON 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.7366	GEN660003 3-HURON WEST PARK
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08283	125.7035	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.6995	GEN652548 5-FT RANDAL
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.6995	GEN652549 7-FT RANDAL
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06985	125.6874	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.6767	GEN652547 3-FT RANDAL
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07174	125.6428	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.6125	GEN600045 4-ANSON
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07208	125.6111	AXTELL - PAULINE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07112	125.6053	SUB 3454 - WAGENER 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07112	125.6053	SUB 3454 - WAGENER 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.5807	GEN590010 1-ERCOT EQUIVALENCE
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.5666	GEN681522 3-GENOA 3
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07315	125.5538	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.5413	GEN590011 2-ERCOT EQUIVALENCE
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.5235	GEN660001 2-ABERDEEN SIEBRECHT
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.5213	GEN600043 7-BLUE LAKE5
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.5213	GEN600044 8-BLUE LAKE6

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06920	125.513	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07315	125.5045	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.502	EMERY 161/18.0KV TRANSFORMER CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	125.4995	GEN652559 1-OAHE
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	125.4993	GEN336252 1-NINEMILE POINT UNIT#5
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.4951	GEN600014 4-BLACK DOG GEN 4
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.4854	GEN600065 7-HIGH BRIDGE
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.4854	GEN600066 8-HIGH BRIDGE
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.4842	GEN600011 5-BLACK DOG GEN 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.4768	GEN600071 10-RIVER SIDE
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.4764	GEN600070 9-RIVER SIDE
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07088	125.471	MISSION - WITTEN 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.4607	GEN600007 7-RIVERSIDE GEN 7
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.4565	GEN652414 4-FT PECK
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.4565	GEN652415 5-FT PECK
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.4458	J460 345.00 - J460-TAP 345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.4458	J460 345.00 345/34.5KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.4435	GEN652345 W-G07_023IS_2 0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.4358	GEN587583 1-J432-GEN1 0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.4317	GEN600017 C-LS POWER CT
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	125.3855	GEN336251 1-NINEMILE POINT UNIT#4
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.379	GEN300003 1-THOMAS HILL UNIT 3
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07052	125.3501	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	125.3315	GEN336831 1-BAXTER WILSON SES
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.3249	GEN615021 1-GRE-ER 14G 16.000
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.3213	GEN300007 1-NEW MADRID UNIT 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.3092	GEN300006 1-NEW MADRID UNIT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.302	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.2931	GEN615052 1-CAMBRIDGE GENERATING STATION
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.2817	LADISH 115/13.2KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.2793	GEN659272 2-GROTON 2G13.800
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	125.2742	GEN501813 1-RODEMACHER UNIT 3
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.2687	GEN659294 1-WILTONCOL9
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.2686	GEN659273 2-GROTON SYNC COND
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07128	125.2684	103RD & ROKEBY - MOORE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07128	125.2684	103RD & ROKEBY - MOORE 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06841	125.2683	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07643	125.2495	G15088_T 345.00 - MOORE 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	125.2449	GEN659118 1-LARAMIE RIVER UNIT1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.2436	GEN659162 4-RED WLCK
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.2436	GEN659163 5-BLACK WDCK
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.2436	GEN659353 1-DEERCREK CTG18.000
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	125.2426	GEN337041 1-GERALD ANDRUS
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.2424	GEN659192 6-LYNN
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07297	125.2417	MINGO - SETAB 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07297	125.2417	MINGO - SETAB 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.2198	GEN659354 1-DEERCREK STG18.000
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.1968	GEN659274 1-GROTON
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06939	125.1898	FT RANDAL - UTICA JCT 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06763	125.1693	COOPER - MOORE 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	125.1673	GEN659296 2-SDPRAIRWND1W0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06964	125.1602	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.1397	GEN 11104 1-J262_GEN 0.6000
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.1397	GEN 11108 1-J263_GEN 0.6000
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06987	125.128	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.1034	GEN600067 9-HIGH BRIDGE
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	125.0279	GEN335206 1-NELSON UNIT 6
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.09578	125.0215	HOSKINS - SHELL CREEK 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.0202	GEN672304 4-BOUNDARY DAM GENERATOR 4
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.0202	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.0201	GEN615015 1-GRE-SPRITWDG13.200
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	125.0201	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07011	125.0103	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.9906	GEN334440 1-SABINE UNIT 4
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	124.9808	GEN600004 2-PRAIRIE ISLAND G2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07233	124.9792	OAHE - PHILIP TAP 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	124.9732	GEN600003 1-PRAIRIE ISLAND G1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.9559	GEN659270 1-WEST SW
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.9529	GEN672392 1-NBECGT1G 18.000
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.9508	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07040	124.9458	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.9382	GEN659291 1-FT MP COLLECTOR
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	124.924	GEN652556 2-OAHE
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	124.924	GEN652557 4-OAHE
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	124.924	GEN652558 6-OAHE
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.9203	GEN562872 1-G15046_3 0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.9056	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	124.9038	ALMA 161 161/24.0KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.9037	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.8786	GEN344897 4-1LAB G4 20.000
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.8783	GEN587623 1-J493-GEN1 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.8766	GEN344894 1-1LAB G1 20.000
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.8764	GEN344895 2-1LAB G2 20.000
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.8764	GEN344896 3-1LAB G3 20.000
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.8741	GEN662101 1-WESSINGTON190.5750
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.8632	GEN660016 1-B_H WIND 0.7000
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.8503	GEN681542 6-JP MADGETT
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.8333	GEN501812 1-RODEMACHER UNIT 2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	124.8267	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07011	124.821	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.8145	GEN345671 2-1RUSH G2 18.000
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.8109	GEN345670 1-1RUSH G1 18.000
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.8092	GEN336191 1-LITTLE GYPSY UNIT#3
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.8088	GEN338388 1-1PLUM PT U1 23.000
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05251	124.8028	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.8011	GEN587353 1-G16-050-GEN10.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.7964	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07040	124.7816	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07174	124.7771	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.7622	GEN 10648 1-G830_GEN 0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.7547	GEN652545 7-BIG BEND
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06840	124.7254	GAVINS POINT - YANKON JCT 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06973	124.6886	CARPENTER - HURON 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07052	124.6844	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07009	124.6774	FARGO - JAMES TOWN 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07040	124.6716	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.6665	GEN334441 1-SABINE UNIT 5
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06933	124.6503	OAHE - SULLEY BUTTE 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.6448	GEN335204 1-NELSON UNIT 4
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06973	124.6441	HURON - WATERTOWN 230KV CKT 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07409	124.6397	G15088_T 345.00 - PAULINE 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.6367	GEN335614 1-WILLOW GLENN UNIT#4
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.6329	GEN910006 1-G12_012IS_3 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07009	124.6292	FARGO - JAMES TOWN 230KV CKT 2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.6288	GEN336801 1-BAXTER WILSON UNIT #1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.6159	GEN336464 1-MICHOUD UNIT #3
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06973	124.598	CARPENTER - WATERTOWN 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07943	124.5916	COLUMEAST - SHELL CREEK 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.5387	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06933	124.509	GLENHAM - L3 HAWDON 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.4997	GEN587593 1-J460-GEN1 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06580	124.4604	GRAND ISLAND - SWEETWATER 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.4597	GEN334433 1-SABINE UNIT 3
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07848	124.4528	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06933	124.4408	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06933	124.4408	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	124.4406	GEN600006 1-AS KING
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06933	124.4302	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06933	124.4194	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06980	124.4187	MENNO JCT - TRIPP JCT 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06933	124.4186	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06923	124.3979	GAVINS POINT - HARTINGTON 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.396	GEN587053 1-G16-007-GEN10.6500
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.3949	GEN531447 1-HOLCOMB GENERATOR
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07009	124.3941	GARRISON - JAMES TOWN 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06933	124.3854	GLENHAM - WHITLOK 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.372	GEN336222 1-LITTLE GYPSY UNIT#2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07057	124.3336	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06939	124.3236	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07297	124.3217	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06939	124.3091	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.2916	GEN652559 1-OAHE
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07122	124.2648	MARTIN - SHANNON 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.2607	GEN563222 1-G15088_3 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07057	124.2603	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.2466	GEN336152 1-WATERFORD UNIT#2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.2465	GEN336151 1-WATERFORD UNIT#1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.2264	GEN652906 1-G09_006IS_3 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06980	124.2057	MENNO JCT - UTICA 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07057	124.1887	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.1869	GEN 11123 1-G736-GEN1 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.1827	GEN303007 1-1BC2 U2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.179	GEN 11133 1-J442-GEN1 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.1737	GEN303006 1-1BC2 U1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.1677	GEN652544 5-BIG BEND
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07008	124.1444	BISMARK - JAMES TOWN 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	124.1379	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.1314	GEN641089 2-ENERGY CENTER 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.1279	GEN659010 4-G07_027IS_2 0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.1225	GEN652543 3-BIG BEND
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.1221	GEN652542 1-BIG BEND
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.1125	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.1079	GEN659366 3-WILTON 3 W0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.1042	GEN659194 1-NDPRAIRWND1W0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.0928	GEN652460 4-GARRISON
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.0928	GEN652461 5-GARRISON
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07008	124.0913	JAMES TOWN - WEBER 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.0841	GEN336170 1-GULF OXY U4
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07010	124.0814	FARGO - SHEYNNE 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	124.0794	GEN303008 1-1BC2 U3
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07008	124.0781	BISMARK - WEBER 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.0257	GEN652457 1-GARRISON
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.0257	GEN652458 2-GARRISON
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.0257	GEN652459 3-GARRISON
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07028	124.0201	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	124.0067	GEN652907 1-G09_007IS_3 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06861	124.0053	CLEARWATER - ONEILL 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07076	124.0009	DENISON - SIOUX CITY 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07038	123.9837	G16-034-TAP 345.00 - KEYSTONE 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	123.964	GEN501811 1-RODEMACHER UNIT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	123.931	GEN587363 1-G16-055-GEN10.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06911	123.931	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.9251	GEN659403 1-NDSUNFLWR W0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07411	123.917	AXTELL - SWEETWATER 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	123.8962	GEN334070 1-LEWIS CREEK 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	123.8962	GEN334071 1-LEWIS CREEK 2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06923	123.8954	BELDEN - HARTINGTON 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06911	123.8912	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07070	123.8882	CHADRON - DUNLAP 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07035	123.8143	CHADRON - WAYSIDE 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	123.811	GEN337766 1-TRACTEBEL UNIT S1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07035	123.8089	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07087	123.8087	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07573	123.8028	MINGO - RED WILLOW 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07573	123.8028	MINGO - RED WILLOW 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	123.7917	GEN337757 1-DUKE HOTSPRINGS STG1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	123.7682	GEN501910 1-ACADIA UNIT ST1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	123.765	GEN587443 1-G16-064-GEN10.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	123.7612	GEN336221 1-LITTLE GYPSY UNIT#1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	123.7594	GEN640009 1-COOPER NUCLEAR STATION
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07240	123.7216	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07070	123.7163	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07039	123.6937	BISON - HETINGER 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	123.6857	GEN645012 2-NEBRASKA CITY 2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.6716	STANTON 230/18.0KV TRANSFORMER CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07122	123.6451	GORDON - SHANNON 115KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.634	GEN672321 1-SHAND GENERATOR 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	123.6275	GEN600005 1-MONTICELLO
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.6193	GEN563232 1-G15089_3 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07168	123.5856	NUNDRWD - PHILIP TAP 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.5793	GEN600004 2-PRAIRIE ISLAND G2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.5723	GEN600003 1-PRAIRIE ISLAND G1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07039	123.5679	BISON - MAURINE 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.5651	GEN659411 1-CAMPBLCNTY W0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.5558	GEN672310 1-POPLAR RIVER GENERATOR 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.5557	GEN672311 2-POPLAR RIVER GENERATOR 2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	123.54	GEN645011 1-NEBRASKA CITY 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.534	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07050	123.5289	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07050	123.5125	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07050	123.5125	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.5116	ALMA 161 161/24.0KV TRANSFORMER CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	123.5011	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07016	123.432	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.4159	GEN615010 1-STANTON4
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.2267	GEN659296 2-SDPRAIRWND1W0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	123.2097	GEN640016 1-KINGSLEY HYDRO
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.1979	GEN600006 1-AS KING
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.1882	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.1274	GEN587653 1-J526-GEN1 0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.0982	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07099	123.0396	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.0345	GEN652556 2-OAHE
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.0345	GEN652557 4-OAHE
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.0345	GEN652558 6-OAHE
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07077	123.0254	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08136	123.0243	MCCOOL - MOORE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.0239	GEN659110 1-LELAND OLDS UNIT1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	123.0183	GEN659453 1-GI1414GEN W0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07054	123.0074	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	122.9502	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	122.8678	GEN659141 1-K10215A
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	122.8631	BASE CASE
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	122.8202	GEN587633 1-J510-GEN1 18.000
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07024	122.8185	FT THOMPSON - OAHE 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07024	122.8185	FT THOMPSON - OAHE 230KV CKT 2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07067	122.7981	SUB 3455 - SUB 3740 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07025	122.7887	FT THOMPSON - OAHE 230KV CKT 3
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07025	122.7887	FT THOMPSON - OAHE 230KV CKT 4
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	122.6797	GEN657749 1-YOUNG 1 GENERATOR
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	122.6266	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07219	122.6226	ATKINSON - EMMET 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	122.6183	GEN509403 1-PIRKEY GENERATION
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07219	122.6117	BASSETT 7115.00 - STUART 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07219	122.6048	ATKINSON - STUART 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07032	122.592	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07219	122.5528	AINSWORTH - BASSETT 7115.00 115KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	122.541	GEN600000 1-SHERBURNECNTY G1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	122.5299	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07060	122.5116	CALLAWAY - MAXWELL 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06977	122.4953	STAPLETON - THEDFORD 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	122.4409	GEN300002 1-THOMAS HILL UNIT 2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07055	122.4286	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07018	122.4118	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07016	122.4111	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07016	122.409	BROADLAND - HURON 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07016	122.409	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07016	122.405	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	122.3986	GEN505432 1-SIKESTON
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07037	122.3921	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	122.3768	GEN659407 1-ANTELPHILLSW0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07409	122.3689	G15088_T 345.00 - MOORE 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	122.3193	GEN587033 1-G16-004-GEN10.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07030	122.3092	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	122.3018	GEN600005 1-MONTICELLO
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07052	122.2757	LARAMIE RIVER - STEGALL 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07256	122.2719	AXTELL - PAULINE 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07037	122.227	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	122.1947	GEN587153 1-G16-021-GEN10.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08354	122.1672	COLUMWEST - GRAND ISLAND 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07073	122.1427	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	122.1411	GEN652548 5-FT RANDAL
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	122.1411	GEN652549 7-FT RANDAL
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	122.12	GEN652547 3-FT RANDAL
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	122.107	GEN660003 3-HURON WEST PARK
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07233	122.0701	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	122.0083	GEN600045 4-ANSON
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	122.0074	GEN600000 1-SHERBURNECNTY G1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06823	122.0011	COOPER - MOORE 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.9981	GEN600063 1-COLVILLE GEN 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.9981	GEN600064 2-COLVILLE GEN 2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.9938	GEN660001 2-ABERDEEN SIEBRECHT
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.987	GEN600043 7-BLUE LAKE5
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.987	GEN600044 8-BLUE LAKE6
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07138	121.9697	MISSION - WITTEN 115KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.9604	GEN600014 4-BLACK DOG GEN 4
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.9551	GEN600065 7-HIGH BRIDGE
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.9551	GEN600066 8-HIGH BRIDGE
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.9504	GEN600011 5-BLACK DOG GEN 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.9466	GEN600071 10-RIVER SIDE
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.9463	GEN600070 9-RIVER SIDE
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07145	121.9344	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.9313	GEN600007 7-RIVERSIDE GEN 7
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.9303	GEN652414 4-FT PECK
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.9303	GEN652415 5-FT PECK
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.9193	GEN652345 W-G07_023IS_2 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07016	121.9056	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.9006	GEN600017 C-LS POWER CT
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07167	121.8938	SUB 3454 - WAGENER 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.891	GEN587583 1-J432-GEN1 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07184	121.8842	103RD & ROKEBY - MOORE 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.871	GEN300003 1-THOMAS HILL UNIT 3
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07226	121.851	HOLCOMB - SETAB 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.8095	GEN300007 1-NEW MADRID UNIT 2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.804	GEN300006 1-NEW MADRID UNIT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.7844	GEN652559 1-OAHE
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.7648	GEN615052 1-CAMBRIDGE GENERATING STATION
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.7647	GEN659273 2-GROTON SYNC COND
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.7647	GEN659294 1-WILTONCOL9
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.7546	GEN659272 2-GROTON 2G13.800
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.7503	GEN659162 4-RED WLCK
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.7503	GEN659163 5-BLACK WDCK
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.7494	GEN659192 6-LYNN
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.7422	GEN615021 1-GRE-ER 14G 16.000
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	121.7244	GEN587033 1-G16-004-GEN10.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.6913	GEN659274 1-GROTON
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.6826	GEN590010 1-ERCOT EQUIVALENCE
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07073	121.6626	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07040	121.6618	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07040	121.6512	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.648	GEN590011 2-ERCOT EQUIVALENCE
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.6328	GEN657705 X-DRAYTON
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.5819	GEN600067 9-HIGH BRIDGE
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.5464	GEN 11104 1-J262_GEN 0.6000
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.5464	GEN 11108 1-J263_GEN 0.6000
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.5411	GEN615015 1-GRE-SPRITWDG13.200
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.5163	GEN659353 1-DEERCREK CTG18.000
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.516	GEN659354 1-DEERCREK STG18.000
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07469	121.4913	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	121.4746	GEN661015 1-COYOTE
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.4557	GEN659270 1-WEST SW
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.4322	GEN659291 1-FT MP COLLECTOR
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.4206	GEN562872 1-G15046_3 0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	121.3997	GEN620315 1-BIG STONE GEN
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07102	121.398	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.363	GEN662101 1-WESSINGTON190.5750
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.3616	GEN660016 1-B_H WIND 0.7000
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.3514	GEN587623 1-J493-GEN1 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06984	121.3324	OAHE - SULLEY BUTTE 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.2488	GEN 10648 1-G830_GEN 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06984	121.2022	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	121.1842	GEN600001 2-SHERBURNE CNTY G2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06984	121.1834	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06984	121.1833	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06984	121.1704	GLENHAM - L3 HAWDON 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.1526	GEN910006 1-G12_012IS_3 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06984	121.1028	GLENHAM - WHITLOK 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07226	121.0901	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	121.0812	GEN661015 1-COYOTE
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	121.0146	GEN600002 3-SHERBURNE CNTY G3
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	121.0015	GEN587593 1-J460-GEN1 0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	121.0008	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07346	120.9493	MINGO - SETAB 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	120.9392	GEN600002 3-SHERBURNE CNTY G3
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.892	GEN587053 1-G16-007-GEN10.6500
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05333	120.8732	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.7769	GEN652545 7-BIG BEND
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.7432	GEN652906 1-G09_006IS_3 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.689	GEN652544 5-BIG BEND
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.6579	GEN652543 3-BIG BEND
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.6576	GEN652542 1-BIG BEND
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.6537	GEN 11123 1-G736-GEN1 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.6528	GEN659010 4-G07_027IS_2 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.6452	GEN 11133 1-J442-GEN1 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.6341	GEN659366 3-WILTON 3 W0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.6198	GEN652460 4-GARRISON
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.6197	GEN652461 5-GARRISON
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.6167	GEN659194 1-NDPRAIRWND1W0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	120.6081	GEN657748 1-YOUNG 2 GENERATOR
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	120.5964	GEN600001 2-SHERBURNE CNTY G2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	120.5908	GEN657748 1-YOUNG 2 GENERATOR
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.5491	GEN652458 2-GARRISON
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.5491	GEN652459 3-GARRISON
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.549	GEN652457 1-GARRISON
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.4923	GEN652907 1-G09_007IS_3 0.6900
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	120.485	GEN620315 1-BIG STONE GEN
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.4446	GEN659403 1-NDSUNFLWR W0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07345	120.418	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07456	120.2551	AXTELL - SWEETWATER 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.1334	GEN659411 1-CAMPBLCNTY W0.6900
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08224	120.1055	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.0988	GEN563232 1-G15089_3 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.0942	GEN600004 2-PRAIRIE ISLAND G2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	120.0875	GEN600003 1-PRAIRIE ISLAND G1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	119.8954	GEN615010 1-STANTON4
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	119.8722	GEN659296 2-SDPRAIRWND1W0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07145	119.8019	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	119.7431	GEN600006 1-AS KING
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	119.7378	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	119.7013	GEN659111 2-LELAND OLDS UNIT2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07017	119.6922	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07017	119.6859	2810X2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	119.609	GEN652556 2-OAHE
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	119.609	GEN652557 4-OAHE
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	119.609	GEN652558 6-OAHE
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07900	119.5922	MCCOOL - MOORE 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	119.5746	GEN587653 1-J526-GEN1 0.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	119.514	GEN659110 1-LELAND OLDS UNIT1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	119.5052	GEN659453 1-GI1414GEN W0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	119.4324	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07620	119.3659	MINGO - RED WILLOW 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	119.3466	GEN659141 1-K10215A
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07469	119.3368	G15088_T 345.00 - MOORE 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	119.2583	GEN587633 1-J510-GEN1 18.000
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	119.1084	GEN652173 1-G09_001IS_2 0.6900
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	119.0495	GEN659103 1-ANTELOPE VALLEY UNIT1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	119.0495	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	118.9142	GEN659407 1-ANTELPHILLSW0.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	118.8858	GEN659103 1-ANTELOPE VALLEY UNIT1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	118.8858	GEN659107 2-ANTELOPE VALLEY UNIT2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	118.8618	GEN600005 1-MONTICELLO
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06816	118.663	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06816	118.6457	Z810X2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	118.5378	GEN600000 1-SHERBURNECNTY G1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	118.3574	BIG STONE 230/24.0KV TRANSFORMER CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	118.3571	GEN620315 1-BIG STONE GEN
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	118.2344	GEN587033 1-G16-004-GEN10.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06816	118.16	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	117.8053	GEN587293 1-G16-044-GEN10.6900
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07017	117.7813	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	117.7379	GEN587293 1-G16-044-GEN10.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	117.693	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	117.6198	GEN600002 3-SHERBURNE CNTY G3
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	117.6066	GEN659125 1-COVEY
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	117.5931	GEN615001 1-COAL CREEK
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	117.5605	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	117.5513	GEN659125 1-COVEY
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	117.4231	GEN600001 2-SHERBURNE CNTY G2
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	117.4079	GEN615002 2-COAL CREEK
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04860	117.3002	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	117.284	GEN615001 1-COAL CREEK
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	117.1095	GEN615002 2-COAL CREEK
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07990	116.9492	MCCOOL - MOORE 345KV CKT 1
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	116.6728	BIG STONE 230/24.0KV TRANSFORMER CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08003	116.4994	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	116.2412	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06865	115.8872	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06865	115.8698	Z810X2
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	115.691	GEN587133 1-G16-017-GEN10.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	115.6636	GEN659103 1-ANTELOPE VALLEY UNIT1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	115.6636	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06865	115.5876	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	115.4074	GEN587133 1-G16-017-GEN10.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	114.5139	GEN587293 1-G16-044-GEN10.6900
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	114.4166	GEN659125 1-COVEY
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	114.1628	GEN615001 1-COAL CREEK
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	114.1126	GEN615002 2-COAL CREEK
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.08090	113.868	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	112.2659	GEN587133 1-G16-017-GEN10.6900
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06816	112.1749	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06816	111.868	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06816	111.8324	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06865	109.4	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06865	109.3983	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06865	109.3797	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.06960	102.639	GEN652353 2-GR PRAIRIEG 0.6900
3	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07160	102.1441	GEN652353 2-GR PRAIRIEG 0.6900
3	20WP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05685	102.1223	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.07012	99.9	GEN652353 2-GR PRAIRIEG 0.6900
3	20WP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05682	99.4	STORLA - WESSINGTON 230KV CKT 1
3	20WP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.05716	99.1	SPLIT ROCK - WHITE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06808	141.7977	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06767	139.6591	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07782	138.838	NUNDRWD - WAYSIDE 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06864	137.477	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06790	137.3684	STORLA - WESSINGTON 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06811	136.4397	HANLON - STORLA 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	135.546	GEN562714 1-G15_023_4 0.6900
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	135.546	GEN562715 1-G15_023_5 0.6900
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	135.2921	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06762	135.1003	FT THOMPSON - LETCHER 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06762	135.1003	FT THOMPSON - LETCHER 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06890	134.347	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06890	134.2447	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06808	134.239	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	134.2041	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06890	134.0872	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06890	134.0872	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07070	133.9956	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07070	133.8834	FT RANDAL - SPENCER 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07429	133.4696	OAHE - PHILIP TAP 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	133.4361	GEN336821 1-GRAND GULF UNIT
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06988	133.4281	LAKEFIELD 3 - NOBLES 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06978	133.3914	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06978	133.3914	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07755	133.3869	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07755	133.3869	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06701	133.3498	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06701	133.3498	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06728	133.282	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06728	133.282	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06841	133.1803	STORLA - WESSINGTON 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07158	133.1553	FARGO - JAMES TOWN 230KV CKT 2
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07070	133.1039	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06708	133.024	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06708	133.024	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07157	133.0235	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07130	133.0197	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	132.9732	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06728	132.9639	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06728	132.9045	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07831	132.8957	NUNDRWD - WAYSIDE 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07015	132.8263	MISSION - ST FRANCIS 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07015	132.7088	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.09786	132.6864	HOSKINS - SHELL CREEK 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	132.5699	GEN562714 1-G15_023_4 0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	132.5699	GEN562715 1-G15_023_5 0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06708	132.5697	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06953	132.5284	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07159	132.4348	AUDUBON - SHEYNNE 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07089	132.3971	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07015	132.3907	HARMONY - ST FRANCIS 115KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06786	132.3068	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06787	132.2982	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07070	132.2547	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07130	132.2026	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07130	132.1615	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06862	132.1016	HANLON - STORLA 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06841	132.0901	LETCHER - SIOUX FALLS 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07015	132.034	HARMONY - VALENTINE 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	131.91	GEN635024 4-WALTER SCOTT UNIT 4
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07205	131.8215	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07159	131.8067	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07159	131.8067	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07155	131.8046	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07155	131.8046	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	131.7914	BALTA - RAMSEY 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	131.782	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07159	131.765	BALTA - MCHENRY 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07157	131.7644	BISMARK - JAMES TOWN 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	131.6962	GEN344225 1-1CAL G1 25.000
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07205	131.6908	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.6859	CLEARWATER - ONEILL 115KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07158	131.6765	ELM CREEK - MONTICELLO 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	131.6424	GEN336153 1-WATERFORD UNIT#3
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	131.6416	CLEARWATER - NELIGH 115KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07157	131.6173	JAMES TOWN - WEBER 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	131.6078	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	131.5995	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	131.5626	PRAIRIE - RAMSEY 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	131.5519	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07157	131.522	BISMARK - WEBER 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06864	131.4692	FT RANDAL - SIOUX CITY 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06974	131.4395	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	131.3413	GEN563222 1-G15088_3 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06814	131.3168	FT THOMPSON - LETCHER 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	131.2907	GEN531447 1-HOLCOMB GENERATOR
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	131.283	GEN635023 3-WALTER SCOTT UNIT 3
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	131.2076	GEN640009 1-COOPER NUCLEAR STATION
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	131.2071	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07216	131.1908	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	131.1894	GEN635213 3-NEAL UNIT 3
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	131.1165	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07180	131.1048	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07180	131.1048	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	131.0816	GEN659118 1-LARAMIE RIVER UNIT1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	131.0376	GEN335831 1-RIVERBEND UNIT#1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06998	131.0102	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07015	130.9503	AINSWORTH - VALENTINE 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06872	130.9489	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06872	130.9489	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06872	130.9399	FT RANDAL - SPENCER 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	130.8478	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07170	130.8158	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.8028	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.787	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.7865	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06872	130.7727	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07174	130.77	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07174	130.77	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07174	130.77	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07174	130.77	FT THOMPSON - OAHE 230KV CKT 2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06955	130.7191	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.7169	GEN635214 4-NEAL UNIT 4
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07183	130.7154	P13:115-230:TSGT:SIDNEY-KV1A
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07175	130.6926	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07175	130.6926	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07175	130.6926	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07175	130.6926	FT THOMPSON - OAHE 230KV CKT 4
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06979	130.6917	AS KING - EAU CLAIRE 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.4566	ANSON - SPLIT ROCK 115KV CKT 2
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.4527	ANSON 115/17.5KV TRANSFORMER CKT 4
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06963	130.45	HANKINSON - WAHPETON 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06900	130.4424	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07213	130.4415	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07377	130.3978	KELLY - SHELL CREEK 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07377	130.3869	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07377	130.3869	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06882	130.3863	HANLON - SIOUX FALLS 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.3736	ANSON - SPLIT ROCK 115KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.3729	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06868	130.3589	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06821	130.3456	RAUN - SIOUX CITY 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06821	130.3456	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07259	130.2983	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07453	130.2672	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.2528	GEN645012 2-NEBRASKA CITY 2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07453	130.2451	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07453	130.2426	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07020	130.236	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.2246	AINSWORTH WIND 34KV SWITCHED SHUNT
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06956	130.2044	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	130.1983	BLAIR - GRANITE FALLS 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	130.1983	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.1871	AINSWORTH WIND 34KV SWITCHED SHUNT
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.1809	GEN642067 1-PLATTE
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07234	130.1708	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.1674	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.1349	GEN542957 1-IATAN UNIT #1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.1339	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.1058	GEN542962 2-IATAN UNIT #2
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07204	130.1032	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07179	130.0411	G13-010T 345.00 - POST ROCK 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	130.04	GEN337653 1-WHITE BLUFF UNIT #2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06864	130.0311	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06900	130.0249	RASMUSN - SIOUX CITY 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.0062	GEN542951 5-HAWTHORN UNIT #5
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	130.0028	GEN542955 1-LACYGNE UNIT #1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	129.9849	GEN337652 1-WHITE BLUFF UNIT #1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07179	129.9519	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	129.9372	GEN542956 2-LACYGNE UNIT #2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06998	129.9238	ADAMS - MITCHLCO3 345.00 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07153	129.9226	CROOKED CREEK - RIVERDALE 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06942	129.9193	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	129.906	GEN338146 1-INDEPENDENCE UNIT #2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	129.8873	GEN338143 1-INDEPENDENCE UNIT #1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	129.8693	GEN501801 1-DOLET HILLS UNIT1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	129.8383	GEN640016 1-KINGSLEY HYDRO
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06990	129.8297	NOBLES - SPLIT ROCK 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06985	129.8267	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07264	129.8184	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07659	129.8098	AINSWORTH - AINSWORTH 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07170	129.8061	GRIMES - LEHIGH 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07264	129.8025	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07264	129.802	P13:230-345:NPPD:STEGALL3:KV3A
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07089	129.7632	SIDNEY - STEGALL 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07108	129.7406	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07108	129.7406	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06868	129.6774	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	129.6431	GEN509394 1-FLINT CREEK
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07422	129.6207	AINSWORTH - STUART 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	129.571	GEN336252 1-NINEMILE POINT UNIT#5
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07216	129.5567	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKEI
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	129.5498	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	129.5498	P12:115:UMZB:# 119 #: IN NE.
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	129.5419	GEN336821 1-GRAND GULF UNIT
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06992	129.5094	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07422	129.4922	ATKINSON - STUART 115KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	129.4595	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07101	129.4493	GRAND ISLAND - RIVERDALE 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06942	129.4475	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	129.4408	GEN336251 1-NINEMILE POINT UNIT#4
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07194	129.4288	CALLAWAY - MAXWELL 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	129.4165	GEN336831 1-BAXTER WILSON SES
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	129.3941	1222-AINSWORTH WIND
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	129.3941	2560-BRDLAND-LNX3345.00
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	129.3941	2561-BRDLAND-LNX3345.00
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	129.3941	BASE CASE
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07805	129.3796	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07216	129.3672	BONESTEEL - GREGORY 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06754	129.3639	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	129.3633	GEN501813 1-RODEMACHER UNIT 3
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	129.354	GEN509416 1-TURK GENERATION
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06942	129.3532	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06981	129.3516	ADAMS - PLEASANT VALLEY 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07422	129.3512	ATKINSON - EMMET 115KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.08527	129.344	COLUMWEST - KELLY 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	129.3342	GEN337041 1-GERALD ANDRUS
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07246	129.3313	BROKEN BOW - LOUP CITY 115KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07286	129.3197	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	129.3001	P12:115:TSGT:BLKWDCK7-ELSIETP7
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06790	129.2686	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06790	129.2686	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06887	129.2402	FT RANDAL - UTICA JCT 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06987	129.2272	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	129.2245	GEN509403 1-PIRKEY GENERATION
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07000	129.2073	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07122	129.1925	STAPLETON - THEDFORD 115KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07148	129.1646	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07148	129.1646	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07148	129.1634	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07148	129.1634	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06959	129.147	FORMAN - HANKINSON 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06978	129.1448	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	129.1336	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.09523	129.1082	HOSKINS - SHELL CREEK 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07166	129.1039	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	129.1007	GEN335206 1-NELSON UNIT 6
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06760	129.0756	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07194	129.0414	OAHE - PHILIP TAP 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	129.037	GEN334440 1-SABINE UNIT 4
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07204	129.0361	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07204	129.0361	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	129.0203	GEN300002 1-THOMAS HILL UNIT 2
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07167	128.9843	HOYT - STRANGER CREEK 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	128.9798	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	128.9783	GEN587153 1-G16-021-GEN10.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.9722	GEN659118 1-LARAMIE RIVER UNIT1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07166	128.9706	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	128.9682	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.9563	GEN344897 4-1LAB G4 20.000
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.954	GEN344894 1-1LAB G1 20.000
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.9539	GEN344896 3-1LAB G3 20.000
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.9538	GEN344895 2-1LAB G2 20.000
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06961	128.9415	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07167	128.9322	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06959	128.9083	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06959	128.9083	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07067	128.9073	MISSION - ST FRANCIS 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06977	128.9044	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06989	128.899	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07220	128.8982	P12:230:UMZW:# 166 #: PL IN SD. TAP
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07220	128.8982	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	128.8963	GEN562003 1-G11_027_3 0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.8951	GEN501812 1-RODEMACHER UNIT 2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06984	128.8903	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.8889	GEN345671 2-1RUSH G2 18.000
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.8822	GEN345670 1-1RUSH G1 18.000
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07204	128.8723	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07204	128.8723	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06781	128.8542	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.8478	GEN336191 1-LITTLE GYPSY UNIT#3
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07182	128.8325	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07182	128.8325	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07409	128.8111	AXTELL - PAULINE 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07423	128.7903	LOUP CITY - NORTH LOUP 115KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	128.7814	GEN660003 3-HURON WEST PARK
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.7426	GEN587353 1-G16-050-GEN10.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06959	128.7331	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06959	128.7331	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06989	128.7317	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.726	GEN338388 1-1PLUM PT U1 23.000
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	128.7094	GEN600045 4-ANSON
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06788	128.7061	GAVINS POINT - YANKON JCT 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06788	128.7061	GAVINS POINT - YANKON JCT 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.7008	GEN335204 1-NELSON UNIT 4
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06968	128.6937	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07892	128.6936	COLUMEAST - SHELL CREEK 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06985	128.6922	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06922	128.6877	CARPENTER - HURON 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	128.6872	GEN562714 1-G15_023_4 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	128.6872	GEN562715 1-G15_023_5 0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.6853	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.6853	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.6845	GEN334441 1-SABINE UNIT 5
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.6797	GEN335614 1-WILLOW GLENN UNIT#4
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07319	128.6789	SUB 3454 - WAGENER 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07319	128.6789	SUB 3454 - WAGENER 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.6574	GEN336464 1-MICHOUD UNIT #3
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.657	GEN336801 1-BAXTER WILSON UNIT #1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06922	128.6566	HURON - WATERTOWN 230KV CKT 2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06922	128.6566	HURON - WATERTOWN 230KV CKT 2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06760	128.641	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.6344	FORMAN - OAKES 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07799	128.6278	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07799	128.6278	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.6264	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06989	128.6262	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07216	128.5981	GREGORY - WINNER 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06981	128.5924	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07000	128.5896	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06964	128.5733	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06964	128.5733	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06922	128.5711	CARPENTER - WATERTOWN 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06922	128.5711	CARPENTER - WATERTOWN 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07186	128.5694	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07173	128.5491	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06961	128.5433	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07067	128.5415	HARMONY - ST FRANCIS 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06513	128.5366	GRAND ISLAND - SWEETWATER 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	128.5188	GEN590010 1-ERCOT EQUIVALENCE
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06964	128.5116	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06963	128.5004	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.08527	128.4992	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06971	128.4822	BYRON - NORTH ROCHESTER 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.4756	GEN334433 1-SABINE UNIT 3
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	128.4721	GEN590011 2-ERCOT EQUIVALENCE
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	128.4539	GEN300003 1-THOMAS HILL UNIT 3
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06928	128.444	MENNO JCT - TRIPP JCT 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06957	128.4422	FARGO - JAMES TOWN 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06871	128.4418	GAVINS POINT - HARTINGTON 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06781	128.4389	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07216	128.4327	MISSION - WITTEN 115KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07216	128.4213	WINNER - WITTEN 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06961	128.4176	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07216	128.4159	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06959	128.4054	AUDUBON - SHEYNNE 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06957	128.3956	FARGO - JAMES TOWN 230KV CKT 2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	128.3859	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07490	128.3817	MINGO - SETAB 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07490	128.3817	MINGO - SETAB 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06874	128.373	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.3685	GEN336222 1-LITTLE GYPSY UNIT#2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06957	128.3347	GARRISON - JAMES TOWN 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.3178	GEN531447 1-HOLCOMB GENERATOR
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	128.2966	GEN300007 1-NEW MADRID UNIT 2
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	128.2868	GEN300006 1-NEW MADRID UNIT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06887	128.266	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06887	128.2659	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06887	128.2659	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06961	128.265	HENNING - INMANN 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06887	128.2564	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06887	128.2564	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07173	128.2528	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07336	128.2521	103RD & ROKEBY - MOORE 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07336	128.2521	103RD & ROKEBY - MOORE 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06893	128.2437	LETCHER - SIOUX FALLS 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.2428	GEN336152 1-WATERFORD UNIT#2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.2427	GEN336151 1-WATERFORD UNIT#1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06928	128.2229	MENNO JCT - UTICA 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07005	128.2226	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07070	128.2188	MARTIN - SHANNON 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.2132	GEN563222 1-G15088_3 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06985	128.2112	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07005	128.1973	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06962	128.1859	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.1823	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.1734	GEN303007 1-1BC2 U2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06906	128.1721	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06985	128.1701	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07005	128.1665	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.1628	GEN303006 1-1BC2 U1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.1622	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06928	128.1593	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06972	128.1505	COOPER - MOORE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06971	128.1329	BYRON - PLEASANT VALLEY 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06962	128.1272	MN VALLEY TAP - PANTHER 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07216	128.1034	P12:115:UMZW:# 172 #: WI IN SD.
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06970	128.0918	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.0677	GEN336170 1-GULF OXY U4

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.0618	GEN303008 1-1BC2 U3
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06959	128.0571	BALTA - RAMSEY 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	128.0526	GEN659353 1-DEERCREK CTG18.000
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06809	128.049	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	128.0358	GEN641089 2-ENERGY CENTER 2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	128.0308	GEN635024 4-WALTER SCOTT UNIT 4
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06809	128.0202	CLEARWATER - ONEILL 115KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	127.9938	GEN659354 1-DEERCREK STG18.000
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06974	127.9774	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07018	127.9669	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06871	127.9377	BELDEN - HARTINGTON 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	127.9353	GEN501811 1-RODEMACHER UNIT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07018	127.9219	CHADRON - DUNLAP 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06976	127.9212	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06976	127.9212	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07025	127.8781	DENISON - SIOUX CITY 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06986	127.872	G16-034-TAP 345.00 - KEYSTONE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06859	127.8634	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	127.8612	GEN334071 1-LEWIS CREEK 2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	127.8609	GEN587363 1-G16-055-GEN10.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	127.8562	GEN334070 1-LEWIS CREEK 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	127.8259	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	127.8243	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07188	127.8225	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06859	127.8104	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06989	127.8103	ARNOLD - HAZLETON 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06963	127.7934	MCLEOD - PANTHER 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	127.7702	GEN337766 1-TRACTEBEL UNIT S1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07643	127.7429	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06983	127.7402	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	127.7245	GEN501910 1-ACADIA UNIT ST1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	127.7091	GEN336221 1-LITTLE GYPSY UNIT#1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	127.6959	GEN587443 1-G16-064-GEN10.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	127.6912	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07018	127.684	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	127.684	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	127.6824	GEN344225 1-1CAL G1 25.000
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	127.6812	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06983	127.6809	CHADRON - WAYSIDE 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06983	127.6809	P13:115-230:NPPD:WAYSIDE4:T1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07349	127.6715	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	127.6705	GEN337757 1-DUKE HOTSPRINGS STG1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	127.6648	GEN336153 1-WATERFORD UNIT#3
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06978	127.655	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07070	127.6546	GORDON - SHANNON 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06592	127.637	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06593	127.6354	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06990	127.6273	BISON - HETINGER 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	127.626	GEN640009 1-COOPER NUCLEAR STATION
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06916	127.614	FT RANDAL - SIOUX CITY 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06975	127.6065	FRANKS - HUBEN 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	127.5083	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	127.4722	GEN635023 3-WALTER SCOTT UNIT 3
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07489	127.4482	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	127.435	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	127.435	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	127.3368	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	127.313	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06964	127.2896	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06924	127.2871	FT RANDAL - SPENCER 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	127.2602	GEN645012 2-NEBRASKA CITY 2
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07596	127.2557	AXTELL - SWEETWATER 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	127.2192	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	127.1772	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	127.1578	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	127.1508	GEN335831 1-RIVERBEND UNIT#1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	127.1042	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	127.0894	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07067	127.0549	AINSWORTH - VALENTINE 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06924	127.0297	ONEILL - SPENCER 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	126.9849	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07049	126.8867	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07027	126.8787	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	126.8458	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07004	126.8319	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06972	126.8308	FT THOMPSON - OAHE 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06972	126.8308	FT THOMPSON - OAHE 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06972	126.8308	FT THOMPSON - OAHE 230KV CKT 2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06972	126.8308	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	126.8139	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07764	126.8111	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07764	126.8111	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07286	126.7896	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06972	126.7878	FT THOMPSON - OAHE 230KV CKT 3
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06972	126.7878	FT THOMPSON - OAHE 230KV CKT 3
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06972	126.7878	FT THOMPSON - OAHE 230KV CKT 4
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06972	126.7878	FT THOMPSON - OAHE 230KV CKT 4
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	126.7541	BASE CASE
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06904	126.6274	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06904	126.6274	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06952	126.5597	RASMUSN - UTICA JCT 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06933	126.5497	HANLON - SIOUX FALLS 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	126.5281	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	126.5281	P12:115:UMZB:# 119 #: IN NE.
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06920	126.5254	PAHOJA - SIOUX FALLS 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	126.5171	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	126.5144	GEN563232 1-G15089_3 0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07168	126.5087	BASSETT 7115.00 - STUART 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07073	126.4947	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07168	126.4922	ATKINSON - STUART 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07010	126.4398	CALLAWAY - MAXWELL 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07168	126.4385	ATKINSON - EMMET 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	126.4281	P12:115:TSGT:BLKWDCK7-ELSIETP7
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	126.3917	GEN337652 1-WHITE BLUFF UNIT #1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07168	126.3856	AINSWORTH - BASSETT 7115.00 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06989	126.3731	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06989	126.3731	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07087	126.3616	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07003	126.3197	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07003	126.3197	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	126.3032	GEN338146 1-INDEPENDENCE UNIT #2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	126.2989	GEN300002 1-THOMAS HILL UNIT 2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	126.2919	GEN338143 1-INDEPENDENCE UNIT #1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	126.2413	GEN652543 3-BIG BEND
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	126.2397	GEN652542 1-BIG BEND
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06965	126.2348	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	126.2347	GEN337653 1-WHITE BLUFF UNIT #2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07504	126.225	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07176	126.2204	HOLCOMB - SETAB 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07176	126.2204	HOLCOMB - SETAB 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07504	126.2199	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06984	126.2097	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06984	126.2097	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06966	126.2076	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07022	126.1943	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07022	126.1943	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06873	126.1861	RAUN - SIOUX CITY 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07504	126.1706	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06952	126.1626	RASMUSN - SIOUX CITY 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06985	126.1482	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07140	126.1418	SIDNEY - STEGALL 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	126.132	GEN587153 1-G16-021-GEN10.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07003	126.1232	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07003	126.1232	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	126.0859	GEN501801 1-DOLET HILLS UNIT1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06965	126.0835	CLEVELAND - G15066_T 345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	126.051	GEN660003 3-HURON WEST PARK
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06964	126.0495	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06964	126.0495	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06964	126.047	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06964	126.0436	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06964	126.0426	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06964	126.0426	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06964	126.0411	BROADLAND - HURON 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.08283	126.0182	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	126.0138	GEN652548 5-FT RANDAL
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	126.0138	GEN652549 7-FT RANDAL
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06985	126.0021	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.991	GEN652547 3-FT RANDAL
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07174	125.9571	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.9265	GEN600045 4-ANSON
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07208	125.9262	AXTELL - PAULINE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07112	125.9211	SUB 3454 - WAGENER 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07112	125.9211	SUB 3454 - WAGENER 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.8953	GEN590010 1-ERCOT EQUIVALENCE
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07315	125.8821	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.8808	GEN681522 3-GENOA 3
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.8558	GEN590011 2-ERCOT EQUIVALENCE
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06920	125.8426	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.8378	GEN660001 2-ABERDEEN SIEBRECHT
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.8357	GEN600043 7-BLUE LAKE5
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.8357	GEN600044 8-BLUE LAKE6
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07315	125.8325	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.8282	GEN336252 1-NINEMILE POINT UNIT#5
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.8165	EMERY 161/18.0KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.8095	GEN600014 4-BLACK DOG GEN 4
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.7995	GEN600065 7-HIGH BRIDGE
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.7995	GEN600066 8-HIGH BRIDGE
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.7985	GEN600011 5-BLACK DOG GEN 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.7912	GEN600071 10-RIVER SIDE
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.7908	GEN600070 9-RIVER SIDE
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07088	125.7852	MISSION - WITTEN 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.775	GEN600007 7-RIVERSIDE GEN 7
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.7598	J460 345.00 - J460-TAP 345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.7598	J460 345.00 345/34.5KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.7581	GEN652345 W-G07_023IS_2 0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.7502	GEN587583 1-J432-GEN1 0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.7457	GEN600017 C-LS POWER CT
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.7142	GEN336251 1-NINEMILE POINT UNIT#4
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.6933	GEN300003 1-THOMAS HILL UNIT 3
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07052	125.6785	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.6599	GEN336831 1-BAXTER WILSON SES
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.639	GEN615021 1-GRE-ER 14G 16.000
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.6355	GEN300007 1-NEW MADRID UNIT 2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.6236	GEN300006 1-NEW MADRID UNIT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.6158	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.6068	GEN615052 1-CAMBRIDGE GENERATING STATION
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.6025	GEN501813 1-RODEMACHER UNIT 3
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.5963	LADISH 115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06841	125.5955	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.5937	GEN659272 2-GROTON 2G13.800
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.5831	GEN659273 2-GROTON SYNC COND
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.5831	GEN659294 1-WILTONCOL9
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07128	125.5825	103RD & ROKEBY - MOORE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07128	125.5825	103RD & ROKEBY - MOORE 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.5708	GEN337041 1-GERALD ANDRUS
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.5705	GEN659118 1-LARAMIE RIVER UNIT1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.558	GEN659162 4-RED WLCK
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.558	GEN659163 5-BLACK WDCK
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.5573	GEN659353 1-DEERCREK CTG18.000
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.5569	GEN659192 6-LYNN
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07297	125.556	MINGO - SETAB 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07297	125.556	MINGO - SETAB 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.5335	GEN659354 1-DEERCREK STG18.000
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06939	125.5182	FT RANDAL - UTICA JCT 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.5112	GEN659274 1-GROTON
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06763	125.4832	COOPER - MOORE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06964	125.4726	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.4534	GEN 11104 1-J262_GEN 0.6000
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.4534	GEN 11108 1-J263_GEN 0.6000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06987	125.4413	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.4171	GEN600067 9-HIGH BRIDGE
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	125.3854	GEN652559 1-OAHE
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.3556	GEN335206 1-NELSON UNIT 6
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.09578	125.3497	HOSKINS - SHELL CREEK 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07011	125.338	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.3336	GEN615015 1-GRE-SPRITWDG13.200
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.3336	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.3336	GEN672304 4-BOUNDARY DAM GENERATOR 4
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.3336	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.3183	GEN334440 1-SABINE UNIT 4
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07233	125.306	OAHE - PHILIP TAP 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.2778	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07040	125.2726	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.27	GEN659270 1-WEST SW
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.2662	GEN672392 1-NBECGT1G 18.000
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.2518	GEN659291 1-FT MP COLLECTOR
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.234	GEN562872 1-G15046_3 0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.2193	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.2174	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.2061	GEN344897 4-1LAB G4 20.000
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.2041	GEN344894 1-1LAB G1 20.000
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.204	GEN344895 2-1LAB G2 20.000
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.204	GEN344896 3-1LAB G3 20.000
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.1913	GEN587623 1-J493-GEN1 0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.1875	GEN662101 1-WESSINGTON190.5750
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.1764	GEN660016 1-B_H WIND 0.7000
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.163	GEN681542 6-JP MADGETT
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.1607	GEN501812 1-RODEMACHER UNIT 2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07011	125.1484	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.142	GEN345671 2-1RUSH G2 18.000
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.1383	GEN345670 1-1RUSH G1 18.000
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.1365	GEN336191 1-LITTLE GYPSY UNIT#3
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.1362	GEN338388 1-1PLUM PT U1 23.000
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07643	125.1289	G15088_T 345.00 - MOORE 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	125.1285	GEN587353 1-G16-050-GEN10.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.05251	125.1271	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.1095	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07040	125.1082	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07174	125.0898	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.0754	GEN 10648 1-G830_GEN 0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	125.0668	GEN652545 7-BIG BEND
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	125.0542	GEN659296 2-SDPRAIRWND1W0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06840	125.0525	GAVINS POINT - YANKON JCT 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06973	125.0155	CARPENTER - HURON 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07052	125.0106	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07009	125.0039	FARGO - JAMES TOWN 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07040	124.998	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.9936	GEN334441 1-SABINE UNIT 5
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.9716	GEN335204 1-NELSON UNIT 4
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06973	124.9709	HURON - WATERTOWN 230KV CKT 2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.9637	GEN335614 1-WILLOW GLENN UNIT#4
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06933	124.9628	OAHE - SULLEY BUTTE 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07009	124.9557	FARGO - JAMES TOWN 230KV CKT 2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.9556	GEN336801 1-BAXTER WILSON UNIT #1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07409	124.9527	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.9458	GEN910006 1-G12_012IS_3 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.9428	GEN336464 1-MICHOUD UNIT #3
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06973	124.925	CARPENTER - WATERTOWN 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07943	124.9189	COLUMEAST - SHELL CREEK 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	124.8674	GEN600004 2-PRAIRIE ISLAND G2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.8652	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	124.8598	GEN600003 1-PRAIRIE ISLAND G1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06933	124.8213	GLENHAM - L3 HAWDON 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	124.8145	GEN652556 2-OAHE
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	124.8145	GEN652557 4-OAHE
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	124.8145	GEN652558 6-OAHE
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.8118	GEN587593 1-J460-GEN1 0.6900
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	124.7958	ALMA 161 161/24.0KV TRANSFORMER CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06580	124.792	GRAND ISLAND - SWEETWATER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.7864	GEN334433 1-SABINE UNIT 3
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07848	124.7783	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06933	124.7527	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06933	124.7527	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06980	124.7452	MENNO JCT - TRIPP JCT 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06933	124.7419	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06933	124.7311	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	124.7303	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06933	124.7303	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06923	124.7245	GAVINS POINT - HARTINGTON 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.7209	GEN531447 1-HOLCOMB GENERATOR
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07009	124.7195	GARRISON - JAMES TOWN 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.7084	GEN587053 1-G16-007-GEN10.6500
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.6984	GEN336222 1-LITTLE GYPSY UNIT#2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06933	124.6975	GLENHAM - WHITLOK 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07057	124.6588	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06939	124.6497	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07297	124.6353	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06939	124.6348	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.604	GEN652559 1-OAHE
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07122	124.5911	MARTIN - SHANNON 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.5875	GEN563222 1-G15088_3 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07057	124.5868	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.5726	GEN336152 1-WATERFORD UNIT#2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.5725	GEN336151 1-WATERFORD UNIT#1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.5378	GEN652906 1-G09_006IS_3 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06980	124.5317	MENNO JCT - UTICA 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07057	124.5147	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.509	GEN303007 1-1BC2 U2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.5	GEN303006 1-1BC2 U1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.4986	GEN 11123 1-G736-GEN1 0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.4908	GEN 11133 1-J442-GEN1 0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.4793	GEN652544 5-BIG BEND
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07008	124.47	BISMARK - JAMES TOWN 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.4589	GEN641089 2-ENERGY CENTER 2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.4399	GEN659010 4-G07_027IS_2 0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.4342	GEN652543 3-BIG BEND
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.4337	GEN652542 1-BIG BEND
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.424	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.4198	GEN659366 3-WILTON 3 W0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07008	124.4167	JAMES TOWN - WEBER 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.4161	GEN659194 1-NDPRAIRWND1W0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.4101	GEN336170 1-GULF OXY U4
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07010	124.4068	FARGO - SHEYNNE 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.4055	GEN303008 1-1BC2 U3
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.4047	GEN652460 4-GARRISON
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.4047	GEN652461 5-GARRISON
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07008	124.4037	BISMARK - WEBER 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07028	124.3457	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.3375	GEN652457 1-GARRISON
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.3375	GEN652458 2-GARRISON
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.3375	GEN652459 3-GARRISON
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	124.336	GEN600006 1-AS KING
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06861	124.3333	CLEARWATER - ONEILL 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07076	124.3272	DENISON - SIOUX CITY 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.3176	GEN652907 1-G09_007IS_3 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07038	124.3098	G16-034-TAP 345.00 - KEYSTONE 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.2898	GEN501811 1-RODEMACHER UNIT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06911	124.257	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.2567	GEN587363 1-G16-055-GEN10.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	124.2367	GEN659403 1-NDSUNFLWR W0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07411	124.2288	AXTELL - SWEETWATER 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06861	124.2239	CLEARWATER - NELIGH 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.2219	GEN334070 1-LEWIS CREEK 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.2219	GEN334071 1-LEWIS CREEK 2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06923	124.2211	BELDEN - HARTINGTON 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06911	124.2166	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07070	124.2134	CHADRON - DUNLAP 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07035	124.1389	CHADRON - WAYSIDE 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.1365	GEN337766 1-TRACTEBEL UNIT S1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07035	124.1336	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07087	124.1199	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.1171	GEN337757 1-DUKE HOTSPRINGS STG1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07573	124.1155	MINGO - RED WILLOW 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07573	124.1155	MINGO - RED WILLOW 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.0936	GEN501910 1-ACADIA UNIT ST1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.0903	GEN587443 1-G16-064-GEN10.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.0866	GEN336221 1-LITTLE GYPSY UNIT#1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.0861	GEN640009 1-COOPER NUCLEAR STATION
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07240	124.0445	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07070	124.0414	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	124.0401	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.0282	GEN334432 1-SABINE UNIT 2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.028	GEN334431 1-SABINE UNIT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07039	124.0174	BISON - HETINGER 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	124.0122	GEN645012 2-NEBRASKA CITY 2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.9828	STANTON 230/18.0KV TRANSFORMER CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07122	123.9712	GORDON - SHANNON 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.9446	GEN672321 1-SHAND GENERATOR 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.9288	GEN563232 1-G15089_3 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07039	123.892	BISON - MAURINE 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.8893	GEN600004 2-PRAIRIE ISLAND G2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.8823	GEN600003 1-PRAIRIE ISLAND G1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.8757	GEN659411 1-CAMPBLCNTY W0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.8663	GEN672310 1-POPLAR RIVER GENERATOR 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.8663	GEN672311 2-POPLAR RIVER GENERATOR 2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	123.8658	GEN645011 1-NEBRASKA CITY 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.8445	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	123.826	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.8217	ALMA 161 161/24.0KV TRANSFORMER CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07016	123.7526	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.7265	GEN615010 1-STANTON4
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.5361	GEN659296 2-SDPRAIRWND1W0.6900
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	123.5277	GEN600005 1-MONTICELLO
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.5072	GEN600006 1-AS KING
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.437	GEN587653 1-J526-GEN1 0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.408	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07099	123.366	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07077	123.3515	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.344	GEN652556 2-OAHE
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.344	GEN652557 4-OAHE
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.344	GEN652558 6-OAHE
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.3339	GEN659110 1-LELAND OLDS UNIT1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07054	123.3329	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.3282	GEN659453 1-GI1414GEN W0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.2596	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	123.1867	BASE CASE
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.1775	GEN659141 1-K10215A
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07024	123.1402	FT THOMPSON - OAHE 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07024	123.1402	FT THOMPSON - OAHE 230KV CKT 2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	123.1293	GEN587633 1-J510-GEN1 18.000
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07067	123.1225	SUB 3455 - SUB 3740 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07025	123.1106	FT THOMPSON - OAHE 230KV CKT 3
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07025	123.1106	FT THOMPSON - OAHE 230KV CKT 4
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	122.989	GEN657749 1-YOUNG 1 GENERATOR
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.9417	GEN509403 1-PIRKEY GENERATION
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07219	122.9349	BASSETT 7115.00 - STUART 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07219	122.9283	ATKINSON - STUART 115KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.08136	122.9257	MCCOOL - MOORE 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07219	122.8766	AINSWORTH - BASSETT 7115.00 115KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	122.8383	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07060	122.8343	CALLAWAY - MAXWELL 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06977	122.8194	STAPLETON - THEDFORD 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.7639	GEN300002 1-THOMAS HILL UNIT 2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07055	122.7514	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07018	122.7334	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07016	122.7322	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07016	122.7301	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07016	122.73	BROADLAND - HURON 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07016	122.7254	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.7214	GEN505432 1-SIKESTON
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	122.6856	GEN659407 1-ANTELPHILLSW0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07409	122.6787	G15088_T 345.00 - MOORE 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07030	122.6324	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	122.6093	GEN600005 1-MONTICELLO
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07052	122.5986	LARAMIE RIVER - STEGALL 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07256	122.5945	AXTELL - PAULINE 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07037	122.5495	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.5261	GEN652546 1-FT RANDAL
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.5167	GEN587153 1-G16-021-GEN10.6900
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	122.4969	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.08354	122.4897	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07073	122.4651	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.4643	GEN659116 1-SPIRIT MOUND UNIT1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.463	GEN652548 5-FT RANDAL
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.463	GEN652549 7-FT RANDAL
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	122.45	GEN600000 1-SHERBURNECNTY G1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.4418	GEN652547 3-FT RANDAL
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.4289	GEN660003 3-HURON WEST PARK
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07233	122.3921	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.3876	GEN600047 1-MECCT1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.379	GEN600046 1-MECST
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.3297	GEN600045 4-ANSON
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06823	122.3223	COOPER - MOORE 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.3204	GEN600063 1-COLVILLE GEN 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.3204	GEN600064 2-COLVILLE GEN 2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.3157	GEN660001 2-ABERDEEN SIEBRECHT
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	122.3143	GEN600000 1-SHERBURNECNTY G1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.3091	GEN600043 7-BLUE LAKE5
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.3091	GEN600044 8-BLUE LAKE6
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07138	122.2928	MISSION - WITTEN 115KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.2823	GEN600014 4-BLACK DOG GEN 4
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.2769	GEN600065 7-HIGH BRIDGE
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.2769	GEN600066 8-HIGH BRIDGE
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.2724	GEN600011 5-BLACK DOG GEN 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	122.272	GEN587033 1-G16-004-GEN10.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.2685	GEN600071 10-RIVER SIDE
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.2683	GEN600070 9-RIVER SIDE
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07145	122.257	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.2532	GEN600007 7-RIVERSIDE GEN 7
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.2523	GEN652414 4-FT PECK
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.2523	GEN652415 5-FT PECK
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.2415	GEN652345 W-G07_023IS_2 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07016	122.2264	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.2222	GEN600017 C-LS POWER CT
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07167	122.2156	SUB 3454 - WAGENER 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.213	GEN587583 1-J432-GEN1 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07184	122.2064	103RD & ROKEBY - MOORE 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.1932	GEN300003 1-THOMAS HILL UNIT 3
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07226	122.1731	HOLCOMB - SETAB 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.1313	GEN300007 1-NEW MADRID UNIT 2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.1258	GEN300006 1-NEW MADRID UNIT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.1061	GEN652559 1-OAHE
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.0868	GEN659273 2-GROTON SYNC COND
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.0868	GEN659294 1-WILTONCOL9
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.0862	GEN615052 1-CAMBRIDGE GENERATING STATION
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.0769	GEN659272 2-GROTON 2G13.800
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.0715	GEN659162 4-RED WLCK
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.0715	GEN659163 5-BLACK WDCK
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.0705	GEN659192 6-LYNN
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.0635	GEN615021 1-GRE-ER 14G 16.000
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	122.032	GEN587033 1-G16-004-GEN10.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.0123	GEN659274 1-GROTON
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	122.0041	GEN590010 1-ERCOT EQUIVALENCE
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07073	121.9841	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07040	121.9831	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07040	121.971	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.9694	GEN590011 2-ERCOT EQUIVALENCE
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.9539	GEN657705 X-DRAYTON
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.9029	GEN600067 9-HIGH BRIDGE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.868	GEN 11104 1-J262_GEN 0.6000
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.868	GEN 11108 1-J263_GEN 0.6000
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.8625	GEN615015 1-GRE-SPRITWDG13.200
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.8371	GEN659353 1-DEERCREK CTG18.000
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.8368	GEN659354 1-DEERCREK STG18.000
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07469	121.813	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	121.7817	GEN661015 1-COYOTE
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.7766	GEN659270 1-WEST SW
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.7524	GEN659291 1-FT MP COLLECTOR
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.7415	GEN562872 1-G15046_3 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07102	121.7202	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	121.7056	GEN620315 1-BIG STONE GEN
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.6829	GEN662101 1-WESSINGTON190.5750
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.6821	GEN660016 1-B_H WIND 0.7000
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.6721	GEN587623 1-J493-GEN1 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06984	121.6528	OAHE - SULLEY BUTTE 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.5696	GEN 10648 1-G830_GEN 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06984	121.522	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06984	121.5032	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06984	121.5031	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06984	121.4901	GLENHAM - L3 HAWDON 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.4733	GEN910006 1-G12_012IS_3 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06984	121.4223	GLENHAM - WHITLOK 230KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07226	121.4108	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.3211	GEN587593 1-J460-GEN1 0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	121.3045	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07346	121.2702	MINGO - SETAB 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	121.2438	GEN600002 3-SHERBURNE CNTY G3
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.2117	GEN587053 1-G16-007-GEN10.6500
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.05333	121.204	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	121.1004	GEN600001 2-SHERBURNE CNTY G2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.0955	GEN652545 7-BIG BEND
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.0623	GEN652906 1-G09_006IS_3 0.6900
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	121.0427	GEN661015 1-COYOTE
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	121.0079	GEN652544 5-BIG BEND
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.9767	GEN652543 3-BIG BEND
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.9764	GEN652542 1-BIG BEND
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.9731	GEN 11123 1-G736-GEN1 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.9726	GEN659010 4-G07_027IS_2 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.9646	GEN 11133 1-J442-GEN1 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.9538	GEN659366 3-WILTON 3 W0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.9393	GEN652460 4-GARRISON
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.9393	GEN652461 5-GARRISON
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.9363	GEN659194 1-NDPRAIRWND1W0.6900
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	120.9304	GEN600002 3-SHERBURNE CNTY G3
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	120.9137	GEN657748 1-YOUNG 2 GENERATOR
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	120.9003	GEN600001 2-SHERBURNE CNTY G2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.8687	GEN652458 2-GARRISON
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.8686	GEN652457 1-GARRISON
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.8686	GEN652459 3-GARRISON
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.8109	GEN652907 1-G09_007IS_3 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.764	GEN659403 1-NDSUNFLWR W0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07345	120.7402	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07456	120.5759	AXTELL - SWEETWATER 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	120.5548	GEN657748 1-YOUNG 2 GENERATOR
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.452	GEN659411 1-CAMPBLCNTY W0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.4159	GEN563232 1-G15089_3 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.4119	GEN600004 2-PRAIRIE ISLAND G2
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	120.4107	GEN620315 1-BIG STONE GEN
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.4052	GEN600003 1-PRAIRIE ISLAND G1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.2137	GEN615010 1-STANTON4
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.19	GEN659296 2-SDPRAIRWND1W0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07145	120.1209	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.0602	GEN600006 1-AS KING
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	120.0555	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.08224	120.0074	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	119.9267	GEN652556 2-OAHE
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	119.9267	GEN652557 4-OAHE
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	119.9267	GEN652558 6-OAHE
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07900	119.8981	MCCOOL - MOORE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	119.892	GEN587653 1-J526-GEN1 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	119.8318	GEN659110 1-LELAND OLDS UNIT1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	119.8229	GEN659453 1-GI1414GEN W0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	119.7361	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07620	119.6871	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	119.6698	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	119.6641	GEN659141 1-K10215A
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07469	119.6559	G15088_T 345.00 - MOORE 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	119.5752	GEN587633 1-J510-GEN1 18.000
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07017	119.5637	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07017	119.5586	2810X2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	119.4251	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	119.231	GEN659407 1-ANTELPHILLSW0.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	119.1886	GEN659103 1-ANTELOPE VALLEY UNIT1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	119.1886	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	119.1772	GEN600005 1-MONTICELLO
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	119.0222	GEN659103 1-ANTELOPE VALLEY UNIT1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	119.0222	GEN659107 2-ANTELOPE VALLEY UNIT2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06816	118.9628	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06816	118.9453	2810X2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	118.8535	GEN600000 1-SHERBURNECNTY G1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	118.6719	GEN620315 1-BIG STONE GEN
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	118.6576	BIG STONE 230/24.0KV TRANSFORMER CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	118.55	GEN587033 1-G16-004-GEN10.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06816	118.4624	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	118.0382	GEN587293 1-G16-044-GEN10.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	118.0048	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	117.9326	GEN600002 3-SHERBURNE CNTY G3
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	117.8932	GEN615001 1-COAL CREEK
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	117.8515	GEN659125 1-COVEY
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	117.777	GEN587293 1-G16-044-GEN10.6900
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07017	117.7691	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	117.7357	GEN600001 2-SHERBURNE CNTY G2
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	117.7078	GEN615002 2-COAL CREEK
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.04860	117.6362	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	117.586	GEN659125 1-COVEY
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	117.5002	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07990	117.2657	MCCOOL - MOORE 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	117.2656	GEN615001 1-COAL CREEK
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	117.0911	GEN615002 2-COAL CREEK
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.08003	116.7985	GRAND ISLAND - MCCOOL 345KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	116.6187	BIG STONE 230/24.0KV TRANSFORMER CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	116.5535	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06865	116.1966	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06865	116.1793	2810X2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	115.975	GEN659103 1-ANTELOPE VALLEY UNIT1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	115.975	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06865	115.9001	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	115.7013	GEN587133 1-G16-017-GEN10.6900
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	115.6164	GEN587133 1-G16-017-GEN10.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	114.8226	GEN587293 1-G16-044-GEN10.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	114.7251	GEN659125 1-COVEY
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	114.4702	GEN615001 1-COAL CREEK
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	114.4199	GEN615002 2-COAL CREEK
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.08090	114.1778	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	112.5683	GEN587133 1-G16-017-GEN10.6900
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06816	112.4576	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06816	112.1542	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06816	112.1184	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06865	109.7	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06865	109.6917	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06865	109.6754	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.06960	102.8727	GEN652353 2-GR PRAIRIEG 0.6900
3	20WP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.05685	102.1102	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07160	101.9355	GEN652353 2-GR PRAIRIEG 0.6900
3	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.07012	100.1686	GEN652353 2-GR PRAIRIEG 0.6900
3	20WP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.05682	99.4	STORLA - WESSINGTON 230KV CKT 1
3	20WP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.05716	99.1	SPLIT ROCK - WHITE 345KV CKT 1
3	20SP	G16_021	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03350	114.9296	HOSKINS - SHELL CREEK 345KV CKT 1
3	17SP	G16_021	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03418	113.451	HOSKINS - SHELL CREEK 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_021	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368.0	368.0	0.03380	111.8571	HOSKINS - SHELL CREEK 345KV CKT 1
3	16WP	G16_021	-	Non-Converged Contingency	0.0	0.0	0.14243	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	16WP	G16_021	-	Non-Converged Contingency	720.0	720.0	0.07121	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	16WP	G16_021	-	Non-Converged Contingency	720.0	720.0	0.07121	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_021	-	Non-Converged Contingency	956.0	956.0	0.15169	-	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	17SP	G16_021	-	Non-Converged Contingency	0.0	0.0	0.06284	-	P13:230-345:NPPD:STEGALL3:KV3A
3	17SP	G16_021	-	Non-Converged Contingency	0.0	0.0	0.03033	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	20SP	G16_021	-	Non-Converged Contingency	0.0	0.0	0.13919	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	20SP	G16_021	-	Non-Converged Contingency	1792.0	1792.0	0.07543	-	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	20SP	G16_021	-	Non-Converged Contingency	720.0	720.0	0.06960	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	20SP	G16_021	-	Non-Converged Contingency	720.0	720.0	0.06960	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
3	20WP	G16_021	-	Non-Converged Contingency	0.0	0.0	0.11646	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	20WP	G16_021	-	Non-Converged Contingency	720.0	720.0	0.05823	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	20WP	G16_021	-	Non-Converged Contingency	720.0	720.0	0.05823	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
3	25SP	G16_021	-	Non-Converged Contingency	956.09	1051.7	0.04864	-	GEN525561 1-TOLK GEN #1 24 KV
3	20SP	G16_021	FROM->TO	RAUN - TEKAMAH 161KV CKT 1	217.0	217.0	0.03551	105.495	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20SP	G16_021	FROM->TO	RAUN - TEKAMAH 161KV CKT 1	217.0	217.0	0.03551	105.495	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	25SP	G16_021	FROM->TO	RAUN - TEKAMAH 161KV CKT 1	217.0	217.0	0.03544	104.0018	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	17G	G16_023	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.51937	127.5746	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	16WP	G16_023	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.51957	114.7237	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	20WP	G16_023	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.52063	108.3614	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	17SP	G16_023	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.51880	100	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	17SP	G16_023	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.33151	100.7303	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	17SP	G16_023	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.33151	100.1583	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	16WP	G16_023	-	Non-Converged Contingency	0.0	0.0	1.12346	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	16WP	G16_023	-	Non-Converged Contingency	0.0	0.0	1.11782	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	16WP	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56173	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	16WP	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56173	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	16WP	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.55891	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	16WP	G16_023	-	Non-Converged Contingency	0.0	0.0	0.55891	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	16WP	G16_023	-	Non-Converged Contingency	0.0	0.0	0.07456	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	17G	G16_023	-	Non-Converged Contingency	0.0	0.0	1.12413	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	17G	G16_023	-	Non-Converged Contingency	0.0	0.0	1.11735	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17G	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56206	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17G	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56206	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	17G	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.55868	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	17G	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.55868	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	17G	G16_023	-	Non-Converged Contingency	0.0	0.0	0.55868	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	17G	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.42803	-	LARAMIE RIVER - STEGALL 345KV CKT 1
0	17SP	G16_023	-	Non-Converged Contingency	0.0	0.0	1.12058	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	17SP	G16_023	-	Non-Converged Contingency	0.0	0.0	1.11673	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17SP	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56029	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17SP	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56029	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	17SP	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.55837	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	17SP	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.55837	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	17SP	G16_023	-	Non-Converged Contingency	0.0	0.0	0.55837	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	17SP	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.43170	-	LARAMIE RIVER - STEGALL 345KV CKT 1
0	20SP	G16_023	-	Non-Converged Contingency	0.0	0.0	1.13460	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	20SP	G16_023	-	Non-Converged Contingency	0.0	0.0	1.12145	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	20SP	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56730	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	20SP	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56730	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	20SP	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.56073	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	20SP	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.56073	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	20SP	G16_023	-	Non-Converged Contingency	0.0	0.0	0.56073	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	20SP	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.42972	-	LARAMIE RIVER - STEGALL 345KV CKT 1
0	20WP	G16_023	-	Non-Converged Contingency	0.0	0.0	1.12823	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	20WP	G16_023	-	Non-Converged Contingency	0.0	0.0	1.11805	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	20WP	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56411	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	20WP	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56411	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	20WP	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.55902	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	20WP	G16_023	-	Non-Converged Contingency	0.0	0.0	0.55902	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	25SP	G16_023	-	Non-Converged Contingency	0.0	0.0	1.13541	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	25SP	G16_023	-	Non-Converged Contingency	0.0	0.0	1.12199	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	25SP	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56771	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	25SP	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56771	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	25SP	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.56100	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	25SP	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.56100	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	25SP	G16_023	-	Non-Converged Contingency	0.0	0.0	0.56100	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	25SP	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.43003	-	LARAMIE RIVER - STEGALL 345KV CKT 1
0	25SP	G16_023	-	Non-Converged Contingency	956.09	1051.7	0.09802	-	GEN525561 1-TOLK GEN #1 24 KV

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_023	-	Non-Converged Contingency	956.09	1051.7	0.09802	-	GEN525562 1-TOLK GEN #2 24 KV
0	17SP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320.0	320.0	0.51846	100.9856	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17SP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320.0	320.0	0.51846	100.3734	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	17SP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320.0	320.0	0.51846	100.3513	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	20SP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320.0	320.0	0.52111	99.2	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17SP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	400.0	0.61585	100.9592	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17SP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	400.0	0.61585	100.3478	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	17SP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	400.0	0.61585	100.3241	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	20SP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	400.0	0.61894	99.3	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	17G	G16_023	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.52439	126.1313	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	16WP	G16_023	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.52464	114.7676	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	17SP	G16_023	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.52359	99.7	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	17SP	G16_023	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.33364	100.5516	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	17SP	G16_023	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.33364	100	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	16WP	G16_023	-	Non-Converged Contingency	0.0	0.0	1.13888	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	16WP	G16_023	-	Non-Converged Contingency	0.0	0.0	1.12276	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
2	16WP	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56944	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	16WP	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56944	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	16WP	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.56138	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
2	16WP	G16_023	-	Non-Converged Contingency	0.0	0.0	0.56138	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
2	16WP	G16_023	-	Non-Converged Contingency	0.0	0.0	0.09310	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17G	G16_023	-	Non-Converged Contingency	0.0	0.0	1.13948	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	17G	G16_023	-	Non-Converged Contingency	0.0	0.0	1.12228	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
2	17G	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56974	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	17G	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56974	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	17G	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.56114	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
2	17G	G16_023	-	Non-Converged Contingency	0.0	0.0	0.56114	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
2	17G	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.42557	-	LARAMIE RIVER - STEGALL 345KV CKT 1
2	17SP	G16_023	-	Non-Converged Contingency	0.0	0.0	1.13571	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	17SP	G16_023	-	Non-Converged Contingency	0.0	0.0	1.12163	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
2	17SP	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56785	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	17SP	G16_023	-	Non-Converged Contingency	956.0	956.0	0.56785	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	17SP	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.56082	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
2	17SP	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.56082	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
2	17SP	G16_023	-	Non-Converged Contingency	0.0	0.0	0.56082	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
2	17SP	G16_023	-	Non-Converged Contingency	956.0	1052.0	0.42925	-	LARAMIE RIVER - STEGALL 345KV CKT 1
3	17G	G16_023	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.52980	127.1582	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	16WP	G16_023	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.53004	115.445	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20WP	G16_023	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.52628	109.5996	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_023	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.52922	100.518	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_023	FROM->TO	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1	400.0	400.0	0.38472	103.4092	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	25SP	G16_023	FROM->TO	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1	400.0	400.0	0.38462	101.3733	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_023	FROM->TO	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1	400.0	400.0	0.38437	100.5296	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_023	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38623	116.8767	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_023	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38623	115.8465	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	25SP	G16_023	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38597	114.881	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_023	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38582	113.6417	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	25SP	G16_023	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38597	113.479	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_023	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38582	112.4729	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17G	G16_023	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38874	109.4152	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17G	G16_023	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38874	107.7528	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	16WP	G16_023	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38864	105.4958	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	16WP	G16_023	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38864	104.2985	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20WP	G16_023	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38337	100.6345	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20WP	G16_023	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38337	99.7	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	25SP	G16_023	-	Non-Converged Contingency	956.09	1051.7	0.09970	-	GEN525561 1-TOLK GEN #1 24 KV
0	20WP	G16_024	TO->FROM	ALTOONA - BUTLER 138KV CKT 1	96.0	96.0	0.10553	115.0024	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	16WP	G16_024	TO->FROM	ALTOONA - BUTLER 138KV CKT 1	96.0	96.0	0.11021	100.2309	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20WP	G16_024	TO->FROM	ALTOONA - BUTLER 138KV CKT 1	96.0	96.0	0.10553	100	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	16WP	G16_024	TO->FROM	ALTOONA - BUTLER 138KV CKT 1	96.0	96.0	0.11093	99.6	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	20WP	G16_024	TO->FROM	ALTOONA - BUTLER 138KV CKT 1	96.0	96.0	0.10509	99.6	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	17SP	G16_024	TO->FROM	BUTLER - MIDIAN 138KV CKT 1	143.0	143.0	0.46004	101.0791	MIDIAN (MIDI TX-1) 138/69/13.2KV TRANSFORMER CKT 1
0	20SP	G16_024	TO->FROM	BUTLER - MIDIAN 138KV CKT 1	143.0	143.0	0.46084	99.1	MIDIAN (MIDI TX-1) 138/69/13.2KV TRANSFORMER CKT 1
0	16WP	G16_028	FROM->TO	BETHEL - BROKEN BOW 138KV CKT 1	121.0	121.0	0.35965	119.9378	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_028	FROM->TO	BETHEL - BROKEN BOW 138KV CKT 1	121.0	121.0	0.35965	119.9378	PITTSBURG - VALLIANT 345KV CKT 1
0	20WP	G16_028	FROM->TO	BETHEL - BROKEN BOW 138KV CKT 1	121.0	121.0	0.36096	105.1406	PITTSBURG - VALLIANT 345KV CKT 1
0	20WP	G16_028	FROM->TO	BETHEL - BROKEN BOW 138KV CKT 1	121.0	121.0	0.36096	105.1406	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_028	FROM->TO	BETHEL - BROKEN BOW 138KV CKT 1	121.0	121.0	0.35798	99	G16-063-TAP 345.00 - HUGO 345KV CKT 1
0	16WP	G16_028	TO->FROM	BETHEL - NASHOBA 138KV CKT 1	121.0	121.0	0.35965	125.5449	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_028	TO->FROM	BETHEL - NASHOBA 138KV CKT 1	121.0	121.0	0.35965	125.5449	PITTSBURG - VALLIANT 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_028	TO->FROM	BETHEL - NASHOBA 138KV CKT 1	121.0	121.0	0.36096	110.8257	PITTSBURG - VALLIANT 345KV CKT 1
0	20WP	G16_028	TO->FROM	BETHEL - NASHOBA 138KV CKT 1	121.0	121.0	0.36096	110.8257	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_028	TO->FROM	BETHEL - NASHOBA 138KV CKT 1	121.0	121.0	0.35798	104.5551	G16-063-TAP 345.00 - HUGO 345KV CKT 1
0	16WP	G16_028	FROM->TO	CLAYTON - NASHOBA 138KV CKT 1	121.0	121.0	0.35965	126.6003	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_028	FROM->TO	CLAYTON - NASHOBA 138KV CKT 1	121.0	121.0	0.35965	126.6003	PITTSBURG - VALLIANT 345KV CKT 1
0	20WP	G16_028	FROM->TO	CLAYTON - NASHOBA 138KV CKT 1	121.0	121.0	0.36096	111.9064	PITTSBURG - VALLIANT 345KV CKT 1
0	20WP	G16_028	FROM->TO	CLAYTON - NASHOBA 138KV CKT 1	121.0	121.0	0.36096	111.9064	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_028	FROM->TO	CLAYTON - NASHOBA 138KV CKT 1	121.0	121.0	0.35798	105.6139	G16-063-TAP 345.00 - HUGO 345KV CKT 1
0	20SP	G16_028	FROM->TO	CLAYTON - SARDIS 138KV CKT 1	98.0	98.0	0.61268	105.6648	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
0	20SP	G16_028	FROM->TO	CLAYTON - SARDIS 138KV CKT 1	98.0	98.0	0.61268	105.6648	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
0	20SP	G16_028	FROM->TO	CLAYTON - SARDIS 138KV CKT 1	98.0	98.0	0.61268	105.6299	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
0	20SP	G16_028	FROM->TO	CLAYTON - SARDIS 138KV CKT 1	98.0	98.0	0.61268	105.6299	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
0	25SP	G16_028	FROM->TO	CLAYTON - SARDIS 138KV CKT 1	98.0	98.0	0.61270	101.7824	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
0	25SP	G16_028	FROM->TO	CLAYTON - SARDIS 138KV CKT 1	98.0	98.0	0.61270	101.7824	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
0	25SP	G16_028	FROM->TO	CLAYTON - SARDIS 138KV CKT 1	98.0	98.0	0.61270	101.7499	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
0	25SP	G16_028	FROM->TO	CLAYTON - SARDIS 138KV CKT 1	98.0	98.0	0.61270	101.7499	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
0	20SP	G16_028	FROM->TO	ENOWILT - LONE OAK 138KV CKT 1	88.0	98.0	0.61268	100.8742	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
0	20SP	G16_028	FROM->TO	ENOWILT - LONE OAK 138KV CKT 1	88.0	98.0	0.61268	100.8742	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
0	20SP	G16_028	FROM->TO	ENOWILT - LONE OAK 138KV CKT 1	88.0	98.0	0.61268	100.8449	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
0	20SP	G16_028	FROM->TO	ENOWILT - LONE OAK 138KV CKT 1	88.0	98.0	0.61268	100.8449	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
0	20SP	G16_028	TO->FROM	ENOWILT - SARDIS 138KV CKT 1	98.0	98.0	0.61268	102.4241	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
0	20SP	G16_028	TO->FROM	ENOWILT - SARDIS 138KV CKT 1	98.0	98.0	0.61268	102.4241	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
0	20SP	G16_028	TO->FROM	ENOWILT - SARDIS 138KV CKT 1	98.0	98.0	0.61268	102.3815	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
0	20SP	G16_028	TO->FROM	ENOWILT - SARDIS 138KV CKT 1	98.0	98.0	0.61268	102.3815	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
0	16WP	G16_028	FROM->TO	HUGO POWER PLANT - VALLIANT 138KV CKT 1	287.0	287.0	0.03127	104.323	HUGO - VALLIANT 345KV CKT 1
0	16WP	G16_028	FROM->TO	HUGO POWER PLANT - VALLIANT 138KV CKT 1	287.0	287.0	0.03127	104.323	HUGO - VALLIANT 345KV CKT 1
0	16WP	G16_028	TO->FROM	LYDIA - VALLIANT 345KV CKT 1	956.0	1052.0	0.19094	105.8951	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	16WP	G16_028	TO->FROM	LYDIA - VALLIANT 345KV CKT 1	956.0	1052.0	0.19094	105.8951	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	17G	G16_029	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.51937	127.5746	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	16WP	G16_029	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.51957	114.7237	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	20WP	G16_029	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.52063	108.3614	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	17SP	G16_029	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.51880	100	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	17SP	G16_029	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.33151	100.7303	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	17SP	G16_029	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.33151	100.1583	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	16WP	G16_029	-	Non-Converged Contingency	0.0	0.0	1.12346	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	16WP	G16_029	-	Non-Converged Contingency	0.0	0.0	1.11782	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	16WP	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56173	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	16WP	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56173	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	16WP	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.55891	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	16WP	G16_029	-	Non-Converged Contingency	0.0	0.0	0.55891	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	16WP	G16_029	-	Non-Converged Contingency	0.0	0.0	0.07456	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	17G	G16_029	-	Non-Converged Contingency	0.0	0.0	1.12413	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	17G	G16_029	-	Non-Converged Contingency	0.0	0.0	1.11735	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17G	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56206	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17G	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56206	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	17G	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.55868	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	17G	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.55868	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	17G	G16_029	-	Non-Converged Contingency	0.0	0.0	0.55868	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	17G	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.42803	-	LARAMIE RIVER - STEGALL 345KV CKT 1
0	17SP	G16_029	-	Non-Converged Contingency	0.0	0.0	1.12058	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	17SP	G16_029	-	Non-Converged Contingency	0.0	0.0	1.11673	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17SP	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56029	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17SP	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56029	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	17SP	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.55837	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	17SP	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.55837	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	17SP	G16_029	-	Non-Converged Contingency	0.0	0.0	0.55837	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	17SP	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.43170	-	LARAMIE RIVER - STEGALL 345KV CKT 1
0	20SP	G16_029	-	Non-Converged Contingency	0.0	0.0	1.13460	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	20SP	G16_029	-	Non-Converged Contingency	0.0	0.0	1.12145	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	20SP	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56730	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	20SP	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56730	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	20SP	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.56073	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	20SP	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.56073	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	20SP	G16_029	-	Non-Converged Contingency	0.0	0.0	0.56073	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	20SP	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.42972	-	LARAMIE RIVER - STEGALL 345KV CKT 1
0	20WP	G16_029	-	Non-Converged Contingency	0.0	0.0	1.12823	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	20WP	G16_029	-	Non-Converged Contingency	0.0	0.0	1.11805	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	20WP	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56411	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	20WP	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56411	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	20WP	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.55902	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_029	-	Non-Converged Contingency	0.0	0.0	0.55902	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	25SP	G16_029	-	Non-Converged Contingency	0.0	0.0	1.13541	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	25SP	G16_029	-	Non-Converged Contingency	0.0	0.0	1.12199	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	25SP	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56771	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	25SP	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56771	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	25SP	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.56100	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	25SP	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.56100	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	25SP	G16_029	-	Non-Converged Contingency	0.0	0.0	0.56100	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	25SP	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.43003	-	LARAMIE RIVER - STEGALL 345KV CKT 1
0	25SP	G16_029	-	Non-Converged Contingency	956.09	1051.7	0.09802	-	GEN525561 1-TOLK GEN #1 24 KV
0	25SP	G16_029	-	Non-Converged Contingency	956.09	1051.7	0.09802	-	GEN525562 1-TOLK GEN #2 24 KV
0	17SP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320.0	320.0	0.51846	100.9856	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17SP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320.0	320.0	0.51846	100.3734	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	17SP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320.0	320.0	0.51846	100.3513	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	20SP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320.0	320.0	0.52111	99.2	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17SP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	400.0	0.61585	100.9592	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17SP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	400.0	0.61585	100.3478	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	17SP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	400.0	0.61585	100.3241	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	20SP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	400.0	0.61894	99.3	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	17G	G16_029	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.52439	126.1313	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	16WP	G16_029	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.52464	114.7676	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	17SP	G16_029	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.52359	99.7	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	17SP	G16_029	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.33364	100.5516	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	17SP	G16_029	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.33364	100	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	16WP	G16_029	-	Non-Converged Contingency	0.0	0.0	1.13888	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	16WP	G16_029	-	Non-Converged Contingency	0.0	0.0	1.12276	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
2	16WP	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56944	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	16WP	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56944	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	16WP	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.56138	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
2	16WP	G16_029	-	Non-Converged Contingency	0.0	0.0	0.56138	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
2	16WP	G16_029	-	Non-Converged Contingency	0.0	0.0	0.09310	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17G	G16_029	-	Non-Converged Contingency	0.0	0.0	1.13948	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	17G	G16_029	-	Non-Converged Contingency	0.0	0.0	1.12228	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
2	17G	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56974	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	17G	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56974	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	17G	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.56114	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
2	17G	G16_029	-	Non-Converged Contingency	0.0	0.0	0.56114	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
2	17G	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.42557	-	LARAMIE RIVER - STEGALL 345KV CKT 1
2	17SP	G16_029	-	Non-Converged Contingency	0.0	0.0	1.13571	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	17SP	G16_029	-	Non-Converged Contingency	0.0	0.0	1.12163	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
2	17SP	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56785	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	17SP	G16_029	-	Non-Converged Contingency	956.0	956.0	0.56785	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	17SP	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.56082	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
2	17SP	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.56082	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
2	17SP	G16_029	-	Non-Converged Contingency	0.0	0.0	0.56082	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
2	17SP	G16_029	-	Non-Converged Contingency	956.0	1052.0	0.42925	-	LARAMIE RIVER - STEGALL 345KV CKT 1
3	17G	G16_029	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.52980	127.1582	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	16WP	G16_029	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.53004	115.445	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20WP	G16_029	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.52628	109.5996	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_029	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.52922	100.518	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_029	FROM->TO	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1	400.0	400.0	0.38472	103.4092	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	25SP	G16_029	FROM->TO	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1	400.0	400.0	0.38462	101.3733	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_029	FROM->TO	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1	400.0	400.0	0.38437	100.5296	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_029	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38623	116.8767	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_029	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38623	115.8465	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	25SP	G16_029	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38597	114.881	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_029	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38582	113.6417	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	25SP	G16_029	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38597	113.479	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_029	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38582	112.4729	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17G	G16_029	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38874	109.4152	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17G	G16_029	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38874	107.7528	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	16WP	G16_029	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38864	105.4958	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	16WP	G16_029	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38864	104.2985	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20WP	G16_029	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38337	100.6345	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20WP	G16_029	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.38337	99.7	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	25SP	G16_029	-	Non-Converged Contingency	956.09	1051.7	0.09970	-	GEN525561 1-TOLK GEN #1 24 KV
0	16WP	G16_030	FROM->TO	BROWN - BROWN 138KV CKT 1	143.0	143.0	0.53447	102.823	RUSSETT - RUSSETT 138KV CKT 1
0	16WP	G16_030	FROM->TO	HUGO POWER PLANT - VALLIANT 138KV CKT 1	287.0	287.0	0.08484	104.323	HUGO - VALLIANT 345KV CKT 1
0	16WP	G16_030	FROM->TO	HUGO POWER PLANT - VALLIANT 138KV CKT 1	287.0	287.0	0.08484	104.323	HUGO - VALLIANT 345KV CKT 1
0	16WP	G16_030	TO->FROM	LYDIA - VALLIANT 345KV CKT 1	956.0	1052.0	0.08229	105.8951	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_030	TO->FROM	LYDIA - VALLIANT 345KV CKT 1	956.0	1052.0	0.08229	105.8951	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03351	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03351	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03316	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03316	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03375	104.4987	BASE CASE
0	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04226	104.3491	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04186	103.6936	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03343	103.443	BASE CASE
0	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03375	101.4903	GEN587433 1-G16-063-GEN10.6900
0	20WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03343	100.7184	GEN587433 1-G16-063-GEN10.6900
0	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03334	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03334	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03375	99.9	GEN509416 1-TURK GENERATION
0	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03568	99.8	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03568	99.5	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03568	99.3	917X
0	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03466	99.3	P12:138:WFEC:MSL03
0	20WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03530	99.3	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03343	99.3	GEN509403 1-PIRKEY GENERATION
0	20WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03343	99.1	GEN509416 1-TURK GENERATION
0	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03375	99	GEN501801 1-DOLET HILLS UNIT1
0	20WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03530	99	G15066_T 345.00 - SOONER 345KV CKT 1
0	17SP	G16_032	FROM->TO	KINZE - STILLWATER KINZIE 138KV CKT 1	287.0	287.0	0.06748	102.1922	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G16_032	FROM->TO	KINZE - STILLWATER KINZIE 138KV CKT 1	287.0	287.0	0.06748	101.5695	917X
0	17SP	G16_032	FROM->TO	KINZE - STILLWATER KINZIE 138KV CKT 1	287.0	287.0	0.06748	100.2928	G15066_T 345.00 - SOONER 345KV CKT 1
2	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03333	108.105	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03333	108.105	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03298	106.8612	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03298	106.8612	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03359	103.4819	BASE CASE
2	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04205	103.2535	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04167	102.6507	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03327	102.4414	BASE CASE
2	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03359	100.5895	GEN587433 1-G16-063-GEN10.6900
2	20WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03327	99.8	GEN587433 1-G16-063-GEN10.6900
2	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03318	99.3	PITTSBURG - VALLIANT 345KV CKT 1
2	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03318	99.3	PITTSBURG - VALLIANT 345KV CKT 1
2	16WP	G16_032	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03359	99	GEN509416 1-TURK GENERATION
0	17G	G16_034	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.53019	127.5746	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	16WP	G16_034	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.53040	114.7237	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	20WP	G16_034	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.53204	108.3614	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	17SP	G16_034	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.52993	100	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	17SP	G16_034	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.34149	100.7303	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	17SP	G16_034	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.34149	100.1583	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	16WP	G16_034	-	Non-Converged Contingency	0.0	0.0	1.49827	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	16WP	G16_034	-	Non-Converged Contingency	0.0	0.0	1.15284	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	16WP	G16_034	-	Non-Converged Contingency	956.0	1052.0	0.74913	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	16WP	G16_034	-	Non-Converged Contingency	0.0	0.0	0.74913	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	16WP	G16_034	-	Non-Converged Contingency	956.0	956.0	0.57642	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	16WP	G16_034	-	Non-Converged Contingency	956.0	956.0	0.57642	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	16WP	G16_034	-	Non-Converged Contingency	0.0	0.0	0.07580	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	17G	G16_034	-	Non-Converged Contingency	0.0	0.0	1.49781	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17G	G16_034	-	Non-Converged Contingency	0.0	0.0	1.15352	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	17G	G16_034	-	Non-Converged Contingency	956.0	1052.0	0.74890	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	17G	G16_034	-	Non-Converged Contingency	0.0	0.0	0.74890	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	17G	G16_034	-	Non-Converged Contingency	956.0	956.0	0.57676	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17G	G16_034	-	Non-Converged Contingency	956.0	956.0	0.57676	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	17G	G16_034	-	Non-Converged Contingency	956.0	1052.0	0.23780	-	LARAMIE RIVER - STEGALL 345KV CKT 1
0	17SP	G16_034	-	Non-Converged Contingency	0.0	0.0	1.49781	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17SP	G16_034	-	Non-Converged Contingency	0.0	0.0	1.15127	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	17SP	G16_034	-	Non-Converged Contingency	956.0	1052.0	0.74890	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	17SP	G16_034	-	Non-Converged Contingency	0.0	0.0	0.74890	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	17SP	G16_034	-	Non-Converged Contingency	956.0	956.0	0.57564	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17SP	G16_034	-	Non-Converged Contingency	956.0	956.0	0.57564	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	17SP	G16_034	-	Non-Converged Contingency	956.0	1052.0	0.24116	-	LARAMIE RIVER - STEGALL 345KV CKT 1
0	20SP	G16_034	-	Non-Converged Contingency	0.0	0.0	1.50275	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	20SP	G16_034	-	Non-Converged Contingency	0.0	0.0	1.16599	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	20SP	G16_034	-	Non-Converged Contingency	956.0	1052.0	0.75138	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	20SP	G16_034	-	Non-Converged Contingency	0.0	0.0	0.75138	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_034	-	Non-Converged Contingency	956.0	956.0	0.58299	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	20SP	G16_034	-	Non-Converged Contingency	956.0	956.0	0.58299	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	20SP	G16_034	-	Non-Converged Contingency	956.0	1052.0	0.23907	-	LARAMIE RIVER - STEGALL 345KV CKT 1
0	20WP	G16_034	-	Non-Converged Contingency	0.0	0.0	1.49935	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	20WP	G16_034	-	Non-Converged Contingency	0.0	0.0	1.15961	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	20WP	G16_034	-	Non-Converged Contingency	956.0	1052.0	0.74967	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	20WP	G16_034	-	Non-Converged Contingency	0.0	0.0	0.74967	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	20WP	G16_034	-	Non-Converged Contingency	956.0	956.0	0.57981	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	20WP	G16_034	-	Non-Converged Contingency	956.0	956.0	0.57981	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	25SP	G16_034	-	Non-Converged Contingency	0.0	0.0	1.50331	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	25SP	G16_034	-	Non-Converged Contingency	0.0	0.0	1.16685	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	25SP	G16_034	-	Non-Converged Contingency	956.0	1052.0	0.75165	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	25SP	G16_034	-	Non-Converged Contingency	0.0	0.0	0.75165	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	25SP	G16_034	-	Non-Converged Contingency	956.0	956.0	0.58342	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	25SP	G16_034	-	Non-Converged Contingency	956.0	956.0	0.58342	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	25SP	G16_034	-	Non-Converged Contingency	956.0	1052.0	0.23937	-	LARAMIE RIVER - STEGALL 345KV CKT 1
0	25SP	G16_034	-	Non-Converged Contingency	956.09	1051.7	0.09905	-	GEN525561 1-TOLK GEN #1 24 KV
0	25SP	G16_034	-	Non-Converged Contingency	956.09	1051.7	0.09905	-	GEN525562 1-TOLK GEN #2 24 KV
0	17SP	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320.0	320.0	0.53282	100.9856	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17SP	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320.0	320.0	0.53282	100.3734	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	17SP	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320.0	320.0	0.53282	100.3513	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	20SP	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320.0	320.0	0.53566	99.2	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17SP	G16_034	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	400.0	0.63480	100.9592	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	17SP	G16_034	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	400.0	0.63480	100.3478	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	17SP	G16_034	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	400.0	0.63480	100.3241	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	20SP	G16_034	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400.0	400.0	0.63811	99.3	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	17G	G16_034	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.53544	126.1313	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	16WP	G16_034	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.53567	114.7676	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	17SP	G16_034	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.53494	99.7	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	17SP	G16_034	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.34370	100.5516	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	17SP	G16_034	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.34370	100	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	16WP	G16_034	-	Non-Converged Contingency	0.0	0.0	1.50338	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
2	16WP	G16_034	-	Non-Converged Contingency	0.0	0.0	1.16882	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	16WP	G16_034	-	Non-Converged Contingency	956.0	1052.0	0.75169	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
2	16WP	G16_034	-	Non-Converged Contingency	0.0	0.0	0.75169	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
2	16WP	G16_034	-	Non-Converged Contingency	956.0	956.0	0.58441	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	16WP	G16_034	-	Non-Converged Contingency	956.0	956.0	0.58441	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	16WP	G16_034	-	Non-Converged Contingency	0.0	0.0	0.09490	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17G	G16_034	-	Non-Converged Contingency	0.0	0.0	1.50290	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
2	17G	G16_034	-	Non-Converged Contingency	0.0	0.0	1.16943	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	17G	G16_034	-	Non-Converged Contingency	956.0	1052.0	0.75145	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
2	17G	G16_034	-	Non-Converged Contingency	0.0	0.0	0.75145	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
2	17G	G16_034	-	Non-Converged Contingency	956.0	956.0	0.58471	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	17G	G16_034	-	Non-Converged Contingency	956.0	956.0	0.58471	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	17G	G16_034	-	Non-Converged Contingency	956.0	1052.0	0.23526	-	LARAMIE RIVER - STEGALL 345KV CKT 1
2	17SP	G16_034	-	Non-Converged Contingency	0.0	0.0	1.50289	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
2	17SP	G16_034	-	Non-Converged Contingency	0.0	0.0	1.16699	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	17SP	G16_034	-	Non-Converged Contingency	956.0	1052.0	0.75145	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
2	17SP	G16_034	-	Non-Converged Contingency	0.0	0.0	0.75145	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
2	17SP	G16_034	-	Non-Converged Contingency	956.0	956.0	0.58349	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	17SP	G16_034	-	Non-Converged Contingency	956.0	956.0	0.58349	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	17SP	G16_034	-	Non-Converged Contingency	956.0	1052.0	0.23862	-	LARAMIE RIVER - STEGALL 345KV CKT 1
3	17G	G16_034	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.54193	127.1582	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	16WP	G16_034	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.54216	115.445	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20WP	G16_034	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.53884	109.5996	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_034	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320.0	320.0	0.54172	100.518	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_034	FROM->TO	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1	400.0	400.0	0.40547	103.4092	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	25SP	G16_034	FROM->TO	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1	400.0	400.0	0.40542	101.3733	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_034	FROM->TO	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1	400.0	400.0	0.40516	100.5296	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_034	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.40699	116.8767	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_034	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.40699	115.8465	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	25SP	G16_034	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.40678	114.881	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_034	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.40661	113.6417	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	25SP	G16_034	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.40678	113.479	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_034	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.40661	112.4729	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17G	G16_034	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.40893	109.4152	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17G	G16_034	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.40893	107.7528	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	16WP	G16_034	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.40883	105.4958	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	16WP	G16_034	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.40883	104.2985	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20WP	G16_034	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.40416	100.6345	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_034	FROM->TO	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1	336.0	336.0	0.40416	99.7	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	25SP	G16_034	-	Non-Converged Contingency	956.09	1051.7	0.10099	-	GEN525561 1-TOLK GEN #1 24 KV
0	20SP	G16_037	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04454	111.6105	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20SP	G16_037	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04454	111.1326	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17SP	G16_037	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04549	109.8022	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17SP	G16_037	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04549	109.8022	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17SP	G16_037	TO->FROM	CLINTON JUNCTION - ELK CITY 138KV CKT 1	136.0	152.0	0.07174	107.1886	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20WP	G16_037	FROM->TO	CORN TAP - NAPLESTP 138.00 138KV CKT 1	183.0	201.0	0.03110	103.7196	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_037	FROM->TO	CORN TAP - NAPLESTP 138.00 138KV CKT 1	183.0	201.0	0.03151	103.4362	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_037	FROM->TO	CORN TAP - NAPLESTP 138.00 138KV CKT 1	183.0	201.0	0.03110	99.6	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_037	FROM->TO	CORN TAP - NAPLESTP 138.00 138KV CKT 1	183.0	201.0	0.03151	99.3	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.26236	109.6733	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.18795	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.18795	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.18867	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.18867	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.21260	107.7582	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.22424	107.6437	CIMARRON - MINCO 345KV CKT 1
0	20WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.25565	107.0835	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.17113	104.4987	BASE CASE
0	16WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.26236	104.4902	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.18109	104.3491	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.18135	103.6936	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.17094	103.443	BASE CASE
0	20WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.21260	102.8382	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.22424	102.5987	GRACEMONT - MINCO 345KV CKT 1
0	20WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.25565	102.1688	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.17113	101.4903	GEN587433 1-G16-063-GEN10.6900
0	20WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.17094	100.7184	GEN587433 1-G16-063-GEN10.6900
0	16WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.17806	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.17806	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.17113	99.9	GEN509416 1-TURK GENERATION
0	16WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.17686	99.8	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.17686	99.5	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.17985	99.3	P12:138:WFEC:MSL03
0	16WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.17686	99.3	917X
0	20WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.17650	99.3	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.17094	99.3	GEN509403 1-PIRKEY GENERATION
0	20WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.17094	99.1	GEN509416 1-TURK GENERATION
0	16WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.17113	99	GEN501801 1-DOLET HILLS UNIT1
0	20WP	G16_037	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.17650	99	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_037	FROM->TO	HUGO POWER PLANT - VALLIANT 138KV CKT 1	287.0	287.0	0.05248	104.323	HUGO - VALLIANT 345KV CKT 1
0	16WP	G16_037	FROM->TO	HUGO POWER PLANT - VALLIANT 138KV CKT 1	287.0	287.0	0.05248	104.323	HUGO - VALLIANT 345KV CKT 1
0	17SP	G16_037	FROM->TO	KINZE - STILLWATER KINZIE 138KV CKT 1	287.0	287.0	0.03191	102.1922	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G16_037	FROM->TO	KINZE - STILLWATER KINZIE 138KV CKT 1	287.0	287.0	0.03191	101.5695	917X
0	17SP	G16_037	FROM->TO	KINZE - STILLWATER KINZIE 138KV CKT 1	287.0	287.0	0.03191	100.2928	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_037	TO->FROM	LYDIA - VALLIANT 345KV CKT 1	956.0	1052.0	0.21034	105.8951	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	16WP	G16_037	TO->FROM	LYDIA - VALLIANT 345KV CKT 1	956.0	1052.0	0.21034	105.8951	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	20WP	G16_037	FROM->TO	NAPLESTP 138.00 - PAYNE 138.00 138KV CKT 1	183.0	201.0	0.03110	101.5173	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_037	FROM->TO	NAPLESTP 138.00 - PAYNE 138.00 138KV CKT 1	183.0	201.0	0.03151	101.2421	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	25SP	G16_037	-	Non-Converged Contingency	1792.0	1972.0	0.03631	-	GEN525820 1-TUCO Interchange SVC Bus
0	16WP	G16_037	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.13954	112.8138	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_037	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.14429	110.6909	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_037	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.13954	107.5838	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G16_037	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.14429	105.3493	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03372	134.4175	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03372	134.4175	PITTSBURG - VALLIANT 345KV CKT 1
0	20WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03457	130.8304	PITTSBURG - VALLIANT 345KV CKT 1
0	20WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03457	130.8304	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03298	129.8415	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03298	129.8415	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03370	128.8551	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03370	128.8551	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03307	127.7886	G16-063-TAP 345.00 - HUGO 345KV CKT 1
0	20WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03367	126.1748	G16-063-TAP 345.00 - HUGO 345KV CKT 1
0	16WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03475	125.4138	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03518	124.7088	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03518	120.4768	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03475	120.4745	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03307	119.0317	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03367	117.0725	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.02963	115.1356	917X
0	20WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.02963	113.8082	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.02963	113.4631	G15066_T 345.00 - SOONER 345KV CKT 1
0	20WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03025	111.3157	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	20WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03025	111.3157	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	16WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.02995	109.813	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	16WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.02995	109.813	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	20WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.03022	107.9974	MUSKOGEE - SEMINOLE 345KV CKT 1
0	16WP	G16_037	TO->FROM	TUPELO - TUPELO TAP 138KV CKT 1	143.0	143.0	0.02990	106.4325	MUSKOGEE - SEMINOLE 345KV CKT 1
0	17G	G16_038	FROM->TO	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1	318.7	350.57	0.11137	99.6	BASE CASE
0	25SP	G16_038	TO->FROM	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.05237	122.1957	BASE CASE
0	17G	G16_038	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.06179	136.6904	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_038	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.06179	136.6904	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_038	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.04545	99.1	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_038	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.04545	99.1	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_038	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.06179	108.7789	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_038	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.06179	108.7789	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.09479	107.5416	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.09479	107.5416	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05943	102.9062	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05943	102.9062	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05674	99.4	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04170	155.1081	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04170	155.1081	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04170	144.4695	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04170	144.4695	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	127.6091	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03141	126.2169	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	125.8663	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03304	125.7356	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03304	125.7356	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	125.0574	P12:115:SPS:V15.1.TUCO.INDANA
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	124.7606	INDIANA SUB - STANTON SUB 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	123.8128	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	123.805	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	123.805	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	123.7915	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	123.4175	P12:115:SPS:V15.1.TUCO.INDANA
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	123.1351	INDIANA SUB - STANTON SUB 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	120.6969	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	120.0848	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	120.0727	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	120.0727	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	120.0649	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	119.2123	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03304	119.1722	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03304	119.1722	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	119.009	P12:115:SPS:V62.1.CRLSLE.INDANA
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	118.803	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03141	118.7443	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03288	118.1529	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	117.6066	P12:115:SPS:V62.1.CRLSLE.INDANA
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	117.4069	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03288	116.756	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03134	116.4793	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03134	116.4781	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03134	116.4781	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03895	115.1773	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03895	115.1773	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03015	114.5086	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03015	114.5086	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03288	114.1373	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03006	114.1158	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03006	114.1158	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	114.0543	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03288	113.1643	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	112.9092	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	112.9092	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03054	112.7464	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03054	112.7464	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03015	112.5646	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03015	112.5646	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03134	112.5047	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03134	112.504	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03134	112.504	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03895	112.3162	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03895	112.3162	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03006	112.1714	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03006	112.1714	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02991	112.1355	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02991	112.1355	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03300	112.0698	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03025	112.0434	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03240	112.0254	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03240	112.0254	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02969	111.6034	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02969	111.6034	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	111.4117	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03184	111.3545	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	111.3093	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	111.3093	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03011	111.1809	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03575	111.0009	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03575	111.0009	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03184	110.6552	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02976	110.5074	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02976	110.5074	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03011	110.3889	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	109.9687	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	109.9687	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02991	109.9541	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02991	109.9541	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03240	109.9463	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03240	109.9463	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03300	109.9346	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02969	109.5101	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02969	109.5101	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03025	109.4641	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03184	109.278	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03575	108.9863	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03575	108.9863	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03011	108.9182	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03054	108.8881	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03054	108.8881	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	108.7503	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	108.7503	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03184	108.6249	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	17SP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03158	100.868	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	17SP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03158	99.4	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	17G	G16_038	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.06179	105.7283	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_038	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.06179	105.7283	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_038	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.06179	101.8175	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_038	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.06179	101.8175	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_038	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.04188	101.7932	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_038	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.04188	101.3961	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_038	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03140	100.679	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_038	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03140	100.6112	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
0	17G	G16_038	FROM->TO	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1	956.09	1051.7	0.17550	99.2	BASE CASE
0	20WP	G16_038	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.27530	105.2154	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	G16_038	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.26620	103.7367	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	16WP	G16_038	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.27883	100.2952	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20WP	G16_038	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.27530	105.2154	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	G16_038	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.26620	103.7367	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	16WP	G16_038	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.27883	100.2952	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	17G	G16_038	FROM->TO	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.11137	107.7528	BASE CASE
0	17G	G16_038	FROM->TO	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.16853	100.6447	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.27670	123.1957	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20SP	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.28058	108.1483	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	17SP	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.27141	104.3861	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.07749	99.6	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20WP	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.27670	123.1957	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20SP	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.28058	108.1483	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	17SP	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.27141	104.3861	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	17G	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.07749	99.6	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20WP	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.27948	126.6254	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.27023	124.6416	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	16WP	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.28294	121.7059	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20SP	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.28341	111.3855	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17SP	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.27412	107.6482	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.07825	103.4359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.04534	102.8359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20WP	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.27948	126.6254	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.27023	124.6416	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.28294	121.7059	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20SP	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.28341	111.3855	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.27412	107.6482	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.07825	103.4359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.04534	102.8359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_038	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04302	109.0517	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17G	G16_038	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.13226	106.8373	BASE CASE
0	20WP	G16_038	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	329.05	360.92	0.13158	101.3958	BASE CASE
0	17G	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.59013	118.0384	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
0	17G	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.59013	118.0384	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
0	17G	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.43101	101.0349	GEN523971 1-HARRINGTON GEN #1 24 KV
0	16WP	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	579.0	664.0	0.49974	100.099	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
0	16WP	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	579.0	664.0	0.49974	100.099	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
0	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.25800	125.9332	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.25800	125.9332	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.26988	123.2624	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.26988	123.2624	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.39852	110.2717	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.39852	110.2717	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.42264	101.7385	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.42264	101.7385	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10400	124.4658	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09151	112.9438	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09151	112.9438	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09151	112.9086	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09151	112.9086	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	112.5354	GEN526331 1-JONES GEN #1 22 KV
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	112.3468	GEN526332 1-JONES GEN #2 21 KV
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09914	111.3346	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09914	111.3053	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08860	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08860	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09434	107.3472	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	107	GEN527884 1-CUNNINGHAM GEN #4 22 KV
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	106.0884	GEN563142 1-G15079_3 0.5500
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	106.0884	GEN563151 1-G15080_2 0.5500
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09434	106.0791	P12:115:SPS:V15.1.TUCO.INDANA
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09434	106.0442	INDIANA SUB - STANTON SUB 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09194	106.0084	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09194	105.974	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09121	105.4304	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08230	105.4088	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08230	105.4088	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09500	105.2063	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09121	105.1732	P12:345:SPS:J14.1.EDDY.XRDS
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09500	105.1386	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09183	105.0982	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09183	105.0934	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09101	105.0723	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09101	104.9891	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	104.8526	GEN527883 1-CUNNINGHAM GEN #3 22 KV
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09029	104.7091	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09185	104.6771	P12:345:SPS:J15.1.XRDS.TOLK
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09029	104.6596	P12:230:SPS:K37.1.TOLK.LAMB
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	104.4479	TUCO INTERCHANGE 230/13.0KV TRANSFORMER CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09166	104.442	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08994	104.1602	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09029	104.149	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08994	104.1458	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09029	104.0778	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09434	103.9914	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09166	103.9739	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09090	103.9293	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09090	103.8823	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09121	103.6702	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09121	103.6636	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09409	103.5765	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09409	103.5559	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	103.5169	GEN563132 1-G15078_3 0.3570
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09071	103.4535	LUBBOCK SOUTH INTERCHANGE - SOUTH PLAINS REC-WOODROW INTERCHANGE 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	103.4314	GEN587113 1-G16-015-GEN10.4180
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	103.3789	GEN563102 1-G15075_3 0.5500
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09215	103.2873	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09194	103.1846	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07945	103.1673	P12:345:SPS:J15.1.XRDS.TOLK
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09166	103.1627	P12:115:SPS:W54.1.KISER.KRESS
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09194	103.1541	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09166	103.0555	KISER 3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09434	103.0022	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08896	102.9892	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09434	102.9593	P12:115:SPS:V62.1.CRLSLE.INDANA
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	102.8077	GEN562812 1-G15040_3 0.3570
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09658	102.7303	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09340	102.7134	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09340	102.6722	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08896	102.6695	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	102.6062	GEN526678 1-CIRRUS_WND 10.6900
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09152	102.5983	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09258	102.2565	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09215	102.2379	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09561	102.2143	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07348	102.1679	GEN527166 1-MUSTANG_6 118.000
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09132	102.0607	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09409	101.9931	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09409	101.9797	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	101.5877	GEN525845 1-ELK_2 1 18.000
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09101	101.5349	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09101	101.5158	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08098	101.3882	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08098	101.3882	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09071	101.1826	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09071	101.0304	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	100.5597	BASE CASE
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	100.5354	BASE CASE
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08311	100.5005	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08311	100.4984	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07348	100.4324	GEN527903 1-HOBBS PLANT #3 (ST)
0	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07509	100.3914	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07509	100.3671	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07509	100.3647	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07509	100.3647	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08879	100.1483	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	100.1357	GEN562270 1-G12-020-2 0.6900
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09194	100.0549	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09034	99.8	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08981	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08897	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08897	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09194	99.5	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08354	99.4	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.3	GEN562762 1-G15033_3 0.6900
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08989	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08989	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08989	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08989	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09119	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09119	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.2	GEN300024 1-1CHOTST6 16.000
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.2	GEN300031 1-CHOUTEAU CTG 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09005	99.2	P12:115:SPS:V56.1.COCHRAN.SUNDWN
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09194	99.1	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.1	GEN300001 1-THOMAS HILL UNIT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.1	GEN300017 1-1G2GPDEL 18.000
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.1	GEN511938 1-OEC STEAM # 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.1	GEN511941 1-OEC STEAM # 2
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.1	GEN562517 1-G14_021_S2 0.6900
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.1	GEN562691 1-G15_015_3 0.6900
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.1	GEN645041 1-CASS COUNTY 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99	GEN300016 1-1G1GPDEL 18.000
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99	GEN549893 2-SOUTHWEST 2
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99	GEN562023 1-G11_020_3 0.6900
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99	GEN562026 1-G11_019_3 0.6900
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08987	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08987	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_038	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.09479	100	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_038	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.09479	100	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_038	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.03480	107.6192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_038	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.03480	107.6192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_038	-	Non-Converged Contingency	987.16	1082.77	0.18670	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.18670	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_038	-	Non-Converged Contingency	1793.0	1793.0	0.14990	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	16WP	G16_038	-	Non-Converged Contingency	1716.0	1793.0	0.14990	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	16WP	G16_038	-	Non-Converged Contingency	1420.0	1775.0	0.12855	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_038	-	Non-Converged Contingency	1420.0	1775.0	0.12855	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_038	-	Non-Converged Contingency	1420.0	1775.0	0.12855	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_038	-	Non-Converged Contingency	859.0	956.0	0.07696	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_038	-	Non-Converged Contingency	560.0	560.0	0.07696	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	17G	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.17550	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.17550	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	439.0	439.0	0.15585	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	502.0	502.0	0.15585	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	500.0	723.0	0.15585	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	1330.0	1940.0	0.14801	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	1330.0	1940.0	0.14801	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	1793.0	1793.0	0.14598	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	1716.0	1793.0	0.14598	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	17G	G16_038	-	Non-Converged Contingency	1793.0	1793.0	0.14598	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	1716.0	1793.0	0.14598	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	17G	G16_038	-	Non-Converged Contingency	1793.0	1793.0	0.14598	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	1716.0	1793.0	0.14598	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G16_038	-	Non-Converged Contingency	318.7	350.57	0.13226	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	1420.0	1775.0	0.12779	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	1420.0	1775.0	0.12779	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	1420.0	1775.0	0.12779	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	1022.0	1124.0	0.11323	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	1022.0	1124.0	0.11323	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	318.7	350.57	0.11137	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	318.7	350.57	0.11137	-	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	1561.0	1793.0	0.09272	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	1561.0	1793.0	0.09272	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G16_038	-	Non-Converged Contingency	726.6	726.6	0.08495	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	1413.0	1517.0	0.08495	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	478.0	502.0	0.07572	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	478.0	502.0	0.07474	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	717.1	717.1	0.07300	-	HOLCOMB - SETAB 345KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	762.5	762.5	0.07084	-	MINGO - SETAB 345KV CKT 1
0	17G	G16_038	-	Non-Converged Contingency	1195.0	1195.0	0.05567	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.19879	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.16767	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_038	-	Non-Converged Contingency	0.0	0.0	0.32185	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.17069	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.17069	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.15116	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.15116	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.15116	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.15116	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_038	-	Non-Converged Contingency	1793.0	1793.0	0.14341	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	G16_038	-	Non-Converged Contingency	1716.0	1793.0	0.14341	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	G16_038	-	Non-Converged Contingency	0.0	0.0	0.03140	-	P12:345:SPS:J07.1.FINN.HITCH
0	20SP	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.18730	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_038	-	Non-Converged Contingency	987.16	1082.77	0.18469	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.16418	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G16_038	-	Non-Converged Contingency	987.16	1082.77	0.16418	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_038	-	Non-Converged Contingency	0.0	0.0	0.22056	-	P12:345:SPS:J02.1.TOLK.EDDY
0	25SP	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.19010	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.16883	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	25SP	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.16883	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_038	-	Non-Converged Contingency	478.0	502.0	0.14861	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_038	-	Non-Converged Contingency	318.7	350.57	0.13467	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	25SP	G16_038	-	Non-Converged Contingency	497.0	547.0	0.12117	-	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_038	-	Non-Converged Contingency	478.0	502.0	0.10969	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	25SP	G16_038	-	Non-Converged Contingency	343.79	343.79	0.09056	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_038	-	Non-Converged Contingency	1792.0	1972.0	0.07507	-	GEN525820 1-TUCO Interchange SVC Bus
0	25SP	G16_038	-	Non-Converged Contingency	478.0	502.0	0.07375	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_038	-	Non-Converged Contingency	478.0	502.0	0.07268	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_038	-	Non-Converged Contingency	318.7	350.6	0.06949	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	25SP	G16_038	-	Non-Converged Contingency	318.7	350.6	0.06949	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	25SP	G16_038	-	Non-Converged Contingency	478.0	502.0	0.06132	-	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_038	-	Non-Converged Contingency	318.7	350.57	0.05237	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_038	-	Non-Converged Contingency	0.0	0.0	0.05152	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
0	25SP	G16_038	-	Non-Converged Contingency	478.05	501.95	0.04819	-	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	25SP	G16_038	-	Non-Converged Contingency	0.0	0.0	0.03933	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
0	25SP	G16_038	-	Non-Converged Contingency	0.0	0.0	0.03176	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	17G	G16_038	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.39661	116.9587	BASE CASE
0	25SP	G16_038	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.38872	115.2466	BASE CASE
0	25SP	G16_038	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03015	104.2168	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G16_038	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03015	104.166	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	17G	G16_038	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.03353	133.2361	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_038	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.03353	133.2361	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_038	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.03353	105.2691	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_038	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.03353	105.2691	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_038	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.03353	102.1939	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_038	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.03353	102.1939	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_038	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.27286	102.7205	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	G16_038	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.27286	102.7205	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10481	107.6126	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10481	107.6126	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.15663	103.713	CIMARRON - MINCO 345KV CKT 1
2	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12296	102.7167	CIMARRON - DRAPER LAKE 345KV CKT 1
2	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11131	102.2733	BASE CASE
2	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11131	99.5	GEN587433 1-G16-063-GEN10.6900
2	17G	G16_038	FROM->TO	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.10974	103.4967	BASE CASE
2	17G	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.27425	120.3583	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	16WP	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.28125	114.6083	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17SP	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.27966	106.8903	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.27425	120.3583	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	16WP	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.28125	114.6083	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17SP	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.27966	106.8903	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.27703	123.543	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	16WP	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.28410	117.8517	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17SP	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.28249	110.1187	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.32405	101.8646	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.27703	123.543	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.28410	117.8517	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17SP	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.28249	110.1187	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.32405	101.8646	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_038	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.13062	100.4226	BASE CASE
2	17G	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.58909	115.4848	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
2	17G	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.58909	115.4848	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
2	17G	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.43100	100.4232	GEN523971 1-HARRINGTON GEN #1 24 KV
2	16WP	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	579.0	664.0	0.60235	99.2	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
2	16WP	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	579.0	664.0	0.60235	99.2	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
2	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.41266	128.8789	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.41266	128.8789	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.43789	126.6427	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.43789	126.6427	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.40067	115.6744	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.40067	115.6744	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.42512	108.6309	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.42512	108.6309	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.41266	100	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.41266	100	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	17G	G16_038	FROM->TO	KINGSMILL INTERCHANGE - MCCULLOUGH SUB 69KV CKT 1	88.0	88.0	0.04223	107.1765	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
2	17G	G16_038	FROM->TO	KINGSMILL INTERCHANGE - MCCULLOUGH SUB 69KV CKT 1	88.0	88.0	0.04223	107.1765	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
2	16WP	G16_038	-	Non-Converged Contingency	987.2	1082.8	0.19313	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	16WP	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.16007	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	G16_038	-	Non-Converged Contingency	987.2	1082.8	0.16007	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.18149	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.16466	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.14993	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.14993	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17SP	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.19506	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_038	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.38948	112.9939	BASE CASE
2	17G	G16_038	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06773	133.4281	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_038	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06773	133.4281	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_038	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06773	128.3522	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_038	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06773	128.3522	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06773	137.6407	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06773	137.6407	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06773	137.6277	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06773	137.6277	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06773	132.2146	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06773	132.2146	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06773	131.6923	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06773	131.6923	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_038	TO->FROM	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.05065	115.3097	BASE CASE
3	17G	G16_038	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.03277	126.5747	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
3	17G	G16_038	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.03277	126.5747	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03237	144.4934	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03237	144.4934	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03237	134.4786	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03237	134.4786	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03336	120.8492	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	118.9192	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	117.3285	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	116.2274	P12:115:SPS:V15.1.TUCO.INDANA
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	116.0899	INDIANA SUB - STANTON SUB 115KV CKT 1
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03336	115.4472	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	114.7388	P12:115:SPS:V15.1.TUCO.INDANA
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	114.6065	INDIANA SUB - STANTON SUB 115KV CKT 1
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	112.061	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	110.71	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	110.2477	P12:115:SPS:V62.1.CRLSLE.INDANA
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	110.1605	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	108.9848	P12:115:SPS:V62.1.CRLSLE.INDANA
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	108.9006	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02966	104.6651	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02966	104.6651	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02966	102.5443	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02966	102.5443	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_038	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	557.0	557.0	0.31321	106.7484	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_038	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	557.0	557.0	0.31321	106.7484	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	557.0	557.0	0.31839	101.0044	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	557.0	557.0	0.31839	101.0044	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	20L	G16_038	TO->FROM	CIMARRON RIVER PLANT - WALKEMEYER 115KV CKT 1	119.5	148.2	0.02980	117.2285	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_038	TO->FROM	CIMARRON RIVER PLANT - WALKEMEYER 115KV CKT 1	119.5	148.2	0.02980	117.2285	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_038	TO->FROM	CIMARRON RIVER PLANT - WALKEMEYER 115KV CKT 1	119.5	148.2	0.02980	112.1725	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_038	TO->FROM	CIMARRON RIVER PLANT - WALKEMEYER 115KV CKT 1	119.5	148.2	0.02980	112.1725	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_038	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03951	103.2467	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_038	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03951	103.2467	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_038	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03071	101.0198	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_038	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03071	101.0198	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_038	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08870	102.99	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G16_038	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08870	102.3933	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10744	110.2643	PITTSBURG - SEMINOLE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10744	110.2643	PITTSBURG - SEMINOLE 345KV CKT 1
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.16064	109.7241	CIMARRON - MINCO 345KV CKT 1
3	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10681	108.6486	PITTSBURG - SEMINOLE 345KV CKT 1
3	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10681	108.6486	PITTSBURG - SEMINOLE 345KV CKT 1
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12568	105.873	CIMARRON - DRAPER LAKE 345KV CKT 1
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11406	105.7261	BASE CASE
3	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.15950	105.6012	CIMARRON - MINCO 345KV CKT 1
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.16064	104.9933	GRACEMONT - MINCO 345KV CKT 1
3	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12499	103.7964	CIMARRON - DRAPER LAKE 345KV CKT 1
3	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11334	103.4473	BASE CASE
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11406	102.8263	GEN587433 1-G16-063-GEN10.6900
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11551	101.4146	CLEVELAND - G15066_T 345.00 345KV CKT 1
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11406	101.3944	GEN509403 1-PIRKEY GENERATION
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11406	101.3624	GEN509416 1-TURK GENERATION
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11282	101.2064	PITTSBURG - VALLIANT 345KV CKT 1
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11282	101.2064	PITTSBURG - VALLIANT 345KV CKT 1
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11551	101.0921	G15066_T 345.00 - SOONER 345KV CKT 1
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11551	100.9133	917X
3	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.15950	100.8175	GRACEMONT - MINCO 345KV CKT 1
3	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11334	100.5911	GEN587433 1-G16-063-GEN10.6900
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12270	100.5297	P12:138:WFEC:MSL03
3	20L	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.15540	100.3827	CIMARRON - MINCO 345KV CKT 1
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11406	100.2734	GEN501801 1-DOLET HILLS UNIT1
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12420	99.5	ARCADIA - NORTHWEST 345KV CKT 1
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11406	99.4	GEN509404 1-WELSH #1
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11406	99.4	GEN509406 1-WELSH #3
3	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11210	99.3	PITTSBURG - VALLIANT 345KV CKT 1
3	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11210	99.3	PITTSBURG - VALLIANT 345KV CKT 1
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11504	99.3	CLEVELAND - TULSA NORTH 345KV CKT 1
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11504	99.3	CLEVELAND - TULSA NORTH 345KV CKT 1
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11406	99.2	GEN336821 1-GRAND GULF UNIT
3	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11406	99.1	GEN336153 1-WATERFORD UNIT#3
3	20WP	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.25059	100.96	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
3	20L	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.24045	99	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
3	20WP	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.25059	100.96	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
3	20L	G16_038	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.24045	99	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
3	20WP	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.25386	104.4778	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	20L	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.24358	102.4888	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	17G	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.25098	102.1788	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	20WP	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.25386	104.4778	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	20L	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.24358	102.4888	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	17G	G16_038	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.25098	102.1788	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	17G	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.58759	111.1082	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
3	17G	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.63141	100.98	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	579.0	664.0	0.54160	99.1	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	579.0	664.0	0.54160	99.1	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31726	156.5099	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31726	156.5099	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29942	155.2093	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29942	155.2093	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.41616	133.347	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.41616	133.347	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.44182	131.7296	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.44182	131.7296	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.40337	127.3081	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.42814	122.6167	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21482	113.0527	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21482	110.627	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
3	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.41616	109.978	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.41616	109.978	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.44181	108.3319	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.44181	108.3319	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20156	106.9685	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20154	105.9912	P12:230:AEPW:ELKCITY6:SWEETWT6
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19828	105.3146	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19828	105.3146	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.18812	104.3115	BASE CASE
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21967	103.4162	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.18515	101.0968	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.18515	101.0968	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19567	101.0027	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19567	101.0027	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19678	100.7149	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19678	100.7149	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19326	100.3813	P12:115:SPS:T67.1.HAPPY.KRESS
3	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28167	100.3746	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19326	100.3501	HAPPY INTERCHANGE - TULIA TAP 115KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19326	100.1308	KRESS INTERCHANGE - TULIA TAP 115KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20156	99.7	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20156	99.7	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
3	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29134	99.7	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20156	99.6	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19232	99.1	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19408	99	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1
3	25SP	G16_038	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03583	113.6961	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G16_038	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03583	113.6922	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11039	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11039	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08789	119.248	GEN526333 1-JONES GEN #3 21 KV
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08789	118.8723	GEN526334 1-JONES_4 116.500
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09991	114.4952	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08781	112.8126	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08781	112.8111	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10305	111.8354	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09608	106.8773	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09608	106.8773	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09919	105.5745	P12:345:SPS:J02.1.TOLK.EDDY
3	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07493	104.0964	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07493	104.0964	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08993	103.9995	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08993	103.984	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08993	103.976	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08993	103.976	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08789	103.6041	GEN587373 1-G16-056-GEN10.6900
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08910	103.2394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08910	103.2394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08910	103.2394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08910	103.2394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09594	103.2214	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09594	103.2214	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09622	102.9873	P12:345:SPS:J15.1.XRDS.TOLK
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08789	102.4114	GEN526331 1-JONES GEN #1 22 KV
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08789	102.4061	GEN526332 1-JONES GEN #2 21 KV
3	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08487	100.4251	P12:345:SPS:J15.1.XRDS.TOLK
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09172	100.2458	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09122	99.6	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09085	99	P12:345:SPS:J14.1.EDDY.XRDS
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08939	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08939	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	150.821	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	150.8177	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.3664	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.3017	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1875	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1522	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	99	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	99	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.7208	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
3	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6974	P12:230:LPL:K26.1.JONES.LP-HOLLY
3	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6461	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6461	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_038	-	Non-Converged Contingency	987.2	1082.8	0.18834	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	16WP	G16_038	-	Non-Converged Contingency	1195.0	1195.0	0.04704	-	GEN525561 1-TOLK GEN #1 24 KV
3	20L	G16_038	-	Non-Converged Contingency	0.0	0.0	0.31322	-	P12:345:SPS:J07.1.FINN.HITCH
3	20L	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.16608	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.16608	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20L	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.14714	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.14714	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.14714	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_038	-	Non-Converged Contingency	956.09	1051.7	0.14714	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20WP	G16_038	-	Non-Converged Contingency	987.16	1082.77	0.18015	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_038	-	Non-Converged Contingency	478.0	502.0	0.06845	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_038	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.38159	109.7172	BASE CASE
3	17G	G16_038	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.38200	104.9495	BASE CASE
3	25SP	G16_038	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03480	100.3388	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
3	17G	G16_038	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06432	119.9794	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G16_038	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06432	119.9794	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G16_038	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06432	115.1123	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	17G	G16_038	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.06432	115.1123	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_038	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.05654	108.7819	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_038	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.05654	108.7819	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_038	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.05654	103.7748	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_038	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.05654	103.7748	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	17G	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06432	125.7845	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06432	125.7845	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06432	125.5571	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06432	125.5571	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06432	120.5936	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	17G	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06432	120.5936	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	17G	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06432	120.5316	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	17G	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.06432	120.5316	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.05654	113.3155	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.05654	113.3155	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.05654	113.298	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.05654	113.298	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.05654	108.9672	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.05654	108.9672	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.05654	108.8001	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_038	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.05654	108.8001	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
4	25SP	G16_038	TO->FROM	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.04890	113.9114	BASE CASE
4	17G	G16_038	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.03230	125.1536	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
4	17G	G16_038	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.03230	125.1536	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03237	144.3473	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03237	144.3473	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03237	134.2951	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03237	134.2951	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03337	120.7509	P12:345:SPS:J15.1.XRDS.TOLK
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	118.7631	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	117.1805	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	116.0713	P12:115:SPS:V15.1.TUCO.INDANA
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	115.9345	INDIANA SUB - STANTON SUB 115KV CKT 1
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03337	115.3543	P12:345:SPS:J15.1.XRDS.TOLK
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	114.5907	P12:115:SPS:V15.1.TUCO.INDANA
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	114.4591	INDIANA SUB - STANTON SUB 115KV CKT 1
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	111.9044	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	110.562	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	110.0919	P12:115:SPS:V62.1.CRLSLE.INDANA
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	110.0021	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	108.8363	P12:115:SPS:V62.1.CRLSLE.INDANA
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	108.75	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02967	104.4941	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02967	104.4941	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02967	102.3817	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02967	102.3817	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_038	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	557.0	557.0	0.31324	105.1334	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_038	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	557.0	557.0	0.31324	105.1334	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	17G	G16_038	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	478.0	502.0	0.42556	99	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	557.0	557.0	0.31843	99.3	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	557.0	557.0	0.31843	99.3	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_038	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03927	103.2735	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_038	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03927	103.2735	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_038	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03052	101.0121	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_038	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03052	101.0121	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_038	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08870	103.0572	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G16_038	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08870	102.4534	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10343	109.6577	PITTSBURG - SEMINOLE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10343	109.6577	PITTSBURG - SEMINOLE 345KV CKT 1
4	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.15470	108.8731	CIMARRON - MINCO 345KV CKT 1
4	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10298	108.1191	PITTSBURG - SEMINOLE 345KV CKT 1
4	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10298	108.1191	PITTSBURG - SEMINOLE 345KV CKT 1
4	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12161	105.2626	CIMARRON - DRAPER LAKE 345KV CKT 1
4	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11022	105.133	BASE CASE
4	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.15382	104.7537	CIMARRON - MINCO 345KV CKT 1
4	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.15470	104.0842	GRACEMONT - MINCO 345KV CKT 1
4	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12110	103.2531	CIMARRON - DRAPER LAKE 345KV CKT 1
4	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10967	102.9054	BASE CASE
4	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11022	102.2906	GEN587433 1-G16-063-GEN10.6900
4	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11022	100.8637	GEN509403 1-PIRKEY GENERATION
4	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11164	100.8283	CLEVELAND - G15066_T 345.00 345KV CKT 1
4	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11022	100.796	GEN509416 1-TURK GENERATION
4	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10893	100.6442	PITTSBURG - VALLIANT 345KV CKT 1
4	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10893	100.6442	PITTSBURG - VALLIANT 345KV CKT 1
4	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11164	100.5068	G15066_T 345.00 - SOONER 345KV CKT 1
4	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11164	100.3304	917X
4	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10967	100.1097	GEN587433 1-G16-063-GEN10.6900
4	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.15382	100	GRACEMONT - MINCO 345KV CKT 1
4	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11857	99.9	P12:138:WFEC:MSL03
4	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11022	99.8	GEN501801 1-DOLET HILLS UNIT1
4	17G	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.58640	109.6596	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
4	17G	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.63264	101.8775	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31730	153.8256	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31730	153.8256	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29948	152.8272	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29948	152.8272	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.41843	134.0911	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.41843	134.0911	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.44441	132.5798	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.44441	132.5798	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.40580	131.0206	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.43094	127.188	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.41842	113.3621	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.41842	113.3621	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.44440	112.2713	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.44440	112.2713	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21491	111.531	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21491	109.1152	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20163	105.2431	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20161	104.4558	P12:230:AEPW:ELKCITY6:SWEETWT6
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19837	103.7306	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19837	103.7306	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.18821	102.6686	BASE CASE
4	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28283	102.1805	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21976	101.8523	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1
4	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29237	100.9379	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
4	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28283	99.9	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19577	99.5	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19577	99.5	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19686	99.1	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
4	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19686	99.1	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
4	25SP	G16_038	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03583	113.6646	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G16_038	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03583	113.6599	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11040	125.0569	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11040	125.0569	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08790	119.0612	GEN526333 1-JONES GEN #3 21 KV
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08790	118.6856	GEN526334 1-JONES_4 116.500
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09992	114.2489	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08782	112.5996	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08782	112.5946	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10306	111.5567	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09609	106.7476	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09609	106.7476	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09920	105.4545	P12:345:SPS:J02.1.TOLK.EDDY
4	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07494	104.0099	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07494	104.0099	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08994	103.8244	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08994	103.8052	P12:230:LPL:K39.1.CRLSLE.LP-MLWK

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08994	103.7969	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08994	103.7969	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08790	103.416	GEN587373 1-G16-056-GEN10.6900
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09595	103.2672	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09595	103.2672	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08911	103.0315	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08911	103.0315	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08911	103.0315	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08911	103.0315	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09625	102.755	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08790	102.1709	GEN526331 1-JONES GEN #1 22 KV
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08790	102.1659	GEN526332 1-JONES GEN #2 21 KV
4	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08490	100.3275	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09173	100	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09123	99.4	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	150.9857	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	150.9823	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.304	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.2713	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1568	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1421	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	99.3	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	99.3	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6999	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
4	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6899	P12:230:LPL:K26.1.JONES.LP-HOLLY
4	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6243	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6243	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G16_038	-	Non-Converged Contingency	1195.0	1195.0	0.03469	-	GEN525561 1-TOLK GEN #1 24 KV
4	25SP	G16_038	-	Non-Converged Contingency	478.0	502.0	0.06701	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_038	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.37425	108.6242	BASE CASE
4	17G	G16_038	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.37493	102.851	BASE CASE
4	25SP	G16_038	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03481	100	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
5	17G	G16_038	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.03230	125.1536	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03242	144.4574	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03242	144.4574	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03242	134.4484	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03242	134.4484	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03343	120.8826	P12:345:SPS:J15.1.XRDS.TOLK
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	118.9077	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	117.3219	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	116.2161	P12:115:SPS:V15.1.TUCO.INDANA
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	116.0797	INDIANA SUB - STANTON SUB 115KV CKT 1
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03343	115.4973	P12:345:SPS:J15.1.XRDS.TOLK
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	114.7323	P12:115:SPS:V15.1.TUCO.INDANA
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	114.601	INDIANA SUB - STANTON SUB 115KV CKT 1
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	112.0513	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	110.7049	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	110.2372	P12:115:SPS:V62.1.CRLSLE.INDANA
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	110.151	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	108.9787	P12:115:SPS:V62.1.CRLSLE.INDANA
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	108.8955	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02971	104.6524	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02971	104.6524	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02971	102.5361	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02971	102.5361	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_038	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	557.0	557.0	0.31349	105.4679	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_038	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	557.0	557.0	0.31349	105.4679	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	557.0	557.0	0.31871	99.6	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	557.0	557.0	0.31871	99.6	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	25SP	G16_038	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03927	103.2735	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
5	25SP	G16_038	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03052	101.0121	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_038	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08869	103.0311	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	16WP	G16_038	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08869	102.4344	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10343	109.6577	PITTSBURG - SEMINOLE 345KV CKT 1
5	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10298	108.1191	PITTSBURG - SEMINOLE 345KV CKT 1
5	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11022	105.133	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	16WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10967	102.9054	BASE CASE
5	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.10893	100.6442	PITTSBURG - VALLIANT 345KV CKT 1
5	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11164	100.3304	917X
5	20WP	G16_038	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11857	99.9	P12:138:WFEC:MSL03
5	17G	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.58640	109.6596	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
5	17G	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.63264	101.8775	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31758	154.411	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31758	154.411	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29973	153.3376	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29973	153.3376	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.41843	134.0911	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.44441	132.5798	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.40580	131.0206	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.43094	127.188	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.41842	113.3621	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.44440	112.2713	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21503	111.7681	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21503	109.3508	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20173	105.4633	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20172	104.6995	P12:230:AEPW:ELKCITY6:SWEETWT6
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19849	103.9902	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19849	103.9902	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.18838	103.0407	BASE CASE
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21993	102.1896	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1
5	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28283	102.1805	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
5	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29237	100.9379	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
5	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28283	99.9	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19592	99.8	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19592	99.8	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19699	99.4	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19699	99.4	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19351	99.2	HAPPY INTERCHANGE - TULIA TAP 115KV CKT 1
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19351	99.2	P12:115:SPS:T67.1.HAPPY.KRESS
5	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19351	99	KRESS INTERCHANGE - TULIA TAP 115KV CKT 1
5	25SP	G16_038	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03583	113.6714	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G16_038	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03583	113.6673	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11051	124.8975	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11051	124.8975	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08797	118.9383	GEN526333 1-JONES GEN #3 21 KV
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08797	118.5628	GEN526334 1-JONES_4 116.500
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10001	114.1042	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08789	112.5331	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08789	112.531	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10315	111.409	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09614	106.6731	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09614	106.6731	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09927	105.3409	P12:345:SPS:J02.1.TOLK.EDDY
5	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07501	104.1015	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07501	104.1015	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09001	103.707	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09001	103.6946	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09001	103.6865	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09001	103.6865	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08797	103.2876	GEN587373 1-G16-056-GEN10.6900
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09602	103.1458	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09602	103.1458	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08920	102.9044	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08920	102.9044	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08920	102.9044	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08920	102.9044	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09638	102.6383	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08797	102.0561	GEN526331 1-JONES GEN #1 22 KV
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08797	102.051	GEN526332 1-JONES GEN #2 21 KV
5	16WP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08507	100.4572	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09181	99.9	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
5	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09130	99.3	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	150.9628	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	150.9601	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.3008	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.268	P12:230:LPL:K57.1.LP-WADS.LUBBE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1553	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1406	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	99.2	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	99.2	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6972	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
5	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6738	P12:230:LPL:K26.1.JONES.LP-HOLLY
5	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6217	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6217	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_038	-	Non-Converged Contingency	478.0	502.0	0.06701	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
5	25SP	G16_038	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.37425	108.6241	BASE CASE
5	17G	G16_038	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.37493	102.851	BASE CASE
5	25SP	G16_038	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03484	99.9	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
6	25SP	G16_038	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	160.0	160.0	0.03792	106.3405	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_038	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	160.0	160.0	0.03792	106.3405	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_038	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.03339	102.8122	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_038	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.03339	102.8122	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_038	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.03339	99.5	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_038	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.03339	99.5	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04404	108.5265	BASE CASE
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.05731	107.4781	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.05731	107.4781	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04457	104.6103	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04457	104.6103	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04872	103.6325	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04872	103.6325	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.05018	102.2549	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.05018	102.2549	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04682	101.9368	RANDALL COUNTY INTERCHANGE (GE M100353) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04682	101.9368	RANDALL COUNTY INTERCHANGE (GE M100353) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04657	101.4194	RANDALL COUNTY INTERCHANGE (WAU WT01090) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04657	101.4194	RANDALL COUNTY INTERCHANGE (WAU WT01090) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04614	101.238	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04614	101.238	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04715	101.0555	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04490	100.8834	AMARILLO SOUTH INTERCHANGE (ABB 801466) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04490	100.8834	AMARILLO SOUTH INTERCHANGE (ABB 801466) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.06264	100.8025	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.06264	100.8025	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04785	100.3947	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04785	100.3947	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04174	100.2761	MOORE COUNTY INTERCHANGE W. - RB-S&S 3115.00 115KV CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04402	99.9	GRAPEVINE INTERCHANGE (WAUK WT01089) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04402	99.9	GRAPEVINE INTERCHANGE (WAUK WT01089) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04174	99.8	P12:115:SPS:T25.1.MOOREW.DUMAS19
6	16WP	G16_038	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	329.05	360.92	0.04354	99.6	BASE CASE
6	16WP	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	579.0	664.0	0.60435	101.3823	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
6	16WP	G16_038	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	579.0	664.0	0.60435	101.3823	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31702	153.6698	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31702	153.6698	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29910	152.6087	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29910	152.6087	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.41427	130.3899	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.41427	130.3899	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.44258	130.2577	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.44258	130.2577	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21438	111.3237	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.44257	110.1009	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.44257	110.1009	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.41427	109.9103	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	17G	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.41427	109.9103	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21438	108.9072	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20235	105.4412	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20233	104.68	P12:230:AEPW:ELKCITY6:SWEETWT6
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19879	103.8392	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19879	103.8392	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.18804	102.5758	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21961	101.7579	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19542	99.4	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19542	99.4	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19726	99.2	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
6	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19726	99.2	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
6	25SP	G16_038	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03583	113.5161	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10942	124.2902	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
6	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08724	118.5502	GEN526333 1-JONES GEN #3 21 KV
6	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08724	118.1772	GEN526334 1-JONES_4 116.500
6	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09905	113.6007	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08716	111.9176	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10183	110.107	CRAWFISH_DR 345.00 - YOAKUM_345 345.00 345KV CKT 1
6	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09592	106.564	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
6	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08928	103.2173	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08928	103.216	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
6	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08724	102.8608	GEN587373 1-G16-056-GEN10.6900
6	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09526	102.7727	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
6	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08840	102.4925	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08840	102.4925	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08724	101.6462	GEN526331 1-JONES GEN #1 22 KV
6	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08724	101.6414	GEN526332 1-JONES GEN #2 21 KV
6	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09062	99.4	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
6	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	151.3756	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03488	118.1734	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03488	118.1275	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03488	101.1279	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03488	101.1113	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	100.0897	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03070	110.6217	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
6	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03070	110.5253	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
7	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31708	153.7695	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
7	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31708	153.7695	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
7	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29914	152.6837	CHERRY1 - HARRINGTON STATION 230KV CKT 1
7	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29914	152.6837	CHERRY1 - HARRINGTON STATION 230KV CKT 1
7	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21439	111.3539	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
7	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21439	108.9383	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
7	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20240	105.5293	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
7	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20238	104.7684	P12:230:AEPW:ELKCITY6:SWEETWT6
7	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19884	103.9163	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
7	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19884	103.9163	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
7	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.18807	102.6406	BASE CASE
7	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21964	101.8163	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1
7	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19544	99.4	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
7	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19544	99.4	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
7	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19730	99.3	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
7	16WP	G16_038	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19730	99.3	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	17SP	G16_039	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06299	111.2423	BASE CASE
0	20SP	G16_039	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.05970	106.965	BASE CASE
0	17G	G16_039	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06516	104.3555	BASE CASE
0	20WP	G16_039	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06280	100.6452	BASE CASE
0	16WP	G16_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.23379	117.2755	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.20522	113.9417	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.23379	112.5386	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G16_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22254	107.9528	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17SP	G16_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22254	103.4902	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25368	197.2146	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25368	189.9362	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26804	115.1329	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26804	114.7364	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.03366	117.8449	BASE CASE
0	17SP	G16_039	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.03337	113.6626	BASE CASE
0	20L	G16_039	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.08943	117.1249	BASE CASE
0	20WP	G16_039	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11232	109.9811	BASE CASE
0	16WP	G16_039	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12173	108.8041	BASE CASE
0	17G	G16_039	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11958	107.5286	BASE CASE
0	20L	G16_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.08943	131.0896	BASE CASE
0	20WP	G16_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11232	123.9661	BASE CASE
0	16WP	G16_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12173	122.9494	BASE CASE
0	17G	G16_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11958	120.973	BASE CASE
0	17SP	G16_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11802	106.8776	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_039	TO->FROM	G15039_T 230.00 - PLANT X STATION 230KV CKT 1	318.7	350.6	0.03366	101.2007	BASE CASE
0	16WP	G16_039	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.23379	106.6944	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_039	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.20522	103.5122	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_039	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.23379	102.1214	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G16_039	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.07040	104.9056	BASE CASE
0	20SP	G16_039	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.06934	103.3041	BASE CASE
0	17G	G16_039	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.05562	102.2178	BASE CASE
0	17G	G16_039	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.03393	108.3473	BASE CASE
0	25SP	G16_039	TO->FROM	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1	226.0	249.0	0.52148	99	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	17SP	G16_039	TO->FROM	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	1011.0	1176.0	0.18074	101.3643	BASE CASE
0	16WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.17854	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	1330.0	1940.0	0.17824	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	1330.0	1940.0	0.17824	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	987.2	1082.8	0.17606	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.17527	-	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.17527	-	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	1792.0	1792.0	0.17404	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	1022.0	1124.0	0.17282	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	1022.0	1124.0	0.17282	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	987.16	1082.77	0.14267	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	956.09	1051.7	0.14267	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.11922	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.11922	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.11668	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.11668	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	16WP	G16_039	-	Non-Converged Contingency	1420.0	1775.0	0.10614	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	1420.0	1775.0	0.10614	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	1420.0	1775.0	0.10614	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.08886	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	439.0	439.0	0.06908	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	450.0	450.0	0.06908	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_039	-	Non-Converged Contingency	439.0	439.0	0.06878	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17G	G16_039	-	Non-Converged Contingency	0.0	0.0	0.07362	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	17G	G16_039	-	Non-Converged Contingency	0.0	0.0	0.05537	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	17G	G16_039	-	Non-Converged Contingency	0.0	0.0	0.03770	-	P12:138:WFEC-AEPW:WASHITA4:CLINTJC4
0	17G	G16_039	-	Non-Converged Contingency	0.0	0.0	0.03645	-	P12:138:AEPW:REDROCKRD4:WTH_JCT4
0	17G	G16_039	-	Non-Converged Contingency	0.0	0.0	0.03474	-	P12:138:AEPW:HOB-JCT4:ELKCTY-4
0	17G	G16_039	-	Non-Converged Contingency	0.0	0.0	0.03215	-	P12:138:AEPW:WTHWF4:WTH_SE4
0	17G	G16_039	-	Non-Converged Contingency	0.0	0.0	0.03004	-	P12:138:AEPW:S.W.S.-4:HOB-JCT4
0	17SP	G16_039	-	Non-Converged Contingency	956.1	1051.7	0.19938	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17SP	G16_039	-	Non-Converged Contingency	956.0	1042.0	0.18074	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17SP	G16_039	-	Non-Converged Contingency	956.0	1042.0	0.18074	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G16_039	-	Non-Converged Contingency	956.09	1051.7	0.15751	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G16_039	-	Non-Converged Contingency	1330.0	1940.0	0.15401	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17SP	G16_039	-	Non-Converged Contingency	1330.0	1940.0	0.15401	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17SP	G16_039	-	Non-Converged Contingency	1792.0	1792.0	0.14055	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.13678	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	17SP	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.13678	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	17SP	G16_039	-	Non-Converged Contingency	478.0	502.0	0.13526	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G16_039	-	Non-Converged Contingency	956.09	1051.7	0.13314	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.13300	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.10943	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G16_039	-	Non-Converged Contingency	1420.0	1775.0	0.10286	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_039	-	Non-Converged Contingency	353.0	353.0	0.08401	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17SP	G16_039	-	Non-Converged Contingency	318.7	350.57	0.07040	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	17SP	G16_039	-	Non-Converged Contingency	478.0	502.0	0.06688	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G16_039	-	Non-Converged Contingency	318.7	350.6	0.03337	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	17SP	G16_039	-	Non-Converged Contingency	318.7	350.6	0.03337	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	0.0	0.0	0.20834	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G16_039	-	Non-Converged Contingency	478.0	502.0	0.15579	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1792.0	1792.0	0.15005	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	956.1	1051.7	0.14012	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	956.1	1051.7	0.14012	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.13772	-	CIMARRON - MINCO 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.13772	-	GRACEMONT - MINCO 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	560.0	560.0	0.13410	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1022.0	1124.0	0.13133	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1022.0	1124.0	0.13133	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1022.0	1124.0	0.13133	-	OKLAUNION 345KV SWITCHED SHUNT
0	20L	G16_039	-	Non-Converged Contingency	1584.0	2098.0	0.12690	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_039	-	Non-Converged Contingency	1584.0	2098.0	0.12690	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.12626	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.12626	-	GEN509403 1-PIRKEY GENERATION
0	20L	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.12626	-	GEN509416 1-TURK GENERATION
0	20L	G16_039	-	Non-Converged Contingency	478.0	502.0	0.12500	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	956.09	1051.7	0.11047	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	956.09	1051.7	0.11047	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	0.0	0.0	0.10192	-	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
0	20L	G16_039	-	Non-Converged Contingency	0.0	0.0	0.10129	-	P12:230:AEPW:ELKCITY6:SWEETWT6
0	20L	G16_039	-	Non-Converged Contingency	956.09	1051.7	0.09787	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	956.09	1051.7	0.09787	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	956.09	1051.7	0.09787	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	956.09	1051.7	0.09787	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	560.0	644.0	0.09771	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_039	-	Non-Converged Contingency	560.0	644.0	0.09771	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_039	-	Non-Converged Contingency	560.0	644.0	0.09771	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G16_039	-	Non-Converged Contingency	560.0	644.0	0.09771	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G16_039	-	Non-Converged Contingency	1792.0	1792.0	0.09333	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1792.0	1792.0	0.09333	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
0	20L	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.09333	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.09333	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20L	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.09333	-	BORDER 7345.00 345KV SWITCHED SHUNT
0	20L	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.08966	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.08966	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	717.0	789.0	0.08943	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	717.0	789.0	0.08943	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	717.0	789.0	0.08943	-	GEN515040 1-SEMINOLE 1G
0	20L	G16_039	-	Non-Converged Contingency	0.0	0.0	0.08712	-	P12:138:WFEC:MSL03
0	20L	G16_039	-	Non-Converged Contingency	0.0	0.0	0.08467	-	P12:345:SPS:J15.1.XRDS.TOLK
0	20L	G16_039	-	Non-Converged Contingency	560.0	560.0	0.08029	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_039	-	Non-Converged Contingency	560.0	560.0	0.08029	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_039	-	Non-Converged Contingency	560.0	560.0	0.08029	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.07907	-	ARCADIA - NORTHWEST 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	560.0	560.0	0.07820	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_039	-	Non-Converged Contingency	560.0	560.0	0.07820	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.06920	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1561.0	1793.0	0.06709	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1561.0	1793.0	0.06709	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1561.0	1793.0	0.06709	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_039	-	Non-Converged Contingency	1561.0	1793.0	0.06709	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_039	-	Non-Converged Contingency	1792.0	1792.0	0.06632	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1792.0	1792.0	0.06632	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
0	20L	G16_039	-	Non-Converged Contingency	1793.0	1793.0	0.06632	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1716.0	1793.0	0.06632	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	G16_039	-	Non-Converged Contingency	1793.0	1793.0	0.06632	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1716.0	1793.0	0.06632	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	G16_039	-	Non-Converged Contingency	1793.0	1793.0	0.06632	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1716.0	1793.0	0.06632	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_039	-	Non-Converged Contingency	1420.0	1775.0	0.06400	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1420.0	1775.0	0.06400	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G16_039	-	Non-Converged Contingency	1420.0	1775.0	0.06400	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1420.0	1775.0	0.06400	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_039	-	Non-Converged Contingency	1420.0	1775.0	0.06400	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1420.0	1775.0	0.06400	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G16_039	-	Non-Converged Contingency	1192.0	1192.0	0.06355	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	956.0	956.0	0.06355	-	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	0.0	0.0	0.05641	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	20L	G16_039	-	Non-Converged Contingency	318.7	350.57	0.05411	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	318.7	350.57	0.05411	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1532.0	1793.0	0.05342	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1532.0	1793.0	0.05342	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20L	G16_039	-	Non-Converged Contingency	1532.0	1793.0	0.05342	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	G16_039	-	Non-Converged Contingency	501.95	501.95	0.05225	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	501.95	501.95	0.05225	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	785.0	785.0	0.05148	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	785.0	785.0	0.05148	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	421.0	439.0	0.05096	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	348.58	381.24	0.05096	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	500.0	723.0	0.05096	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	762.5	762.5	0.05080	-	MINGO - SETAB 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_039	-	Non-Converged Contingency	762.5	762.5	0.05080	-	MINGO - SETAB 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.05072	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.05052	-	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	439.0	439.0	0.05033	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	450.0	450.0	0.05033	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_039	-	Non-Converged Contingency	450.0	450.0	0.05033	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_039	-	Non-Converged Contingency	717.1	717.1	0.05006	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	717.1	717.1	0.05006	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	478.0	502.0	0.04981	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	478.0	502.0	0.04981	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	478.0	502.0	0.04981	-	BUSHLAND INTERCHANGE 230KV SWITCHED SHUNT
0	20L	G16_039	-	Non-Converged Contingency	726.6	726.6	0.04418	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	726.6	726.6	0.04418	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1413.0	1517.0	0.04418	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1413.0	1517.0	0.04418	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	0.0	0.0	0.04365	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	20L	G16_039	-	Non-Converged Contingency	318.7	350.57	0.04327	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	318.7	350.57	0.04327	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	318.7	350.57	0.04304	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	318.7	350.57	0.04304	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	318.7	350.57	0.04291	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	318.7	350.57	0.04291	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	0.0	0.0	0.04269	-	P12:138:WFEC:MSL14
0	20L	G16_039	-	Non-Converged Contingency	0.0	0.0	0.04261	-	917X
0	20L	G16_039	-	Non-Converged Contingency	1504.0	1792.0	0.04236	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1504.0	1792.0	0.04236	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1505.0	1793.0	0.04224	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1505.0	1793.0	0.04224	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1505.0	1793.0	0.04224	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	956.0	956.0	0.04011	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1141.0	1195.0	0.03453	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1141.0	1195.0	0.03453	-	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	1141.0	1195.0	0.03453	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20L	G16_039	-	Non-Converged Contingency	0.0	0.0	0.03405	-	P12:230:SPS:K43.1.PRNGLE.HARR_E
0	20L	G16_039	-	Non-Converged Contingency	0.0	0.0	0.03341	-	P12:115:SPS:W08.1.HITCH.LASLEY
0	20SP	G16_039	-	Non-Converged Contingency	956.1	1051.7	0.19989	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20SP	G16_039	-	Non-Converged Contingency	956.0	1042.0	0.17542	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20SP	G16_039	-	Non-Converged Contingency	956.0	1042.0	0.17542	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.13609	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20SP	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.13609	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	G16_039	-	Non-Converged Contingency	1792.0	1792.0	0.17937	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	987.2	1082.8	0.17185	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	1022.0	1124.0	0.15840	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	1022.0	1124.0	0.15840	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	1584.0	2098.0	0.15532	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	1584.0	2098.0	0.15532	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.15299	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.15204	-	CIMARRON - MINCO 345KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.15204	-	GRACEMONT - MINCO 345KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	987.16	1082.77	0.13826	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	956.09	1051.7	0.12298	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	987.16	1082.77	0.12298	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	717.0	789.0	0.11232	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.11209	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.11209	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.11014	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.11014	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	G16_039	-	Non-Converged Contingency	560.0	560.0	0.09655	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.08225	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	421.0	439.0	0.06513	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	439.0	439.0	0.06280	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	450.0	450.0	0.06280	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	329.05	360.92	0.05521	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20WP	G16_039	-	Non-Converged Contingency	329.05	360.92	0.05253	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17SP	G16_039	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06785	113.9867	BASE CASE
2	20SP	G16_039	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06447	110.7777	BASE CASE
2	17G	G16_039	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06516	104.3556	BASE CASE
2	20WP	G16_039	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06282	99.1	BASE CASE
2	17SP	G16_039	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.27635	103.9462	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20SP	G16_039	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.27105	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.23383	117.0258	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G16_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.20533	112.9654	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G16_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.23383	112.441	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	G16_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.20533	108.3696	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17SP	G16_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22853	108.1247	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17SP	G16_039	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22853	103.6738	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	G16_039	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11235	109.7093	BASE CASE
2	16WP	G16_039	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12175	108.7418	BASE CASE
2	17G	G16_039	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11958	107.5286	BASE CASE
2	20WP	G16_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11235	123.7856	BASE CASE
2	16WP	G16_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12175	122.9306	BASE CASE
2	17G	G16_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11958	120.973	BASE CASE
2	17SP	G16_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11794	105.8511	BASE CASE
2	16WP	G16_039	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.23383	106.376	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G16_039	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.20533	102.3425	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G16_039	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.23383	101.9464	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_039	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.05562	102.2178	BASE CASE
2	17G	G16_039	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.03393	108.3474	BASE CASE
2	16WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.17857	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	16WP	G16_039	-	Non-Converged Contingency	1330.0	1940.0	0.17827	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	16WP	G16_039	-	Non-Converged Contingency	1330.0	1940.0	0.17827	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	16WP	G16_039	-	Non-Converged Contingency	987.2	1082.8	0.17609	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.17531	-	CIMARRON - MINCO 345KV CKT 1
2	16WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.17531	-	GRACEMONT - MINCO 345KV CKT 1
2	16WP	G16_039	-	Non-Converged Contingency	1792.0	1792.0	0.17407	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_039	-	Non-Converged Contingency	1022.0	1124.0	0.17285	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G16_039	-	Non-Converged Contingency	1022.0	1124.0	0.17285	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G16_039	-	Non-Converged Contingency	987.16	1082.77	0.14270	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	16WP	G16_039	-	Non-Converged Contingency	956.09	1051.7	0.14270	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.11924	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	16WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.11924	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.11670	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	16WP	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.11670	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	16WP	G16_039	-	Non-Converged Contingency	1420.0	1775.0	0.10615	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.08889	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	16WP	G16_039	-	Non-Converged Contingency	439.0	439.0	0.06909	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	16WP	G16_039	-	Non-Converged Contingency	450.0	450.0	0.06909	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_039	-	Non-Converged Contingency	226.0	249.0	0.49278	-	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1330.0	1940.0	0.17194	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1330.0	1940.0	0.17194	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.17180	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.17180	-	GEN509403 1-PIRKEY GENERATION
2	17G	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.17180	-	GEN509404 1-WELSH #1
2	17G	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.17180	-	GEN509406 1-WELSH #3
2	17G	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.17180	-	GEN509416 1-TURK GENERATION
2	17G	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.17180	-	GEN511848 1-SOUTHWESTERN STATION #3
2	17G	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.16913	-	CIMARRON - MINCO 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.16913	-	GRACEMONT - MINCO 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	956.1	1051.7	0.16561	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1022.0	1124.0	0.16486	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1022.0	1124.0	0.16486	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1792.0	1792.0	0.16243	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	318.7	350.57	0.15500	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	560.0	560.0	0.14139	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_039	-	Non-Converged Contingency	956.09	1051.7	0.13153	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	956.09	1051.7	0.13153	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	478.0	502.0	0.12830	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	717.0	789.0	0.11958	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	717.0	789.0	0.11958	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.11381	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.11381	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1792.0	1792.0	0.11021	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1792.0	1792.0	0.11021	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
2	17G	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.11021	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.11021	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	17G	G16_039	-	Non-Converged Contingency	1420.0	1775.0	0.10552	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1420.0	1775.0	0.10552	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1420.0	1775.0	0.10552	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	560.0	644.0	0.10406	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_039	-	Non-Converged Contingency	560.0	644.0	0.10406	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_039	-	Non-Converged Contingency	249.0	274.0	0.10259	-	HAPPY INTERCHANGE - PALO DURO SUB 115KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	251.0	251.0	0.10259	-	PALO DURO SUB - RANDALL COUNTY INTERCHANGE 115KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	560.0	560.0	0.10012	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_039	-	Non-Converged Contingency	560.0	560.0	0.09848	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_039	-	Non-Converged Contingency	560.0	560.0	0.09848	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G16_039	-	Non-Converged Contingency	1561.0	1793.0	0.09075	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1561.0	1793.0	0.09075	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.08878	-	ARCADIA - NORTHWEST 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.08246	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1792.0	1792.0	0.07899	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1792.0	1792.0	0.07899	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
2	17G	G16_039	-	Non-Converged Contingency	1793.0	1793.0	0.07899	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1716.0	1793.0	0.07899	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	G16_039	-	Non-Converged Contingency	1793.0	1793.0	0.07899	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1716.0	1793.0	0.07899	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G16_039	-	Non-Converged Contingency	1793.0	1793.0	0.07899	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1716.0	1793.0	0.07899	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_039	-	Non-Converged Contingency	1792.0	1792.0	0.07899	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1792.0	1792.0	0.07899	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 2
2	17G	G16_039	-	Non-Converged Contingency	1532.0	1793.0	0.07480	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1532.0	1793.0	0.07480	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	G16_039	-	Non-Converged Contingency	1532.0	1793.0	0.07480	-	G1524G1525 345.00 - WICHITA 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1532.0	1793.0	0.07480	-	G1524G1525 345.00 - WICHITA 345KV CKT 2
2	17G	G16_039	-	Non-Converged Contingency	1532.0	1793.0	0.07480	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	G16_039	-	Non-Converged Contingency	560.0	644.0	0.06626	-	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G16_039	-	Non-Converged Contingency	878.0	956.0	0.06595	-	BENTON - WICHITA 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.06546	-	CIMARRON - DRAPER LAKE 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	439.0	439.0	0.06531	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	502.0	502.0	0.06531	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	500.0	723.0	0.06531	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	439.0	439.0	0.06516	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	450.0	450.0	0.06516	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_039	-	Non-Converged Contingency	501.95	501.95	0.06230	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1793.0	1793.0	0.06200	-	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1793.0	1793.0	0.06200	-	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	717.1	717.1	0.06024	-	HOLCOMB - SETAB 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	318.7	350.57	0.05986	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	762.5	762.5	0.05889	-	MINGO - SETAB 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.05816	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	785.0	785.0	0.05816	-	MINGO - RED WILLOW 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	560.0	644.0	0.05764	-	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_039	-	Non-Converged Contingency	726.6	726.6	0.05681	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1413.0	1517.0	0.05681	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	318.7	350.57	0.05562	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	502.0	502.0	0.05553	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	478.0	502.0	0.05524	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.05473	-	GEN520947 1-HUGO1
2	17G	G16_039	-	Non-Converged Contingency	1192.0	1192.0	0.05444	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	956.0	956.0	0.05444	-	G15063_T 345.00 - WOODRING 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1039.0	1195.0	0.05288	-	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1505.0	1793.0	0.05160	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1505.0	1793.0	0.05160	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1505.0	1793.0	0.05160	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.05098	-	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	318.7	350.57	0.05092	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1504.0	1792.0	0.04801	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1504.0	1792.0	0.04801	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1035.0	1035.0	0.04761	-	G14_001T 345.00 - WICHITA 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1141.0	1195.0	0.04706	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1141.0	1195.0	0.04706	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	478.0	502.0	0.03849	-	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	1022.0	1143.0	0.03788	-	PITTSBURG - VALLIANT 345KV CKT 1
2	17G	G16_039	-	Non-Converged Contingency	685.0	796.0	0.03593	-	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
2	17G	G16_039	-	Non-Converged Contingency	318.7	350.57	0.03393	-	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17SP	G16_039	-	Non-Converged Contingency	956.0	1042.0	0.16824	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G16_039	-	Non-Converged Contingency	1792.0	1792.0	0.17947	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20WP	G16_039	-	Non-Converged Contingency	987.2	1082.8	0.17193	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G16_039	-	Non-Converged Contingency	1022.0	1124.0	0.15847	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G16_039	-	Non-Converged Contingency	1022.0	1124.0	0.15847	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G16_039	-	Non-Converged Contingency	1584.0	2098.0	0.15538	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20WP	G16_039	-	Non-Converged Contingency	1584.0	2098.0	0.15538	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	20WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.15305	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	20WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.15213	-	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G16_039	-	Non-Converged Contingency	987.16	1082.77	0.13833	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.11214	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	20WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.11214	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.11019	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	20WP	G16_039	-	Non-Converged Contingency	1792.0	1972.0	0.11019	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	20WP	G16_039	-	Non-Converged Contingency	1195.0	1195.0	0.08234	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	20WP	G16_039	-	Non-Converged Contingency	439.0	439.0	0.06282	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	20WP	G16_039	-	Non-Converged Contingency	450.0	450.0	0.06282	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
3	17G	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28751	219.0037	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28751	218.7841	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25898	212.6842	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25898	212.3523	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28567	206.7258	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28567	206.6	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30048	198.5451	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30048	197.214	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29393	191.0186	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29393	188.8782	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29079	182.2433	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29079	180.1336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30309	128.2336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30309	124.1314	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20424	100.7674	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20424	100.7674	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20424	100.7674	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20424	100.7674	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20424	100.6264	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20424	100.6264	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20424	100.6264	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20424	100.6264	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21608	100.4252	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21608	100.4252	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21608	100.4252	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21608	100.4252	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21608	100.4196	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21608	100.4196	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21608	100.4196	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21608	100.4196	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	17G	G16_039	-	Non-Converged Contingency	3975.0	4570.0	0.32939	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	20L	G16_039	-	Non-Converged Contingency	3975.0	4570.0	0.27553	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	17G	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28712	219.2477	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28712	218.9034	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25854	212.5533	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25854	212.4877	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28513	206.5319	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28513	206.4431	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30005	198.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30005	197.0767	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29348	191.0175	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29348	188.7404	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29026	181.83	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29026	179.8003	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30253	128.3207	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30253	124.1778	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20374	100.5697	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20374	100.5697	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20374	100.5697	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20374	100.5697	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20374	100.3504	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20374	100.3504	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20374	100.3504	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20374	100.3504	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21547	100.1644	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21547	100.1644	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21547	100.1644	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21547	100.1644	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21547	100.1193	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21547	100.1193	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21547	100.1193	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21547	100.1193	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	17G	G16_039	-	Non-Converged Contingency	3975.0	4570.0	0.32504	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	20L	G16_039	-	Non-Converged Contingency	3975.0	4570.0	0.27122	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
5	17G	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28448	217.7095	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28448	216.9825	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25642	211.2861	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25642	210.7754	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28256	204.8525	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28256	204.7326	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29724	196.7495	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29724	195.2293	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29082	189.7734	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29082	187.2532	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28765	180.5705	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28765	178.2726	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29978	127.7475	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29978	123.5792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20212	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
5	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20212	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
5	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20212	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
5	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20212	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
5	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20212	99	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
5	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20212	99	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
5	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20212	99	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
5	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20212	99	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	17G	G16_041	FROM->TO	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1	318.7	350.57	0.03932	99.6	BASE CASE
0	25SP	G16_041	TO->FROM	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.04068	122.1957	BASE CASE
0	17G	G16_041	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.04099	136.6904	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_041	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.04099	136.6904	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_041	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.02970	99.1	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_041	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.02970	99.1	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_041	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.04099	108.7789	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_041	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.04099	108.7789	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03314	115.7084	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.11067	107.5416	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.11067	107.5416	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.06885	102.9062	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.06885	102.9062	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.06439	99.4	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05190	155.1081	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05190	155.1081	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05190	144.4695	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05190	144.4695	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04451	127.6091	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03841	126.2169	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04451	125.8663	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03882	125.7356	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03882	125.7356	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04451	125.0574	P12:115:SPS:V15.1.TUCO.INDANA
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04451	124.7606	INDIANA SUB - STANTON SUB 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	124.1537	GEN527166 1-MUSTANG_6 118.000
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	123.8128	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	123.805	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	123.805	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	123.7915	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04451	123.4175	P12:115:SPS:V15.1.TUCO.INDANA
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04451	123.1351	INDIANA SUB - STANTON SUB 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04451	120.6969	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	120.4581	GEN527903 1-HOBBS PLANT #3 (ST)
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	120.0848	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	120.0727	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	120.0727	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	120.0649	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04451	119.2123	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03882	119.1722	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03882	119.1722	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04451	119.009	P12:115:SPS:V62.1.CRLSLE.INDANA
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04451	118.803	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03841	118.7443	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03953	118.1529	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04451	117.6066	P12:115:SPS:V62.1.CRLSLE.INDANA
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04451	117.4069	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	117.2761	GEN527166 1-MUSTANG_6 118.000
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03953	116.756	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03815	116.4793	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03815	116.4781	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03815	116.4781	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	115.6905	GEN527901 1-HOBBS PLANT #1 (CT)
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03643	115.6871	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	115.2235	GEN527902 1-HOBBS PLANT #2 (CT)
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04780	115.1773	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04780	115.1773	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	115.1175	GEN527903 1-HOBBS PLANT #3 (ST)
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03827	114.5086	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03827	114.5086	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03953	114.1373	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03811	114.1158	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03811	114.1158	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	114.0543	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03953	113.1643	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	112.9092	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	112.9092	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03713	112.7464	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03713	112.7464	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03827	112.5646	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03827	112.5646	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03815	112.5047	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03815	112.504	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03815	112.504	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04780	112.3162	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04780	112.3162	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	112.2121	GEN527901 1-HOBBS PLANT #1 (CT)
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03811	112.1714	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03811	112.1714	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03643	112.17	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03661	112.1355	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03661	112.1355	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03927	112.0698	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03708	112.0434	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03850	112.0254	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03850	112.0254	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	111.7033	GEN527902 1-HOBBS PLANT #2 (CT)
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03559	111.623	P12:115:LCEC:W56.1.HOBBG.LE-LVN
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03665	111.6034	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03665	111.6034	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	111.4117	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03548	111.3793	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	111.3765	GEN563132 1-G15078_3 0.3570
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03798	111.3545	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	111.3093	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	111.3093	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03688	111.1809	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	111.0984	GEN562812 1-G15040_3 0.3570
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04549	111.0009	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04549	111.0009	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03396	110.953	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	110.9228	GEN587423 1-G16-062-GEN10.6900
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03798	110.6552	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	110.6408	GEN563102 1-G15075_3 0.5500
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	110.5718	GEN587393 1-G16-058-GEN10.5500
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03664	110.5074	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03664	110.5074	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03688	110.3889	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	109.9687	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	109.9687	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03661	109.9541	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03661	109.9541	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03850	109.9463	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03850	109.9463	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03927	109.9346	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03665	109.5101	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03665	109.5101	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03708	109.4641	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03798	109.278	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	109.1786	GEN563132 1-G15078_3 0.3570
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04549	108.9863	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04549	108.9863	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03396	108.9825	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	108.9435	GEN562812 1-G15040_3 0.3570
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03688	108.9182	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03713	108.8881	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03713	108.8881	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03548	108.8335	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	108.8246	GEN587423 1-G16-062-GEN10.6900
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	108.7503	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	108.7503	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03798	108.6249	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03559	108.6053	P12:115:LCEC:W56.1.HOBBG.LE-LVN
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	108.5854	2074-CARLISLE INTERCHANGE
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	108.5854	BASE CASE
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	108.5748	GEN563102 1-G15075_3 0.5500
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	108.4473	GEN587393 1-G16-058-GEN10.5500
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03659	106.7761	P12:230:AEPW:ELKCITY6:SWEETWT6
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	106.76	GEN640009 1-COOPER NUCLEAR STATION
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	106.6432	BASE CASE
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03558	106.5195	P12:115:SPS:V80.1.DC_STH.LE-WAIT
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03663	106.4543	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03574	106.3694	P12:115:SPS:V49.1.YOAKUM.SHLCO2
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03589	106.2682	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03589	106.2662	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	105.4944	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03659	104.8547	P12:230:AEPW:ELKCITY6:SWEETWT6
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03558	104.7649	P12:115:SPS:V80.1.DC_STH.LE-WAIT
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03574	104.6722	P12:115:SPS:V49.1.YOAKUM.SHLCO2
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03663	104.5349	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03620	104.5133	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03618	104.3074	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03589	104.3049	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03589	104.3025	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03572	103.7299	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03618	102.9725	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03620	102.577	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03618	102.2329	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03618	102.144	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03618	101.0487	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03618	100.9839	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	17SP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03849	100.868	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03618	99.4	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03618	99.4	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	17SP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03849	99.4	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	17G	G16_041	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.04099	105.7283	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_041	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.04099	105.7283	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_041	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.04099	101.8175	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_041	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.04099	101.8175	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_041	FROM->TO	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1	956.09	1051.7	0.24506	99.2	BASE CASE
0	17G	G16_041	TO->FROM	FPL SWITCH - WOODWARD 138KV CKT 1	133.0	153.0	0.03639	99.9	BASE CASE
0	20WP	G16_041	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.47815	105.2154	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	G16_041	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.46905	103.7367	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	16WP	G16_041	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.47861	100.2952	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20WP	G16_041	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.47815	105.2154	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	G16_041	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.46905	103.7367	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	16WP	G16_041	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.47861	100.2952	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	17G	G16_041	FROM->TO	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.03932	107.7528	BASE CASE
0	17G	G16_041	FROM->TO	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.08740	100.6447	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.48057	123.1957	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20SP	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.48446	108.1483	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	17SP	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.46955	104.3861	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	17G	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.27826	99.6	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.48057	123.1957	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20SP	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.48446	108.1483	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	17SP	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.46955	104.3861	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	17G	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.27826	99.6	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20WP	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.48540	126.6254	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.47616	124.6416	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	16WP	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.48567	121.7059	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20SP	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.48933	111.3855	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17SP	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.47423	107.6482	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.28098	103.4359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.29801	102.8359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20WP	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.48540	126.6254	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.47616	124.6416	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.48567	121.7059	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20SP	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.48933	111.3855	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.47423	107.6482	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.28098	103.4359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.29801	102.8359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_041	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04113	106.8373	BASE CASE
0	20WP	G16_041	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	329.05	360.92	0.04098	101.3958	BASE CASE
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11734	124.4658	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10376	112.9438	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10376	112.9438	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10376	112.9086	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10376	112.9086	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	112.5354	GEN526331 1-JONES GEN #1 22 KV
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	112.3468	GEN526332 1-JONES GEN #2 21 KV
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10984	111.3346	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10984	111.3053	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10362	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10362	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10503	107.3472	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	107	GEN527884 1-CUNNINGHAM GEN #4 22 KV
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	106.0884	GEN563142 1-G15079_3 0.5500
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	106.0884	GEN563151 1-G15080_2 0.5500
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10503	106.0791	P12:115:SPS:V15.1.TUCO.INDANA
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10503	106.0442	INDIANA SUB - STANTON SUB 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10252	106.0084	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10252	105.974	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10178	105.4304	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10337	105.4088	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10337	105.4088	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10916	105.2063	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10178	105.1732	P12:345:SPS:J14.1.EDDY.XRDS
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10916	105.1386	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10211	105.0982	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10211	105.0934	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10165	105.0723	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10165	104.9891	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	104.8526	GEN527883 1-CUNNINGHAM GEN #3 22 KV
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10099	104.7091	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10257	104.6771	P12:345:SPS:J15.1.XRDS.TOLK
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10099	104.6596	P12:230:SPS:K37.1.TOLK.LAMB
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	104.4479	TUCO INTERCHANGE 230/13.0KV TRANSFORMER CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10187	104.442	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	104.1602	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10099	104.149	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	104.1458	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10099	104.0778	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10503	103.9914	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10187	103.9739	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10169	103.9293	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10169	103.8823	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10178	103.6702	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10178	103.6636	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10391	103.5765	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10391	103.5559	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	103.5169	GEN563132 1-G15078_3 0.3570
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10138	103.4535	LUBBOCK SOUTH INTERCHANGE - SOUTH PLAINS REC-WOODROW INTERCHANGE 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	103.4314	GEN587113 1-G16-015-GEN10.4180

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	103.3789	GEN563102 1-G15075_3 0.5500
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10244	103.2873	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10252	103.1846	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09880	103.1673	P12:345:SPS:J15.1.XRDS.TOLK
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10187	103.1627	P12:115:SPS:W54.1.KISER.KRESS
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10252	103.1541	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10187	103.0555	KISER 3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10503	103.0022	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10777	102.9892	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10503	102.9593	P12:115:SPS:V62.1.CRLSLE.INDANA
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	102.8077	GEN562812 1-G15040_3 0.3570
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10613	102.7303	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10381	102.7134	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10381	102.6722	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10777	102.6695	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	102.6062	GEN526678 1-CIRRUS_WND 10.6900
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10231	102.5983	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10328	102.2565	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10244	102.2379	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10502	102.2143	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09245	102.1679	GEN527166 1-MUSTANG_6 118.000
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10205	102.0607	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10391	101.9931	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10391	101.9797	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	101.5877	GEN525845 1-ELK_2 1 18.000
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10165	101.5349	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10165	101.5158	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10075	101.3882	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10075	101.3882	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10138	101.1826	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10138	101.0304	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	100.5597	BASE CASE
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	100.5354	BASE CASE
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09433	100.5005	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09433	100.4984	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09245	100.4324	GEN527903 1-HOBBS PLANT #3 (ST)
0	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09450	100.3914	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09450	100.3671	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09450	100.3647	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09450	100.3647	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09791	100.1483	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	100.1357	GEN562270 1-G12-020-2 0.6900
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10252	100.0549	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10024	99.8	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09888	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09851	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09851	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10252	99.5	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10196	99.4	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	99.3	GEN562762 1-G15033_3 0.6900
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09973	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09973	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09973	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09973	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10182	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10182	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	99.2	GEN300024 1-1CHOTST6 16.000
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	99.2	GEN300031 1-CHOUTEAU CTG 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10078	99.2	P12:115:SPS:V56.1.COCHRAN.SUNDWN
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10252	99.1	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	99.1	GEN300001 1-THOMAS HILL UNIT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	99.1	GEN300017 1-1G2GPDEL 18.000
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	99.1	GEN511938 1-OEC STEAM # 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	99.1	GEN511941 1-OEC STEAM # 2
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	99.1	GEN562517 1-G14_021_S2 0.6900
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	99.1	GEN562691 1-G15_015_3 0.6900
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	99.1	GEN645041 1-CASS COUNTY 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	99	GEN300016 1-1G1GPDEL 18.000
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	99	GEN549893 2-SOUTHWEST 2
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	99	GEN562023 1-G11_020_3 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	99	GEN562026 1-G11_019_3 0.6900
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	99	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10051	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10051	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.11067	100	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.11067	100	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_041	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.04120	107.6192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_041	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.04120	107.6192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_041	-	Non-Converged Contingency	1793.0	1793.0	0.25731	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	16WP	G16_041	-	Non-Converged Contingency	1716.0	1793.0	0.25731	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	16WP	G16_041	-	Non-Converged Contingency	987.16	1082.77	0.25627	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.25627	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_041	-	Non-Converged Contingency	1420.0	1775.0	0.16672	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_041	-	Non-Converged Contingency	1420.0	1775.0	0.16672	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_041	-	Non-Converged Contingency	1420.0	1775.0	0.16672	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_041	-	Non-Converged Contingency	859.0	956.0	0.07495	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_041	-	Non-Converged Contingency	560.0	560.0	0.07495	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	17G	G16_041	-	Non-Converged Contingency	1793.0	1793.0	0.25338	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	1716.0	1793.0	0.25338	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	17G	G16_041	-	Non-Converged Contingency	1793.0	1793.0	0.25338	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	1716.0	1793.0	0.25338	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	17G	G16_041	-	Non-Converged Contingency	1793.0	1793.0	0.25338	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	1716.0	1793.0	0.25338	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.24506	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.24506	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	1420.0	1775.0	0.16596	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	1420.0	1775.0	0.16596	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	1420.0	1775.0	0.16596	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	956.1	1051.7	0.14139	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	726.6	726.6	0.12990	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	1413.0	1517.0	0.12990	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	1330.0	1940.0	0.11276	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	1330.0	1940.0	0.11276	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	1195.0	1195.0	0.09922	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.09703	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.09703	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	1561.0	1793.0	0.09538	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	1561.0	1793.0	0.09538	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G16_041	-	Non-Converged Contingency	717.1	717.1	0.09326	-	HOLCOMB - SETAB 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	762.5	762.5	0.08987	-	MINGO - SETAB 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	1792.0	1792.0	0.08133	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	1420.0	1775.0	0.05484	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	1022.0	1124.0	0.05449	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	1022.0	1124.0	0.05449	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	439.0	439.0	0.05027	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	502.0	502.0	0.05027	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	500.0	723.0	0.05027	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	478.0	502.0	0.04612	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	478.0	502.0	0.04516	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	318.7	350.57	0.04113	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	318.7	350.57	0.03932	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	17G	G16_041	-	Non-Converged Contingency	318.7	350.57	0.03932	-	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.27224	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.22980	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_041	-	Non-Converged Contingency	0.0	0.0	0.45593	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G16_041	-	Non-Converged Contingency	1793.0	1793.0	0.25269	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	G16_041	-	Non-Converged Contingency	1716.0	1793.0	0.25269	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.24167	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.24167	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.21426	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.21426	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.21426	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.21426	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_041	-	Non-Converged Contingency	0.0	0.0	0.19513	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.10330	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.10330	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.25828	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_041	-	Non-Converged Contingency	987.16	1082.77	0.25567	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.22728	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G16_041	-	Non-Converged Contingency	987.16	1082.77	0.22728	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.26109	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.23193	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	25SP	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.23193	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_041	-	Non-Converged Contingency	0.0	0.0	0.21257	-	P12:345:SPS:J02.1.TOLK.EDDY
0	25SP	G16_041	-	Non-Converged Contingency	1792.0	1972.0	0.12959	-	GEN525820 1-TUCO Interchange SVC Bus
0	25SP	G16_041	-	Non-Converged Contingency	478.0	502.0	0.11604	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_041	-	Non-Converged Contingency	343.79	343.79	0.10124	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_041	-	Non-Converged Contingency	478.0	502.0	0.07265	-	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_041	-	Non-Converged Contingency	0.0	0.0	0.05174	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
0	25SP	G16_041	-	Non-Converged Contingency	497.0	547.0	0.04880	-	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_041	-	Non-Converged Contingency	1792.0	1792.0	0.04598	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	25SP	G16_041	-	Non-Converged Contingency	318.7	350.57	0.04407	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	25SP	G16_041	-	Non-Converged Contingency	478.0	502.0	0.04277	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_041	-	Non-Converged Contingency	478.0	502.0	0.04117	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_041	-	Non-Converged Contingency	318.7	350.57	0.04068	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_041	-	Non-Converged Contingency	0.0	0.0	0.03929	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
0	25SP	G16_041	-	Non-Converged Contingency	478.0	502.0	0.03758	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	25SP	G16_041	-	Non-Converged Contingency	318.7	350.6	0.03485	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	25SP	G16_041	-	Non-Converged Contingency	318.7	350.6	0.03485	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	25SP	G16_041	-	Non-Converged Contingency	0.0	0.0	0.03152	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	17G	G16_041	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.17833	116.9587	BASE CASE
0	25SP	G16_041	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.16711	115.2466	BASE CASE
0	25SP	G16_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03626	104.2168	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G16_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03626	104.166	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G16_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03047	104.0555	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03047	104.0254	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	20L	G16_041	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.03868	120.6857	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_041	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.03868	120.6857	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_041	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.03868	115.6758	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_041	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.03868	115.6758	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03868	123.8299	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03868	123.8299	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03868	123.7513	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03868	123.7513	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03868	119.2914	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03868	119.2914	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03868	118.9527	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03868	118.9527	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_041	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.04075	133.2361	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_041	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.04075	133.2361	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_041	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.04075	105.2691	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_041	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.04075	105.2691	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.11090	109.0656	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.11090	109.0656	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.06898	103.7245	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.06898	103.7245	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.06450	99.9	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05204	156.1003	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05204	156.1003	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05204	145.3888	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05204	145.3888	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04462	128.3534	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03852	127.245	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04462	126.5976	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04462	125.804	P12:115:SPS:V15.1.TUCO.INDANA
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03890	125.6597	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03890	125.6597	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04462	125.5052	INDIANA SUB - STANTON SUB 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04462	124.1544	P12:115:SPS:V15.1.TUCO.INDANA
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03732	124.0435	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03732	124.0435	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03732	124.0305	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03732	124.0224	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	123.9757	GEN527166 1-MUSTANG_6 118.000
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04462	123.8697	INDIANA SUB - STANTON SUB 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04462	121.4715	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03732	120.6839	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03732	120.6839	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03732	120.6766	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03732	120.6686	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	120.5376	GEN527903 1-HOBBS PLANT #3 (ST)
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04462	119.9767	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04462	119.73	P12:115:SPS:V62.1.CRLSLE.INDANA
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03852	119.5769	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04462	119.5546	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03890	119.471	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03890	119.471	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03963	119.2013	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04462	118.3197	P12:115:SPS:V62.1.CRLSLE.INDANA
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04462	118.1502	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03825	117.9752	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03825	117.9739	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03825	117.9739	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	117.4977	GEN527166 1-MUSTANG_6 118.000
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03963	116.8902	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	116.636	GEN527901 1-HOBBS PLANT #1 (CT)
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03654	116.3618	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04793	115.998	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04793	115.998	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	115.5631	GEN527903 1-HOBBS PLANT #3 (ST)
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	115.3495	GEN527902 1-HOBBS PLANT #2 (CT)
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03839	115.271	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03839	115.271	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03963	114.9884	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03822	114.8706	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03822	114.8706	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03732	114.7472	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03685	113.9091	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03685	113.9091	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03963	113.6635	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03825	113.5585	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03825	113.5577	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03825	113.5577	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03723	113.3476	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03723	113.3476	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03839	113.3219	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03839	113.3219	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04793	113.1198	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04793	113.1198	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	113.0072	GEN527901 1-HOBBS PLANT #1 (CT)
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03822	112.921	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03822	112.921	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03654	112.8344	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03671	112.8024	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03671	112.8024	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03936	112.7234	NEWHART 230 - PLANT X STATION 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03859	112.61	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03859	112.61	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	112.2809	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	112.2809	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03718	112.2805	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	112.195	GEN527902 1-HOBBS PLANT #2 (CT)
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03732	112.0913	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04563	111.997	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04563	111.997	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	111.9941	GEN563132 1-G15078_3 0.3570
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03807	111.9665	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03698	111.8322	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03569	111.7789	P12:115:LCEC:W56.1.HOBBG.LE-LVN
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	111.7258	GEN562812 1-G15040_3 0.3570
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03558	111.6255	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	111.5523	GEN587423 1-G16-062-GEN10.6900
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03685	111.4933	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03685	111.4933	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03400	111.3638	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	111.2945	GEN563102 1-G15075_3 0.5500
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03807	111.2605	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	111.2108	GEN587393 1-G16-058-GEN10.5500
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03674	111.1658	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03674	111.1658	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03698	111.0316	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03685	110.8047	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03685	110.8047	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03671	110.6141	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03671	110.6141	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03936	110.5756	NEWHART 230 - PLANT X STATION 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03859	110.5261	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03859	110.5261	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	110.1766	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	110.1766	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03718	110.0504	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04563	109.9561	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04563	109.9561	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03807	109.8863	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	109.8041	GEN563132 1-G15078_3 0.3570
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	109.5692	GEN562812 1-G15040_3 0.3570
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03698	109.5571	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03723	109.4717	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03723	109.4717	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	109.4519	GEN587423 1-G16-062-GEN10.6900
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03558	109.4232	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03400	109.3873	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03685	109.2965	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03685	109.2965	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	109.2416	2074-CARLISLE INTERCHANGE
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	109.2416	BASE CASE
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03807	109.2328	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	109.2199	GEN563102 1-G15075_3 0.5500
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03569	109.1136	P12:115:LCEC:W56.1.HOBBG.LE-LVN
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	109.0947	GEN587393 1-G16-058-GEN10.5500
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	107.4173	GEN640009 1-COOPER NUCLEAR STATION
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	107.2914	BASE CASE
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03674	107.2216	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03568	107.1866	P12:115:SPS:V80.1.DC_STH.LE-WAIT
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03584	107.0384	P12:115:SPS:V49.1.YOAKUM.SHLCO2
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03599	106.935	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03599	106.9337	P12:LPL:SPS:K64.1.LP-SE.LUBBS
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	106.1585	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03635	105.4572	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03568	105.4255	P12:115:SPS:V80.1.DC_STH.LE-WAIT
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03584	105.3348	P12:115:SPS:V49.1.YOAKUM.SHLCO2
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03674	105.2892	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03599	104.9614	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03599	104.9602	P12:LPL:SPS:K64.1.LP-SE.LUBBS
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03628	104.9498	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03582	104.3876	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03628	103.615	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03635	103.5237	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03628	102.886	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03628	102.7983	P12:115:SPS:T83.1.SP-FKFD.ALLEN
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03628	101.6959	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03628	101.6345	P12:115:SPS:T83.1.SP-FKFD.ALLEN
2	17SP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03856	101.2869	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03628	100.0813	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03628	100.0813	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
2	17SP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03856	99.8	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03628	99.1	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
2	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03628	99.1	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
2	17G	G16_041	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.04075	102.1939	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_041	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.04075	102.1939	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_041	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.47192	102.7205	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	G16_041	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.47192	102.7205	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	17G	G16_041	FROM->TO	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.03721	103.4967	BASE CASE
2	17G	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.47433	120.3583	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	16WP	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.48132	114.6083	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17SP	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.48004	106.8903	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.47433	120.3583	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	16WP	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.48132	114.6083	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17SP	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.48004	106.8903	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.47913	123.543	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.48620	117.8517	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17SP	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.48490	110.1187	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.28023	101.8646	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.47913	123.543	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.48620	117.8517	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17SP	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.48490	110.1187	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.28023	101.8646	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_041	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03891	100.4226	BASE CASE
2	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10384	109.903	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10384	109.903	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10367	106.06	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10367	106.06	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09908	103.9952	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09273	102.7121	GEN527166 1-MUSTANG_6 118.000
2	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10103	102.1229	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10103	102.1229	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09273	101.2079	GEN527903 1-HOBBS PLANT #3 (ST)
2	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09478	101.1113	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
2	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09478	101.109	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09478	101.109	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09478	101.1046	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
2	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10223	100.4149	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10355	99.1	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
2	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10223	99.1	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	16WP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.11090	101.4839	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.11090	101.4839	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_041	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.04130	108.1182	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_041	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.04130	108.1182	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_041	-	Non-Converged Contingency	987.2	1082.8	0.26544	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	16WP	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.21992	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	G16_041	-	Non-Converged Contingency	987.2	1082.8	0.21992	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	16WP	G16_041	-	Non-Converged Contingency	859.0	956.0	0.07492	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_041	-	Non-Converged Contingency	560.0	560.0	0.07492	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.25380	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.20978	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.20978	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.10078	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	17SP	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.26749	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_041	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.16917	112.9939	BASE CASE
2	17G	G16_041	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.04155	133.4281	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_041	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.04155	133.4281	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_041	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.04155	128.3522	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_041	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.04155	128.3522	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.04155	137.6407	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.04155	137.6407	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.04155	137.6277	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.04155	137.6277	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.04155	132.2146	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.04155	132.2146	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.04155	131.6923	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.04155	131.6923	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_041	TO->FROM	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.03463	115.3097	BASE CASE
3	17G	G16_041	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.03871	126.5747	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
3	17G	G16_041	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.03871	126.5747	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03373	115.766	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.11286	110.8107	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.11286	110.8107	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.07015	104.6899	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.07015	104.6899	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.06547	100.3509	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.06497	99.3	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.06497	99.3	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05327	157.8597	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05327	157.8597	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05327	146.7186	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05327	146.7186	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04552	129.2348	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04552	127.4678	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04552	126.6753	P12:115:SPS:V15.1.TUCO.INDANA
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04552	126.3883	INDIANA SUB - STANTON SUB 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03961	126.3147	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03961	126.3147	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03937	126.108	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04552	125.0151	P12:115:SPS:V15.1.TUCO.INDANA
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03820	124.8488	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03820	124.8488	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03820	124.8366	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03820	124.8362	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04552	124.7422	INDIANA SUB - STANTON SUB 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	123.2261	GEN527166 1-MUSTANG_6 118.000
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04552	122.3272	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03820	121.4802	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03820	121.4802	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03820	121.4735	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03820	121.4733	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04552	120.8233	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04552	120.6067	P12:115:SPS:V62.1.CRLSLE.INDANA
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	120.475	GEN527903 1-HOBBS PLANT #3 (ST)
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04552	120.4127	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03961	120.0997	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03961	120.0997	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04045	119.9417	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03937	119.4241	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04552	119.1864	P12:115:SPS:V62.1.CRLSLE.INDANA
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04552	118.9988	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03909	118.4604	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03909	118.4591	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03909	118.4591	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04045	117.6958	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	117.5728	GEN527166 1-MUSTANG_6 118.000
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04900	116.9499	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04900	116.9499	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	116.8672	GEN527901 1-HOBBS PLANT #1 (CT)
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03740	116.6296	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03937	116.1738	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03937	116.1738	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	115.9401	GEN527903 1-HOBBS PLANT #3 (ST)
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03919	115.7659	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03919	115.7659	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04045	115.7134	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	115.626	GEN527902 1-HOBBS PLANT #2 (CT)
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03820	115.5634	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04045	114.4359	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03909	114.2458	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03909	114.2451	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03909	114.2451	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03937	114.2219	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03937	114.2219	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03768	114.1505	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03768	114.1505	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03803	114.0697	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03803	114.0697	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04900	114.053	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04900	114.053	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03919	113.813	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03919	113.813	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	113.6211	GEN527901 1-HOBBS PLANT #1 (CT)
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03753	113.5452	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03753	113.5452	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04014	113.4444	NEWHART 230 - PLANT X STATION 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03740	113.441	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03933	113.3041	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03933	113.3041	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04677	113.1432	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04677	113.1432	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03760	113.0726	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03760	113.0726	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03801	113.0448	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03820	112.8927	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	112.8391	GEN527902 1-HOBBS PLANT #2 (CT)

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	112.7491	GEN563132 1-G15078_3 0.3570
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03884	112.6926	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03781	112.5943	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03652	112.5255	P12:115:LCEC:W56.1.HOBBG.LE-LVN
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	112.5036	GEN562812 1-G15040_3 0.3570
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03644	112.4054	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	112.3388	GEN587423 1-G16-062-GEN10.6900
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03768	112.2539	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03768	112.2539	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03488	112.1455	G14-074T 345.00 - OKLAUNION 345KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	112.0823	GEN563102 1-G15075_3 0.5500
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	111.9976	GEN587393 1-G16-058-GEN10.5500
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03884	111.9646	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03758	111.9572	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03758	111.9572	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03768	111.4181	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03768	111.4181	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03753	111.3475	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03753	111.3475	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04014	111.3007	NEWHART 230 - PLANT X STATION 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03933	111.2148	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03933	111.2148	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04677	111.0814	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04677	111.0814	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03760	110.958	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03760	110.958	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03801	110.805	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03884	110.6039	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	110.5403	GEN563132 1-G15078_3 0.3570
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	110.3398	GEN562812 1-G15040_3 0.3570
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03781	110.307	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	110.2287	GEN587423 1-G16-062-GEN10.6900
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03644	110.2003	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03803	110.1732	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03803	110.1732	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03488	110.1583	G14-074T 345.00 - OKLAUNION 345KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03768	110.0488	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03768	110.0488	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	110.0302	2074-CARLISLE INTERCHANGE
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	110.0302	BASE CASE
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	109.9978	GEN563102 1-G15075_3 0.5500
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03884	109.9312	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03652	109.8631	P12:115:LCEC:W56.1.HOBBG.LE-LVN
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	108.1857	GEN640009 1-COOPER NUCLEAR STATION
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	108.071	BASE CASE
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03652	107.9755	P12:115:SPS:V80.1.DC_STH.LE-WAIT
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03667	107.8252	P12:115:SPS:V49.1.YOAKUM.SHLCO2
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03684	107.7259	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03684	107.7246	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	106.9392	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03760	106.6573	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03652	106.208	P12:115:SPS:V80.1.DC_STH.LE-WAIT
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03667	106.1148	P12:115:SPS:V49.1.YOAKUM.SHLCO2
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03684	105.7432	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03684	105.742	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	105.7265	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03666	105.1612	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03760	104.7161	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	104.387	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	103.665	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	103.5691	P12:115:SPS:T83.1.SP-FKFD.ALLEN
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	102.4714	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	102.4018	P12:115:SPS:T83.1.SP-FKFD.ALLEN
3	17SP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03945	101.8957	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	100.8551	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	100.8551	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
3	17SP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03945	100.3684	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	99.8	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
3	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03709	99.8	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
3	20WP	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.39607	100.96	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20L	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.38593	99	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
3	20WP	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.39607	100.96	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
3	20L	G16_041	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.38593	99	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
3	20WP	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.40124	104.4778	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	20L	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.39096	102.4888	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	17G	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.39547	102.1788	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	20WP	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.40124	104.4778	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	20L	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.39096	102.4888	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	17G	G16_041	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.39547	102.1788	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11917	124.5219	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10668	115.1164	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10668	115.1164	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10542	112.8269	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10542	112.8269	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10542	112.8269	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10542	112.8269	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	111.5115	GEN526331 1-JONES GEN #1 22 KV
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	111.4565	GEN526332 1-JONES GEN #2 21 KV
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11132	111.2518	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11132	111.2518	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10568	110.5112	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10568	110.5112	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10650	107.3881	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10625	107.2296	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10625	107.2296	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10650	106.1186	P12:115:SPS:V15.1.TUCO.INDANA
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10650	106.0961	INDIANA SUB - STANTON SUB 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10397	106.0064	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10397	106.0064	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11108	105.6608	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11108	105.6608	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	105.1892	GEN527884 1-CUNNINGHAM GEN #4 22 KV
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10352	104.8208	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10352	104.8208	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	104.8068	GEN563142 1-G15079_3 0.5500
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	104.8068	GEN563151 1-G15080_2 0.5500
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10311	104.7375	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10311	104.7375	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10404	104.3598	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10146	104.3247	P12:345:SPS:J15.1.XRDS.TOLK
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	104.3018	GEN527883 1-CUNNINGHAM GEN #3 22 KV
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10328	104.2343	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10323	104.1816	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10323	104.1787	P12:345:SPS:J14.1.EDDY.XRDS
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10245	104.1328	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10278	104.1231	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10278	104.1231	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10245	104.0986	P12:230:SPS:K37.1.TOLK.LAMB
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10650	104.0626	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10317	103.9156	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10317	103.9156	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10328	103.8721	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10245	103.8362	LAMB COUNTY INTERCHANGE (WH_ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10245	103.8362	LAMB COUNTY INTERCHANGE (WH_ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10284	103.7633	LUBBOCK SOUTH INTERCHANGE - SOUTH PLAINS REC-WOODROW INTERCHANGE 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	103.6645	GEN563102 1-G15075_3 0.5500
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10527	103.6601	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10527	103.6601	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	103.5007	TUCO INTERCHANGE 230/13.0KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10323	103.4971	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10323	103.4971	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	103.4286	GEN563132 1-G15078_3 0.3570
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09505	103.3805	GEN527166 1-MUSTANG_6 118.000
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	103.3383	GEN587113 1-G16-015-GEN10.4180
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10385	103.3085	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10397	103.2661	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10397	103.2661	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10328	103.1583	P12:115:SPS:W54.1.KISER.KRESS
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10916	103.1556	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10916	103.1556	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10747	103.1243	NEWHART 230 - PLANT X STATION 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10650	103.0922	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10328	103.0555	KISER 3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10650	103.0419	P12:115:SPS:V62.1.CRLSLE.INDANA
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10347	103.0089	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10347	103.0089	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10379	102.8354	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10517	102.8198	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10517	102.8198	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	102.6426	GEN526678 1-CIRRUS_WND 10.6900
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10385	102.5845	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10475	102.3631	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10634	102.3262	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10362	102.1963	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10527	102.0461	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10527	102.0461	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09716	101.8753	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09716	101.873	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09716	101.8713	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09716	101.8713	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09505	101.7036	GEN527903 1-HOBBS PLANT #3 (ST)
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10311	101.6562	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10311	101.6562	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10449	101.1523	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10284	100.8227	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10284	100.8227	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	100.6997	GEN525844 1-ELK_1 118.000
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	100.6435	BASE CASE
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	100.5015	GEN525845 1-ELK_2 1 18.000
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10397	100.1411	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09942	100.1001	G14-074T 345.00 - OKLAUNION 345KV CKT 1
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10603	100	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10449	99.9	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10158	99.8	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10397	99.6	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09959	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09959	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10603	99.5	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10069	99.5	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10069	99.5	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10069	99.5	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09505	99.4	GEN527901 1-HOBBS PLANT #1 (CT)
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99.4	GEN562762 1-G15033_3 0.6900
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10107	99.4	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10107	99.4	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10107	99.4	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10107	99.4	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09700	99.3	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10328	99.3	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10328	99.3	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99.3	GEN300001 1-THOMAS HILL UNIT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99.3	GEN300017 1-1G2GPDEL 18.000
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99.3	GEN511938 1-OEC STEAM # 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99.3	GEN511941 1-OEC STEAM # 2
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99.3	GEN645041 1-CASS COUNTY 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10225	99.3	P12:115:SPS:V56.1.COCHRAN.SUNDWN
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10397	99.2	P12:115:SPS:T83.1.SP-FKFD.ALLEN
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99.2	GEN300016 1-1G1GPDEL 18.000
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99.2	GEN549893 2-SOUTHWEST 2
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99.2	GEN562026 1-G11_019_3 0.6900
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99.2	GEN563162 1-G15081_3 0.6900
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99.2	GEN563173 1-G15082_3 0.6900
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99.2	GEN659407 1-ANTELPHILLSW0.6900
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99.1	GEN547649 1-ASBURY UNIT #1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10339	99	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10339	99	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99	GEN513602 1-GRECSTG_1 17.500
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99	GEN520947 1-HUGO1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99	GEN530690 1-PRWINDG1 0.6900
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99	GEN562694 1-G15_016_3 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99	GEN563082 1-G15073_3 0.6900
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99	GEN563232 1-G15089_3 0.6900
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99	GEN587033 1-G16-004-GEN10.6900
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99	GEN587084 1-G16-012-GEN10.6900
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99	GEN587213 1-G16-032-GEN10.6900
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10270	99	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10196	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10196	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
3	16WP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.11286	103.1998	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.11286	103.1998	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_041	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.04209	108.7718	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_041	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.04209	108.7718	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_041	-	Non-Converged Contingency	987.2	1082.8	0.24801	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	16WP	G16_041	-	Non-Converged Contingency	1195.0	1195.0	0.12536	-	GEN525561 1-TOLK GEN #1 24 KV
3	16WP	G16_041	-	Non-Converged Contingency	859.0	956.0	0.07467	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
3	16WP	G16_041	-	Non-Converged Contingency	560.0	560.0	0.07467	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	20L	G16_041	-	Non-Converged Contingency	0.0	0.0	0.42392	-	P12:345:SPS:J07.1.FINN.HITCH
3	20L	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.22469	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.22469	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.19923	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.19923	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.19923	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_041	-	Non-Converged Contingency	956.09	1051.7	0.19923	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20WP	G16_041	-	Non-Converged Contingency	987.16	1082.77	0.23876	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_041	-	Non-Converged Contingency	0.0	0.0	0.21151	-	P12:345:SPS:J02.1.TOLK.EDDY
3	25SP	G16_041	-	Non-Converged Contingency	478.0	502.0	0.10971	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_041	-	Non-Converged Contingency	343.79	343.79	0.10270	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_041	-	Non-Converged Contingency	478.0	502.0	0.07422	-	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_041	-	Non-Converged Contingency	0.0	0.0	0.05177	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
3	25SP	G16_041	-	Non-Converged Contingency	0.0	0.0	0.03929	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G16_041	-	Non-Converged Contingency	0.0	0.0	0.03149	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_041	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.14182	109.7172	BASE CASE
3	17G	G16_041	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.14406	104.9495	BASE CASE
3	25SP	G16_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03715	104.5971	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	25SP	G16_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03715	104.5971	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	25SP	G16_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03089	104.0551	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03089	104.0551	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
3	17G	G16_041	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.03393	119.9794	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G16_041	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.03393	119.9794	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G16_041	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.03393	115.1123	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	17G	G16_041	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.03393	115.1123	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_041	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.03160	108.7819	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_041	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.03160	108.7819	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_041	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.03160	103.7748	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_041	TO->FROM	WALKEMEYER - WALKTAP3 115.00 115KV CKT 1	280.9	303.8	0.03160	103.7748	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	17G	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03393	125.7845	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03393	125.7845	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03393	125.5571	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03393	125.5571	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	17G	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03393	120.5936	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	17G	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03393	120.5936	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	17G	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03393	120.5316	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	17G	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03393	120.5316	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03160	113.3155	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03160	113.3155	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03160	113.298	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03160	113.298	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03160	108.9672	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03160	108.9672	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03160	108.8001	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_041	FROM->TO	WALKTAP7 345.00 (WALKE345) 345/115/13.8KV TRANSFORMER CKT 1	280.0	280.0	0.03160	108.8001	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
4	25SP	G16_041	TO->FROM	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.03242	113.9114	BASE CASE
4	17G	G16_041	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.03849	125.1536	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
4	17G	G16_041	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.03849	125.1536	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.03380	115.7161	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.11307	111.1386	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.11307	111.1386	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.07027	104.8629	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.07027	104.8629	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.06557	100.4992	P12:345:SPS:J15.1.XRDS.TOLK

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.06505	99.6	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.06505	99.6	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05340	158.0601	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05340	158.0601	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05340	146.9037	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05340	146.9037	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04562	129.3926	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04562	127.6233	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04562	126.8354	P12:115:SPS:V15.1.TUCO.INDANA
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04562	126.5465	INDIANA SUB - STANTON SUB 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03946	126.2293	P12:345:SPS:J15.1.XRDS.TOLK
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03968	125.7471	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03968	125.7471	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04562	125.1727	P12:115:SPS:V15.1.TUCO.INDANA
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	124.9986	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	124.9986	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	124.9865	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	124.986	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04562	124.8982	INDIANA SUB - STANTON SUB 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	123.3265	GEN527166 1-MUSTANG_6 118.000
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04562	122.4859	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	121.6261	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	121.6261	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	121.6194	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	121.6192	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04562	120.9798	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04562	120.7683	P12:115:SPS:V62.1.CRLSLE.INDANA
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04562	120.5913	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	120.5822	GEN527903 1-HOBBS PLANT #3 (ST)
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04053	120.0797	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03968	119.9526	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03968	119.9526	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03946	119.5401	P12:345:SPS:J15.1.XRDS.TOLK
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04562	119.3457	P12:115:SPS:V62.1.CRLSLE.INDANA
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04562	119.1748	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03917	118.5597	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03917	118.5585	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03917	118.5585	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04053	117.8348	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	117.6804	GEN527166 1-MUSTANG_6 118.000
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04911	117.1264	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04911	117.1264	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	116.9833	GEN527901 1-HOBBS PLANT #1 (CT)
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	116.7711	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03948	116.3344	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03948	116.3344	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	116.0466	GEN527903 1-HOBBS PLANT #3 (ST)
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03930	115.9251	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03930	115.9251	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04053	115.8466	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	115.7496	GEN527902 1-HOBBS PLANT #2 (CT)
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	115.7132	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04053	114.5707	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03948	114.3815	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03948	114.3815	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03917	114.3595	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03917	114.3587	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03917	114.3587	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03777	114.2874	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03777	114.2874	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04911	114.2252	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04911	114.2252	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	114.1987	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	114.1987	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03930	113.9713	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03930	113.9713	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	113.7373	GEN527901 1-HOBBS PLANT #1 (CT)
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03762	113.6844	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03762	113.6844	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04022	113.5823	NEWHART 230 - PLANT X STATION 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03749	113.5789	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03941	113.4332	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03941	113.4332	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04689	113.3549	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04689	113.3549	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03769	113.2177	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03769	113.2177	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03810	113.1855	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	113.0394	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	112.9596	GEN527902 1-HOBBS PLANT #2 (CT)
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	112.8823	GEN563132 1-G15078_3 0.3570
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03892	112.8249	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03789	112.7339	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03661	112.6653	P12:115:LCEC:W56.1.HOBBG.LE-LVN
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	112.6372	GEN562812 1-G15040_3 0.3570
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03653	112.5461	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	112.4725	GEN587423 1-G16-062-GEN10.6900
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03777	112.3925	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03777	112.3925	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03493	112.2674	G14-074T 345.00 - OKLAUNION 345KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	112.2212	GEN563102 1-G15075_3 0.5500
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	112.1325	GEN587393 1-G16-058-GEN10.5500
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03767	112.0983	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03767	112.0983	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03892	112.0959	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03777	111.5554	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03777	111.5554	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03762	111.4844	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03762	111.4844	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04022	111.4368	NEWHART 230 - PLANT X STATION 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03941	111.3421	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03941	111.3421	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04689	111.2883	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04689	111.2883	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03769	111.1008	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03769	111.1008	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03810	110.9434	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03892	110.7345	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	110.6713	GEN563132 1-G15078_3 0.3570
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	110.4712	GEN562812 1-G15040_3 0.3570
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03789	110.444	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	110.3599	GEN587423 1-G16-062-GEN10.6900
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03653	110.3391	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	110.2981	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	110.2981	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03493	110.2782	G14-074T 345.00 - OKLAUNION 345KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03777	110.187	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03777	110.187	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	110.1706	2074-CARLISLE INTERCHANGE
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	110.1706	BASE CASE
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	110.1347	GEN563102 1-G15075_3 0.5500
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03892	110.0609	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03661	110.0021	P12:115:LCEC:W56.1.HOBBG.LE-LVN
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	108.3525	GEN640009 1-COOPER NUCLEAR STATION
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	108.2095	BASE CASE
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03661	108.1191	P12:115:SPS:V80.1.DC_STH.LE-WAIT
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03676	107.9703	P12:115:SPS:V49.1.YOAKUM.SHLCO2
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03693	107.8668	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03693	107.8655	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	107.1084	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03773	106.8675	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03661	106.3499	P12:115:SPS:V80.1.DC_STH.LE-WAIT
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03676	106.2584	P12:115:SPS:V49.1.YOAKUM.SHLCO2
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03693	105.8821	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03693	105.8809	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03718	105.8647	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	105.3287	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03773	104.9243	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03718	104.5242	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03718	103.8036	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03718	103.71	P12:115:SPS:T83.1.SP-FKFD.ALLEN
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03718	102.6091	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03718	102.5416	P12:115:SPS:T83.1.SP-FKFD.ALLEN
4	17SP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03955	101.9618	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03718	100.9968	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03718	100.9968	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
4	17SP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03955	100.4333	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03718	100	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
4	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03718	100	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11938	124.4426	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10680	115.2096	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10680	115.2096	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10561	112.7825	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10561	112.7825	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10561	112.7825	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10561	112.7825	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	111.4277	GEN526332 1-JONES GEN #2 21 KV
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	111.4262	GEN526331 1-JONES GEN #1 22 KV
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11148	111.1872	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11148	111.1872	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10587	110.6166	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10587	110.6166	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10652	107.3755	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10652	107.3755	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10666	107.2994	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10666	106.0503	P12:115:SPS:V15.1.TUCO.INDANA
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10666	106.0286	INDIANA SUB - STANTON SUB 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10413	105.9426	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10413	105.9426	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11129	105.5518	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11129	105.5518	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	105.1919	GEN527884 1-CUNNINGHAM GEN #4 22 KV
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10368	104.7565	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10368	104.7565	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	104.7227	GEN563142 1-G15079_3 0.5500
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	104.7227	GEN563151 1-G15080_2 0.5500
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10328	104.701	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10328	104.701	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10171	104.4387	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10421	104.3096	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10344	104.1763	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10339	104.1716	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	104.169	GEN527883 1-CUNNINGHAM GEN #3 22 KV
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10339	104.1682	P12:345:SPS:J14.1.EDDY.XRDS
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10262	104.0759	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10666	104.0569	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10262	104.0503	P12:230:SPS:K37.1.TOLK.LAMB
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10296	104.0486	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10296	104.0486	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10334	103.8472	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10334	103.8472	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10344	103.8112	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10262	103.7811	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10262	103.7811	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10300	103.7042	LUBBOCK SOUTH INTERCHANGE - SOUTH PLAINS REC-WOODROW INTERCHANGE 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10542	103.6116	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10542	103.6116	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	103.61	GEN563102 1-G15075_3 0.5500
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09530	103.4791	GEN527166 1-MUSTANG_6 118.000
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	103.4413	TUCO INTERCHANGE 230/13.0KV TRANSFORMER CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10339	103.4247	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10339	103.4247	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	103.3748	GEN563132 1-G15078_3 0.3570
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10401	103.237	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	103.2128	GEN587113 1-G16-015-GEN10.4180
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10413	103.2003	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10413	103.2003	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10372	103.1719	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10372	103.1719	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10344	103.1311	P12:115:SPS:W54.1.KISER.KRESS

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10932	103.0824	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10932	103.0824	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10762	103.063	NEWHART 230 - PLANT X STATION 230KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10666	103.0516	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10344	102.9902	KISER 3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10666	102.9728	P12:115:SPS:V62.1.CRLSLE.INDANA
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10533	102.7825	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10533	102.7825	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10395	102.7478	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	102.5867	GEN526678 1-CIRRUS_WND 10.6900
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10401	102.5168	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10491	102.2923	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10649	102.283	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10380	102.1196	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09741	102.029	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09741	102.0268	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09741	102.025	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09741	102.025	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10542	102.0027	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10542	102.0027	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09530	101.8062	GEN527903 1-HOBBS PLANT #3 (ST)
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10328	101.583	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10328	101.583	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10473	101.2908	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10300	100.8241	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10300	100.8241	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	100.6863	GEN525844 1-ELK_1 118.000
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	100.5854	BASE CASE
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	100.5324	GEN525845 1-ELK_2 1 18.000
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10629	100.1603	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10413	100.122	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10473	100.0517	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09952	100.0499	G14-074T 345.00 - OKLAUNION 345KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10174	99.8	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10629	99.6	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10093	99.6	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10093	99.6	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10093	99.6	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09974	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09974	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09530	99.5	GEN527901 1-HOBBS PLANT #1 (CT)
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10413	99.5	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09726	99.4	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	99.3	GEN562762 1-G15033_3 0.6900
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10241	99.3	P12:115:SPS:V56.1.COCHRAN.SUNDWN
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10122	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10122	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10122	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10122	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10413	99.2	P12:115:SPS:T83.1.SP-FKFD.ALLEN
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10344	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10344	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	99.2	GEN300001 1-THOMAS HILL UNIT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	99.2	GEN300016 1-1G1GPDEL 18.000
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	99.2	GEN300017 1-1G2GPDEL 18.000
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	99.2	GEN511938 1-OEC STEAM # 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	99.2	GEN511941 1-OEC STEAM # 2
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	99.2	GEN562023 1-G11_020_3 0.6900
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	99.2	GEN645041 1-CASS COUNTY 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10629	99.1	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09489	99.1	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
4	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09489	99.1	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	99.1	GEN549893 2-SOUTHWEST 2
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	99.1	GEN562026 1-G11_019_3 0.6900
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	99.1	GEN563162 1-G15081_3 0.6900
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	99.1	GEN659407 1-ANTELPHILLSW0.6900
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	99	GEN513602 1-GRECSTG_1 17.500
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	99	GEN547649 1-ASBURY UNIT #1
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	99	GEN563173 1-G15082_3 0.6900
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10213	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10213	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
4	16WP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.11307	103.5221	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.11307	103.5221	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_041	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.04218	108.8773	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_041	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.04218	108.8773	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_041	-	Non-Converged Contingency	1195.0	1195.0	0.12012	-	GEN525561 1-TOLK GEN #1 24 KV
4	16WP	G16_041	-	Non-Converged Contingency	859.0	956.0	0.07464	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
4	16WP	G16_041	-	Non-Converged Contingency	560.0	560.0	0.07464	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G16_041	-	Non-Converged Contingency	0.0	0.0	0.21138	-	P12:345:SPS:J02.1.TOLK.EDDY
4	25SP	G16_041	-	Non-Converged Contingency	478.0	502.0	0.10900	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_041	-	Non-Converged Contingency	343.79	343.79	0.10287	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_041	-	Non-Converged Contingency	478.0	502.0	0.07440	-	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_041	-	Non-Converged Contingency	0.0	0.0	0.05178	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
4	25SP	G16_041	-	Non-Converged Contingency	0.0	0.0	0.03929	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G16_041	-	Non-Converged Contingency	0.0	0.0	0.03149	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_041	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.13246	108.6242	BASE CASE
4	17G	G16_041	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.13514	102.851	BASE CASE
4	25SP	G16_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03724	104.4944	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	25SP	G16_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03724	104.4944	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	25SP	G16_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03093	104.0261	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
4	25SP	G16_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03093	104.0261	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
5	17G	G16_041	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.03849	125.1536	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.11307	111.1386	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.07027	104.8629	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.06557	100.4992	P12:345:SPS:J15.1.XRDS.TOLK
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.06505	99.6	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05340	158.0601	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05340	146.9036	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04562	126.8354	P12:115:SPS:V15.1.TUCO.INDANA
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03946	126.2293	P12:345:SPS:J15.1.XRDS.TOLK
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03968	125.7471	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04562	125.1727	P12:115:SPS:V15.1.TUCO.INDANA
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	124.9986	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	124.986	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	121.6261	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03830	121.6192	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04562	120.7683	P12:115:SPS:V62.1.CRLSLE.INDANA
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03968	119.9526	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03946	119.5401	P12:345:SPS:J15.1.XRDS.TOLK
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04562	119.3457	P12:115:SPS:V62.1.CRLSLE.INDANA
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03917	118.5585	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04911	117.1264	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03948	116.3344	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03930	115.9251	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03948	114.3815	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03917	114.3587	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03777	114.2874	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04911	114.2252	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	114.1987	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03930	113.9713	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03762	113.6844	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03941	113.4332	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04689	113.3549	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03769	113.2177	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03661	112.6653	P12:115:LCEC:W56.1.HOBBG.LE-LVN
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03777	112.3925	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03767	112.0983	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03777	111.5554	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03762	111.4844	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03941	111.3421	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04689	111.2883	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03769	111.1008	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03812	110.2981	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03777	110.187	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	110.1706	2074-CARLISLE INTERCHANGE
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	110.1706	BASE CASE
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03661	110.0021	P12:115:LCEC:W56.1.HOBBG.LE-LVN
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03675	108.2095	BASE CASE
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03661	108.1191	P12:115:SPS:V80.1.DC_STH.LE-WAIT
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03676	107.9703	P12:115:SPS:V49.1.YOAKUM.SHLCO2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03693	107.8655	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03661	106.3499	P12:115:SPS:V80.1.DC_STH.LE-WAIT
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03676	106.2584	P12:115:SPS:V49.1.YOAKUM.SHLCO2
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03693	105.8809	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03718	103.71	P12:115:SPS:T83.1.SP-FKFD.ALLEN
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03718	102.5416	P12:115:SPS:T83.1.SP-FKFD.ALLEN
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03718	100.9968	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
5	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03718	100	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10680	115.2096	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10561	112.7825	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10561	112.7825	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11148	111.1872	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10587	110.6166	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10652	107.3755	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10666	106.0503	P12:115:SPS:V15.1.TUCO.INDANA
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10413	105.9426	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11129	105.5518	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10368	104.7565	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10328	104.701	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
5	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10171	104.4387	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10421	104.3096	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10339	104.1682	P12:345:SPS:J14.1.EDDY.XRDS
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10262	104.0503	P12:230:SPS:K37.1.TOLK.LAMB
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10296	104.0486	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10334	103.8472	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10262	103.7811	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10542	103.6115	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10339	103.4247	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10413	103.2003	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
5	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10372	103.1719	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10344	103.1311	P12:115:SPS:W54.1.KISER.KRESS
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10932	103.0824	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10666	102.9728	P12:115:SPS:V62.1.CRLSLE.INDANA
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10533	102.7825	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09741	102.0268	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09741	102.025	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10542	102.0028	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10328	101.5831	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10300	100.8241	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10287	100.5857	BASE CASE
5	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.10093	99.6	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10241	99.3	P12:115:SPS:V56.1.COCHRAN.SUNDWN
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10122	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10122	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10413	99.2	P12:115:SPS:T83.1.SP-FKFD.ALLEN
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10344	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09489	99.1	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
5	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10213	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
5	16WP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.11307	103.5221	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_041	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.04218	108.8773	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_041	-	Non-Converged Contingency	0.0	0.0	0.21138	-	P12:345:SPS:J02.1.TOLK.EDDY
5	25SP	G16_041	-	Non-Converged Contingency	478.0	502.0	0.10900	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
5	25SP	G16_041	-	Non-Converged Contingency	343.79	343.79	0.10287	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_041	-	Non-Converged Contingency	478.0	502.0	0.07440	-	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_041	-	Non-Converged Contingency	0.0	0.0	0.05178	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
5	25SP	G16_041	-	Non-Converged Contingency	0.0	0.0	0.03929	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G16_041	-	Non-Converged Contingency	0.0	0.0	0.03149	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_041	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.13246	108.6241	BASE CASE
5	17G	G16_041	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.13514	102.851	BASE CASE
5	25SP	G16_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03724	104.4944	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	25SP	G16_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03093	104.0261	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
6	25SP	G16_041	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	160.0	160.0	0.04451	106.3405	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_041	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	160.0	160.0	0.04451	106.3405	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_041	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.03950	102.8122	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_041	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.03950	102.8122	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_041	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.03950	99.5	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_041	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.03950	99.5	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_041	FROM->TO	G15079_T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	318.7	350.57	0.06902	100.8357	HOBBS - YOAKUM_345 345.00 345KV CKT 1
6	16WP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.11530	106.6113	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	16WP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.11530	106.6113	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
6	16WP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.07233	103.097	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.07233	103.097	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.06252	101.6558	GEN525561 1-TOLK GEN #1 24 KV
6	16WP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.06770	99.3	P12:345:SPS:J15.1.XRDS.TOLK
6	25SP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	159.0	175.0	0.03497	99	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	16WP	G16_041	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.04191	108.9068	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G16_041	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.04191	108.9068	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G16_041	-	Non-Converged Contingency	859.0	956.0	0.07466	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
6	16WP	G16_041	-	Non-Converged Contingency	560.0	560.0	0.07466	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
6	25SP	G16_041	-	Non-Converged Contingency	0.0	0.0	0.21139	-	P12:345:SPS:J02.1.TOLK.EDDY
6	16WP	G16_041	FROM->TO	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1	165.0	180.0	0.11530	99.9	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	16WP	G16_041	FROM->TO	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1	165.0	180.0	0.11530	99.9	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	16WP	G16_041	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06925	101.0832	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
6	16WP	G16_041	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06925	101.0832	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
6	25SP	G16_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.03425	100.78	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	25SP	G16_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250.0	288.0	0.03425	100.78	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	25SP	G16_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.03425	100.78	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	25SP	G16_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250.0	288.0	0.03425	100.78	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_043	-	Non-Converged Contingency	0.0	0.0	0.05313	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	25SP	G16_043	-	Non-Converged Contingency	956.09	1051.7	0.04863	-	GEN525561 1-TOLK GEN #1 24 KV
0	25SP	G16_043	-	Non-Converged Contingency	956.09	1051.7	0.04863	-	GEN525562 1-TOLK GEN #2 24 KV
2	16WP	G16_043	-	Non-Converged Contingency	0.0	0.0	0.05022	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	25SP	G16_043	-	Non-Converged Contingency	956.09	1051.7	0.04864	-	GEN525561 1-TOLK GEN #1 24 KV
0	20SP	G16_044	TO->FROM	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1	341.8	341.8	0.04412	103.0654	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	25SP	G16_044	TO->FROM	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1	341.8	341.8	0.04411	101.8602	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20L	G16_044	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03602	103.7129	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20L	G16_044	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03602	103.6279	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20L	G16_044	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03602	103.6233	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	17SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.04403	112.4929	BASE CASE
0	17SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.04403	112.4918	BASE CASE
0	25SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.04152	107.2478	BASE CASE
0	20SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.04155	102.072	BASE CASE
0	20WP	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111.0	111.0	0.06223	116.4198	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	20L	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111.0	111.0	0.06589	107.0227	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	20L	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111.0	111.0	0.06589	101.0569	G09_001IST 345.00 - GROTON 345KV CKT 1
0	20WP	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111.0	111.0	0.06223	109.1062	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	20L	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111.0	111.0	0.06589	103.8938	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	16WP	G16_044	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.02950	110.1857	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_044	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.02950	106.7465	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	108.4948	BASE CASE
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	108.494	BASE CASE
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26312	105.7759	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26312	104.5818	G13_001IST 115.00 - SUMMIT 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26584	103.6445	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26584	103.5979	Z810X2
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.34324	103.5196	BASE CASE
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.34324	103.5186	BASE CASE
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26584	102.9118	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26904	102.4869	BRISTOL - GROTON 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25770	102.1422	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26904	102.1048	BRISTOL - SUMMIT 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25770	101.5283	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25770	101.3753	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.35361	101.1693	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.27130	101.0749	GROTON - REDFIELD 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.27130	101.0229	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.34190	100.6642	CARPENTER - WATERTOWN 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26237	100.5038	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26237	100.5036	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	100.4606	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.27059	100.4461	HURON - REDFIELD 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25882	100.4102	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25882	100.4102	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	100.2476	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	100.2476	P12:230:UMZW:# 158 #: MH IN ND.
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	100.1719	MOOREHEAD - MORRIS 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25723	100.1572	PRAIRIE - RAMSEY 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	100.0723	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	100.062	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	100.062	J460 345.00 345/34.5KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25717	100	JAMES TOWN - WEBER 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.9	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.9	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25717	99.9	BISMARK - WEBER 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25710	99.9	G15088_T 345.00 - MOORE 345KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25876	99.8	BISMARK - WASHBURN 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25876	99.8	LELAND OLDS - WASHBURN 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25876	99.8	P12:230:UMZB:# 171 #: WB IN ND.
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25876	99.8	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25727	99.8	ELM CREEK - MONTICELLO 345KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.8	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26241	99.7	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25724	99.7	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25724	99.7	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25724	99.7	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25724	99.7	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25724	99.7	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.7	GEN337652 1-WHITE BLUFF UNIT #1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.7	GEN337653 1-WHITE BLUFF UNIT #2
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.7	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.7	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.7	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25715	99.7	GRANITE FALLS - MORRIS 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25715	99.7	GRANITE FALLS - MORRIS 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25704	99.7	BISMARK - HILKEN 4 230.00 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.35361	99.6	G13_001IST 115.00 - SUMMIT 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26237	99.6	REDFIELD - WEST PARK B TAP 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25957	99.6	GLENHAM - WHITLOK 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25957	99.6	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25734	99.6	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25730	99.6	AUDUBON - HUBBARD 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25729	99.6	GRAND FORKS - PICKERT 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25728	99.6	MENNO JCT - UTICA 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.6	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.6	ANSON 115/17.5KV TRANSFORMER CKT 4
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.6	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.6	GEN338146 1-INDEPENDENCE UNIT #2
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25716	99.6	FARGO - MOOREHEAD 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25677	99.6	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25677	99.6	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.27657	99.5	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25970	99.5	GLENHAM - L3 HAWDON 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25761	99.5	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25761	99.5	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25734	99.5	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25726	99.5	ELM CREEK - PARKERS LAKE 345KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.5	GEN300003 1-THOMAS HILL UNIT 3
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.5	GEN542962 2-IATAN UNIT #2
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.5	GEN636641 1-LOUISA UNIT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.5	GEN659353 1-DEERCREK CTG18.000
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.5	GEN659354 1-DEERCREK STG18.000
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25699	99.5	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25699	99.5	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25699	99.5	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25699	99.5	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25698	99.5	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25698	99.5	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25698	99.5	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25698	99.5	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25697	99.5	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25697	99.5	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25957	99.4	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25957	99.4	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25728	99.4	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.4	BROOKING COUNTY - J432 345.00 345KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.4	GEN344894 1-1LAB G1 20.000
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.4	GEN344895 2-1LAB G2 20.000
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.4	GEN344896 3-1LAB G3 20.000
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.4	GEN344897 4-1LAB G4 20.000
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.4	GEN501801 1-DOLET HILLS UNIT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.4	GEN542957 1-IATAN UNIT #1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.4	GEN587583 1-J432-GEN1 0.6900
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.4	GEN645011 1-NEBRASKA CITY 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.4	GEN645012 2-NEBRASKA CITY 2
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.4	J432 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.4	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.4	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.4	YANKEE 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.4	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25712	99.4	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26427	99.3	GROTON - ORDWAY 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25957	99.3	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25957	99.3	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25831	99.3	BELFIELD - CHARLIE CREEK 345KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25761	99.3	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25761	99.3	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25748	99.3	MONTICELLO - WAITE PARK 345KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25743	99.3	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25743	99.3	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25728	99.3	BALTA - HARVEY 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25725	99.3	AS KING - CHISAGO COUNTY 345KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.3	G09_001IST 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.3	G09_001IST 345.00 345/34.5KV TRANSFORMER CKT 2
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.3	GEN334440 1-SABINE UNIT 4
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.3	GEN336251 1-NINEMILE POINT UNIT#4
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.3	GEN336252 1-NINEMILE POINT UNIT#5
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.3	GEN336831 1-BAXTER WILSON SES
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.3	GEN337041 1-GERALD ANDRUS
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.3	GEN345670 1-1RUSH G1 18.000
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.3	GEN345671 2-1RUSH G2 18.000
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.3	GEN501812 1-RODEMACHER UNIT 2
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.3	GEN501813 1-RODEMACHER UNIT 3
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.3	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.3	GEN542951 5-HAWTHORN UNIT #5
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.3	GEN542955 1-LACYGNE UNIT #1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.3	GEN587153 1-G16-021-GEN10.6900
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.3	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25713	99.3	CLEARWATER - NELIGH 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25713	99.3	CLEARWATER - ONEILL 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25707	99.3	AXTELL - SWEETWATER 345KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.35996	99.2	BRISTOL - GROTON 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25957	99.2	OAHE - SULLEY BUTTE 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25806	99.2	BOWMAN - RHAME 4 230.00 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25787	99.2	LELAND OLDS - LOGAN 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25729	99.2	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25722	99.2	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.2	GEN300006 1-NEW MADRID UNIT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.2	GEN300007 1-NEW MADRID UNIT 2
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.2	GEN335206 1-NELSON UNIT 6
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.2	GEN509403 1-PIRKEY GENERATION
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.2	GEN509416 1-TURK GENERATION
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.2	GEN542956 2-LACYGNE UNIT #2
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.2	GEN563222 1-G15088_3 0.6900
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.2	GEN600045 4-ANSON
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.2	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.2	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.2	MEC115 - WILMARTH 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.2	MEC345 - WILMARTH 345KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.2	MEC345 345/19.5KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.2	MORANVILLE - ROSEAU 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25721	99.2	RICHER - ROSEAU 230KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.2	GRANT - MITCHELL 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.2	GRANT - MITCHELL 115KV CKT 1
0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26185	99	EDGELEY - JAMES TOWN 115KV CKT 1
0	20WP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120.0	121.0	0.04821	113.4785	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	20L	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120.0	121.0	0.04971	104.1245	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	16WP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120.0	121.0	0.05607	100.2122	G09_001IST 345.00 - GROTON 345KV CKT 1
0	20L	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120.0	121.0	0.04971	99.6	G09_001IST 345.00 - GROTON 345KV CKT 1
0	20L	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03602	118.5797	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20L	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03602	118.4195	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03602	118.4137	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03334	103.1064	BISON - HETINGER 230KV CKT 1
0	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03334	103.0404	BISON - MAURINE 230KV CKT 1
0	16WP	G16_044	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.03005	125.6308	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	16WP	G16_044	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.03005	125.4581	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	16WP	G16_044	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.03005	125.4569	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	16WP	G16_044	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.03005	124.8078	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	16WP	G16_044	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.03005	124.6343	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	16WP	G16_044	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.03005	124.633	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	25SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.04909	126.5608	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
0	25SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.04909	126.3515	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
0	25SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.04909	126.3232	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
0	20SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.04913	120.7802	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
0	20SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.04913	120.7239	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
0	20SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.04913	120.6758	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
0	20L	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06479	118.4068	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20L	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06479	118.4059	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	20L	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06479	117.8898	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20L	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06479	113.3394	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	20L	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06479	113.338	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20L	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06479	112.8864	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07258	109.7316	BASE CASE
0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07258	109.7313	BASE CASE
0	25SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07148	107.1967	BASE CASE
0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07258	105.7454	BASE CASE
0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07258	105.7451	BASE CASE
0	17G	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06947	104.5522	BASE CASE
0	25SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07148	103.7454	BASE CASE
0	20SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07122	103.5593	BASE CASE
0	17G	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06947	101.2968	BASE CASE
0	20SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07122	100.5691	BASE CASE
0	16WP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.92411	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	16WP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.46205	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	16WP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.46205	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	16WP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.34064	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	16WP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.34064	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	16WP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.27252	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	16WP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.23989	-	2810X2
0	16WP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.23989	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	16WP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.21421	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	16WP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.11995	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	16WP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.11995	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	16WP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.11995	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	16WP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.11995	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	16WP	G16_044	-	Non-Converged Contingency	478.0	526.0	0.07140	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	16WP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.07140	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	16WP	G16_044	-	Non-Converged Contingency	797.0	797.0	0.07140	-	BROADLAND - HURON 230KV CKT 1
0	16WP	G16_044	-	Non-Converged Contingency	400.0	400.0	0.07140	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.03935	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.92244	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.78778	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.49489	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.49489	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.46718	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.46122	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.46122	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.39389	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.39389	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.34123	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.34123	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.33340	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.27786	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.27471	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.27471	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	720.0	792.0	0.24744	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	17G	G16_044	-	Non-Converged Contingency	720.0	792.0	0.24744	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.23359	-	2810X2
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.23359	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.22420	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.22420	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.20840	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.20840	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	17G	G16_044	-	Non-Converged Contingency	720.0	792.0	0.16670	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	17G	G16_044	-	Non-Converged Contingency	720.0	792.0	0.16670	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	400.0	480.0	0.11999	-	GROTON 115KV SWITCHED SHUNT
0	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.11680	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.11680	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.11680	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.11680	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17G	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11210	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11210	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	17G	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11210	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11210	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.10333	-	2810X2
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.10333	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.06947	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	17G	G16_044	-	Non-Converged Contingency	478.0	526.0	0.06947	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.06947	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	17G	G16_044	-	Non-Converged Contingency	732.0	732.0	0.06947	-	BROADLAND - HURON 230KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	400.0	400.0	0.06947	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_044	-	Non-Converged Contingency	400.0	400.0	0.06947	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06521	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06521	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06222	-	FORBES - ROSEAU 500KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	1732.1	1905.3	0.06222	-	RIEL - ROSEAU 500KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06222	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06222	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	1793.0	1793.0	0.06204	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	705.0	705.0	0.05308	-	BUFFALO - JAMESTOWN 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	705.0	705.0	0.05276	-	CENTER - JAMESTOWN 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	720.0	792.0	0.05218	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.05167	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.05167	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.05167	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.05167	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17G	G16_044	-	Non-Converged Contingency	319.0	341.0	0.04428	-	NUNDRWD - WAYSIDE 230KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	319.0	385.0	0.04263	-	BISON - HETINGER 230KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	400.0	400.0	0.04263	-	BISON - MAURINE 230KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	409.0	450.0	0.03595	-	FORMAN - HANKINSON 230KV CKT 1
0	17G	G16_044	-	Non-Converged Contingency	335.0	429.4	0.03388	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.92452	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.46226	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.46226	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	20SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.35592	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	20SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.33603	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.33603	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.28487	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	20SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.24091	-	2810X2
0	20SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.24091	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.23728	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	20SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.23728	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	20SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.21366	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.21366	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	20SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.12046	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.12046	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.12046	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11864	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	20SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11864	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11864	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11864	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	20SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11864	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	20SP	G16_044	-	Non-Converged Contingency	478.0	526.0	0.07122	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.07122	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	20SP	G16_044	-	Non-Converged Contingency	732.0	732.0	0.07122	-	BROADLAND - HURON 230KV CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	400.0	400.0	0.07122	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	400.0	400.0	0.07122	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06510	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06510	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06108	-	FORBES - ROSEAU 500KV CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	1732.1	1905.3	0.06108	-	RIEL - ROSEAU 500KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06108	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06108	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	705.0	705.0	0.05327	-	CENTER - JAMESTOWN 345KV CKT 1
0	20SP	G16_044	-	Non-Converged Contingency	705.0	705.0	0.05324	-	BUFFALO - JAMESTOWN 345KV CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.92581	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	25SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.48186	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	25SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.46290	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.46290	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	25SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.36330	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	25SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.33681	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.33681	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.28592	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.24220	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	25SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.24220	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	25SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.24093	-	2810X2
0	25SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.24093	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	25SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.21444	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	25SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.21444	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	25SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.12110	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	25SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.12110	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.12110	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.12110	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	25SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.12110	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	25SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.12046	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	25SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.12046	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.12046	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.12046	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_044	-	Non-Converged Contingency	720.0	792.0	0.07664	-	SPLIT ROCK - WHITE 345KV CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.07148	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	25SP	G16_044	-	Non-Converged Contingency	478.0	526.0	0.07148	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.07148	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	25SP	G16_044	-	Non-Converged Contingency	732.0	732.0	0.07148	-	BROADLAND - HURON 230KV CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	400.0	400.0	0.07148	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	400.0	400.0	0.07148	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06584	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06584	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06167	-	FORBES - ROSEAU 500KV CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06167	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06167	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	720.0	792.0	0.05288	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	25SP	G16_044	-	Non-Converged Contingency	1800.0	1980.0	0.03140	-	488489510526345.00 - BSSOUTH3 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717.0	717.0	0.03597	118.8462	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717.0	717.0	0.03571	114.121	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717.0	717.0	0.03415	104.2828	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717.0	717.0	0.03415	102.5888	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717.0	717.0	0.03376	101.5413	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717.0	717.0	0.03597	117.8823	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717.0	717.0	0.03571	113.1943	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717.0	717.0	0.03415	103.5595	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717.0	717.0	0.03415	101.9172	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717.0	717.0	0.03376	100.9106	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	150.2033	BASE CASE
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	146.4509	BASE CASE
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08156	142.9483	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07508	142.8595	LETCHER - SIOUX FALLS 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08073	142.291	AURORA - BROOKINGS 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	141.6574	BASE CASE
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08073	141.5259	AURORA - FLANDRU 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07536	141.1086	HANLON - SIOUX FALLS 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08156	141.0543	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	140.5225	GEN600045 4-ANSON
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	140.3194	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	140.2154	GEN336153 1-WATERFORD UNIT#3
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07495	140.146	FT RANDAL - UTICA JCT 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07589	140.1448	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07589	139.946	BROOKINGS - WHITE 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07692	139.888	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07788	139.8802	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07687	139.7983	GRANITE FALLS - WILLMAR 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07556	139.7561	FT RANDAL - SIOUX CITY 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08387	139.6887	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	139.6727	GEN335831 1-RIVERBEND UNIT#1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08387	139.6384	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07852	139.4463	BISON - HETINGER 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08119	139.4314	AURORA - BROOKINGS 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	139.4023	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	139.3421	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	139.0916	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	139.0239	GEN640009 1-COOPER NUCLEAR STATION
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07503	138.9861	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.9577	GEN501801 1-DOLET HILLS UNIT1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07634	138.9453	G15088_T 345.00 - MOORE 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.9286	GEN337653 1-WHITE BLUFF UNIT #2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07788	138.8501	MITCHELL - MITCHELL NW 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.8484	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.8403	GEN338143 1-INDEPENDENCE UNIT #1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.8224	GEN344897 4-1LAB G4 20.000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.8196	GEN344894 1-1LAB G1 20.000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.8194	GEN344895 2-1LAB G2 20.000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.8193	GEN344896 3-1LAB G3 20.000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.8153	GEN336251 1-NINEMILE POINT UNIT#4
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.791	GEN336831 1-BAXTER WILSON SES
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.7698	GEN501813 1-RODEMACHER UNIT 3
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.7688	GEN587153 1-G16-021-GEN10.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.7428	GEN337041 1-GERALD ANDRUS
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.711	GEN345671 2-1RUSH G2 18.000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.7059	GEN345670 1-1RUSH G1 18.000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07622	138.6739	MCCOOL - MOORE 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.6623	GEN645012 2-NEBRASKA CITY 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.6516	GEN335206 1-NELSON UNIT 6
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07618	138.6142	GRAND ISLAND - MCCOOL 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.6138	GEN336191 1-LITTLE GYPSY UNIT#3
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.5976	GEN501812 1-RODEMACHER UNIT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.5924	GEN336252 1-NINEMILE POINT UNIT#5
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09465	138.5916	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07697	138.5605	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.5487	GEN645011 1-NEBRASKA CITY 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07791	138.5353	HANKINSON - WAHPETON 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07651	138.5213	AINSWORTH - VALENTINE 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07852	138.5079	BISON - MAURINE 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.495	GEN600020 2-ANGUS ANSON1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.4562	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.4559	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.4491	GEN334440 1-SABINE UNIT 4
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.4472	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.44	GEN338388 1-1PLUM PT U1 23.000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07673	138.4367	GRACEVT7 - MORRIS 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.4146	GEN600021 3-ANGUS ANSON2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07697	138.4043	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.3945	GEN336464 1-MICHOUD UNIT #3
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.3825	GEN335204 1-NELSON UNIT 4
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07719	138.3467	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07616	138.3415	GRANT - MITCHELL 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.3288	GEN334441 1-SABINE UNIT 5
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.3159	GEN336801 1-BAXTER WILSON UNIT #1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07955	138.291	GLENHAM - WHITLOK 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08073	138.2516	FLANDRU - SIOUX FALLS 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07662	138.2507	CANBY - GRANITE FALLS 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07955	138.207	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07601	138.1969	SIDNEY - STEGALL 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.1931	GEN335614 1-WILLOW GLENN UNIT#4
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.1839	GEN542962 2-IATAN UNIT #2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07955	138.1774	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07582	138.1683	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.1563	GEN334433 1-SABINE UNIT 3
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07955	138.1541	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07645	138.1214	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07971	138.1195	GLENHAM - L3 HAWDON 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.1153	GEN336222 1-LITTLE GYPSY UNIT#2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08119	138.0548	AURORA - FLANDRU 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07955	138.053	OAHE - SULLEY BUTTE 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	138.0278	GEN563232 1-G15089_3 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	138.0095	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.9907	GEN336151 1-WATERFORD UNIT#1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.9907	GEN336152 1-WATERFORD UNIT#2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07659	137.9335	GRAND FORKS - PICKERT 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.9288	GEN303007 1-1BC2 U2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.9249	WINNER - WITTEN 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.9204	GEN600149 W-J183 PROSEW10.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07736	137.9059	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07736	137.9059	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.9001	GEN600150 W-J183 PROSEW20.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.8974	GEN303006 1-1BC2 U1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07662	137.8656	FARGO - SHEYNNE 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	137.8652	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.8353	GEN303008 1-1BC2 U3
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.8233	GEN542957 1-IATAN UNIT #1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.821	GEN336170 1-GULF OXY U4
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07640	137.8064	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07640	137.8041	AXTELL - SWEETWATER 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07511	137.803	UTICA JCT - VFODNES 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07622	137.794	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.7827	GEN563222 1-G15088_3 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	137.7462	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07622	137.7359	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07622	137.7357	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.7286	GEN542951 5-HAWTHORN UNIT #5
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07839	137.709	HURON - WOONSOCKET 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07641	137.703	CLEARWATER - ONEILL 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07633	137.6707	RASMUSN - UTICA JCT 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07622	137.6642	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07585	137.6569	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07687	137.6536	MT VERN - STORLA 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07380	137.6344	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07659	137.6331	JAMES TOWN - PICKERT 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.6246	GEN501811 1-RODEMACHER UNIT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07641	137.6147	CLEARWATER - NELIGH 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07585	137.6122	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.5832	GEN542955 1-LACYGNE UNIT #1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.5534	GEN345765 H-1SIOUX 2 18.000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.5367	GEN334071 1-LEWIS CREEK 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.533	GREGORY - WINNER 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.5317	GEN334070 1-LEWIS CREEK 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.53	GEN562003 1-G11_027_3 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07643	137.5016	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07483	137.4955	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07657	137.4942	FT RANDAL - WHITE SWAN 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07736	137.4922	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07648	137.4853	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	137.4822	GEN600045 4-ANSON
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.458	GEN337766 1-TRACTEBEL UNIT S1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07657	137.4472	TYNDALL - WHITE SWAN 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.4315	GEN336221 1-LITTLE GYPSY UNIT#1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.4301	GEN345756 H-1SIOUX 1 18.000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07634	137.4227	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07634	137.4227	FT THOMPSON - OAHE 230KV CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.4185	GEN501910 1-ACADIA UNIT ST1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07650	137.4183	BASSETT 7115.00 - STUART 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.3852	GEN345832 1-1TS G1 13.800
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.3849	GEN345841 2-1TS G2 13.800
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07739	137.3805	BOWMAN - RHAME 4 230.00 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07633	137.3746	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07633	137.3746	FT THOMPSON - OAHE 230KV CKT 4
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07710	137.37	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07839	137.3643	STORLA - WOONSOCKET 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.3642	GEN337757 1-DUKE HOTSPRINGS STG1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.3591	GEN336446 1-MICHOUD UNIT #2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.3341	GEN334431 1-SABINE UNIT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.334	GEN334432 1-SABINE UNIT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07832	137.3168	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.3151	GEN337764 1-TRACTEBEL UNIT C1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.3151	GEN337765 1-TRACTEBEL UNIT C2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.2862	GEN336242 1-1NMIL ST1 18.000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07719	137.2848	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.2667	GEN501823 1-TECHE UNIT 3
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07719	137.2383	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07651	137.2346	ONEILL - SPENCER 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08006	137.2292	GROTON - REDFIELD 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07687	137.1957	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07651	137.173	FT RANDAL - SPENCER 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.1405	GEN659116 1-SPIRIT MOUND UNIT1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.1373	GEN587353 1-G16-050-GEN10.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07660	137.0637	PLEZIOZO1ARC
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	137.0508	GEN659117 2-SPIRIT MOUND UNIT2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07451	137.0483	FT THOMPSON - LETCHER 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07672	137.0173	MENNO JCT - TRIPP JCT 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08398	136.978	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07658	136.9385	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07611	136.9219	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	136.7807	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	136.7048	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	136.6639	GEN660016 1-B_H WIND 0.7000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07611	136.6401	G13_001IST 115.00 - SUMMIT 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07659	136.5937	MOOREHEAD - MORRIS 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	136.4544	GEN600046 1-MECST
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	136.4072	GEN600047 1-MECCT1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07639	136.3365	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08872	136.3	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08198	136.2928	FT THOMPSON - HURON 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08198	136.2928	FT THOMPSON - HURON 230KV CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07652	136.2478	SUB 1226 - TEKAMAH 161KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07731	136.2398	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07661	136.1745	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	136.1707	GEN615031 1-PLEASANT VALLEY
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	136.1672	GEN615032 2-PLEASANT VALLEY
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	136.1613	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07645	136.1609	DIXONCO 230.00 - HOSKINS 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	136.1598	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07647	136.1219	RAUN - TEKAMAH 161KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07660	136.1051	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07858	136.1033	BISON - MAURINE 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07659	136.1031	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	136.0643	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	136.0506	GEN619954 1-HUTCHINSON
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.9921	GEN600125 2-FEP ST G 13.800
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07652	135.9816	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07626	135.9654	SIOUX CITY - TWIN CHURCH 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.9649	GEN600130 W-G586 - CWN 10.6000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.9588	GEN600131 W-G586 - CWN 20.6000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07817	135.9586	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07817	135.9586	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.9346	GEN652004 1-G13_001IS_3 0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	135.9275	GEN335206 1-NELSON UNIT 6
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.9119	COOPER - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.8878	GEN600013 3-BLACK DOG GEN 3
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	135.8586	GEN335204 1-NELSON UNIT 4
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.8137	GEN603185 1-FIBROMINN GENERATION
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.7857	GEN659289 1-DAYCNTYWND W0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.7832	GEN563312 1-G15097_3 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07730	135.7796	HESKETT - WISHEK 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07626	135.7771	GRANT - MITCHELL 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07656	135.7617	COOPER - FAIRPORT 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07918	135.7567	BUFFALO RIDGE - YANKEE 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.7502	GEN600018 S-LS POWER STEAM
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.7477	GEN659031 1-G12_014IS_4 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.7245	GEN600050 1-FEP
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07616	135.7198	HOSKINS - SHELL CREEK 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	135.6897	GEN587153 1-G16-021-GEN10.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07657	135.6782	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07791	135.6548	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	135.6205	GEN501812 1-RODEMACHER UNIT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07790	135.6154	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.6047	GEN600012 2-BLACK DOG GEN 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07522	135.5941	UTICA JCT - VFODNES 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07966	135.5929	GLENHAM - WHITLOK 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09476	135.5671	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.5508	GEN600056 W-BUFFALO RIDGE WIND GEN
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16364	135.5451	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.5352	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07656	135.5343	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07656	135.5342	DENISON - EXIRA 161KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16364	135.461	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.4593	GEN652414 4-FT PECK
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.4593	GEN652415 5-FT PECK
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	135.4475	GEN334441 1-SABINE UNIT 5
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16364	135.4253	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07697	135.3943	MT VERN - STORLA 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.3725	GEN600063 1-COLVILLE GEN 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.3725	GEN600064 2-COLVILLE GEN 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.3287	GEN 11143 1-J436GEN1 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.3287	GEN 11153 1-J437GEN1 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.3269	GEN659290 1-EDGECOL
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07798	135.3197	MITCHELL - MITCHELL NW 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.3112	GEN587603 1-J488&J489GN10.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.2949	GEN600014 4-BLACK DOG GEN 4
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07656	135.2658	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	135.2658	GEN542957 1-IATAN UNIT #1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07657	135.2435	COOPER - ST JOE 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07966	135.2361	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	135.2353	GEN334433 1-SABINE UNIT 3
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.2302	GEN659162 4-RED WLCK
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.2302	GEN659163 5-BLACK WDCK
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.2267	GEN587663 1-H081-GEN1 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.2267	GEN659192 6-LYNN
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.224	GEN600065 7-HIGH BRIDGE
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.224	GEN600066 8-HIGH BRIDGE
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.2195	GEN600011 5-BLACK DOG GEN 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	135.2173	GREGORY - WINNER 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.2157	GEN600071 10-RIVER SIDE
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.2145	GEN600070 9-RIVER SIDE
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07981	135.2012	GLENHAM - L3 HAWDON 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.1958	GEN659294 1-WILTONCOL9
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.1957	GEN659273 2-GROTON SYNC COND
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	135.1912	GEN336222 1-LITTLE GYPSY UNIT#2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.1911	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.1897	GEN660001 2-ABERDEEN SIEBRECHT
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.1896	GEN600007 7-RIVERSIDE GEN 7
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.1882	GEN600043 7-BLUE LAKE5
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.1882	GEN600044 8-BLUE LAKE6
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	135.1722	GEN600017 C-LS POWER CT
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07594	135.0963	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07966	135.0803	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07720	135.0525	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07966	135.0427	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.9804	GEN336152 1-WATERFORD UNIT#2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.9803	GEN336151 1-WATERFORD UNIT#1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07656	134.9478	DENISON - SIOUX CITY 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.9439	GEN338388 1-1PLUM PT U1 23.000
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08031	134.9285	FLANDRU - SIOUX FALLS 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.9226	GEN659270 1-WEST SW
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.9189	GEN652556 2-OAHE
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.9189	GEN652557 4-OAHE
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.9189	GEN652558 6-OAHE
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.9146	GEN600020 2-ANGUS ANSON1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.9063	GEN303007 1-1BC2 U2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.8966	GEN303006 1-1BC2 U1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.8874	GEN336191 1-LITTLE GYPSY UNIT#3
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07657	134.8861	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07657	134.8782	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.8729	GEN615021 1-GRE-ER 14G 16.000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.8593	GEN562872 1-G15046_3 0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.84	GEN600021 3-ANGUS ANSON2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.8344	GEN615052 1-CAMBRIDGE GENERATING STATION
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07657	134.7686	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.762	GEN652559 1-OAHE
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07966	134.7546	OAHE - SULLEY BUTTE 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.7425	GEN652345 W-G07_023IS_2 0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.7423	GEN563222 1-G15088_3 0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.7031	BASE CASE
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.7001	GEN335614 1-WILLOW GLENN UNIT#4
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.6926	GEN336170 1-GULF OXY U4
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.6905	GEN303008 1-1BC2 U3
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.6888	GEN600067 9-HIGH BRIDGE
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08165	134.6823	HURON - WATERTOWN 230KV CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.6703	GEN563232 1-G15089_3 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.634	GEN910006 1-G12_012IS_3 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08165	134.6168	CARPENTER - WATERTOWN 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.6077	GEN600149 W-J183 PROSEW10.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.5958	GEN336464 1-MICHOUD UNIT #3
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.5814	GEN659272 2-GROTON 2G13.800
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.5804	GEN600150 W-J183 PROSEW20.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.5714	GEN336801 1-BAXTER WILSON UNIT #1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07383	134.5645	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.5168	GEN501811 1-RODEMACHER UNIT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07849	134.5102	HURON - WOONSOCKET 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07747	134.5	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.4776	GEN345765 H-1SIOUX 2 18.000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.4618	GEN600069 W-YANKEE 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.4419	GEN659274 1-GROTON
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.4193	GEN600078 W-YANKEE 3
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08246	134.4088	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.4075	GEN600077 W-YANKEE 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.4075	GEN600099 W-YANKEE 4
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07690	134.3638	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.3638	GEN659411 1-CAMPBLCNTY W0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07632	134.361	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.3462	GEN 10648 1-G830_GEN 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.326	GEN 11104 1-J262_GEN 0.6000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.326	GEN 11108 1-J263_GEN 0.6000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07684	134.2849	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.2834	GEN615015 1-GRE-SPRITWDG13.200
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07493	134.2599	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.2492	GEN562003 1-G11_027_3 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08165	134.2408	CARPENTER - HURON 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07747	134.049	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07747	134.049	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07747	134.0367	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.0328	GEN659010 4-G07_027IS_2 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08073	134.0255	AURORA - BROOKINGS 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07667	134.0209	TYNDALL - YANKON JCT 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.0198	GEN659194 1-NDPRAIRWND1W0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	134.0132	GEN587353 1-G16-050-GEN10.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.0116	GEN659366 3-WILTON 3 W0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.0074	GEN652460 4-GARRISON
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	134.0042	GEN652461 5-GARRISON
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	133.9969	ANSON - SPLIT ROCK 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	133.9968	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	133.9571	GEN300006 1-NEW MADRID UNIT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	133.9548	GEN652457 1-GARRISON
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	133.9548	GEN652458 2-GARRISON
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	133.9548	GEN652459 3-GARRISON
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07667	133.9487	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07797	133.9316	CHANARANBIE - FENTON 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07669	133.9236	PLEZIOZO1ARC
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07849	133.9218	STORLA - WOONSOCKET 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	133.8911	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08016	133.8734	GROTON - REDFIELD 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	133.8685	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	133.8611	GEN659403 1-NDSUNFLWR W0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07677	133.8273	BLOOMFIELD - GAVINS POINT 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07692	133.7116	AS KING - EAU CLAIRE 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	133.6682	GEN659116 1-SPIRIT MOUND UNIT1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	133.6	GEN590010 1-ERCOT EQUIVALENCE
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	133.5835	GEN600112 W-G287 NOB2G W0.5750
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	133.5591	GEN587053 1-G16-007-GEN10.6500
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	133.5565	GEN659117 2-SPIRIT MOUND UNIT2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07632	133.5343	PAHOJA - SIOUX FALLS 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	133.5272	GEN590011 2-ERCOT EQUIVALENCE
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07707	133.5143	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	133.4654	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	133.4454	CENTER 230/22.0KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08207	133.4436	FT THOMPSON - HURON 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08207	133.4436	FT THOMPSON - HURON 230KV CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08073	133.3354	AURORA - FLANDRU 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	133.3335	ANSON - SPLIT ROCK 115KV CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	133.3328	ANSON 115/17.5KV TRANSFORMER CKT 4
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07670	133.3168	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	133.218	GEN660016 1-B_H WIND 0.7000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07866	133.1519	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	133.1013	GEN600046 1-MECST
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07692	133.091	FT RANDAL - FT THOMPSON 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	133.0749	GEN600047 1-MECCT1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	133.0713	GEN659110 1-LELAND OLDS UNIT1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	133.0526	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07657	133.0502	RAUN - TEKAMAH 161KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	133.0446	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07669	133.0435	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07740	132.9874	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	132.9438	GEN587133 1-G16-017-GEN10.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	132.907	GEN659141 1-K10215A
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07692	132.8914	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07713	132.8619	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	132.8586	DIXONCO 230.00 - HOSKINS 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07662	132.8431	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	132.8354	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	132.8212	GEN600003 1-PRAIRIE ISLAND G1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16373	132.7188	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07747	132.7097	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	132.7076	GEN659353 1-DEERCREK CTG18.000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	132.6831	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	132.6721	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07742	132.6651	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07748	132.6613	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	132.6493	GEN659354 1-DEERCREK STG18.000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07741	132.6248	MN VALLEY TAP - PANTHER 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	132.6091	GEN615010 1-STANTON4
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	132.5996	GEN600125 2-FEP ST G 13.800
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	132.5879	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07636	132.5825	SIOUX CITY - TWIN CHURCH 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	132.5692	COOPER - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07800	132.5675	HANKINSON - WAHPETON 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	132.5203	GEN603185 1-FIBROMINN GENERATION
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16373	132.515	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	132.514	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	132.5022	GEN600013 3-BLACK DOG GEN 3
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07667	132.4976	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16373	132.4943	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	132.4785	GEN600130 W-G586 - CWN 10.6000
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	132.4686	GEN600131 W-G586 - CWN 20.6000
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07666	132.4426	COOPER - FAIRPORT 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	132.438	GEN652004 1-G13_001IS_3 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07697	132.3942	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	132.3813	DENISON - EXIRA 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	132.3741	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	132.3594	GEN600018 S-LS POWER STEAM
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	132.3576	GEN600050 1-FEP
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	132.301	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07690	132.2933	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	132.2314	GEN600012 2-BLACK DOG GEN 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	132.1342	GEN600056 W-BUFFALO RIDGE WIND GEN

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07666	132.123	COOPER - ST JOE 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07688	132.0456	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	132.0064	GEN600063 1-COLVILLE GEN 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	132.0064	GEN600064 2-COLVILLE GEN 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	131.9872	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.9377	GEN600014 4-BLACK DOG GEN 4
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07666	131.9324	DENISON - SIOUX CITY 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07698	131.9251	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	131.8847	GEN587583 1-J432-GEN1 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	131.8797	GEN587033 1-G16-004-GEN10.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	131.8638	GEN600006 1-AS KING
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.8581	GEN600011 5-BLACK DOG GEN 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.8566	GEN600071 10-RIVER SIDE
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.8552	GEN600070 9-RIVER SIDE
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07733	131.8525	MCLEOD - PANTHER 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.8516	GEN600065 7-HIGH BRIDGE
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.8516	GEN600066 8-HIGH BRIDGE
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.8384	GEN600043 7-BLUE LAKE5
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.8384	GEN600044 8-BLUE LAKE6
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.8281	GEN600007 7-RIVERSIDE GEN 7
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07688	131.821	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.8195	GEN600017 C-LS POWER CT
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.8146	GEN659290 1-EDGECOL
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	131.811	GEN587623 1-J493-GEN1 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07823	131.7943	PIPESTONE - SPLIT ROCK 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.7894	GEN 11143 1-J436GEN1 0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.7894	GEN 11153 1-J437GEN1 0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.7794	GEN659162 4-RED WLCK
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.7794	GEN659163 5-BLACK WDCK
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.7769	GEN659192 6-LYNN
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.7757	GEN587603 1-J488&J489GN10.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07747	131.7643	BYRON - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.7574	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.7431	GEN659273 2-GROTON SYNC COND
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.7431	GEN659294 1-WILTONCOL9
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.7383	GEN587663 1-H081-GEN1 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07668	131.7316	BIG STONE - BROWNS VALLEY 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07757	131.7289	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07667	131.716	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07667	131.7075	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07589	131.6609	BROOKINGS - WHITE 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.6463	GEN660001 2-ABERDEEN SIEBRECHT
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07688	131.5546	HENNING - INMANN 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.5508	GEN659270 1-WEST SW
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07757	131.5207	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.493	GEN562872 1-G15046_3 0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07667	131.4702	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07788	131.3941	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07696	131.3898	PAYNSVILLE - WILLMAR 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08172	131.3886	HELENA - SHEAS LK3 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.3706	GEN600067 9-HIGH BRIDGE
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07651	131.3528	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07677	131.3452	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07687	131.3218	GRANITE FALLS - WILLMAR 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07696	131.2896	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07668	131.2726	BROWNS VALLEY - HANKINSON 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.2599	GEN910006 1-G12_012IS_3 0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.2514	GEN652345 W-G07_023IS_2 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07556	131.1947	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.192	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.1904	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07680	131.1822	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.1389	GEN659272 2-GROTON 2G13.800
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07744	131.138	BYRON - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09465	131.0241	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.0058	GEN659411 1-CAMPBLCNTY W0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	131.0028	GEN659274 1-GROTON
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07695	130.9586	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.9331	GEN600078 W-YANKEE 3
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.9314	GEN 10648 1-G830_GEN 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.9067	GEN600077 W-YANKEE 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.9067	GEN600099 W-YANKEE 4
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.9003	GEN600069 W-YANKEE 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.8673	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07661	130.853	AUDUBON - SHEYNNE 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.8313	GEN 11104 1-J262_GEN 0.6000
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.8313	GEN 11108 1-J263_GEN 0.6000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.8249	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.8083	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07685	130.8075	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	130.7962	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07503	130.7503	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07692	130.7329	FENTON - NOBLES 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07788	130.7262	MITCHELL - MITCHELL NW 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07681	130.7106	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07673	130.692	GRACEVT7 - ORTONVILLE 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07672	130.6877	BIG STONE - HIGHWAY 12 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08246	130.669	FIELD SOUTH - WILMARTH 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.6505	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.6442	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.6442	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07668	130.6376	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.6194	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.6136	GEN659194 1-NDPRAIRWND1W0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.6129	GEN659010 4-G07_027IS_2 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08246	130.6075	FIELD NORTH - FIELD SOUTH 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.5997	GEN659366 3-WILTON 3 W0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08246	130.598	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.5952	GEN652461 5-GARRISON
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.5947	GEN652460 4-GARRISON
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07955	130.5863	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07955	130.5863	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07783	130.552	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.5329	GEN652457 1-GARRISON
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.5329	GEN652458 2-GARRISON
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.5329	GEN652459 3-GARRISON
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07688	130.5308	FENTON - NOBLES 115KV CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07463	130.4753	FT THOMPSON - LETCHER 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07672	130.4652	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.4406	GEN659403 1-NDSUNFLWR W0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.3584	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.353	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.3452	AUDUBON - HUBBARD 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07662	130.3309	CANBY - GRANITE FALLS 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07616	130.3265	GRANT - MITCHELL 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07662	130.2948	FARGO - SHEYNNE 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.2732	MEC345 345/19.5KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.2657	MEC345 - WILMARTH 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.2453	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	130.2259	GEN587053 1-G16-007-GEN10.6500
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07673	130.2202	GRACEVT7 - MORRIS 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.217	NOBLES 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.1939	GEN659111 2-LELAND OLDS UNIT2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.1833	MEC115 - WILMARTH 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.1832	MEC115 115/15.0KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07673	130.1531	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.1	GEN600005 1-MONTICELLO
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07662	130.0917	KARLSTAD - WINGER 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07661	130.0915	ELM CREEK - MONTICELLO 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08117	130.0728	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.0173	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	130.0115	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.9976	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07660	129.8981	AIRTECH - FEP TAP 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.8828	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.8708	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07660	129.8687	AIRTECH - WEST FARIBAULT 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.858	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.8549	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07672	129.8523	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07651	129.8255	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07651	129.8255	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.8238	GENOA 161 161/24.0KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07697	129.823	P13:230-345:NPPD:STEGALL3:KV3A
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07675	129.8137	FENTON 115/69KV TRANSFORMER CKT 5
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.8126	488489510526345.00 - J526 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.8126	J526 345.00 345/34.5KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07616	129.796	CHERRY CREEK - GRANT 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.759	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.759	GEN659107 2-ANTELOPE VALLEY UNIT2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07675	129.7533	FORT RIDGELY - FRANKLIN 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	129.753	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07380	129.7497	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07609	129.7393	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07659	129.7309	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.7278	AS KING 345/20.0KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.6792	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07827	129.6622	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07827	129.6622	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07659	129.645	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07667	129.6326	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07689	129.6272	BLUE LAKE - MCLEOD 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07659	129.6239	LAWERENCE CREEK - SHAEFER 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07666	129.6223	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07839	129.6106	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07679	129.5918	PAYNESVILLE - WAKEFIELD 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07686	129.5798	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	129.5792	GEN659453 1-GI1414GEN W0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07691	129.5624	MONTICELLO - WAITE PARK 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07660	129.5569	ELM CREEK - PARKERS LAKE 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07667	129.548	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07659	129.5343	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	129.5304	GEN659110 1-LELAND OLDS UNIT1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07674	129.5225	LYON COUNTY 115/69KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.5148	NOBLES 115/34.5KV TRANSFORMER CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07689	129.5144	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.5107	FENTON 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07659	129.5084	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07661	129.5075	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07658	129.5017	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07800	129.4964	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07672	129.4943	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07659	129.494	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07483	129.4928	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07483	129.4928	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07641	129.4909	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07752	129.4905	HIGHLND 3 345.00 - RAUN 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.4817	P12:115:UMZW:# 172 #: WI IN SD.
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07668	129.4808	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07685	129.476	LYON COUNTY (8779072) 345/115/34.5KV TRANSFORMER CKT 9
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.4692	LANGDON - LANGWIN7 115.00 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.4619	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	129.4571	GEN587133 1-G16-017-GEN10.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07799	129.4519	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07659	129.4498	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07832	129.4473	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08006	129.4341	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.4334	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.4248	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07669	129.4191	ARNOLD - HAZLETON 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07657	129.4133	ARROWHEAD - FORBES 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07696	129.3746	KOSSUTH 3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07672	129.3742	FRANKLIN - REDWOOD FALLS 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	129.3692	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.3612	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	129.3477	GEN659141 1-K10215A
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07663	129.3396	NOBLES () 345/115/34.5KV TRANSFORMER CKT 9
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07663	129.3364	NOBLES () 345/115/34.5KV TRANSFORMER CKT 10
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07670	129.2964	BLUE LAKE - HAMPTON CORNER 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.2918	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07849	129.2786	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.2774	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.2701	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07657	129.2658	AS KING - WILLOW RIVER 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07658	129.243	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07659	129.2389	NORTH ROCHESTER (NROC TR) 345/161/34.5KV TRANSFORMER CKT 9
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.2328	GEN 11123 1-G736-GEN1 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.2289	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.2202	GEN 11133 1-J442-GEN1 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07657	129.2093	CEDRSAUK B4 345.00 - EDG BUS2 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	129.2033	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07675	129.1951	WILMARTH () 161/115/13.8KV TRANSFORMER CKT 6
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	129.1945	GRE-CHUBLAK3345.00 - HAMPTON CORNER 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	129.187	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07663	129.1851	GLENCOE MUNI - MCLEOD 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.1629	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07928	129.1068	BUFFALO RIDGE - YANKEE 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.0887	HELENA - SCOTTCO3 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	129.0509	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	129.0128	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	129.0047	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07766	128.8813	BLAIR - GRANITE FALLS 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	128.6554	GEN659125 1-COVEY
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	128.6357	GEN587593 1-J460-GEN1 0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	128.6302	GEN659353 1-DEERCREK CTG18.000
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	128.6274	GEN659354 1-DEERCREK STG18.000
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07659	128.5968	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07659	128.5968	P12:230:UMZW:# 158 #: MH IN ND.
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07626	128.5903	HAZEL CREEK - LYON COUNTY 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07659	128.5542	CENTER - COYOTE 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07666	128.5394	BREWSTER - HERON LAKE 5 SPLIT INTO HRN EAST ELK1 161KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07666	128.448	BREWSTER - ELK 161KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07666	128.4458	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08398	128.4012	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07652	128.3949	SUB 1226 - TEKAMAH 161KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07647	128.3771	RAUN - TEKAMAH 161KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07626	128.3747	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07626	128.354	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07656	128.3501	CARROLL COUNTY - VICTORY 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	128.3463	GEN587583 1-J432-GEN1 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	128.3298	NEW MADRID 161/22.0KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	128.317	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08198	128.3116	FT THOMPSON - HURON 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08198	128.3116	FT THOMPSON - HURON 230KV CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	128.3108	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	128.3093	GEN600006 1-AS KING
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	128.3016	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07684	128.2863	BROOKING COUNTY - YANKEE 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07684	128.2863	BROOKING COUNTY - YANKEE 115KV CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	128.2785	GEN587623 1-J493-GEN1 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	128.2657	GRE-STNYCRK7115.00 (STNYCR115-69) 115/69/12.8KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07659	128.2575	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	128.22	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07678	128.214	HILLS - MONTEZUMA 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	128.2056	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07656	128.1988	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	128.1962	COOPER - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07660	128.1885	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07656	128.1076	COOPER - FAIRPORT 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07652	128.1006	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07656	128.0328	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07606	128.0075	BIG STONE - BLAIR 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	127.9944	DONALDSON - DONALDSON PIPE 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	127.9772	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07694	127.9576	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	127.9351	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	127.9317	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	127.9277	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	127.8931	H081 345.00 - H081-TAP 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	127.8931	H081 345.00 345/34.5KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07654	127.865	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	127.8356	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07657	127.8243	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	127.7965	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07636	127.7534	GRIMES - LEHIGH 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	127.7402	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07666	127.6853	ELK - MAGNOLIA 5 161KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07651	127.6558	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	127.6454	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	127.6443	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	127.5738	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	127.5609	LADISH 115/13.2KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07628	127.4551	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07701	127.4344	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07806	127.4281	CHANARANBIE - FENTON 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	127.4069	CENTER 230/22.0KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07682	127.4035	BONDURANT - MONTEZUMA 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07750	127.3363	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	127.2611	ANSON - SPLIT ROCK 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	127.2609	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08119	127.2295	AURORA - BROOKINGS 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	127.1891	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07658	127.0623	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07663	127.0343	DAN JUHL - SPLIT ROCK 161KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07663	127.0264	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	126.9894	ANSON 115/17.5KV TRANSFORMER CKT 4
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	126.9855	ANSON - SPLIT ROCK 115KV CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07679	126.9528	LEHIGH - RAUN 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07663	126.9248	DAN JUHL - MAGNOLIA 5 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07703	126.8753	AS KING - EAU CLAIRE 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	126.873	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	126.8649	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	126.8034	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	126.7595	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	126.6999	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07702	126.6145	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08165	126.6008	CARPENTER - WATERTOWN 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08119	126.5967	AURORA - FLANDRU 115KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	126.5813	GEN615001 1-COAL CREEK
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08165	126.5808	HURON - WATERTOWN 230KV CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	126.5515	GEN615002 2-COAL CREEK
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	126.5502	GEN659111 2-LELAND OLDS UNIT2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	126.5169	GEN587653 1-J526-GEN1 0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07876	126.4953	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07701	126.4473	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07751	126.3941	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07751	126.366	MN VALLEY TAP - PANTHER 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	126.3463	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07707	126.2234	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07750	126.199	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	126.174	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	126.1532	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	126.1471	GEN659103 1-ANTELOPE VALLEY UNIT1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	126.1471	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08255	126.1256	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07723	126.1117	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07753	126.0809	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07698	125.7989	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	125.7528	GEN587633 1-J510-GEN1 18.000
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07677	125.7239	BIG STONE - BROWNS VALLEY 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07700	125.6999	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07767	125.6091	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07675	125.6052	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07742	125.5723	MCLEOD - PANTHER 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	125.5456	GEN 11123 1-G736-GEN1 0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07698	125.5436	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07834	125.5387	PIPESTONE - SPLIT ROCK 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	125.5325	GEN 11133 1-J442-GEN1 0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	125.5016	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07610	125.4406	BROOKINGS - WHITE 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07767	125.3914	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	125.3709	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	125.3638	YANKEE 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07698	125.2738	HENNING - INMANN 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07706	125.2578	PAYNSVILLE - WILLMAR 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07707	125.2364	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07697	125.195	GRANITE FALLS - WILLMAR 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09476	125.1885	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07688	125.185	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07675	125.173	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	125.1725	GEN587593 1-J460-GEN1 0.6900
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	125.1575	BROOKING COUNTY - J432 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	125.1575	J432 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07677	125.1452	BROWNS VALLEY - HANKINSON 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07706	125.1387	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07753	125.0232	BYRON - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07798	125.0086	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	124.9911	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	124.9462	GEN659125 1-COVEY
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	124.9439	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07670	124.9312	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	124.8506	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07695	124.7684	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07671	124.6797	AUDUBON - SHEYNNE 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07792	124.6644	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07661	124.6336	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07595	124.5815	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07682	124.5792	BIG STONE - HIGHWAY 12 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	124.5695	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07750	124.5402	BYRON - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07691	124.5369	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	124.5353	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07682	124.5154	GRACEVT7 - ORTONVILLE 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07704	124.5076	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07677	124.4988	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07667	124.4784	BURR - CANBY 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07702	124.4677	FENTON - NOBLES 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07966	124.4527	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07966	124.4527	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07513	124.4429	FT THOMPSON - WESSINGTON 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07690	124.3437	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07798	124.295	MITCHELL - MITCHELL NW 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07672	124.2803	CANBY - GRANITE FALLS 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07682	124.2715	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07698	124.2467	FENTON - NOBLES 115KV CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	124.2234	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	124.2234	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	124.2108	BURR - J493 115.00 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	124.2108	J493 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	124.137	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	124.1189	NOBLES 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07672	124.1153	FARGO - SHEYNNE 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07674	124.085	AUDUBON - HUBBARD 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	124.0798	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	124.0774	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	124.0641	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	124.0553	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.9608	NOBLES 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07626	123.9583	GRANT - MITCHELL 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.943	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07682	123.9373	GRACEVT7 - MORRIS 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.9303	488489510526345.00 - J526 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.9303	J526 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.8783	MEC345 345/19.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.8729	MEC345 - WILMARTH 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.7892	MEC115 - WILMARTH 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.7891	MEC115 115/15.0KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07671	123.7592	ELM CREEK - MONTICELLO 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07672	123.7338	KARLSTAD - WINGER 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.7234	RGBYWND4 230.00 - RUGBY 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.715	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07684	123.7055	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07762	123.6373	HIGHLND 3 345.00 - RAUN 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.6145	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07556	123.5434	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.5264	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.5175	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07685	123.5054	FORT RIDGELY - FRANKLIN 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07669	123.5027	AIRTECH - FEP TAP 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07669	123.4769	AIRTECH - WEST FARIBAULT 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.4566	GENOA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07682	123.4547	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07619	123.4536	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07685	123.4524	FENTON 115/69KV TRANSFORMER CKT 5
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07626	123.4291	CHERRY CREEK - GRANT 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.3892	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.3805	AS KING 345/20.0KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07677	123.3728	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.3725	LANGDON - LANGWIN7 115.00 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07668	123.3451	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.34	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07699	123.3375	BLUE LAKE - MCLEOD 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.3357	FENTON 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07699	123.3198	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07689	123.3119	PAYNESVILLE - WAKEFIELD 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07707	123.302	P13:230-345:NPPD:STEGALL3:KV3A
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07668	123.2655	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07669	123.2571	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07849	123.2489	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07668	123.2463	LAWERENCE CREEK - SHAEFER 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07670	123.2421	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07677	123.2405	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07695	123.2389	LYON COUNTY (8779072) 345/115/34.5KV TRANSFORMER CKT 9
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07681	123.2366	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07701	123.2312	MONTICELLO - WAITE PARK 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07676	123.231	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07678	123.1789	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	123.1656	P12:115:UMZW:# 172 #: WI IN SD.
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07668	123.1653	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07670	123.1599	ELM CREEK - PARKERS LAKE 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07666	123.1554	ARROWHEAD - FORBES 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07383	123.1502	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07668	123.1413	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07684	123.1305	LYON COUNTY 115/69KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.1293	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07668	123.1274	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08016	123.1228	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07681	123.1204	FRANKLIN - REDWOOD FALLS 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07680	123.0942	ARNOLD - HAZLETON 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07673	123.0916	NOBLES () 345/115/34.5KV TRANSFORMER CKT 9
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.0909	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07673	123.0878	NOBLES () 345/115/34.5KV TRANSFORMER CKT 10
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07493	123.0871	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07493	123.0841	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07842	123.0671	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07674	123.0667	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.0654	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	123.0128	GRAND MEADOW - PLEASANT VALLEY 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07667	123.002	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07673	122.9809	GLENCOE MUNI - MCLEOD 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	122.9638	HELENA - SCOTTCO3 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	122.9548	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07859	122.9509	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07667	122.9392	CEDRSAUK B4 345.00 - EDG BUS2 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07669	122.9349	BLUE LAKE (7000550) 345/115/13.8KV TRANSFORMER CKT 9
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	122.9333	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	122.9296	FENTON 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	122.9255	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07666	122.9184	AS KING - WILLOW RIVER 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	122.9122	GRAND GULF 500/22.0KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07674	122.9057	GRE-CHUBLAK3345.00 - HAMPTON CORNER 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	122.8976	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	122.8673	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	122.8673	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	122.6798	GEN587653 1-J526-GEN1 0.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	122.6533	RUNNING 230/118KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	122.3537	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07668	122.3482	CENTER - COYOTE 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07635	122.3337	HAZEL CREEK - LYON COUNTY 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07676	122.2406	BREWSTER - ELK 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07675	122.2222	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	122.1949	NEAL SOUTH - RAUN 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07680	122.1405	BROOKING COUNTY () 345/115/13.8KV TRANSFORMER CKT 10
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07681	122.1174	BROOKING COUNTY () 345/115/34.5KV TRANSFORMER CKT 9
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07635	122.1147	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07635	122.0938	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07666	122.0568	POCAHONTAS COUNTY - POMEROY 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	122.0413	P13:115-230:NPPD:NUCOR-3
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07666	122.0392	CARROLL COUNTY - VICTORY 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07657	122.0324	RAUN - TEKAMAH 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	122.0254	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07446	121.97	SPLIT ROCK (SPLT 11) 345/115/13.8KV TRANSFORMER CKT 11
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.9679	GRE-STNYCRK7115.00 (STNYCR115-69) 115/69/12.8KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07561	121.9638	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07669	121.9568	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07436	121.9511	SPLIT ROCK (SPLT 10) 345/115/13.8KV TRANSFORMER CKT 10
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07669	121.9386	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08207	121.9376	FT THOMPSON - HURON 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08207	121.9376	FT THOMPSON - HURON 230KV CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.9246	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07666	121.9036	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07666	121.8897	COOPER - FAIRPORT 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07694	121.8886	BROOKING COUNTY - YANKEE 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07694	121.8886	BROOKING COUNTY - YANKEE 115KV CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	121.8693	COOPER - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07666	121.8632	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.8494	GEN587633 1-J510-GEN1 18.000
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.8357	WINGER (WINGER) 115/69/41.6KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07667	121.8188	EDEN 345 345.00 - HCKRYCK3 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	121.7925	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07688	121.7844	HILLS - MONTEZUMA 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.778	THIEF RIVER FALLS (TRF) 115/69/13.2KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	121.7742	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07771	121.7552	ELLSBORO - LAKE YANKTON 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.7508	DONALDSON - DONALDSON PIPE 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07771	121.7291	CHANARANBIE - ELLSBORO 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07662	121.7195	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.6396	FRONTER4 230.00 (FRONTIER) 230/69/13.8KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07663	121.595	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.5673	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.5661	H081 345.00 - H081-TAP 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.5661	H081 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08126	121.5508	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.5112	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.4708	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.4617	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.453	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07676	121.4425	ELK - MAGNOLIA 5 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.4267	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07645	121.4084	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07666	121.3156	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.2834	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.2831	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.2821	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07762	121.27	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07661	121.2221	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.2078	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08255	121.1569	FIELD NORTH - FIELD SOUTH 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08255	121.1452	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08255	121.144	FIELD SOUTH - WILMARTH 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	121.1267	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07692	121.1262	BONDURANT - MONTEZUMA 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07638	121.1221	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07673	120.8101	DAN JUHL - SPLIT ROCK 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07673	120.8095	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07673	120.694	DAN JUHL - MAGNOLIA 5 161KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07665	120.6626	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07689	120.6362	LEHIGH - RAUN 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07668	120.564	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	120.5175	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08173	120.3513	CARPENTER - WATERTOWN 230KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08173	120.329	HURON - WATERTOWN 230KV CKT 2
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	120.0737	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	119.2398	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.19670	119.2158	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	119.0905	YANKEE 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	118.906	BROOKING COUNTY - J432 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	118.906	J432 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07605	118.367	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	118.0931	BASE CASE
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07567	117.8398	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	117.6507	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.19670	117.5	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	116.6625	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	116.6625	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.19822	116.2862	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.19670	115.7213	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07196	114.9465	HANLON - STORLA 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07211	114.8408	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.19822	114.4011	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07301	114.1623	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07301	114.0325	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07944	113.9642	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07944	113.829	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	113.8285	GEN635214 4-NEAL UNIT 4
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07944	113.8274	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	113.1663	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.19822	113.1162	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03682	113.0842	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	112.9598	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07559	112.6621	NOBLES - SPLIT ROCK 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07195	112.51	STORLA - WESSINGTON 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	112.4951	GEN635024 4-WALTER SCOTT UNIT 4
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	112.4081	GEN635213 3-NEAL UNIT 3
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07158	112.2794	FT THOMPSON - LETCHER 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07158	112.2794	FT THOMPSON - LETCHER 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	111.8115	GEN635023 3-WALTER SCOTT UNIT 3
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07207	111.728	LETCHER - SIOUX FALLS 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07715	111.7197	AURORA - BROOKINGS 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07715	111.7197	AURORA - BROOKINGS 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07248	111.1851	BIG STONE - BLAIR 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07248	111.1851	BIG STONE - BLAIR 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07416	111.1134	BLAIR - GRANITE FALLS 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07416	111.1134	BLAIR - GRANITE FALLS 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07715	111.0891	AURORA - FLANDRU 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07715	111.0891	AURORA - FLANDRU 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	110.9475	GEN336821 1-GRAND GULF UNIT
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07223	110.7449	HANLON - SIOUX FALLS 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	110.6995	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07944	110.6151	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	110.5886	GEN344225 1-1CAL G1 25.000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07237	110.3178	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09059	110.253	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09059	110.253	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07399	110.1137	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07944	110.1135	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07944	110.1096	2810X2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07422	110.0921	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07237	110.0641	BROOKINGS - WHITE 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07237	110.0641	BROOKINGS - WHITE 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07944	109.9494	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	109.9252	GEN336153 1-WATERFORD UNIT#3
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07422	109.9127	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07422	109.8955	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	109.8852	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06800	109.8759	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07422	109.864	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07422	109.8598	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06800	109.8197	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07221	109.7862	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	109.6817	GEN640009 1-COOPER NUCLEAR STATION
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	109.6287	GEN335831 1-RIVERBEND UNIT#1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	109.5812	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07380	109.5704	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07380	109.5704	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07378	109.5453	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07378	109.5453	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	109.4996	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07163	109.4577	FT RANDAL - UTICA JCT 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07378	109.3511	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07418	109.2519	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07418	109.2519	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	109.2309	GEN587153 1-G16-021-GEN10.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	109.1563	GEN337653 1-WHITE BLUFF UNIT #2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07301	109.1392	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07418	109.102	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07418	109.102	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07346	109.0254	GRANITE FALLS - WILLMAR 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07346	109.0254	GRANITE FALLS - WILLMAR 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.9941	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.9817	GEN337652 1-WHITE BLUFF UNIT #1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.9753	GEN338146 1-INDEPENDENCE UNIT #2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.9731	GEN338143 1-INDEPENDENCE UNIT #1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07276	108.9554	GRAND ISLAND - MCCOOL 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.9521	GEN501801 1-DOLET HILLS UNIT1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07318	108.9206	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07452	108.9112	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07452	108.9112	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.8421	GEN563232 1-G15089_3 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07290	108.818	G15088_T 345.00 - MOORE 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.7762	GEN344897 4-1LAB G4 20.000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.7757	GEN344894 1-1LAB G1 20.000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.7754	GEN344896 3-1LAB G3 20.000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07490	108.7514	BISON - HETINGER 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.7371	GEN501813 1-RODEMACHER UNIT 3
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.7326	GEN344895 2-1LAB G2 20.000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07577	108.7046	GLENHAM - WHITLOK 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.7004	GEN345670 1-1RUSH G1 18.000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.7001	GEN345671 2-1RUSH G2 18.000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07577	108.6621	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07577	108.6621	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07280	108.6424	MCCOOL - MOORE 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07249	108.6349	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.629	GEN645012 2-NEBRASKA CITY 2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07170	108.6263	UTICA JCT - VFODNES 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07249	108.6246	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07577	108.6143	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07577	108.6143	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07577	108.6139	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	108.6128	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.5996	GEN335206 1-NELSON UNIT 6
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07452	108.5777	MITCHELL - MITCHELL NW 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07452	108.5777	MITCHELL - MITCHELL NW 115KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07576	108.5693	NOBLES - SPLIT ROCK 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07195	108.5641	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07195	108.5641	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07433	108.5578	NUNDRWD - WAYSIDE 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.5546	GEN645011 1-NEBRASKA CITY 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07594	108.552	GLENHAM - L3 HAWDON 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07331	108.5516	GRACEVT7 - MORRIS 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07283	108.5354	GRANT - MITCHELL 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07319	108.5303	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.5156	GEN336252 1-NINEMILE POINT UNIT#5
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.5142	GEN636641 1-LOUISA UNIT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07195	108.5035	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07577	108.4979	OAHE - SULLEY BUTTE 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.488	GEN501812 1-RODEMACHER UNIT 2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.4867	GEN600149 W-J183 PROSEW10.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07195	108.4783	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.4735	GEN542962 2-IATAN UNIT #2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.4695	GEN600150 W-J183 PROSEW20.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.4627	GEN336831 1-BAXTER WILSON SES
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07195	108.4592	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07334	108.4373	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07319	108.4276	CANBY - GRANITE FALLS 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07319	108.4276	CANBY - GRANITE FALLS 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.4166	GEN337041 1-GERALD ANDRUS
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07055	108.3906	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.3644	GEN336251 1-NINEMILE POINT UNIT#4
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07292	108.3199	RASMUSN - UTICA JCT 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.3023	GEN334440 1-SABINE UNIT 4
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.2707	GEN562003 1-G11_027_3 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.2664	GEN563222 1-G15088_3 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07490	108.2539	BISON - MAURINE 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.2263	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07292	108.2233	RASMUSN - SIOUX CITY 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.217	GEN336191 1-LITTLE GYPSY UNIT#3
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07262	108.1672	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.1585	GEN335204 1-NELSON UNIT 4
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.1421	GEN336801 1-BAXTER WILSON UNIT #1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.1334	GEN335614 1-WILLOW GLENN UNIT#4
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.1271	GEN336464 1-MICHOUD UNIT #3
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.1121	GEN303007 1-1BC2 U2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07159	108.1107	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.1071	GEN303006 1-1BC2 U1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.1039	GEN334441 1-SABINE UNIT 5
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07315	108.0958	JAMES TOWN - PICKERT 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.0772	GEN542957 1-IATAN UNIT #1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07310	108.0668	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07715	108.0664	FLANDRU - SIOUX FALLS 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07491	108.0628	HURON - WOONSOCKET 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.0605	GEN336170 1-GULF OXY U4
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.053	GEN303008 1-1BC2 U3
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07310	108.0509	MISSION - ST FRANCIS 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07194	108.0476	SIOUX FALLS - VFODNES 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07290	108.0422	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07254	108.0328	SIDNEY - STEGALL 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07163	108.0299	MANNING - SPIRIT MOUND 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.0293	GEN338388 1-1PLUM PT U1 23.000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	108.0169	GEN334433 1-SABINE UNIT 3
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07301	108.012	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07649	108.004	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07310	108	HARMONY - ST FRANCIS 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07331	107.9901	MENNO JCT - TRIPP JCT 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.9823	GEN501811 1-RODEMACHER UNIT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.9663	GEN336222 1-LITTLE GYPSY UNIT#2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07318	107.9619	FARGO - SHEYNNE 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07310	107.9594	HARMONY - VALENTINE 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07328	107.9592	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07366	107.9433	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07317	107.9368	WINNER - WITTEN 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07315	107.9365	GRAND FORKS - PICKERT 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07331	107.9364	MENNO JCT - UTICA 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07233	107.9246	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.9242	GEN542955 1-LACYGNE UNIT #1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.9153	GEN345765 H-1SIOUX 2 18.000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.9089	GEN336152 1-WATERFORD UNIT#2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.9082	GEN336151 1-WATERFORD UNIT#1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07649	107.9061	GROTON - REDFIELD 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.9037	GEN334071 1-LEWIS CREEK 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07486	107.9001	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07486	107.9001	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8997	GEN334070 1-LEWIS CREEK 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07491	107.8947	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07163	107.8907	BERSFORD - MANNING 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8854	GEN337766 1-TRACTEBEL UNIT S1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8671	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8651	GEN501910 1-ACADIA UNIT ST1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8603	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8602	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8581	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8528	GEN345756 H-1SIOUX 1 18.000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8509	GEN542956 2-LACYGNE UNIT #2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8474	GEN659116 1-SPIRIT MOUND UNIT1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8474	GEN659117 2-SPIRIT MOUND UNIT2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8466	GEN629992 1-G164_WF9 34.500
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8291	GEN345832 1-1TS G1 13.800
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8288	GEN345841 2-1TS G2 13.800
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8275	GEN542951 5-HAWTHORN UNIT #5
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8209	GEN562517 1-G14_021_S2 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8063	GEN337764 1-TRACTEBEL UNIT C1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.8063	GEN337765 1-TRACTEBEL UNIT C2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07317	107.8054	GREGORY - WINNER 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.7994	GEN635407 W-SHD415 W 0.6000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.7994	GEN635408 W-SHD425 W 0.6000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.7994	GEN635409 W-SHD435 W 0.6000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.787	GEN336242 1-1NMIL ST1 18.000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.7694	GEN501823 1-TECHE UNIT 3
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.7539	GEN334030 1-FRONTIER UNIT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.7537	GEN334031 1-FRONTIER UNIT 2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.7469	GEN587353 1-G16-050-GEN10.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.7443	GEN660016 1-B_H WIND 0.7000
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03688	107.1058	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07270	107.0445	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.0119	GEN600046 1-MECST
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.966	CARROLL COUNTY - DRAGER5 161.00 161KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07359	106.9569	STORLA (KV1A) 230/115/13.2KV TRANSFORMER CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.9563	P13:115-230:NPPD:NUCOR-3
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.9506	GEN681540 5-ALMA UNIT 5
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.9423	GEN600047 1-MECCT1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.9187	GEN672383 1-MLTC 1G 13.800
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.9151	GEN600056 W-BUFFALO RIDGE WIND GEN
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.8993	COOPER - SUB 3458 NEB CTY 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.8993	COOPER - SUB 3458 NEB CTY 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.8876	GEN672336 7-E B CAMPBELL GENERATOR 7
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.8876	GEN672337 8-E B CAMPBELL GENERATOR 8
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.8868	GEN563302 1-G15096_3 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.8791	GEN672382 1-MEADOW LAKE GENERATOR 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07315	106.8734	PLYMOUTH - SIOUX CITY 161KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07215	106.8667	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.8633	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.8444	GEN652004 1-G13_001IS_3 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.84	GEN672396 1-YHPS 1G 13.800
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.84	GEN672397 2-YHPS 2G 13.800
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.8373	GEN600130 W-G586 - CWN 10.6000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.8348	GEN600131 W-G586 - CWN 20.6000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07314	106.8226	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07394	106.8155	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.8145	LAKOTA 115/69KV TRANSFORMER CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.8103	GEN659289 1-DAYCNTYWND W0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.8089	GEN563312 1-G15097_3 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.8082	GEN659031 1-G12_014IS_4 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07319	106.8045	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.7919	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.7886	GEN652410 3-FT PECK
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.7883	GEN620115 1-HRDLKGEN 0.6000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.7863	GEN652559 1-OAHE
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.7762	GEN672378 1-ERMINE GENERATOR 4
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.7762	GEN672379 2-ERMINE2X 13.800
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.77	GEN600043 7-BLUE LAKE5

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.7674	GEN600125 2-FEP ST G 13.800
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07313	106.7671	COOPER - FAIRPORT 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.7665	GEN672371 2-COTEAU CREEK GENERATOR 2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.7664	GEN672372 3-COTEAU CREEK GENERATOR 3
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.7663	GEN672370 1-COTEAU CREEK GENERATOR 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.7652	GEN620857 1-LKPRSTN9 41.600
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.7462	GEN672369 3-MERIDIAN GENERATOR 3 ST
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.7385	GEN615032 2-PLEASANT VALLEY
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.7364	GEN652414 4-FT PECK
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.7364	GEN652415 5-FT PECK
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.7282	GEN672314 1-TNTLLN1X 13.800
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.7282	GEN672315 2-TNTLLN2X 13.800
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07313	106.7165	COPSTJCPFRSJ
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07313	106.7165	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07313	106.7165	STMDSJFAFACO
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07796	106.7124	FT THOMPSON - HURON 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07796	106.7124	FT THOMPSON - HURON 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07796	106.7124	FT THOMPSON - HURON 230KV CKT 2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07796	106.7124	FT THOMPSON - HURON 230KV CKT 2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07315	106.7109	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07315	106.7109	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.6999	GEN652353 2-GR PRAIRIEG 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.6935	GEN620285 1-SOLWAY
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07309	106.6827	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.6705	GEN600013 3-BLACK DOG GEN 3
0	20L	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.10761	106.6603	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.6558	DENISON - EXIRA 161KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.6551	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.647	GEN652556 2-OAHE
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.6467	GEN652558 6-OAHE
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.6398	GEN652557 5-OAHE
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.6316	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.6205	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.6009	GEN672384 1-CENTENNIAL WINDFARM
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.5851	GEN659162 4-RED WLCK
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.5851	GEN659163 5-BLACK WDCK
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.5845	GEN659192 6-LYNN
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.5597	GEN660001 2-ABERDEEN SIEBRECHT
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.5578	GEN659273 2-GROTON SYNC COND
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.5578	GEN659294 1-WILTONCOL9
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.5429	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.533	GEN657600 1-L1GEN3 9 0.5750
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.533	GEN659270 1-WEST SW
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.5229	H081 345.00 - H081-TAP 345.00 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.52	GEN600018 S-LS POWER STEAM
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07273	106.5064	HOSKINS - SHELL CREEK 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.4826	GEN659290 1-EDGECOL
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.4732	GEN657964 1-ASH2GEN9 0.5750
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.4687	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.4654	GEN603185 1-FIBROMINN GENERATION
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.4641	GEN672358 1-CHAPLN1W 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07313	106.4555	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07313	106.4389	COOPER - ST JOE 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.4381	GEN587603 1-J488&J489GN10.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.4351	GEN620323 2-HOOT LAKE 2 GEN
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.4335	GEN681522 3-GENOA 3
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.423	GEN672347 1-CORY COGEN GENERATOR 1 GT1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.423	GEN672348 2-CORY COGEN GENERATOR 2 GT2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.4173	GEN600050 1-FEP
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.383	GEN672352 3-NIPAWIN GENERATOR 3
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.3829	GEN672350 1-NIPAWIN GENERATOR 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.3829	GEN672351 2-NIPAWIN GENERATOR 2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.3745	GEN672367 1-MERIDIAN GENERATOR 1 GT1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.3745	GEN672368 2-MERIDIAN GENERATOR 2 GT2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.3687	GEN 11143 1-J436GEN1 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.3687	GEN 11153 1-J437GEN1 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.3561	GEN562872 1-G15046_3 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.3462	GEN600012 2-BLACK DOG GEN 2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.3125	GEN672349 3-CORY COGEN GENERATOR 3 ST
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.2982	GEN672342 3-QUEEN ELIZABETH GENERATOR 3

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.2981	GEN672339 16-QE 16G 13.800
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.2155	GEN910006 1-G12_012IS_3 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.2139	GEN672393 2-NBECST2G 13.800
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07310	106.1898	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.1758	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.1639	GEN659411 1-CAMPBLCNTY W0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.1632	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07314	106.1483	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07314	106.1439	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.0819	GEN587663 1-H081-GEN1 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	106.0646	GEN620324 3-HOOT LAKE 3 GEN
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07314	106.0376	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.9905	GEN600014 4-BLACK DOG GEN 4
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.9821	GEN600065 7-HIGH BRIDGE
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.9821	GEN600066 8-HIGH BRIDGE
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.9794	DENISON - SIOUX CITY 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.9645	GEN652345 W-G07_023IS_2 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.956	GEN 10648 1-G830_GEN 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.9543	GEN657985 1-ASH1GEN9 0.5750
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.95	GEN600071 10-RIVER SIDE
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.9498	GEN600070 9-RIVER SIDE
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.9354	GEN600011 5-BLACK DOG GEN 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.93	GEN 11104 1-J262_GEN 0.6000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.93	GEN 11108 1-J263_GEN 0.6000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.9277	GEN600007 7-RIVERSIDE GEN 7
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.9141	GEN659272 2-GROTON 2G13.800
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.9026	GEN659274 1-GROTON
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.9022	GEN600017 C-LS POWER CT
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.8459	GEN615015 1-GRE-SPRITWDG13.200
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.8451	GEN652460 4-GARRISON
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.8451	GEN652461 5-GARRISON
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.8168	GEN652459 3-GARRISON
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.8167	GEN652457 1-GARRISON
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.8167	GEN652458 2-GARRISON
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.7738	GEN659010 4-G07_027IS_2 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.7575	GEN659366 3-WILTON 3 W0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.7253	GEN615052 1-CAMBRIDGE GENERATING STATION
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.719	GEN659194 1-NDPRAIRWND1W0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.663	GEN657705 X-DRAYTON
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.6524	GEN659403 1-NDSUNFLWR W0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07775	105.5973	CARPENTER - WATERTOWN 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07775	105.5973	CARPENTER - WATERTOWN 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07284	105.5857	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.5851	GEN600077 W-YANKEE 2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.5851	GEN600099 W-YANKEE 4
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.5789	GEN600078 W-YANKEE 3
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.5583	GEN600069 W-YANKEE 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07775	105.5269	HURON - WATERTOWN 230KV CKT 2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07775	105.5269	HURON - WATERTOWN 230KV CKT 2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.4677	GEN659110 1-LELAND OLDS UNIT1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.4284	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.4284	GEN672304 4-BOUNDARY DAM GENERATOR 4
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.4284	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.4104	GEN587133 1-G16-017-GEN10.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.4102	GEN600067 9-HIGH BRIDGE
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.3372	GEN615021 1-GRE-ER 14G 16.000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07284	105.2933	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.2856	GEN681542 6-JP MADGETT
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.2605	GEN672392 1-NBECGT1G 18.000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.2435	GEN587053 1-G16-007-GEN10.6500
0	20L	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.10761	105.1985	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07775	105.1867	CARPENTER - HURON 230KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	105.0891	GEN659453 1-GI1414GEN W0.6900
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07016	104.9226	BASE CASE
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07016	104.9219	BASE CASE
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	104.8391	GEN659141 1-K10215A
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	104.6228	GEN659407 1-ANTELPHILLSW0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	104.5635	GEN615010 1-STANTON4
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06814	104.2747	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.06814	104.2486	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	104.1098	GEN587033 1-G16-004-GEN10.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	103.9707	GEN659354 1-DEERCREK STG18.000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	103.9697	GEN659353 1-DEERCREK CTG18.000
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07250	103.6977	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07250	103.6977	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20L	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.10761	103.6431	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	103.6014	GEN657749 1-YOUNG 1 GENERATOR
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07204	103.5918	RAUN - SIOUX CITY 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	103.5596	GEN659111 2-LELAND OLDS UNIT2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	103.5337	GEN587623 1-J493-GEN1 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	103.2626	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	103.2626	GEN659107 2-ANTELOPE VALLEY UNIT2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	103.2053	GEN672321 1-SHAND GENERATOR 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	103.2037	GEN600004 2-PRAIRIE ISLAND G2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	103.1967	GEN600003 1-PRAIRIE ISLAND G1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	103.1915	GEN587583 1-J432-GEN1 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	103.1105	GEN672310 1-POPLAR RIVER GENERATOR 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	103.1105	GEN672311 2-POPLAR RIVER GENERATOR 2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	103.0722	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16960	102.7748	BASE CASE
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	102.6073	GEN600006 1-AS KING
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07016	102.069	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07016	101.9576	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	101.3252	GEN 11123 1-G736-GEN1 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	101.3171	GEN 11133 1-J442-GEN1 0.6900
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	101.2921	GEN659125 1-COVEY
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	101.253	GEN661015 1-COYOTE
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	101.2488	GEN652173 1-G09_001IS_2 0.6900
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07270	101.1359	BUFFALO RIDGE - YANKEE 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	100.8581	GEN600005 1-MONTICELLO
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	100.6711	GEN657748 1-YOUNG 2 GENERATOR
0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07409	100.5533	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	100.456	GEN600000 1-SHERBURNECNTY G1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03202	100.4056	G09_001IST 345.00 - GROTON 345KV CKT 1
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07016	100.371	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07016	100.3631	ANSON 115/17.5KV TRANSFORMER CKT 4
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07176	100.2429	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07176	100.2429	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07150	100.1767	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07150	100.1507	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07093	100.1316	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07407	100	AURORA - BROOKINGS 115KV CKT 1
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07407	100	AURORA - BROOKINGS 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	100	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07093	99.7	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07623	99.6	FIELD SOUTH - WILMARTH 345KV CKT 1
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07623	99.5	FIELD NORTH - FIELD SOUTH 345KV CKT 1
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07623	99.5	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07093	99.5	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07407	99.3	AURORA - FLANDRU 115KV CKT 1
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07407	99.3	AURORA - FLANDRU 115KV CKT 1
0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07216	99.1	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	99	GEN600001 2-SHERBURNE CNTY G2
0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	99	GEN615001 1-COAL CREEK
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.16251	109.8349	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.16251	109.8348	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.16251	108.8672	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.16251	108.8671	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	107.6947	BASE CASE
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	107.6935	BASE CASE
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15754	106.1694	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15754	105.1775	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15754	104.9459	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.26378	104.5739	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.26378	104.2916	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	102.9624	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15920	102.8818	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15920	102.8646	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15920	102.7737	HAZEL CREEK - LYON COUNTY 345KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.26378	102.6576	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.25034	102.6278	BASE CASE
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.25034	102.6265	BASE CASE
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	102.4327	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	102.4327	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15865	101.9756	BROOKINGS - WATERTOWN 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15865	101.9756	BROOKINGS - WATERTOWN 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	101.9498	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15817	101.4207	ARLINGTON - WATERTOWN 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	101.1804	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15675	101.1506	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15640	100.9658	BURR - CANBY 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	100.9627	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15675	100.8928	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15759	100.7518	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15759	100.7517	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	100.7034	BROOKING COUNTY - J432 345.00 345KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	100.7034	J432 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	100.657	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15609	100.6144	G15088_T 345.00 - MOORE 345KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	100.5895	YANKEE 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	100.5459	GEN659353 1-DEERCREK CTG18.000
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	100.5449	GEN659354 1-DEERCREK STG18.000
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15817	100.5341	ARLINGTON - BROOKINGS 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	100.4705	GEN587583 1-J432-GEN1 0.6900
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15703	100.4475	MN VALLEY TAP - PANTHER 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15817	100.3916	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15817	100.3916	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15817	100.3916	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	100.3549	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15516	100.3505	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15516	100.3504	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15646	100.3366	ELM CREEK - MONTICELLO 345KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15687	100.3188	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15652	100.2906	CANBY - GRANITE FALLS 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15652	100.2905	CANBY - GRANITE FALLS 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15657	100.2681	MENNO JCT - UTICA 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	100.2582	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15717	100.2556	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	100.2448	ANSON 115/17.5KV TRANSFORMER CKT 4
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15645	100.2128	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15645	100.2127	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.16170	100.191	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15759	100.1487	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15759	100.1487	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15645	100.1317	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15645	100.106	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.16170	100.1056	2810X2
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15645	100.1019	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15635	100.0967	PRAIRIE - RAMSEY 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15648	100	AUDUBON - HUBBARD 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15657	99.9	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.9	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.9	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15630	99.9	JAMES TOWN - WEBER 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15755	99.8	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15755	99.8	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15630	99.8	BISMARK - WEBER 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15645	99.7	ELM CREEK - PARKERS LAKE 345KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.7	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15592	99.7	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15592	99.7	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15661	99.6	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15657	99.6	GRACEVT7 - ORTONVILLE 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.6	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.6	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.6	WATERTOWN 230KV SWITCHED SHUNT
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15604	99.6	GRANT - MITCHELL 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15604	99.6	GRANT - MITCHELL 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15661	99.5	BIG STONE - HIGHWAY 12 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.5	BURR - J493 115.00 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.5	J493 115.00 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15615	99.5	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15683	99.4	MCLEOD - PANTHER 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15657	99.4	GRACEVT7 - MORRIS 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15657	99.4	GRACEVT7 - MORRIS 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.4	GEN337652 1-WHITE BLUFF UNIT #1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.4	GEN337653 1-WHITE BLUFF UNIT #2
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.4	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.4	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.4	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15614	99.4	CLEARWATER - NELIGH 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15614	99.4	CLEARWATER - ONEILL 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15605	99.4	AXTELL - SWEETWATER 345KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15535	99.4	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15535	99.4	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15739	99.3	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15688	99.3	MONTICELLO - WAITE PARK 345KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15681	99.3	MT VERN - STORLA 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15643	99.3	GRAND FORKS - PICKERT 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.3	2516-WATERTNCAP 4230.00
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.3	GEN600045 4-ANSON
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.3	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.3	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15614	99.3	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15532	99.3	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15532	99.3	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15532	99.3	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15739	99.2	FIELD NORTH - FIELD SOUTH 345KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15739	99.2	FIELD SOUTH - WILMARTH 345KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15638	99.2	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15636	99.2	EAGLE - MARTIN 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.2	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.2	GEN300003 1-THOMAS HILL UNIT 3
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.2	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.2	GEN338146 1-INDEPENDENCE UNIT #2
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.2	GEN542962 2-IATAN UNIT #2
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.2	GEN645012 2-NEBRASKA CITY 2
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.2	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.2	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.2	MEC115 - WILMARTH 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.2	MEC345 - WILMARTH 345KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.2	MEC345 345/19.5KV TRANSFORMER CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.2	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15631	99.2	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15631	99.2	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15631	99.2	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15631	99.2	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15640	99.1	AS KING - CHISAGO COUNTY 345KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.1	GEN636641 1-LOUISA UNIT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.1	GEN645011 1-NEBRASKA CITY 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.1	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.1	MEC115 115/15.0KV TRANSFORMER CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15632	99.1	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15632	99.1	P12:230:UMZW:# 158 #: MH IN ND.
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15631	99.1	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15631	99.1	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15631	99.1	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15631	99.1	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15627	99.1	FT RANDAL - WHITE SWAN 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15619	99.1	KELLY - SHELL CREEK 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15619	99.1	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15619	99.1	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15604	99.1	CHERRY CREEK - GRANT 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15830	99	HURON - WOONSOCKET 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15654	99	GRANITE FALLS - WILLMAR 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15654	99	GRANITE FALLS - WILLMAR 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15636	99	DICKINSON - PARKERS LAKE 345KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15635	99	ARROWHEAD - FORBES 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15634	99	MORANVILLE - ROSEAU 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99	GEN344894 1-1LAB G1 20.000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99	GEN344895 2-1LAB G2 20.000
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99	GEN344896 3-1LAB G3 20.000
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99	GEN344897 4-1LAB G4 20.000
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99	GEN501801 1-DOLET HILLS UNIT1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99	GEN542951 5-HAWTHORN UNIT #5
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99	GEN542957 1-IATAN UNIT #1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99	GEN587153 1-G16-021-GEN10.6900
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99	GEN600069 W-YANKEE 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99	GEN600077 W-YANKEE 2
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99	GEN600078 W-YANKEE 3
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99	GEN600099 W-YANKEE 4
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15632	99	MOOREHEAD - MORRIS 230KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15627	99	TYNDALL - WHITE SWAN 115KV CKT 1
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15620	99	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15592	99	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16251	110.718	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16251	110.7179	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16251	109.7188	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16251	109.7187	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	108.7517	BASE CASE
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	108.7505	BASE CASE
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15754	107.167	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.26378	106.3432	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15754	106.1325	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.26378	106.041	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15754	105.8973	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25034	104.4933	BASE CASE
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25034	104.4921	BASE CASE
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.26378	104.3232	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	104.038	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15920	103.7885	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15920	103.7695	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15920	103.6747	HAZEL CREEK - LYON COUNTY 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	103.3691	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	103.3691	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	102.9084	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15865	102.9039	BROOKINGS - WATERTOWN 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15865	102.9039	BROOKINGS - WATERTOWN 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15817	102.3571	ARLINGTON - WATERTOWN 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	102.1677	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15675	102.1203	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15640	102.0271	BURR - CANBY 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	101.938	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15675	101.8588	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15759	101.7025	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15759	101.7024	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	101.6438	BROOKING COUNTY - J432 345.00 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	101.6438	J432 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15609	101.6171	G15088_T 345.00 - MOORE 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	101.615	YANKEE 115/34.5KV TRANSFORMER CKT 2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	101.5509	YANKEE 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15817	101.4879	ARLINGTON - BROOKINGS 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	101.4187	GEN587583 1-J432-GEN1 0.6900
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	101.3973	GEN659354 1-DEERCREK STG18.000
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	101.3903	GEN659353 1-DEERCREK CTG18.000
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	101.376	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15516	101.3483	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15516	101.3483	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15703	101.3451	MN VALLEY TAP - PANTHER 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15646	101.3109	ELM CREEK - MONTICELLO 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15817	101.303	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15817	101.303	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15817	101.303	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15652	101.2973	CANBY - GRANITE FALLS 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15652	101.2973	CANBY - GRANITE FALLS 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15687	101.2934	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16170	101.2617	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15657	101.2617	MENNO JCT - UTICA 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	101.2296	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15645	101.2245	NAPA JCT7 115.00 - UTICA 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15645	101.2244	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	101.2159	ANSON 115/17.5KV TRANSFORMER CKT 4
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16170	101.1672	2810X2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15645	101.1391	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15635	101.1284	PRAIRIE - RAMSEY 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15717	101.1278	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15645	101.113	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15645	101.1077	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15759	101.1049	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15759	101.1048	MITCHELL - MITCHELL NW 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	101.1	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15648	101.0264	AUDUBON - HUBBARD 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15630	100.9687	JAMES TOWN - WEBER 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15657	100.8951	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15755	100.8671	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15755	100.8671	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.8664	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15630	100.818	BISMARK - WEBER 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.7447	WATERTOWN 230KV SWITCHED SHUNT
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15592	100.6529	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15592	100.6453	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15645	100.6452	ELM CREEK - PARKERS LAKE 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.603	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.6017	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15661	100.5928	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.5824	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15604	100.5383	GRANT - MITCHELL 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15604	100.5382	GRANT - MITCHELL 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15615	100.5306	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15657	100.5298	GRACEVT7 - ORTONVILLE 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.5047	BURR - J493 115.00 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.5047	J493 115.00 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15614	100.4369	CLEARWATER - ONEILL 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.4197	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.4195	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.4174	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.4173	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15605	100.4146	AXTELL - SWEETWATER 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.4106	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15661	100.4089	BIG STONE - HIGHWAY 12 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15535	100.4087	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15535	100.4086	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.4	2516-WATERTNCAP 4230.00
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15614	100.3935	CLEARWATER - NELIGH 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15657	100.3426	GRACEVT7 - MORRIS 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15657	100.3425	GRACEVT7 - MORRIS 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15643	100.3378	GRAND FORKS - PICKERT 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15681	100.3146	MT VERN - STORLA 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15614	100.3055	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15532	100.3039	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15532	100.2829	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15532	100.2828	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15683	100.2714	MCLEOD - PANTHER 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15688	100.2543	MONTICELLO - WAITE PARK 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.2479	GEN600045 4-ANSON
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.2472	GEN645012 2-NEBRASKA CITY 2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.2379	GEN542962 2-IATAN UNIT #2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.2185	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15739	100.2169	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.2151	GEN338146 1-INDEPENDENCE UNIT #2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.207	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15739	100.1903	FIELD SOUTH - WILMARTH 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.1858	GEN337653 1-WHITE BLUFF UNIT #2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.1846	MEC345 - WILMARTH 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.1828	MEC345 345/19.5KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	100.1815	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	100.1815	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	100.1796	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	100.1796	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.1791	GEN337652 1-WHITE BLUFF UNIT #1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.1775	MEC115 - WILMARTH 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.1641	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15636	100.1543	EAGLE - MARTIN 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15739	100.152	FIELD NORTH - FIELD SOUTH 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.152	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.1517	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	100.1509	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	100.1509	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	100.1509	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	100.1509	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.1482	GEN300003 1-THOMAS HILL UNIT 3
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15638	100.1476	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15632	100.1383	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15632	100.1383	P12:230:UMZW:# 158 #: MH IN ND.
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.1336	GEN645011 1-NEBRASKA CITY 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15619	100.1209	KELLY - SHELL CREEK 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15640	100.1059	AS KING - CHISAGO COUNTY 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15619	100.1047	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15619	100.1047	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.1022	MEC115 115/15.0KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.1	GEN636641 1-LOUISA UNIT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.0746	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25908	100	HAZEL CREEK - LYON COUNTY 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19375	100	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16390	100	BLAIR - WATERTOWN 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16390	100	BLAIR - WATERTOWN 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15830	100	HURON - WOONSOCKET 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100	GEN344894 1-1LAB G1 20.000
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100	GEN344895 2-1LAB G2 20.000
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100	GEN344896 3-1LAB G3 20.000
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100	GEN344897 4-1LAB G4 20.000
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100	GEN501801 1-DOLET HILLS UNIT1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100	GEN542951 5-HAWTHORN UNIT #5
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100	GEN542957 1-IATAN UNIT #1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100	GEN587153 1-G16-021-GEN10.6900
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100	GEN600069 W-YANKEE 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15632	100	MOOREHEAD - MORRIS 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	100	FT RANDAL - WHITE SWAN 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	100	TYNDALL - WHITE SWAN 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15620	100	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15604	100	CHERRY CREEK - GRANT 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15592	100	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25908	99.9	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25908	99.9	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15733	99.9	BISMARK - WASHBURN 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15733	99.9	P12:230:UMZB:# 171 #: WB IN ND.
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15733	99.9	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15666	99.9	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15654	99.9	GRANITE FALLS - WILLMAR 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15654	99.9	GRANITE FALLS - WILLMAR 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15649	99.9	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15645	99.9	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15636	99.9	DICKINSON - PARKERS LAKE 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15636	99.9	EAGLE - PHILIP 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15635	99.9	ARROWHEAD - FORBES 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15635	99.9	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15634	99.9	MORANVILLE - ROSEAU 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15634	99.9	RICHER - ROSEAU 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.9	GEN336251 1-NINEMILE POINT UNIT#4
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.9	GEN336252 1-NINEMILE POINT UNIT#5
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.9	GEN345670 1-1RUSH G1 18.000
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.9	GEN345671 2-1RUSH G2 18.000
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.9	GEN501812 1-RODEMACHER UNIT 2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.9	GEN501813 1-RODEMACHER UNIT 3
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.9	GEN542955 1-LACYGNE UNIT #1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.9	GEN600077 W-YANKEE 2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.9	GEN600078 W-YANKEE 3
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.9	GEN600099 W-YANKEE 4
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	99.9	GRANITE FALLS - MORRIS 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	99.9	GRANITE FALLS - MORRIS 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.9	BISMARK - HILKEN 4 230.00 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15615	99.9	OGALLALA - SIDNEY 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15609	99.9	G15088_T 345.00 - PAULINE 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15554	99.9	UTICA JCT - VFODNES 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25034	99.8	2516-WATERTNCAP 4230.00
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25034	99.8	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16128	99.8	GROTON - REDFIELD 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16128	99.8	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15733	99.8	LELAND OLDS - WASHBURN 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15695	99.8	AURORA - BROOKINGS 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15695	99.8	AURORA - BROOKINGS 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15666	99.8	FRANKLIN - REDWOOD FALLS 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15651	99.8	BIG STONE - BROWNS VALLEY 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15647	99.8	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15641	99.8	BALTA - HARVEY 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15638	99.8	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15634	99.8	AINSWORTH - AINSWORTH 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.8	GEN334440 1-SABINE UNIT 4
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.8	GEN335206 1-NELSON UNIT 6
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.8	GEN336831 1-BAXTER WILSON SES
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.8	GEN337041 1-GERALD ANDRUS
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.8	GEN338388 1-1PLUM PT U1 23.000
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.8	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.8	GEN563222 1-G15088_3 0.6900
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.8	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.8	GRANITE FALLS 115KV SWITCHED SHUNT
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.8	GRANITE FALLS 230KV SWITCHED SHUNT
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.8	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15626	99.8	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15618	99.8	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15618	99.8	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15618	99.8	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15618	99.8	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15618	99.8	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15618	99.8	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16170	99.7	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15858	99.7	BRISTOL - GROTON 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15714	99.7	HELENA - SHEAS LK3 345.00 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15686	99.7	GRANITE FALLS - S3 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15686	99.7	GRANITE FALLS - S3 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15659	99.7	PAYNSVILLE - WILLMAR 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15642	99.7	COAL CREEK - MCHENRY 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15640	99.7	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15639	99.7	MARTIN - SHANNON 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15638	99.7	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15638	99.7	CHADRON - DUNLAP 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.7	GEN335614 1-WILLOW GLENN UNIT#4
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.7	GEN336191 1-LITTLE GYPSY UNIT#3
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.7	GEN336801 1-BAXTER WILSON UNIT #1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.7	GEN542956 2-LACYGNE UNIT #2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.7	H081 345.00 - H081-TAP 345.00 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.7	H081 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.7	MINNESOTA VALLEY - MINVALY CAP7115.00 115KV CKT Z
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.7	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15632	99.7	MALLARD - RUGBY 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15632	99.7	MALLARD - RUGBY 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	99.7	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	99.7	P12:115:TSGT:COVALT7-SNAKECK7
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15612	99.7	P13:230-345:NPPD:SIDNEY 3:KV2A
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15612	99.7	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15612	99.7	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15592	99.7	G16234&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25034	99.6	GEN635214 4-NEAL UNIT 4
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16103	99.6	HURON - REDFIELD 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15858	99.6	BRISTOL - SUMMIT 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15830	99.6	STORLA - WOONSOCKET 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15792	99.6	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15792	99.6	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15661	99.6	MARSHALL ERIE ROAD - S3 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15661	99.6	MARSHALL ERIE ROAD - S3 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15639	99.6	BADOURA - HUBBARD 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15638	99.6	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15635	99.6	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15634	99.6	FALCONER - OSLO 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15634	99.6	GRE-ORTMN 4 230.00 - SHANNON 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.6	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.6	GEN300006 1-NEW MADRID UNIT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.6	GEN300007 1-NEW MADRID UNIT 2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.6	GEN334441 1-SABINE UNIT 5
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.6	GEN335204 1-NELSON UNIT 4
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.6	GEN336464 1-MICHOUD UNIT #3
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.6	GEN509403 1-PIRKEY GENERATION
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.6	GEN509416 1-TURK GENERATION
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.6	GEN587663 1-H081-GEN1 0.6900
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.6	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.6	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.6	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.6	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.6	RUNNING 230/118KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	99.6	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKE
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15630	99.6	AINSWORTH - STUART 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15629	99.6	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15629	99.6	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	99.6	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	99.6	TYNDALL - YANKON JCT 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	GAVINS POINT - HARTINGTON 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15618	99.6	AXTELL - PAULINE 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15610	99.6	MINGO - SETAB 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15610	99.6	MINGO - SETAB 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15603	99.6	HOSKINS - SHELL CREEK 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15561	99.6	SIOUX FALLS - VFODNES 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15830	99.5	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15722	99.5	BELFIELD - CHARLIE CREEK 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15695	99.5	AURORA - FLANDRU 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15695	99.5	AURORA - FLANDRU 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15681	99.5	ARMOUR - MT VERN 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15680	99.5	LELAND OLDS - LOGAN 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15659	99.5	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15654	99.5	CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15651	99.5	LOGAN (KW1A) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15638	99.5	CHADRON - WAYSIDE 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15638	99.5	P13:115-230:NPPD:WAYSIDE4:T1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15638	99.5	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15636	99.5	FERGSFL4 230.00 (FERG230/115) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15636	99.5	FERGSFL7 115.00 - HOOT LAKE 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15636	99.5	MORO TAP - MORRIS 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15636	99.5	MORO TAP - MORRIS 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15635	99.5	BAGLEY - WINGER 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15635	99.5	FALCONER - GRAND FORKS 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15635	99.5	FALCONER - GRAND FORKS 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15634	99.5	GRE-ORTMN 4 230.00 - RUNNING 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15634	99.5	LUND - RUNNING 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	1222-AINSWORTH WIND
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	2546-JAMES TOWN
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	AINSWORTH WIND 34KV SWITCHED SHUNT
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	BARNES 4 230.00 230/34.5KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	E B CAMPBELL 230/14.4KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	FARGO - MOOREHEAD 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN300002 1-THOMAS HILL UNIT 2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN303006 1-1BC2 U1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN303007 1-1BC2 U2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN303008 1-1BC2 U3
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN334433 1-SABINE UNIT 3
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN336151 1-WATERFORD UNIT#1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN336152 1-WATERFORD UNIT#2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN336170 1-GULF OXY U4
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN336222 1-LITTLE GYPSY UNIT#2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN509394 1-FLINT CREEK

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN509404 1-WELSH #1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN509406 1-WELSH #3
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN512688 2-GRDA1 GSU2 22
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN513601 1-GRECCTG_1 20.000
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN514805 1-SOONER UNIT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN514806 1-SOONER UNIT 2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN515225 1-MUSKOGEE 5G
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN515226 1-MUSKOGEE 6G
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN590010 1-ERCOT EQUIVALENCE
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN600020 2-ANGUS ANSON1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN600021 3-ANGUS ANSON2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	GENOA 161 161/24.0KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	JAMES TOWN 115KV SWITCHED SHUNT
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.5	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	99.5	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	99.5	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15630	99.5	ATKINSON - STUART 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15630	99.5	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15630	99.5	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15630	99.5	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	99.5	COVALT 7 115.00 - LYNN 7 115.00 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15607	99.5	SIOUX FALLS (SF KV3A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15607	99.5	SIOUX FALLS (SF KV5A) 230/115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15808	99.4	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15706	99.4	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15701	99.4	BOWMAN - RHAME 4 230.00 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15653	99.4	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15653	99.4	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15649	99.4	LOGAN - MALLARD 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15649	99.4	LOGAN - MALLARD 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15639	99.4	BADOURA - RIVERTON 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15638	99.4	ALIANCE - BOXBUTE7 115.00 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15637	99.4	EDEN PRAIRIE - PARKERS LAKE 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15635	99.4	APPLE RIVER 161 - POPLAR LAKE 161 161KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15635	99.4	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15635	99.4	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15634	99.4	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15634	99.4	GENOA 161 - SENECA 161 161KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	ARNOLD - HAZLETON 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	FARIBALT GEN115.00 115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	GEN511839 1-NORTHEASTERN STATION #2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	GEN511840 1-NORTHEASTERN STATION #3
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	GEN511842 1-RIVERSIDE STATION #1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	GEN511843 1-RIVERSIDE STATION #2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	GEN515223 1-MUSKOGEE 4G
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	GEN541151 3-SIBLEY GENERATING UNIT #3
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	GEN562003 1-G11_027_3 0.6900
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	GEN587233 1-G16-037-GEN10.6900
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	GEN600046 1-MECST
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	GEN600047 1-MECCT1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	LANGDON - LANGWIN7 115.00 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	STONE LK B1 345.00 () 345/161/13.8KV TRANSFORMER CKT 9
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15632	99.4	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	99.4	COOPER - MOORE 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	99.4	P12:115:NPPD:TSGT2:W.HORSE7:B.SPRGS7:BTB
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	99.4	P12:115:TSGT:BSPRGS7-WHORSE7
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	BELDEN - HARTINGTON 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15620	99.4	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25122	99.3	GRAND ISLAND - MCCOOL 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25096	99.3	BIG STONE - HIGHWAY 12 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25054	99.3	MOOREHEAD - MORRIS 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15650	99.3	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15650	99.3	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15641	99.3	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15635	99.3	BUNKER LAKE - SHERBURNE CO 345KV CKT 2
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15635	99.3	COON CREEK - SHERBURNE CO 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15635	99.3	COON CREEK - SHERBURNE CO 345KV CKT 3
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15635	99.3	LAWERENCE CREEK - SHAEFER 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15634	99.3	AIRTECH - FEP TAP 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15634	99.3	AIRTECH - WEST FARIBAULT 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15634	99.3	GRAND FORKS (GK KV1A) 230/115/12.47KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.3	AS KING 345/20.0KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.3	BLACK DOG 115/18.0KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.3	BLACK DOG 115/18.0KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.3	CENTER 230/22.0KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.3	CHEMOLITE 115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.3	GEN562517 1-G14_021_S2 0.6900
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.3	GEN587084 1-G16-012-GEN10.6900
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.3	GEN587643 1-J525-GEN1 0.6900
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.3	GEN629046 3-FOX LAKE 5 GENERATOR NO 3
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.3	GEN629069 1-EMERY STEAM TURBINE 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.3	HIGH BRIDGE 115/13.8KV TRANSFORMER CKT 9
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.3	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.3	MALLARD - RUTHVILLECP7115.00 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.3	MALLARD - RUTHVILLECP7115.00 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.3	NOBLES 115/34.5KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.3	WARSAW (WARSAW) 115/69/13.8KV TRANSFORMER CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	99.3	CALLAWAY - MAXWELL 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15630	99.3	ATKINSON - EMMET 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15630	99.3	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15630	99.3	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	99.3	COVALT 7 115.00 - W.HORSE7 115.00 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	99.3	COVALT 7 115.00 - W.HORSE7 115.00 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15617	99.3	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15617	99.3	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15651	99.2	BROWNS VALLEY - HANKINSON 230KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25407	99.1	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25407	99	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25034	99	GEN635024 4-WALTER SCOTT UNIT 4
0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25376	99	MONTICELLO - WAITE PARK 345KV CKT 1
0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.22424	105.8926	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.22424	105.2047	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.22445	104.8476	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.22445	104.2092	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.28511	103.0375	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.28462	102.3943	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.28511	102.3201	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.28511	102.3201	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.28511	102.2882	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.28462	101.8127	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.28462	101.8127	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.28462	101.7943	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.28511	100.62	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.28511	100.468	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.28511	100.468	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.28511	100.4392	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.28462	100.0895	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.28462	100	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.28462	100	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.28462	100	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	17SP	G16_044	FROM->TO	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	478.0	526.0	0.07233	100.6065	BASE CASE
2	17SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.04405	115.4161	BASE CASE
2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.34317	100.5291	BASE CASE
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	108.4946	BASE CASE
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26302	105.7641	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.34317	105.6474	BASE CASE
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26302	104.5245	G13_001IST 115.00 - SUMMIT 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26571	103.621	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26571	103.5944	2810X2
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26571	102.9128	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26893	102.5013	BRISTOL - GROTON 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25760	102.1862	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26893	102.1155	BRISTOL - SUMMIT 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25902	101.9428	BISON - HETINGER 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25902	101.2901	BISON - MAURINE 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25707	101.0911	BISMARK - JAMES TOWN 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.27121	101.0865	GROTON - REDFIELD 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.27121	101.0642	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25722	100.6175	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25722	100.6175	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.35353	100.5942	G13_001IST 115.00 - SUMMIT 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26228	100.5915	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26228	100.5915	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.27049	100.4867	HURON - REDFIELD 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25714	100.3622	PRAIRIE - RAMSEY 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25707	100.2525	BISMARK - WEBER 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25707	100.2313	JAMES TOWN - WEBER 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25701	100.2173	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25701	100.2173	P12:230:UMZW:# 158 #: MH IN ND.
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	100.1897	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25701	100.1311	MOOREHEAD - MORRIS 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25869	100.093	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25869	100.093	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25718	100	MENNO JCT - TRIPP JCT 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25715	100	PRAIRIE - WINGER 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	100	J460 345.00 - J460-TAP 345.00 345KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	100	J460 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25719	99.9	JAMES TOWN - PICKERT 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.9	GEN587593 1-J460-GEN1 0.6900
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25864	99.8	BISMARK - WASHBURN 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25864	99.8	LELAND OLDS - WASHBURN 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25864	99.8	P12:230:UMZB:# 171 #: WB IN ND.
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25864	99.8	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26232	99.7	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25724	99.7	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.7	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.7	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.7	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.7	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25705	99.7	GRANITE FALLS - MORRIS 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25705	99.7	GRANITE FALLS - MORRIS 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25700	99.7	G15088_T 345.00 - MOORE 345KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25694	99.7	BISMARK - HILKEN 4 230.00 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26228	99.6	REDFIELD - WEST PARK B TAP 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25948	99.6	GLENHAM - WHITLOK 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25724	99.6	HENNING - INMANN 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25714	99.6	BALTA - MCHENRY 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.6	ANSON - SPLIT ROCK 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.6	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25687	99.6	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.27646	99.5	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25961	99.5	GLENHAM - L3 HAWDON 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25948	99.5	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25724	99.5	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25720	99.5	AUDUBON - HUBBARD 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25719	99.5	GRAND FORKS - PICKERT 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25716	99.5	ELM CREEK - PARKERS LAKE 345KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.5	ANSON - SPLIT ROCK 115KV CKT 2
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.5	ANSON 115/17.5KV TRANSFORMER CKT 4
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.5	GEN300003 1-THOMAS HILL UNIT 3
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.5	GEN337652 1-WHITE BLUFF UNIT #1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.5	GEN337653 1-WHITE BLUFF UNIT #2
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.5	GEN338143 1-INDEPENDENCE UNIT #1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.5	GEN338146 1-INDEPENDENCE UNIT #2
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.5	GEN636641 1-LOUISA UNIT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.5	GEN659353 1-DEERCREK CTG18.000
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.5	GEN659354 1-DEERCREK STG18.000
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25706	99.5	FARGO - MOOREHEAD 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25690	99.5	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25690	99.5	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25667	99.5	FT THOMPSON - WESSINGTON 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25667	99.5	FT THOMPSON - WESSINGTON 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.35944	99.4	GROTON - REDFIELD 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25948	99.4	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25948	99.4	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25948	99.4	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25751	99.4	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25751	99.4	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25751	99.4	MITCHELL - MITCHELL NW 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25751	99.4	MITCHELL - MITCHELL NW 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25718	99.4	MENNO JCT - UTICA 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.4	BROOKING COUNTY - J432 345.00 345KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.4	GEN344894 1-1LAB G1 20.000
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.4	GEN344896 3-1LAB G3 20.000
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.4	GEN542962 2-IATAN UNIT #2
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.4	GEN587583 1-J432-GEN1 0.6900
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.4	GEN645012 2-NEBRASKA CITY 2
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.4	J432 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.4	YANKEE 115/34.5KV TRANSFORMER CKT 2
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25689	99.4	FT THOMPSON - OAHE 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25689	99.4	FT THOMPSON - OAHE 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25689	99.4	FT THOMPSON - OAHE 230KV CKT 2
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25689	99.4	FT THOMPSON - OAHE 230KV CKT 2
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25688	99.4	FT THOMPSON - OAHE 230KV CKT 3
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25688	99.4	FT THOMPSON - OAHE 230KV CKT 3
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25688	99.4	FT THOMPSON - OAHE 230KV CKT 4
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25688	99.4	FT THOMPSON - OAHE 230KV CKT 4
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25687	99.4	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25687	99.4	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25948	99.3	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25818	99.3	BELFIELD - CHARLIE CREEK 345KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25738	99.3	MONTICELLO - WAITE PARK 345KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25719	99.3	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25718	99.3	BALTA - HARVEY 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25718	99.3	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25715	99.3	AS KING - CHISAGO COUNTY 345KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.3	GEN336251 1-NINEMILE POINT UNIT#4
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.3	GEN336252 1-NINEMILE POINT UNIT#5
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.3	GEN336831 1-BAXTER WILSON SES
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.3	GEN344895 2-1LAB G2 20.000
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.3	GEN344897 4-1LAB G4 20.000
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.3	GEN345670 1-1RUSH G1 18.000
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.3	GEN345671 2-1RUSH G2 18.000
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.3	GEN501801 1-DOLET HILLS UNIT1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.3	GEN501813 1-RODEMACHER UNIT 3
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.3	GEN587153 1-G16-021-GEN10.6900
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.3	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.3	GEN645011 1-NEBRASKA CITY 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.3	YANKEE 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.35944	99.2	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26416	99.2	GROTON - ORDWAY 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25948	99.2	OAHE - SULLEY BUTTE 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25722	99.2	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25718	99.2	HARVEY - UNDERWOOD 230KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.2	GEN300006 1-NEW MADRID UNIT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.2	GEN300007 1-NEW MADRID UNIT 2
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.2	GEN337041 1-GERALD ANDRUS
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.2	GEN542956 2-LACYGNE UNIT #2
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.2	GEN542957 1-IATAN UNIT #1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.2	GEN600045 4-ANSON
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.2	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.2	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.2	MEC115 - WILMARTH 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.2	MEC115 115/15.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.2	MEC345 - WILMARTH 345KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.2	MEC345 345/19.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.2	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.2	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25701	99.2	GRANT - MITCHELL 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25701	99.2	GRANT - MITCHELL 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.1	GEN542951 5-HAWTHORN UNIT #5
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99.1	GEN542955 1-LACYGNE UNIT #1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26174	99	EDGELEY - JAMES TOWN 115KV CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99	G09_001IST 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.25711	99	G09_001IST 345.00 345/34.5KV TRANSFORMER CKT 2
2	16WP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120.0	121.0	0.05606	100.2712	G09_001IST 345.00 - GROTON 345KV CKT 1
2	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210.0	210.0	0.03337	104.0235	BISON - MAURINE 230KV CKT 1
2	16WP	G16_044	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.02996	125.4454	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	16WP	G16_044	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.02996	125.2713	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	16WP	G16_044	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.02996	125.2702	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	16WP	G16_044	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.02996	124.6221	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	16WP	G16_044	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.02996	124.4467	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	16WP	G16_044	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.02996	124.4455	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07233	110.0846	BASE CASE
2	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.07233	106.0432	BASE CASE
2	17G	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06923	103.9446	BASE CASE
2	17G	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.06923	100.9216	BASE CASE
2	16WP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.92384	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	16WP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.46192	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	16WP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.46192	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	16WP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.34058	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	16WP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.34058	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	16WP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.27242	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	16WP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.23950	-	2810X2
2	16WP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.23950	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	16WP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.21341	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	16WP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.11975	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	16WP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.11975	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	16WP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.11975	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	16WP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.11975	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	16WP	G16_044	-	Non-Converged Contingency	478.0	526.0	0.07114	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	16WP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.07114	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	16WP	G16_044	-	Non-Converged Contingency	797.0	797.0	0.07114	-	BROADLAND - HURON 230KV CKT 1
2	16WP	G16_044	-	Non-Converged Contingency	400.0	400.0	0.07114	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.03920	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.92212	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.78763	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.49467	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.49467	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.46667	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.46106	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.46106	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.39382	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.39382	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.34113	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.34113	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.33332	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.27691	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
2	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.27466	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.27466	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	720.0	792.0	0.24733	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	17G	G16_044	-	Non-Converged Contingency	720.0	792.0	0.24733	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.23333	-	2810X2
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.23333	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.22402	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.20769	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.20769	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
2	17G	G16_044	-	Non-Converged Contingency	720.0	792.0	0.16666	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	17G	G16_044	-	Non-Converged Contingency	720.0	792.0	0.16666	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.11667	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.11667	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.11667	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.11667	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17G	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11201	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11201	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11201	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.10319	-	2810X2
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.10319	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.06923	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
2	17G	G16_044	-	Non-Converged Contingency	478.0	526.0	0.06923	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.06923	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	17G	G16_044	-	Non-Converged Contingency	732.0	732.0	0.06923	-	BROADLAND - HURON 230KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	400.0	400.0	0.06923	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_044	-	Non-Converged Contingency	400.0	400.0	0.06923	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06529	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06529	-	CHISAGO COUNTY - FORBES 500KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06229	-	FORBES - ROSEAU 500KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	1732.1	1905.3	0.06229	-	RIEL - ROSEAU 500KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06229	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06229	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	1793.0	1793.0	0.06212	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	705.0	705.0	0.05325	-	BUFFALO - JAMESTOWN 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	705.0	705.0	0.05292	-	CENTER - JAMESTOWN 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	720.0	792.0	0.05233	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.05160	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.05160	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.05160	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.05160	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17G	G16_044	-	Non-Converged Contingency	409.0	450.0	0.03596	-	FORMAN - HANKINSON 230KV CKT 1
2	17G	G16_044	-	Non-Converged Contingency	335.0	429.4	0.03393	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.92820	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.81683	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.50062	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.50062	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	17SP	G16_044	-	Non-Converged Contingency	212.0	212.0	0.50000	-	GEN-2016-044345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	212.0	212.0	0.50000	-	GEN-2016-044345.00 345/34.5KV TRANSFORMER CKT 2
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.48198	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.46410	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.46410	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.40841	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.40841	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.34317	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.34317	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.34204	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.31248	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.28930	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
2	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.25711	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.25711	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	720.0	792.0	0.25031	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	720.0	792.0	0.25031	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.24099	-	2810X2
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.24099	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.22802	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.22802	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.21698	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.21698	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
2	17SP	G16_044	-	Non-Converged Contingency	720.0	792.0	0.16278	-	SPLIT ROCK - WHITE 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	720.0	792.0	0.16278	-	SPLIT ROCK - WHITE 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	720.0	792.0	0.15624	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	720.0	792.0	0.15624	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.14014	-	P12:230:UMZB:# 171 #: WB IN ND.
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.14014	-	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.12499	-	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.12499	-	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
2	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.12049	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.12049	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.12049	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.12049	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11401	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11401	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11401	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11401	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11401	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11401	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11401	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.11138	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	17SP	G16_044	-	Non-Converged Contingency	717.0	717.0	0.11107	-	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	1073.0	1195.0	0.09429	-	GEN542951 5-HAWTHORN UNIT #5

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_044	-	Non-Converged Contingency	1073.0	1195.0	0.09429	-	GEN542955 1-LACYGNE UNIT #1
2	17SP	G16_044	-	Non-Converged Contingency	1073.0	1195.0	0.09429	-	GEN542956 2-LACYGNE UNIT #2
2	17SP	G16_044	-	Non-Converged Contingency	956.1	956.1	0.09389	-	ADAMS - MITCHLCO3 345.00 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	1099.0	1195.0	0.08466	-	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	17SP	G16_044	-	Non-Converged Contingency	1099.0	1195.0	0.08466	-	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	17SP	G16_044	-	Non-Converged Contingency	1099.0	1195.0	0.08466	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.08333	-	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.07924	-	P13:230-345:NPPD:STEGALL3:KV3A
2	17SP	G16_044	-	Non-Converged Contingency	430.2	430.2	0.07317	-	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	430.2	430.2	0.07317	-	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.07283	-	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.07233	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	478.0	526.0	0.07233	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.07233	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	732.0	732.0	0.07233	-	BROADLAND - HURON 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	400.0	400.0	0.07233	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	400.0	400.0	0.07233	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	1173.6	1195.0	0.07152	-	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.07109	-	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
2	17SP	G16_044	-	Non-Converged Contingency	720.0	792.0	0.07014	-	SPLIT ROCK - WHITE 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	320.0	352.0	0.07007	-	BISMARK - WASHBURN 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	319.0	351.0	0.07007	-	LELAND OLDS - WASHBURN 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	1793.0	1793.0	0.06999	-	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	864.0	864.0	0.06941	-	HIGHLND 3 345.00 - RAUN 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	1378.0	1515.4	0.06895	-	HELENA - SHEAS LK3 345.00 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	1792.7	1792.7	0.06791	-	MONTICELLO - WAITE PARK 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	2066.0	2066.0	0.06717	-	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	2066.0	2066.0	0.06717	-	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06689	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06689	-	CHISAGO COUNTY - FORBES 500KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06363	-	FORBES - ROSEAU 500KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	1732.1	1905.3	0.06363	-	GEN600000 1-SHERBURNECNTY G1
2	17SP	G16_044	-	Non-Converged Contingency	1732.1	1905.3	0.06363	-	GEN600001 2-SHERBURNE CNTY G2
2	17SP	G16_044	-	Non-Converged Contingency	1732.1	1905.3	0.06363	-	GEN600002 3-SHERBURNE CNTY G3
2	17SP	G16_044	-	Non-Converged Contingency	1732.1	1905.3	0.06363	-	GEN600003 1-PRAIRIE ISLAND G1
2	17SP	G16_044	-	Non-Converged Contingency	1732.1	1905.3	0.06363	-	GEN600004 2-PRAIRIE ISLAND G2
2	17SP	G16_044	-	Non-Converged Contingency	1732.1	1905.3	0.06363	-	GEN600005 1-MONTICELLO
2	17SP	G16_044	-	Non-Converged Contingency	1732.1	1905.3	0.06363	-	GEN600006 1-AS KING
2	17SP	G16_044	-	Non-Converged Contingency	1732.1	1905.3	0.06363	-	RIEL - ROSEAU 500KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06363	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.06363	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	1793.0	1793.0	0.06348	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	1793.0	1793.0	0.06348	-	GEN620315 1-BIG STONE GEN
2	17SP	G16_044	-	Non-Converged Contingency	1793.0	1793.0	0.06348	-	GEN657964 1-ASH2GEN9 0.5750
2	17SP	G16_044	-	Non-Converged Contingency	1299.0	1299.0	0.05690	-	GEN514806 1-SOONER UNIT 2
2	17SP	G16_044	-	Non-Converged Contingency	1299.0	1299.0	0.05690	-	GEN515223 1-MUSKOGEE 4G
2	17SP	G16_044	-	Non-Converged Contingency	1299.0	1299.0	0.05690	-	GEN515225 1-MUSKOGEE 5G
2	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.05569	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.05569	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.05501	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	17SP	G16_044	-	Non-Converged Contingency	705.0	705.0	0.05473	-	BUFFALO - JAMESTOWN 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	705.0	705.0	0.05443	-	CENTER - JAMESTOWN 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	720.0	792.0	0.05378	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	956.0	956.0	0.05210	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	800.0	1084.0	0.04699	-	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	319.0	341.0	0.04599	-	NUNDRWD - WAYSIDE 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	430.2	430.2	0.04591	-	SQUARE BUTTE - STANTON 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	1195.1	1195.1	0.04510	-	NOBLES - SPLIT ROCK 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	215.0	236.0	0.04405	-	BISON - HETINGER 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	384.0	384.0	0.04405	-	BISON - MAURINE 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.04209	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	17SP	G16_044	-	Non-Converged Contingency	210.0	210.0	0.04184	-	BISMARK - L3 HAWDON 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	210.0	210.0	0.04184	-	GLENHAM - L3 HAWDON 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	240.0	260.0	0.04166	-	GLENHAM - WHITLOK 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	240.0	260.0	0.04166	-	OAHE - SULLEY BUTTE 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	240.0	260.0	0.04166	-	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	240.0	260.0	0.04166	-	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	342.0	342.0	0.03982	-	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	342.0	342.0	0.03982	-	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	400.0	480.0	0.03962	-	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_044	-	Non-Converged Contingency	409.0	409.0	0.03843	-	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	409.0	409.0	0.03843	-	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	341.8	341.8	0.03843	-	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	341.8	341.8	0.03843	-	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	410.0	410.0	0.03830	-	BLAIR - GRANITE FALLS 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	410.0	410.0	0.03830	-	BLAIR - GRANITE FALLS 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	1072.0	1195.0	0.03806	-	GEN300003 1-THOMAS HILL UNIT 3
2	17SP	G16_044	-	Non-Converged Contingency	320.0	320.0	0.03789	-	FT RANDAL - FT THOMPSON 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	320.0	320.0	0.03789	-	FT RANDAL - FT THOMPSON 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	318.7	318.7	0.03718	-	FT RANDAL - LAKE PLATT 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	352.0	352.0	0.03718	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	352.0	352.0	0.03718	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	364.0	364.0	0.03641	-	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	364.0	364.0	0.03641	-	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	409.0	450.0	0.03616	-	FORMAN - HANKINSON 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	320.0	342.0	0.03554	-	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	320.0	342.0	0.03554	-	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	1195.1	1195.1	0.03542	-	AS KING - CHISAGO COUNTY 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	239.0	299.0	0.03528	-	BOWMAN - HETINGER 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	239.0	299.0	0.03528	-	BOWMAN - RHAME 4 230.00 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	320.0	320.0	0.03525	-	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	368.0	368.0	0.03525	-	KELLY - MEADOWGROVE4230.00 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	956.0	956.0	0.03505	-	HOSKINS - RAUN 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	956.0	956.0	0.03505	-	HOSKINS - RAUN 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	335.0	429.4	0.03473	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	335.0	429.4	0.03473	-	J290_SUB 230.00 - RUGBY 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	336.0	386.0	0.03444	-	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
2	17SP	G16_044	-	Non-Converged Contingency	372.9	372.9	0.03262	-	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	717.0	717.0	0.03239	-	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
2	17SP	G16_044	-	Non-Converged Contingency	717.0	717.0	0.03239	-	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	672.0	773.0	0.03202	-	CENTER (C1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	672.0	773.0	0.03202	-	CENTER (C2) 345/230/13.8KV TRANSFORMER CKT 2
2	17SP	G16_044	-	Non-Converged Contingency	111.0	111.0	0.03102	-	BRISTOL - GROTON 115KV CKT 1
2	17SP	G16_044	-	Non-Converged Contingency	111.0	111.0	0.03102	-	BRISTOL - SUMMIT 115KV CKT 1
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07014	104.9537	BASE CASE
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07014	101.7062	ANSON - SPLIT ROCK 115KV CKT 1
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07014	101.7058	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07268	101.1779	BUFFALO RIDGE - YANKEE 115KV CKT 1
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07014	100.3068	ANSON - SPLIT ROCK 115KV CKT 2
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07014	100.2587	ANSON 115/17.5KV TRANSFORMER CKT 4
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07174	100.2371	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07174	100.2371	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07091	100.2299	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07148	100.1353	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07147	100.1054	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07405	100.0845	AURORA - BROOKINGS 115KV CKT 1
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07405	100.0845	AURORA - BROOKINGS 115KV CKT 1
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07622	99.5	FIELD NORTH - FIELD SOUTH 345KV CKT 1
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07622	99.5	FIELD NORTH - LKFLDXL3 345KV CKT 1
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07622	99.5	FIELD SOUTH - WILMARTH 345KV CKT 1
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07405	99.3	AURORA - FLANDRU 115KV CKT 1
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07405	99.3	AURORA - FLANDRU 115KV CKT 1
2	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07214	99.1	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.16241	108.6095	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.16241	108.6095	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	107.7004	BASE CASE
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15744	106.2601	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.25031	105.756	BASE CASE
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15911	102.9424	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15911	102.9344	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15911	102.8133	HAZEL CREEK - LYON COUNTY 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	102.3034	J460 345.00 - J460-TAP 345.00 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	102.3034	J460 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15621	101.8913	BISMARK - JAMES TOWN 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	101.8829	GEN587593 1-J460-GEN1 0.6900
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15776	101.4677	BISON - HETINGER 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	101.4214	COYOTE 345/24.0KV TRANSFORMER CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15638	101.4196	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15638	101.4196	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15855	101.4084	BROOKINGS - WATERTOWN 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15855	101.4084	BROOKINGS - WATERTOWN 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15807	101.3639	ARLINGTON - WATERTOWN 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15666	101.2196	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15648	100.9861	MENNO JCT - TRIPP JCT 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15666	100.8829	HENNING - INMANN 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15631	100.7926	BURR - CANBY 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15666	100.7665	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15776	100.6342	BISON - MAURINE 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15749	100.5826	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15749	100.5826	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	100.5724	BROOKING COUNTY - J432 345.00 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	100.5724	J432 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	100.5628	GEN659354 1-DEERCREK STG18.000
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	100.5615	GEN659353 1-DEERCREK CTG18.000
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.25495	100.558	BROOKINGS - WATERTOWN 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.25495	100.558	BROOKINGS - WATERTOWN 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15807	100.5484	ARLINGTON - BROOKINGS 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	100.5298	YANKEE 115/34.5KV TRANSFORMER CKT 2
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	100.4632	YANKEE 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	100.4599	GEN587583 1-J432-GEN1 0.6900
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15621	100.4491	BISMARK - WEBER 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	100.4436	ANSON - SPLIT ROCK 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	100.4428	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15626	100.4413	PRAIRIE - RAMSEY 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15807	100.4235	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15807	100.4235	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15807	100.4235	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15621	100.4068	JAMES TOWN - WEBER 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15600	100.3591	G15088_T 345.00 - MOORE 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15642	100.2559	CANBY - GRANITE FALLS 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15642	100.2559	CANBY - GRANITE FALLS 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15677	100.2105	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15749	100.1641	MITCHELL - MITCHELL NW 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15749	100.1641	MITCHELL - MITCHELL NW 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.16158	100.1542	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15507	100.126	FT THOMPSON - WESSINGTON 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15507	100.126	FT THOMPSON - WESSINGTON 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.16158	100.1095	2810X2
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	100.1057	ANSON - SPLIT ROCK 115KV CKT 2
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	100	ANSON 115/17.5KV TRANSFORMER CKT 4
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	100	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15580	100	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15580	100	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15694	99.9	MN VALLEY TAP - PANTHER 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15582	99.9	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15657	99.8	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15648	99.8	MENNO JCT - UTICA 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15648	99.8	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15635	99.8	ELM CREEK - PARKERS LAKE 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.8	JAMES TOWN - PICKERT 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.8	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.8	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.25906	99.7	HAZEL CREEK - LYON COUNTY 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.25399	99.7	ARLINGTON - WATERTOWN 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15639	99.7	AUDUBON - HUBBARD 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15627	99.6	BALTA - MCHENRY 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15627	99.6	PRAIRIE - WINGER 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.6	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15595	99.6	GRANT - MITCHELL 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15595	99.6	GRANT - MITCHELL 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15582	99.6	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15582	99.6	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15651	99.5	BIG STONE - HIGHWAY 12 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15648	99.5	GRACEVT7 - ORTONVILLE 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.5	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.5	WATERTOWN 230KV SWITCHED SHUNT
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.25906	99.4	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15636	99.4	NAPA JCT7 115.00 - UTICA 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15636	99.4	NAPA JCT7 115.00 - UTICA 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15636	99.4	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15635	99.4	BYRON - PLEASANT VALLEY 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.4	BURR - J493 115.00 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.4	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.4	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.4	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.4	GEN600045 4-ANSON
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.4	J493 115.00 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.4	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.4	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.25031	99.3	GEN659353 1-DEERCREK CTG18.000
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.25031	99.3	GEN659354 1-DEERCREK STG18.000
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15743	99.3	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15743	99.3	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15679	99.3	MONTICELLO - WAITE PARK 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15674	99.3	MCLEOD - PANTHER 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15636	99.3	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15636	99.3	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15631	99.3	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.3	MEC345 - WILMARTH 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.3	MEC345 345/19.5KV TRANSFORMER CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15604	99.3	CLEARWATER - NELIGH 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15604	99.3	CLEARWATER - ONEILL 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15651	99.2	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15633	99.2	GRAND FORKS - PICKERT 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.2	2516-WATERTNCAP 4230.00
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.2	GEN542962 2-IATAN UNIT #2
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.2	GEN645012 2-NEBRASKA CITY 2
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.2	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.2	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.2	MEC115 - WILMARTH 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.2	MEC115 115/15.0KV TRANSFORMER CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.2	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.2	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.2	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15606	99.2	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15604	99.2	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15595	99.2	AXTELL - SWEETWATER 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15526	99.2	LAWRENCE - SIOUX FALLS 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15526	99.2	LAWRENCE - SIOUX FALLS 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15522	99.2	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15522	99.2	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15522	99.2	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15821	99.1	HURON - WOONSOCKET 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15730	99.1	FIELD NORTH - LKFLDXL3 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15730	99.1	FIELD SOUTH - WILMARTH 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15628	99.1	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.1	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.1	GEN300003 1-THOMAS HILL UNIT 3
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.1	GEN337652 1-WHITE BLUFF UNIT #1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.1	GEN337653 1-WHITE BLUFF UNIT #2
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.1	GEN338143 1-INDEPENDENCE UNIT #1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.1	GEN587153 1-G16-021-GEN10.6900
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.1	GEN636641 1-LOUISA UNIT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99.1	GEN645011 1-NEBRASKA CITY 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15623	99.1	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15623	99.1	P12:230:UMZW:# 158 #: MH IN ND.
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15621	99.1	FT THOMPSON - OAHE 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15621	99.1	FT THOMPSON - OAHE 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15621	99.1	FT THOMPSON - OAHE 230KV CKT 2
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15621	99.1	FT THOMPSON - OAHE 230KV CKT 2
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15595	99.1	CHERRY CREEK - GRANT 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15582	99.1	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15730	99	FIELD NORTH - FIELD SOUTH 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15657	99	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15648	99	GRACEVT7 - MORRIS 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15648	99	GRACEVT7 - MORRIS 115KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15636	99	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15630	99	AS KING - CHISAGO COUNTY 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15627	99	DICKINSON - PARKERS LAKE 345KV CKT 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99	GEN338146 1-INDEPENDENCE UNIT #2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99	GEN344894 1-1LAB G1 20.000
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99	GEN344896 3-1LAB G3 20.000
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99	GEN600069 W-YANKEE 1
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99	GEN600077 W-YANKEE 2
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99	GEN600078 W-YANKEE 3
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15624	99	GEN600099 W-YANKEE 4
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15621	99	FT THOMPSON - OAHE 230KV CKT 3
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15621	99	FT THOMPSON - OAHE 230KV CKT 3
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15621	99	FT THOMPSON - OAHE 230KV CKT 4
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15621	99	FT THOMPSON - OAHE 230KV CKT 4
2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.15545	99	UTICA JCT - VFODNES 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16241	109.4544	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16241	109.4544	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	108.7558	BASE CASE
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	107.8342	BASE CASE
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15744	107.2591	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15911	103.8506	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15911	103.8413	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15911	103.7145	HAZEL CREEK - LYON COUNTY 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	103.2353	J460 345.00 - J460-TAP 345.00 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	103.2353	J460 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15621	102.9941	BISMARK - JAMES TOWN 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	102.8386	GEN587593 1-J460-GEN1 0.6900
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15776	102.5496	BISON - HETINGER 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15638	102.4757	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15638	102.4757	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25495	102.4498	BROOKINGS - WATERTOWN 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25495	102.4498	BROOKINGS - WATERTOWN 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	102.4308	COYOTE 345/24.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15855	102.316	BROOKINGS - WATERTOWN 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15855	102.316	BROOKINGS - WATERTOWN 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15807	102.2969	ARLINGTON - WATERTOWN 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15666	102.1898	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15648	102.0016	MENNO JCT - TRIPP JCT 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15666	101.8518	HENNING - INMANN 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	101.8467	BURR - CANBY 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15666	101.7278	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15776	101.6796	BISON - MAURINE 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25399	101.5473	ARLINGTON - WATERTOWN 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15749	101.5264	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15749	101.5264	HURON WEST PARK - MITCHELL NW 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	101.5081	BROOKING COUNTY - J432 345.00 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	101.5081	J432 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15621	101.5041	BISMARK - WEBER 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15807	101.5021	ARLINGTON - BROOKINGS 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	101.483	YANKEE 115/34.5KV TRANSFORMER CKT 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15626	101.4786	PRAIRIE - RAMSEY 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15621	101.4596	JAMES TOWN - WEBER 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25906	101.4262	HAZEL CREEK - LYON COUNTY 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	101.4199	YANKEE 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	101.4149	GEN659354 1-DEERCREK STG18.000
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	101.4055	GEN587583 1-J432-GEN1 0.6900
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	101.4055	GEN659353 1-DEERCREK CTG18.000
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	101.4035	ANSON - SPLIT ROCK 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	101.4027	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15600	101.3493	G15088_T 345.00 - MOORE 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15807	101.3345	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15807	101.3345	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15807	101.3345	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15642	101.2595	CANBY - GRANITE FALLS 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15642	101.2595	CANBY - GRANITE FALLS 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16158	101.2206	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25906	101.2175	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15677	101.1804	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16158	101.17	Z810X2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	101.154	GEN659353 1-DEERCREK CTG18.000
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15507	101.1171	FT THOMPSON - WESSINGTON 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15507	101.1171	FT THOMPSON - WESSINGTON 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15749	101.1131	MITCHELL - MITCHELL NW 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15749	101.1131	MITCHELL - MITCHELL NW 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	101.0925	GEN659354 1-DEERCREK STG18.000
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	101.071	ANSON - SPLIT ROCK 115KV CKT 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	101	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.9902	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.982	ANSON 115/17.5KV TRANSFORMER CKT 4
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15580	100.949	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15580	100.949	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15582	100.8923	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25308	100.8567	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	100.8286	ANSON - SPLIT ROCK 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	100.8286	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.8286	JAMES TOWN - PICKERT 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.8009	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25399	100.7988	ARLINGTON - BROOKINGS 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15657	100.7907	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15694	100.7905	MN VALLEY TAP - PANTHER 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15648	100.7833	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15648	100.7791	MENNO JCT - UTICA 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15635	100.7355	ELM CREEK - PARKERS LAKE 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15639	100.7241	AUDUBON - HUBBARD 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.617	WATERTOWN 230KV SWITCHED SHUNT
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	100.6113	PRAIRIE - WINGER 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25103	100.5709	MCCOOL - MOORE 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15582	100.5574	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15582	100.5568	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	100.5566	BALTA - MCHENRY 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15595	100.5198	GRANT - MITCHELL 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15595	100.5198	GRANT - MITCHELL 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.5014	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15651	100.4754	BIG STONE - HIGHWAY 12 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15648	100.4731	GRACEVT7 - ORTONVILLE 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.4254	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15635	100.4207	BYRON - PLEASANT VALLEY 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.4016	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.4014	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.3933	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.3859	BURR - J493 115.00 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.3859	J493 115.00 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.3657	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.3632	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15636	100.3593	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15743	100.3571	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15743	100.3571	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15636	100.3542	NAPA JCT7 115.00 - UTICA 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15636	100.3542	NAPA JCT7 115.00 - UTICA 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15604	100.3223	CLEARWATER - NELIGH 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	100.3058	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.3	2516-WATERTNCAP 4230.00
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.2939	GEN600045 4-ANSON
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15636	100.2884	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15636	100.2884	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.2827	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.2827	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15604	100.2726	CLEARWATER - ONEILL 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15679	100.2431	MONTICELLO - WAITE PARK 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.2267	MEC345 - WILMARTH 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.2252	MEC345 345/19.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15606	100.2235	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.2162	GEN645012 2-NEBRASKA CITY 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15604	100.2098	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15522	100.2078	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15522	100.2078	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.2021	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.1992	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.1968	MEC115 115/15.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	100.1801	GRAND FORKS - PICKERT 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.177	MEC115 - WILMARTH 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15674	100.1722	MCLEOD - PANTHER 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15526	100.1699	LAWRENCE - SIOUX FALLS 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15526	100.1699	LAWRENCE - SIOUX FALLS 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15522	100.1658	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15595	100.1653	AXTELL - SWEETWATER 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.1639	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15651	100.1418	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25092	100.1398	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.138	GEN542962 2-IATAN UNIT #2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25038	100.1333	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.109	GEN645011 1-NEBRASKA CITY 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.1	GEN338143 1-INDEPENDENCE UNIT #1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.1	GEN636641 1-LOUISA UNIT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.0967	GEN300003 1-THOMAS HILL UNIT 3
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25395	100.0922	HURON - WOONSOCKET 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15582	100.0871	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15621	100.0851	FT THOMPSON - OAHE 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15621	100.0851	FT THOMPSON - OAHE 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15621	100.0851	FT THOMPSON - OAHE 230KV CKT 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15621	100.0851	FT THOMPSON - OAHE 230KV CKT 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15623	100.0839	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15623	100.0839	P12:230:UMZW:# 158 #: MH IN ND.
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.0706	GEN337653 1-WHITE BLUFF UNIT #2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15628	100.069	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15730	100.0636	FIELD NORTH - LKFLDXL3 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.0622	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100.0614	GEN337652 1-WHITE BLUFF UNIT #1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16378	100	BLAIR - WATERTOWN 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16378	100	BLAIR - WATERTOWN 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15821	100	HURON - WOONSOCKET 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15730	100	FIELD NORTH - FIELD SOUTH 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15730	100	FIELD SOUTH - WILMARTH 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15657	100	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15648	100	GRACEVT7 - MORRIS 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15648	100	GRACEVT7 - MORRIS 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15630	100	AS KING - CHISAGO COUNTY 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	100	DICKINSON - PARKERS LAKE 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100	GEN338146 1-INDEPENDENCE UNIT #2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100	GEN587153 1-G16-021-GEN10.6900
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100	GEN600069 W-YANKEE 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	100	GEN600078 W-YANKEE 3
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15621	100	FT THOMPSON - OAHE 230KV CKT 3
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15621	100	FT THOMPSON - OAHE 230KV CKT 3
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15621	100	FT THOMPSON - OAHE 230KV CKT 4
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15621	100	FT THOMPSON - OAHE 230KV CKT 4
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15595	100	CHERRY CREEK - GRANT 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25054	99.9	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.9	GEN600045 4-ANSON
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.9	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.9	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16119	99.9	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15722	99.9	BISMARK - WASHBURN 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15722	99.9	P12:230:UMZB:# 171 #: WB IN ND.
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15722	99.9	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15636	99.9	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.9	GEN344894 1-1LAB G1 20.000
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.9	GEN344895 2-1LAB G2 20.000
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.9	GEN344896 3-1LAB G3 20.000
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.9	GEN344897 4-1LAB G4 20.000
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.9	GEN501801 1-DOLET HILLS UNIT1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.9	GEN600077 W-YANKEE 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.9	GEN600099 W-YANKEE 4
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15623	99.9	MOOREHEAD - MORRIS 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15622	99.9	GRANITE FALLS - MORRIS 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15622	99.9	GRANITE FALLS - MORRIS 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15614	99.9	BISMARK - HILKEN 4 230.00 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15545	99.9	UTICA JCT - VFODNES 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25601	99.8	GROTON - REDFIELD 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25294	99.8	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25095	99.8	GRANT - MITCHELL 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25095	99.8	GRANT - MITCHELL 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.8	GEN640009 1-COOPER NUCLEAR STATION
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19363	99.8	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16119	99.8	GROTON - REDFIELD 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15849	99.8	BRISTOL - GROTON 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15722	99.8	LELAND OLDS - WASHBURN 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15686	99.8	AURORA - BROOKINGS 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15686	99.8	AURORA - BROOKINGS 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15671	99.8	MT VERN - STORLA 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15657	99.8	FRANKLIN - REDWOOD FALLS 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15637	99.8	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15629	99.8	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15626	99.8	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.8	GEN336251 1-NINEMILE POINT UNIT#4
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.8	GEN336252 1-NINEMILE POINT UNIT#5
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.8	GEN336831 1-BAXTER WILSON SES
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.8	GEN337041 1-GERALD ANDRUS
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.8	GEN345670 1-1RUSH_G1 18.000
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.8	GEN345671 2-1RUSH_G2 18.000
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.8	GEN501813 1-RODEMACHER UNIT 3
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.8	GEN542957 1-IATAN UNIT #1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.8	GEN563222 1-G15088_3 0.6900
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.8	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.8	GRANITE FALLS 115KV SWITCHED SHUNT
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.8	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15610	99.8	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15609	99.8	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15609	99.8	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15609	99.8	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15609	99.8	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25395	99.7	STORLA - WOONSOCKET 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.7	GEN645012 2-NEBRASKA CITY 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16158	99.7	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15849	99.7	BRISTOL - SUMMIT 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15783	99.7	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15783	99.7	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15705	99.7	HELENA - SHEAS LK3 345.00 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15676	99.7	GRANITE FALLS - S3 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15676	99.7	GRANITE FALLS - S3 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15641	99.7	BIG STONE - BROWNS VALLEY 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	99.7	BALTA - HARVEY 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15631	99.7	HARVEY - UNDERWOOD 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15628	99.7	CHADRON - DUNLAP 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	99.7	EAGLE - PHILIP 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15626	99.7	ARROWHEAD - FORBES 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.7	AINSWORTH - AINSWORTH 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.7	AS KING 345/20.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.7	GEN335206 1-NELSON UNIT 6
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.7	GEN335614 1-WILLOW GLENN UNIT#4
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.7	GEN336191 1-LITTLE GYPSY UNIT#3
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.7	GEN338388 1-1PLUM PT U1 23.000
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.7	GEN542951 5-HAWTHORN UNIT #5
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.7	GEN542956 2-LACYGNE UNIT #2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.7	GRANITE FALLS 230KV SWITCHED SHUNT
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.7	H081 345.00 - H081-TAP 345.00 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.7	H081 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15617	99.7	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15603	99.7	P13:230-345:NPPD:SIDNEY 3:KV2A
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15603	99.7	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15603	99.7	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25601	99.6	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25047	99.6	TYNDALL - WHITE SWAN 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.6	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.6	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.16094	99.6	HURON - REDFIELD 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15821	99.6	STORLA - WOONSOCKET 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15710	99.6	BELFIELD - CHARLIE CREEK 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15651	99.6	MARSHALL ERIE ROAD - S3 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15651	99.6	MARSHALL ERIE ROAD - S3 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15632	99.6	COAL CREEK - MCHENRY 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15630	99.6	BADOURA - HUBBARD 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15629	99.6	MARTIN - SHANNON 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	99.6	EAGLE - MARTIN 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15626	99.6	FALCONER - GRAND FORKS 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15626	99.6	FALCONER - GRAND FORKS 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15625	99.6	MORANVILLE - ROSEAU 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15625	99.6	RICHER - ROSEAU 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	GEN300006 1-NEW MADRID UNIT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	GEN300007 1-NEW MADRID UNIT 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	GEN334440 1-SABINE UNIT 4
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	GEN334441 1-SABINE UNIT 5
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	GEN335204 1-NELSON UNIT 4
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	GEN336464 1-MICHOUD UNIT #3
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	GEN501812 1-RODEMACHER UNIT 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	GEN542955 1-LACYGNE UNIT #1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	GEN587663 1-H081-GEN1 0.6900
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	GEN600020 2-ANGUS ANSON1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.6	RUNNING 230/118KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15617	99.6	TYNDALL - YANKON JCT 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15615	99.6	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15610	99.6	KELLY - SHELL CREEK 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15582	99.6	G16234&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15552	99.6	SIOUX FALLS - VFODNES 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25254	99.5	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25254	99.5	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25252	99.5	MN VALLEY TAP - PANTHER 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25157	99.5	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25157	99.5	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.5	J460 345.00 - J460-TAP 345.00 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.5	J460 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15821	99.5	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15799	99.5	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15686	99.5	AURORA - FLANDRU 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15686	99.5	AURORA - FLANDRU 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15671	99.5	ARMOUR - MT VERN 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15645	99.5	CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15630	99.5	BADOURA - RIVERTON 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15628	99.5	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15628	99.5	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15626	99.5	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15626	99.5	CHISAGO COUNTY (C055765(2-4)) 500/345/34.5KV TRANSFORMER CKT 9
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15626	99.5	MORO TAP - MORRIS 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15626	99.5	MORO TAP - MORRIS 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15625	99.5	FALCONER - OSLO 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.5	GEN334433 1-SABINE UNIT 3
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.5	GEN509394 1-FLINT CREEK
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.5	GEN511840 1-NORTHEASTERN STATION #3
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.5	GEN512688 2-GRDA1 GSU2 22
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.5	GEN513601 1-GRECCTG_1 20.000
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.5	GEN514805 1-SOONER UNIT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.5	GEN515223 1-MUSKOGEE 4G
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.5	GEN515225 1-MUSKOGEE 5G
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.5	GEN515226 1-MUSKOGEE 6G
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.5	GEN600021 3-ANGUS ANSON2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.5	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.5	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.5	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.5	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.5	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15621	99.5	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15621	99.5	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15617	99.5	COVALT 7 115.00 - LYNN 7 115.00 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15617	99.5	FT RANDAL - WHITE SWAN 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15617	99.5	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15617	99.5	P12:115:TSGT:COVALT7-SNAKECK7
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15617	99.5	TYNDALL - WHITE SWAN 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15610	99.5	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15610	99.5	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15609	99.5	AXTELL - PAULINE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15600	99.5	MINGO - SETAB 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15600	99.5	MINGO - SETAB 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15598	99.5	SIOUX FALLS (SF KV3A) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15598	99.5	SIOUX FALLS (SF KV5A) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15621	99.5	BONESTEEL - FT RANDAL 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25399	99.4	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25399	99.4	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25399	99.4	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25100	99.4	ELM CREEK - PARKERS LAKE 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.4	GEN645011 1-NEBRASKA CITY 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15666	99.4	LELAND OLDS - LOGAN 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15649	99.4	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15645	99.4	GRANITE FALLS - WILLMAR 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15645	99.4	GRANITE FALLS - WILLMAR 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15644	99.4	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15644	99.4	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15642	99.4	LOGAN (KW1A) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15641	99.4	LOGAN - MALLARD 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15641	99.4	LOGAN - MALLARD 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15640	99.4	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15640	99.4	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15633	99.4	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15628	99.4	CHADRON - WAYSIDE 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15628	99.4	P13:115-230:NPPD:WAYSIDE4:T1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15627	99.4	EDEN PRAIRIE - PARKERS LAKE 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15626	99.4	COON CREEK - SHERBURNE CO 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15626	99.4	COON CREEK - SHERBURNE CO 345KV CKT 3
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15625	99.4	AIRTECH - FEP TAP 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15625	99.4	AIRTECH - WEST FARIBAULT 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15625	99.4	BUNKER LAKE - SHERBURNE CO 345KV CKT 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15625	99.4	CHISAGO COUNTY (C073455(1-2)) 500/345/34.5KV TRANSFORMER CKT 10
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15625	99.4	GRE-ORTMN 4 230.00 - RUNNING 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15625	99.4	GRE-ORTMN 4 230.00 - SHANNON 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15625	99.4	LUND - RUNNING 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	1222-AINSWORTH WIND
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	2546-JAMES TOWN
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	AINSWORTH WIND 34KV SWITCHED SHUNT
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	BARNES 4 230.00 230/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	BLACK DOG 115/18.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	E B CAMPBELL 230/14.4KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	FARIBALT GEN115.00 115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	GEN303008 1-1BC2 U3
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	GEN336151 1-WATERFORD UNIT#1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	GEN336152 1-WATERFORD UNIT#2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	GEN336170 1-GULF OXY U4
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	GEN336801 1-BAXTER WILSON UNIT #1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	GEN511839 1-NORTHEASTERN STATION #2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	GEN511842 1-RIVERSIDE STATION #1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	GEN511843 1-RIVERSIDE STATION #2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	GEN541151 3-SIBLEY GENERATING UNIT #3
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	GEN562517 1-G14_021_S2 0.6900
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	GEN563082 1-G15073_3 0.6900
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	GEN600046 1-MECST
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	GENOA 161 - SENECA 161 161KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	JAMES TOWN 115KV SWITCHED SHUNT
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	P12:115:TSGT:BLKWDCK7-ELSIETP7
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.4	RGBYWND4 230.00 - RUGBY 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15623	99.4	FARGO - MOOREHEAD 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15622	99.4	CALLAWAY - MAXWELL 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15621	99.4	CROOKED CREEK - RIVERDALE 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15619	99.4	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15619	99.4	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15617	99.4	P12:115:TSGT:BSPRGS7-WHORSE7
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15615	99.4	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15615	99.4	BELDEN - HARTINGTON 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15614	99.4	103RD & ROKEBY - MOORE 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15614	99.4	103RD & ROKEBY - MOORE 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15611	99.4	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15600	99.4	G15088_T 345.00 - PAULINE 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25097	99.3	PAYNSVILLE - WILLMAR 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25077	99.3	BADOURA - RIVERTON 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25054	99.3	HARMONY - ST FRANCIS 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25051	99.3	MISSION - VETAL TAP 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15697	99.3	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15640	99.3	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15628	99.3	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15626	99.3	LAWERENCE CREEK - SHAEFER 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15626	99.3	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.3	BLACK DOG 115/18.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.3	CHEMOLITE 115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.3	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.3	GEN562518 1-G14_021_N2 0.6900
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.3	GEN587084 1-G16-012-GEN10.6900
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.3	GEN587643 1-J525-GEN1 0.6900
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.3	GEN629046 3-FOX LAKE 5 GENERATOR NO 3
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.3	GENOA 161 161/24.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.3	NOBLES 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.3	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.3	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.3	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15623	99.3	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15607	99.3	SUB 3454 - WAGENER 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15607	99.3	SUB 3454 - WAGENER 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25273	99.2	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25078	99.2	AS KING - EAU CLAIRE 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25060	99.2	GARRISON - HILKEN 4 230.00 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25045	99.2	RUGBY - TOWNER 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25034	99.2	DONALDSON - DRAYTON 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.2	GEN511840 1-NORTHEASTERN STATION #3
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.2	GEN542957 1-IATAN UNIT #1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.2	GEN542962 2-IATAN UNIT #2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.2	GEN600046 1-MECST
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.2	GEN600047 1-MECCT1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.2	H081 345.00 - H081-TAP 345.00 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.2	H081 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15649	99.2	PAYNSVILLE - WILLMAR 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15624	99.2	CENTER 230/22.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25119	99.1	GRAND ISLAND - MCCOOL 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25090	99.1	BYRON - PLEASANT VALLEY 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25070	99.1	CLEARWATER - NELIGH 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25067	99.1	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25042	99.1	CHISAGO COUNTY (C055765(2-4)) 500/345/34.5KV TRANSFORMER CKT 9
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25042	99.1	CHISAGO COUNTY (C073455(1-2)) 500/345/34.5KV TRANSFORMER CKT 10
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25033	99.1	ANDER NW - GREEN WOOD 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.1	ABERDEEN JCT 115KV SWITCHED SHUNT
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.1	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.1	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.1	GEN511839 1-NORTHEASTERN STATION #2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.1	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.1	GEN541151 3-SIBLEY GENERATING UNIT #3
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.1	GEN590011 2-ERCOT EQUIVALENCE
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.1	GEN645025 5-NORTH OMAHA 5
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.1	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25021	99.1	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25021	99.1	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25021	99.1	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25021	99.1	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25002	99.1	AXTELL - PAULINE 345KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.15641	99.1	BROWNS VALLEY - HANKINSON 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99.1	ABERDEEN JCT 115KV SWITCHED SHUNT
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25598	99	HURON - REDFIELD 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25122	99	ARMOUR - MT VERN 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25095	99	CHERRY CREEK - GRANT 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25047	99	TYNDALL - YANKON JCT 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25043	99	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25043	99	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25043	99	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25040	99	MAPLE RIVER - SHEYNNE 230KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25037	99	GARRISON - VOLTAIRE 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25036	99	MIDLAND - PHILIP 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25036	99	P12:230:UMZW:# 155 #: MD IN SD. IS-MD-PL
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99	ANSON - SPLIT ROCK 115KV CKT 2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99	ANSON 115/17.5KV TRANSFORMER CKT 4
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99	DETROIT LAKES WEST - DLWEST CAP 7115.00 115KV CKT Z1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99	GEN511842 1-RIVERSIDE STATION #1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99	GEN511843 1-RIVERSIDE STATION #2
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99	GEN525562 1-TOLK GEN #2 24 KV
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99	GEN590010 1-ERCOT EQUIVALENCE
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99	GEN600020 2-ANGUS ANSON1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99	MALLARD - NELSON 7 115.00 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99	MALLARD - NELSON 7 115.00 115KV CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25031	99	YANKEE 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.25005	99	G15088_T 345.00 - MOORE 345KV CKT 1
3	20SP	G16_044	TO->FROM	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1	341.8	341.8	0.05259	106.0153	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20SP	G16_044	TO->FROM	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1	341.8	341.8	0.05259	105.4479	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	20SP	G16_044	TO->FROM	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1	341.8	341.8	0.05259	105.4479	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20SP	G16_044	TO->FROM	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1	341.8	341.8	0.05259	105.3732	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G16_044	TO->FROM	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1	341.8	341.8	0.05258	104.629	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	25SP	G16_044	TO->FROM	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1	341.8	341.8	0.05258	104.2587	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G16_044	TO->FROM	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1	341.8	341.8	0.05258	104.1765	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	25SP	G16_044	TO->FROM	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1	341.8	341.8	0.05258	104.1765	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.03942	109.8074	BASE CASE
3	25SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.03711	103.7294	BASE CASE
3	20SP	G16_044	FROM->TO	BLAIR - GRANITE FALLS 230KV CKT 1	410.0	410.0	0.03313	112.8014	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20SP	G16_044	FROM->TO	BLAIR - GRANITE FALLS 230KV CKT 1	410.0	410.0	0.03313	112.1642	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	20SP	G16_044	FROM->TO	BLAIR - GRANITE FALLS 230KV CKT 1	410.0	410.0	0.03313	112.1642	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20SP	G16_044	FROM->TO	BLAIR - GRANITE FALLS 230KV CKT 1	410.0	410.0	0.03313	112.163	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G16_044	FROM->TO	BLAIR - GRANITE FALLS 230KV CKT 1	410.0	410.0	0.03313	110.9157	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	25SP	G16_044	FROM->TO	BLAIR - GRANITE FALLS 230KV CKT 1	410.0	410.0	0.03313	110.529	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G16_044	FROM->TO	BLAIR - GRANITE FALLS 230KV CKT 1	410.0	410.0	0.03313	110.3981	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	25SP	G16_044	FROM->TO	BLAIR - GRANITE FALLS 230KV CKT 1	410.0	410.0	0.03313	110.3981	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20WP	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111.0	111.0	0.07117	119.6798	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20SP	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111.0	111.0	0.07187	115.9315	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20L	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111.0	111.0	0.07395	115.4656	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	25SP	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111.0	111.0	0.07194	114.7	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20L	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111.0	111.0	0.07395	110.2623	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20L	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111.0	111.0	0.07395	112.3413	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20WP	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111.0	111.0	0.07117	112.3411	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20SP	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111.0	111.0	0.07187	111.2988	G09_001IST 345.00 - GROTON 345KV CKT 1
3	25SP	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111.0	111.0	0.07194	109.7	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20L	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111.0	111.0	0.07395	107.1333	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40645	110.1371	FORMAN - HANKINSON 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40048	108.3898	BASE CASE
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.41169	104.8055	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40168	103.8834	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.41169	103.7528	G13_001IST 115.00 - SUMMIT 115KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.41965	103.7014	BRISTOL - GROTON 115KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40417	103.479	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40406	103.4295	GLENHAM - L3 HAWDON 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.41965	103.315	BRISTOL - SUMMIT 115KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40406	103.0548	BISMARK - L3 HAWDON 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40113	103.0497	FT THOMPSON - LETCHER 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40113	103.0497	FT THOMPSON - LETCHER 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40166	102.9039	HANLON - STORLA 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.49887	102.7311	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.39778	102.6582	CARPENTER - HURON 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40321	102.5978	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.39778	102.5603	HURON - WATERTOWN 230KV CKT 2
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.39778	102.5603	HURON - WATERTOWN 230KV CKT 2
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40079	102.5526	STORLA - WESSINGTON 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40404	102.4604	GLENHAM - WHITLOK 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.39778	102.3827	CARPENTER - WATERTOWN 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.39778	102.3827	CARPENTER - WATERTOWN 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40404	102.3714	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40404	102.3714	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40184	102.3597	FARGO - JAMES TOWN 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40404	102.2902	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40404	102.2525	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40180	102.2409	FARGO - JAMES TOWN 230KV CKT 2
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40404	102.2384	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40404	101.986	OAHE - SULLEY BUTTE 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.41907	101.9776	GROTON - REDFIELD 115KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.41907	101.9512	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40164	101.8384	FT RANDAL - FT THOMPSON 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40164	101.8384	FT RANDAL - FT THOMPSON 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40075	101.708	BALTA - RAMSEY 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40092	101.7	CENTER - COYOTE 345KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40087	101.6653	PRAIRIE - RAMSEY 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40255	101.6482	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40255	101.6482	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40162	101.5978	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40162	101.5978	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40255	101.5781	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.41899	101.3705	HURON - REDFIELD 115KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40162	101.2405	FT RANDAL - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40866	101.2205	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40866	101.2205	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40110	101.1222	PRAIRIE - WINGER 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40135	101.0872	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40087	101.0506	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40087	101.0086	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40087	100.9914	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40283	100.9495	BOWMAN - RHAME 4 230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40149	100.8459	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40149	100.8459	P12:230:UMZW:# 158 #: MH IN ND.
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40134	100.8274	LETCHER - SIOUX FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40149	100.7484	MOOREHEAD - MORRIS 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40141	100.7444	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40120	100.67	AUDUBON - SHEYNNE 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40079	100.546	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40079	100.546	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40048	100.4292	GEN652173 1-G09_001IS_2 0.6900
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40383	100.3749	P12:230:UMZB:# 171 #: WB IN ND.
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40383	100.3749	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40870	100.3604	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40383	100.295	BISMARK - WASHBURN 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40866	100.2929	REDFIELD - WEST PARK B TAP 115KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40383	100.2654	LELAND OLDS - WASHBURN 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40133	100.2392	KARLSTAD - WINGER 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40048	100.2	2525-GROTON
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40048	100.1667	GROTON 115KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40048	100.1657	GROTON 115KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40129	100.1525	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40145	100.0536	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40145	100.0536	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40118	100	AUDUBON - HUBBARD 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40111	100	HANLON - SIOUX FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40107	100	JAMES TOWN - PICKERT 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40490	99.9	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40490	99.9	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40283	99.9	BOWMAN - HETINGER 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40146	99.9	BROWNS VALLEY - HANKINSON 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40104	99.9	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40084	99.9	ELM CREEK - MONTICELLO 345KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40063	99.9	FT RANDAL - UTICA JCT 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40120	99.8	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40120	99.8	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40096	99.8	FARGO - MOOREHEAD 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40048	99.8	GEN659353 1-DEERCREK CTG18.000
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40048	99.8	GEN659354 1-DEERCREK STG18.000
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40896	99.7	GROTON - ORDWAY 115KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40093	99.7	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40083	99.7	HANKINSON - WAHPETON 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.42181	99.6	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40170	99.6	HURON WEST PARK - MITCHELL NW 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40170	99.6	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40102	99.6	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40102	99.5	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40048	99.5	GEN-2016-044345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40048	99.5	GEN-2016-044345.00 345/34.5KV TRANSFORMER CKT 2
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40146	99.4	BIG STONE - BROWNS VALLEY 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40081	99.4	ELM CREEK - PARKERS LAKE 345KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40170	99.3	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40170	99.3	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40102	99.3	HENNING - INMANN 230KV CKT 1
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40048	99.1	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40048	99	WATERTOWN 230KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.40048	99	WATERTOWN 230KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31478	119.6725	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31478	119.2	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31478	118.7574	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	117.4791	BASE CASE
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30736	115.4262	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30736	115.4262	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40645	115.3092	FORMAN - HANKINSON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30736	115.1097	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30736	115.0737	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30736	115.0676	BROADLAND - HURON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30736	115.0675	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30736	115.0675	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30736	114.4828	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31421	114.1541	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	113.8693	BASE CASE
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31421	112.9443	G13_001IST 115.00 - SUMMIT 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31478	112.9095	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31478	112.9031	2810X2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31478	112.3484	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30150	111.6617	CARPENTER - HURON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30150	111.4836	HURON - WATERTOWN 230KV CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30150	111.4836	HURON - WATERTOWN 230KV CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30783	111.4833	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30784	111.4462	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30150	111.3596	CARPENTER - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30150	111.3596	CARPENTER - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30784	111.2756	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.32160	110.9668	BRISTOL - GROTON 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30784	110.8201	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30784	110.7699	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.32160	110.6014	BRISTOL - SUMMIT 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30694	110.342	LETCHER - SIOUX FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30744	110.2472	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30762	110.0147	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30762	110.0147	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30745	109.9966	FARGO - JAMES TOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30762	109.9826	FT RANDAL - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30745	109.9028	FARGO - JAMES TOWN 230KV CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41169	109.8769	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30706	109.7254	HANLON - SIOUX FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30921	109.7031	BISON - HETINGER 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.32366	109.6204	GROTON - REDFIELD 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.32366	109.5866	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30921	109.5294	BISON - MAURINE 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30738	109.3652	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30708	109.283	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30747	109.2046	HARMONY - ST FRANCIS 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	109.0769	GEN635024 4-WALTER SCOTT UNIT 4
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30774	109.048	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.32298	109.0471	HURON - REDFIELD 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30715	109.043	CENTER - COYOTE 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30703	109.0319	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40168	109.0233	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31352	108.8536	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31352	108.8536	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30769	108.8296	HANKINSON - WAHPETON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.8053	GEN635214 4-NEAL UNIT 4

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41169	108.7867	G13_001IST 115.00 - SUMMIT 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.7687	GEN344225 1-1CAL G1 25.000
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30746	108.7653	BALTA - RAMSEY 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41965	108.7479	BRISTOL - GROTON 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.7386	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.7126	GEN635023 3-WALTER SCOTT UNIT 3
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.7096	GEN336821 1-GRAND GULF UNIT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30747	108.7066	HARMONY - VALENTINE 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30745	108.6833	PRAIRIE - WINGER 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30723	108.6256	GRAND ISLAND - MCCOOL 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30690	108.5878	FT RANDAL - UTICA JCT 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40417	108.5863	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.5518	J460 345.00 - J460-TAP 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.5518	J460 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30754	108.5444	AUDUBON - SHEYNNE 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.5172	GEN640009 1-COOPER NUCLEAR STATION
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30706	108.4945	SIDNEY - STEGALL 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30856	108.4607	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30856	108.4607	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30977	108.4559	GLENHAM - WHITLOK 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40406	108.4464	GLENHAM - L3 HAWDON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30754	108.4263	ELM CREEK - MONTICELLO 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30747	108.4205	AINSWORTH - VALENTINE 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30754	108.4124	KARLSTAD - WINGER 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30735	108.4111	JAMES TOWN - WEBER 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30735	108.4015	BISMARK - WEBER 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30705	108.4014	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30705	108.4014	P12:230:UMZW:# 158 #: MH IN ND.
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30977	108.3997	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30977	108.3997	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.3934	SHEYENNE SVC - SHEYNNE 115KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30799	108.3667	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41965	108.3527	BRISTOL - SUMMIT 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30799	108.3521	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.3521	GEN635213 3-NEAL UNIT 3
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30977	108.3437	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30799	108.3427	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30977	108.3397	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30747	108.3344	PRAIRIE - RAMSEY 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30756	108.3317	JAMES TOWN - PICKERT 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30705	108.3292	MOOREHEAD - MORRIS 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30756	108.3243	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30756	108.3243	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30977	108.3213	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30725	108.3182	MCCOOL - MOORE 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.3164	GEN336153 1-WATERFORD UNIT#3
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.32945	108.3139	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30991	108.2705	GLENHAM - L3 HAWDON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30820	108.2536	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.2502	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.2492	GEN587593 1-J460-GEN1 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30820	108.2423	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30820	108.2423	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30756	108.2297	AUDUBON - HUBBARD 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30735	108.2128	BISMARK - JAMES TOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30782	108.1933	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30977	108.1859	OAHE - SULLEY BUTTE 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40113	108.1623	FT THOMPSON - LETCHER 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40113	108.1623	FT THOMPSON - LETCHER 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30764	108.1418	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30737	108.1244	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.1078	GEN335831 1-RIVERBEND UNIT#1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30870	108.0949	P12:230:UMZB:# 171 #: WB IN ND.
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30870	108.0949	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40406	108.0681	BISMARK - L3 HAWDON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.0583	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.0582	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.0541	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30870	108.0514	BISMARK - WASHBURN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30870	108.0478	LELAND OLDS - WASHBURN 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30764	108.0429	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30738	108.0347	G15088_T 345.00 - MOORE 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31356	108.0307	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	108.0243	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40166	108.0194	HANLON - STORLA 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.979	GEN300003 1-THOMAS HILL UNIT 3
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30752	107.9767	AS KING - EAU CLAIRE 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40138	107.97	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30690	107.9636	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31600	107.9593	GROTON - ORDWAY 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31352	107.9581	REDFIELD - WEST PARK B TAP 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.9532	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30756	107.9484	GRAND FORKS - PICKERT 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30782	107.9345	P13:230-345:NPPD:STEGALL3:KV3A
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30782	107.9345	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30746	107.8997	BALTA - MCHENRY 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.8791	YANKEE 115/34.5KV TRANSFORMER CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.8748	GEN636641 1-LOUISA UNIT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30737	107.8652	RASMUSN - SIOUX CITY 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30718	107.8553	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30718	107.8553	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.8536	YANKEE 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.8477	GEN542962 2-IATAN UNIT #2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30793	107.8436	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30793	107.8436	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30691	107.8359	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30691	107.8359	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30748	107.8337	FT RANDAL - SPENCER 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.8198	GEN338146 1-INDEPENDENCE UNIT #2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30758	107.8196	MENNO JCT - TRIPP JCT 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.8148	GEN338143 1-INDEPENDENCE UNIT #1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30748	107.8127	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30748	107.8127	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30726	107.792	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30726	107.792	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.7851	GEN337652 1-WHITE BLUFF UNIT #1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.7803	GEN659353 1-DEERCREK CTG18.000
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.7761	GEN337653 1-WHITE BLUFF UNIT #2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.7745	GEN659354 1-DEERCREK STG18.000
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.7617	GEN645012 2-NEBRASKA CITY 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30748	107.7599	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30729	107.7595	FARGO - MOOREHEAD 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30767	107.7411	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.7306	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30761	107.7303	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30724	107.7204	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30724	107.7202	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.7134	ANSON - SPLIT ROCK 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.7132	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30724	107.7094	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30724	107.7094	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30724	107.7094	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30724	107.7094	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30723	107.707	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30723	107.707	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30723	107.707	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30723	107.707	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30736	107.7067	CENTER - SQUARE BUTTE 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.7	GEN344895 2-1LAB G2 20.000
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30738	107.6977	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30724	107.6935	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.6884	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30753	107.6849	ELM CREEK - PARKERS LAKE 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.6693	GEN344897 4-1LAB G4 20.000
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30758	107.6685	GAVINS POINT - YANKON JCT 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30758	107.6685	GAVINS POINT - YANKON JCT 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.668	MORANVILLE - ROSEAU 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.6665	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.6656	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30758	107.664	MENNO JCT - UTICA 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.6638	RICHER - ROSEAU 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30754	107.6595	HARVEY - UNDERWOOD 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40321	107.6586	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30754	107.6544	COAL CREEK - UNDERWOOD 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40079	107.6489	STORLA - WESSINGTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.6394	GEN344894 1-1LAB G1 20.000
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.6393	GEN344896 3-1LAB G3 20.000
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.6364	GEN336252 1-NINEMILE POINT UNIT#5
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.6317	GEN345670 1-1RUSH G1 18.000
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.6316	BROOKING COUNTY - J432 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.6316	J432 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30735	107.6305	AXTELL - SWEETWATER 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39778	107.6267	CARPENTER - HURON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.6263	GEN587583 1-J432-GEN1 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.6226	GEN300007 1-NEW MADRID UNIT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.6202	GEN345671 2-1RUSH G2 18.000
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.6158	GEN300006 1-NEW MADRID UNIT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30724	107.6144	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31324	107.6128	EDGELEY - JAMES TOWN 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30754	107.611	BALTA - HARVEY 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30748	107.6105	ADAMS - MITCHLCO3 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30758	107.6081	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.5983	GEN501801 1-DOLET HILLS UNIT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30753	107.5944	CANBY - GRANITE FALLS 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30753	107.5944	CANBY - GRANITE FALLS 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30756	107.5875	BALTA - RUGBY 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.5766	ADAMS - PLEASANT VALLEY 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.5665	GEN542957 1-IATAN UNIT #1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.5638	ANSON - SPLIT ROCK 115KV CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.5629	ANSON 115/17.5KV TRANSFORMER CKT 4
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.5585	GEN336831 1-BAXTER WILSON SES
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30740	107.5585	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.5576	GEN501813 1-RODEMACHER UNIT 3
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30752	107.5532	AS KING - CHISAGO COUNTY 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30742	107.5526	CLEARWATER - ONEILL 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.5518	GEN336251 1-NINEMILE POINT UNIT#4
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30769	107.5491	MONTICELLO - WAITE PARK 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.5475	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39778	107.5437	HURON - WATERTOWN 230KV CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39778	107.5437	HURON - WATERTOWN 230KV CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.5417	GEN542951 5-HAWTHORN UNIT #5
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30752	107.5394	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.5368	GEN337041 1-GERALD ANDRUS
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30742	107.5309	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30742	107.5114	CLEARWATER - NELIGH 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.5093	GEN587153 1-G16-021-GEN10.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.5087	GEN542955 1-LACYGNE UNIT #1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.4804	GEN335206 1-NELSON UNIT 6
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.469	LUND - MORANVILLE 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40404	107.4689	GLENHAM - WHITLOK 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.4685	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.4643	LUND - RUNNING 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30793	107.462	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30793	107.462	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30736	107.4571	P13:115-230:TSGT:SIDNEY-KV1A
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30754	107.451	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30754	107.451	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30754	107.4403	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.4368	GEN600045 4-ANSON
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.4355	FALCONER - GRAND FORKS 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.4355	FALCONER - GRAND FORKS 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30802	107.4262	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30749	107.4218	GRAND FORKS (GK KV1A) 230/115/12.47KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.4145	GEN542956 2-LACYGNE UNIT #2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30738	107.4143	GRANT - MITCHELL 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30738	107.4143	GRANT - MITCHELL 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.49887	107.4118	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30754	107.409	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30710	107.4084	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30710	107.4084	SIOUX FALLS - SPLIT ROCK 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30757	107.4076	COAL CREEK - MCHENRY 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40184	107.4066	FARGO - JAMES TOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.4066	GEN501812 1-RODEMACHER UNIT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30710	107.403	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30842	107.4017	BELFIELD - CHARLIE CREEK 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.3874	GEN334440 1-SABINE UNIT 4
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.3859	GEN338388 1-1PLUM PT U1 23.000
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.3838	GEN509403 1-PIRKEY GENERATION
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40404	107.3783	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40404	107.3783	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.3739	GEN336191 1-LITTLE GYPSY UNIT#3
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30752	107.3733	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.3652	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.3626	MEC345 - WILMARTH 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39778	107.3625	CARPENTER - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39778	107.3625	CARPENTER - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.362	MEC345 345/19.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.3563	GEN509416 1-TURK GENERATION
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.3502	MEC115 115/15.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.3469	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.3457	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.3281	GEN590011 2-ERCOT EQUIVALENCE
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.3065	G09_001IST 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.3065	G09_001IST 345.00 345/34.5KV TRANSFORMER CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30824	107.3051	BOWMAN - RHAME 4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40404	107.2963	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40180	107.2855	FARGO - JAMES TOWN 230KV CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.2791	GEN620315 1-BIG STONE GEN
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30712	107.2664	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30712	107.2664	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40404	107.2584	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40404	107.244	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.1669	GEN600069 W-YANKEE 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.1636	GEN600078 W-YANKEE 3
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.1538	GEN600077 W-YANKEE 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	107.1538	GEN600099 W-YANKEE 4
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41907	107.0099	GROTON - REDFIELD 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40404	106.9895	OAHE - SULLEY BUTTE 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41907	106.9849	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40164	106.9238	FT RANDAL - FT THOMPSON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40164	106.9238	FT RANDAL - FT THOMPSON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.7585	2560-BRDLAND-LNX3345.00
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.7585	2561-BRDLAND-LNX3345.00
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.7585	2562-GROTON-LNX3 345.00
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.7585	2563-GROTON-LNX3 345.00
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40075	106.7434	BALTA - RAMSEY 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.7262	GEN-2016-044345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.7262	GEN-2016-044345.00 345/34.5KV TRANSFORMER CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40087	106.7019	PRAIRIE - RAMSEY 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40092	106.7	CENTER - COYOTE 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40162	106.6769	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40162	106.6769	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40255	106.6718	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40255	106.6718	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40255	106.6006	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30468	106.5192	BLAIR - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30468	106.5192	BLAIR - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30736	106.5171	NOBLES - SPLIT ROCK 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41899	106.3963	HURON - REDFIELD 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.328	GROTON-LNX3 345.00 345KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30722	106.3228	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40162	106.3074	FT RANDAL - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30722	106.3047	MN VALLEY TAP - PANTHER 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.2667	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40866	106.2622	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40866	106.2622	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30708	106.2351	BUFFALO RIDGE - YANKEE 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.2192	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31243	106.1919	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30668	106.1898	BROWNS VALLEY - HANKINSON 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.1693	GEN672350 1-NIPAWIN GENERATOR 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.1693	GEN672351 2-NIPAWIN GENERATOR 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.1693	GEN672352 3-NIPAWIN GENERATOR 3
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30729	106.1667	GRANITE FALLS - WILLMAR 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30729	106.1667	GRANITE FALLS - WILLMAR 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.1575	GEN672349 3-CORY COGEN GENERATOR 3 ST
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40110	106.15	PRAIRIE - WINGER 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.1425	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.1338	GEN657964 1-ASH2GEN9 0.5750
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40135	106.1303	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30725	106.12	PAYNSVILLE - WILLMAR 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40087	106.1001	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30725	106.0833	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.0787	GEN672339 16-QE 16G 13.800
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.0787	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40096	106.0708	BISMARK - HILKEN 4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40087	106.0578	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40087	106.0414	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.0361	GEN652907 1-G09_007IS_3 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30710	106.0308	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31243	106.0287	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30710	106.0273	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.0134	GEN659158 2-PIONEER G213.800
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.0134	GEN659159 3-PIONEER G313.800
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.0085	GEN659156 2-LONESMCRK 2G13.800
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	106.0085	GEN659157 3-LONESMCRK 3G13.800
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.9986	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.9977	GEN563302 1-G15096_3 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.9691	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40283	105.9584	BOWMAN - RHAME 4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.9309	GEN620115 1-HRDLKGEN 0.6000
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.9259	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30702	105.9189	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30702	105.9189	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.8789	GEN652410 3-FT PECK
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40134	105.8767	LETCHER - SIOUX FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.876	GEN652345 W-G07_023IS_2 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30758	105.869	DRAYTON - LETELLIER 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.8583	GEN652559 1-OAHE
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40149	105.8545	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40149	105.8545	P12:230:UMZW:# 158 #: MH IN ND.
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30753	105.8284	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.8277	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30668	105.821	BIG STONE - BROWNS VALLEY 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30614	105.8095	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30614	105.8095	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40141	105.8041	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.8008	GEN652556 2-OAHE
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.8008	GEN652557 4-OAHE
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.8008	GEN652558 6-OAHE
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30736	105.7877	HELENA - SCOTTCO3 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.7746	GEN652414 4-FT PECK
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.7746	GEN652415 5-FT PECK
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40149	105.7567	MOOREHEAD - MORRIS 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.7567	GEN659294 1-WILTONCOL9
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.7566	GEN659273 2-GROTON SYNC COND
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30614	105.7251	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30614	105.7251	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.723	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40120	105.7099	AUDUBON - SHEYNNE 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.6664	RGBYWND4 230.00 - RUGBY 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.6544	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.6465	GEN659162 4-RED WLCK
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.6465	GEN659163 5-BLACK WDCK
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30708	105.642	LAKEFIELD 3 - NOBLES 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.6409	GEN659192 6-LYNN
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30617	105.5914	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40079	105.5782	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40079	105.5782	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30617	105.5649	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30617	105.5649	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.5609	GEN659118 1-LARAMIE RIVER UNIT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.5275	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.5275	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.5217	GEN659289 1-DAYCNTYWND W0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.5176	GEN563312 1-G15097_3 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.5042	GEN672392 1-NBECGT1G 18.000
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.4976	GEN659290 1-EDGECOL
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30617	105.4878	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.4864	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.4864	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.4504	GEN659031 1-G12_014IS_4 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.4157	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.3957	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40870	105.3823	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.3801	GEN659270 1-WEST SW
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40383	105.3621	P12:230:UMZB:# 171 #: WB IN ND.
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40383	105.3621	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.3499	GEN615015 1-GRE-SPRITWDG13.200
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40866	105.3116	REDFIELD - WEST PARK B TAP 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.293	GEN562872 1-G15046_3 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40383	105.2818	BISMARK - WASHBURN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40133	105.2588	KARLSTAD - WINGER 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.2525	GEN 11104 1-J262_GEN 0.6000
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.2525	GEN 11108 1-J263_GEN 0.6000
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40383	105.251	LELAND OLDS - WASHBURN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.1815	GEN910006 1-G12_012IS_3 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.1787	LADISH 115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40129	105.1518	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.1268	GEN652353 2-GR PRAIRIEG 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.1131	GEN660001 2-ABERDEEN SIEBRECHT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	105.0916	GROTON 115KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	105.0905	GROTON 115KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40145	105.0725	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40145	105.0725	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40118	105.067	AUDUBON - HUBBARD 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40111	105.0615	HANLON - SIOUX FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.0386	GEN659411 1-CAMPBLCNTY W0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	105.01	GEN587053 1-G16-007-GEN10.6500
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40107	105.0039	JAMES TOWN - PICKERT 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40104	104.9762	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26957	104.9631	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.26957	104.9631	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40063	104.9521	FT RANDAL - UTICA JCT 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40084	104.9169	ELM CREEK - MONTICELLO 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40283	104.9125	BOWMAN - HETINGER 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40490	104.8437	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40490	104.8437	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40120	104.8227	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40120	104.8227	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	104.8221	GEN659354 1-DEERCREK STG18.000
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40146	104.814	BROWNS VALLEY - HANKINSON 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40096	104.7995	FARGO - MOOREHEAD 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40093	104.7709	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31243	104.7579	ABERDEEN JCT - ELLENDALE 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.7238	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	104.7104	GEN620315 1-BIG STONE GEN
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40896	104.6798	GROTON - ORDWAY 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.6691	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.6156	GEN 10648 1-G830_GEN 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40170	104.6052	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40170	104.6052	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40102	104.5858	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.42181	104.5608	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.5597	GEN659010 4-G07_027IS_2 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.5501	GEN659366 3-WILTON 3 W0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.5191	GEN672321 1-SHAND GENERATOR 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.5171	GEN672310 1-POPLAR RIVER GENERATOR 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.5171	GEN672311 2-POPLAR RIVER GENERATOR 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.4915	GEN659194 1-NDPRAIRWND1W0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.4783	GEN652460 4-GARRISON
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.4763	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.4662	GEN652461 5-GARRISON
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.4233	GEN659403 1-NDSUNFLWR W0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	104.4044	GEN-2016-044345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	104.4044	GEN-2016-044345.00 345/34.5KV TRANSFORMER CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40081	104.3578	ELM CREEK - PARKERS LAKE 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.3572	GEN652457 1-GARRISON
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.3572	GEN652458 2-GARRISON
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.3572	GEN652459 3-GARRISON
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.3482	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.345	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40146	104.3432	BIG STONE - BROWNS VALLEY 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31243	104.2832	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40170	104.2686	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40170	104.2686	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.2598	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	104.1414	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	104.132	WATERTOWN 230KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	104.1311	WATERTOWN 230KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	104.0262	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	104.0262	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	104.0262	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	103.8826	GEN587133 1-G16-017-GEN10.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	103.6292	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39958	103.5924	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39958	103.5924	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40079	103.5482	BROOKINGS - WHITE 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40079	103.5482	BROOKINGS - WHITE 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40079	103.5355	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	103.4781	2516-WATERTNCAP 4230.00
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	103.4781	2525-GROTON
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	103.4781	2562-GROTON-LNX3 345.00
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	103.4781	2563-GROTON-LNX3 345.00
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	103.4741	GEN659453 1-GI1414GEN W0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39607	103.4126	BLAIR - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39607	103.4126	BLAIR - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	103.3782	GEN659272 2-GROTON 2G13.800
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31658	103.3616	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39944	103.2262	NOBLES - SPLIT ROCK 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	103.2257	WATERTN-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	103.2253	WATERTN-LNX3345.00 345KV SWITCHED SHUNT
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31658	103.2219	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31658	103.219	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	103.1504	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	103.1291	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	103.1215	GEN659274 1-GROTON
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	103.1167	GEN659141 1-K10215A
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	103.0529	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40196	103.0303	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40196	103.0301	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40003	103.0139	GRANITE FALLS - WILLMAR 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40003	103.0139	GRANITE FALLS - WILLMAR 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	103.0062	GEN659110 1-LELAND OLDS UNIT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40625	103.0004	EDGELEY - JAMES TOWN 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39935	102.9145	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39934	102.9115	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41122	102.8575	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39912	102.8548	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39912	102.8548	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	102.8328	STANTON 230/18.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	102.6954	GEN615010 1-STANTON4
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	102.6417	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	102.583	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	102.5134	GROTON-LNX3 345.00 345KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40657	102.5133	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39780	102.5116	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39780	102.5116	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	102.4703	GEN657749 1-YOUNG 1 GENERATOR
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39780	102.4623	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39780	102.4623	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	102.4501	GEN659158 2-PIONEER G213.800
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	102.4501	GEN659159 3-PIONEER G313.800
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39843	102.4478	LAKEFIELD 3 - NOBLES 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	102.4324	GEN659407 1-ANTELPHILLSW0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	102.4236	GEN652414 4-FT PECK
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	102.4236	GEN652415 5-FT PECK
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40218	102.4062	DRAYTON - LETELLIER 230KV CKT 1
3	17G	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41577	102.395	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40657	102.3348	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	102.3244	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	102.3202	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	102.2719	GEN563312 1-G15097_3 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	102.2156	GEN659294 1-WILTONCOL9
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	102.2155	GEN659273 2-GROTON SYNC COND
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	102.1838	GEN659118 1-LARAMIE RIVER UNIT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	102.1837	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	102.1837	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	102.1587	GEN672392 1-NBECGT1G 18.000
3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31687	102.1343	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31687	102.1286	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	102.1254	GEN620115 4-HRDLKGEN 0.6000
3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.31687	102.1171	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39629	101.9459	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39629	101.9459	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39629	101.9117	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39629	101.8875	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.36391	101.8018	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.36391	101.8018	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.7754	GEN 11104 1-J262_GEN 0.6000
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.7754	GEN 11108 1-J263_GEN 0.6000
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.7392	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.6956	GEN910006 1-G12_012IS_3 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.6925	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.6925	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	101.6593	GEN587033 1-G16-004-GEN10.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40050	101.6544	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40049	101.6514	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.5256	GEN660001 2-ABERDEEN SIEBRECHT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.4816	GEN 10572 2-J290_MK10 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	101.4072	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	101.4	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30932	101.2749	BASE CASE
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.2744	GEN657745 1-MPC02100GEN90.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.186	GEN659018 1-G14_003IS_3 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.1853	J290_SUB 230.00 230/34.5KV TRANSFORMER CKT 1
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41122	101.1508	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.1499	GEN 10648 1-G830_GEN 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.1474	MPC2100WIND4230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.1448	MPC02100TAP4230.00 - MPC2100WIND4230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.1301	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.122	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.1209	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.0961	GEN659366 3-WILTON 3 W0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.0842	GEN659010 4-G07_027IS_2 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.0591	GEN672321 1-SHAND GENERATOR 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.0568	GEN563342 1-G15098_3 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.0405	GEN563252 1-G15091_3 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.0365	GEN672310 1-POPLAR RIVER GENERATOR 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	101.0365	GEN672311 2-POPLAR RIVER GENERATOR 2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	101.0132	COYOTE 345/24.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40657	101.0095	ABERDEEN JCT - ELLENDALE 115KV CKT 1
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41122	100.9946	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	100.9752	GEN652460 4-GARRISON
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	100.9752	GEN652461 5-GARRISON
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	100.9652	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	100.9324	GEN659403 1-NDSUNFLWR W0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	100.8655	GEN652457 1-GARRISON
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	100.8655	GEN652458 2-GARRISON
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	100.8655	GEN652459 3-GARRISON

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17G	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41577	100.7694	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	100.7238	RGBYWND4 230.00 - RUGBY 230KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	100.6996	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	100.6026	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39383	100.5988	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40657	100.5719	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
3	17G	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.32221	100.5016	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	100.2968	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41207	100.2054	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	100.1549	GEN659453 1-GI1414GEN W0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	100.1519	GEN661015 1-COYOTE
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	100.1259	GEN563302 1-G15096_3 0.6900
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39383	100.1057	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
3	17G	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40703	99.8	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	99.8	GEN659031 1-G12_014IS_4 0.6900
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41122	99.8	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	99.7	GEN659141 1-K10215A
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.39383	99.7	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	99.7	GEN657748 1-YOUNG 2 GENERATOR
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41122	99.7	2810X2
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41122	99.7	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30890	99.7	CENTER - JAMESTOWN 345KV CKT 1
3	17G	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.32325	99.6	BASE CASE
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	99.6	STANTON 230/18.0KV TRANSFORMER CKT 1
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41122	99.5	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40357	99.5	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40357	99.5	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40357	99.5	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30958	99.5	BASE CASE
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	99.4	GEN615010 1-STANTON4
3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40357	99.4	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40357	99.4	BROADLAND - HURON 230KV CKT 1
3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40357	99.4	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40357	99.4	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	99.3	GEN659103 1-ANTELOPE VALLEY UNIT1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	99.3	GEN659107 2-ANTELOPE VALLEY UNIT2
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40048	99.2	CENTER 230/22.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30750	99.2	GEN659111 2-LELAND OLDS UNIT2
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40268	99.2	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40268	99.1	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40268	99.1	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40268	99.1	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40357	99.1	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	17G	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.41760	99	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40268	99	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40268	99	BROADLAND - HURON 230KV CKT 1
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40268	99	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.40268	99	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.30946	99	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120.0	121.0	0.05531	131.7225	G09_001IST 345.00 - GROTON 345KV CKT 1
3	25SP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120.0	121.0	0.05540	128.9	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20WP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120.0	121.0	0.05450	115.6009	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20L	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120.0	121.0	0.05537	109.5686	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	16WP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120.0	121.0	0.06207	105.524	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20L	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120.0	121.0	0.05537	105.4142	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17G	G16_044	FROM->TO	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	240.0	259.0	0.03946	108.2385	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17G	G16_044	FROM->TO	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	240.0	259.0	0.03946	107.7391	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	17G	G16_044	FROM->TO	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	240.0	259.0	0.03946	107.7243	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	17G	G16_044	FROM->TO	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1	240.0	259.0	0.03946	107.7243	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	25SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.04909	113.1716	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
3	25SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.04909	113.0941	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	25SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.04909	113.0482	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	25SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.04909	113.0421	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	20SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.04913	111.5957	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
3	20SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.04913	111.5455	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	20SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.04913	111.5271	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	20SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319.0	351.0	0.04913	111.5197	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05540	106.0622	BASE CASE
3	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05540	102.75	BASE CASE
3	25SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05483	102.0308	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.05483	99.2	BASE CASE
3	16WP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.39759	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	16WP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.39759	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	16WP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.32115	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	16WP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.02978	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.39805	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.39805	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.32325	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.32325	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.20033	-	2810X2
3	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.15726	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.15018	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.10016	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.10016	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.10016	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.07509	-	2810X2
3	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.07509	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17G	G16_044	-	Non-Converged Contingency	478.0	526.0	0.05242	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.05242	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17G	G16_044	-	Non-Converged Contingency	732.0	732.0	0.05242	-	BROADLAND - HURON 230KV CKT 1
3	17G	G16_044	-	Non-Converged Contingency	400.0	400.0	0.05242	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.03755	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.03755	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17G	G16_044	-	Non-Converged Contingency	717.0	789.0	0.03755	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17G	G16_044	-	Non-Converged Contingency	0.0	0.0	0.03755	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.55689	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.40048	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.40048	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.36180	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.33170	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.30750	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.30750	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	720.0	792.0	0.27844	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	17SP	G16_044	-	Non-Converged Contingency	720.0	792.0	0.27844	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.27498	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.22113	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.22113	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.20773	-	2810X2
3	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.20773	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_044	-	Non-Converged Contingency	720.0	792.0	0.18090	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	17SP	G16_044	-	Non-Converged Contingency	720.0	792.0	0.18090	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.16621	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11057	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11057	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11057	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
3	17SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11057	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11057	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11057	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11057	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.10387	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.10387	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.10387	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.10387	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_044	-	Non-Converged Contingency	720.0	792.0	0.08248	-	SPLIT ROCK - WHITE 345KV CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.05540	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	17SP	G16_044	-	Non-Converged Contingency	478.0	526.0	0.05540	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.05540	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17SP	G16_044	-	Non-Converged Contingency	732.0	732.0	0.05540	-	BROADLAND - HURON 230KV CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	400.0	400.0	0.05540	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	319.0	341.0	0.04409	-	NUNDRWD - WAYSIDE 230KV CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	215.0	236.0	0.03942	-	BISON - HETINGER 230KV CKT 1
3	17SP	G16_044	-	Non-Converged Contingency	384.0	384.0	0.03942	-	BISON - MAURINE 230KV CKT 1
3	20SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.39383	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.39383	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.30932	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20SP	G16_044	-	Non-Converged Contingency	720.0	720.0	0.11494	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	20SP	G16_044	-	Non-Converged Contingency	720.0	792.0	0.08781	-	SPLIT ROCK - WHITE 345KV CKT 1
3	20SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.05450	-	FORBES - ROSEAU 500KV CKT 1
3	20SP	G16_044	-	Non-Converged Contingency	1732.1	1905.3	0.05450	-	RIEL - ROSEAU 500KV CKT 1
3	20SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.05450	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_044	-	Non-Converged Contingency	1732.1	2165.1	0.05450	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
3	20SP	G16_044	-	Non-Converged Contingency	705.0	705.0	0.04430	-	BUFFALO - JAMESTOWN 345KV CKT 1
3	25SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.39469	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	25SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.39469	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	25SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.30958	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	25SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.20827	-	2810X2
3	25SP	G16_044	-	Non-Converged Contingency	0.0	0.0	0.20827	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	25SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.10413	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	25SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.10413	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	25SP	G16_044	-	Non-Converged Contingency	717.0	789.0	0.10413	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	25SP	G16_044	-	Non-Converged Contingency	720.0	792.0	0.08792	-	SPLIT ROCK - WHITE 345KV CKT 1
3	25SP	G16_044	-	Non-Converged Contingency	478.0	526.0	0.05483	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717.0	717.0	0.04122	119.126	LAKEFIELD 3 - NOBLES 345KV CKT 1
3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717.0	717.0	0.04095	114.6479	LAKEFIELD 3 - NOBLES 345KV CKT 1
3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717.0	717.0	0.03871	102.1442	NOBLES - SPLIT ROCK 345KV CKT 1
3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717.0	717.0	0.03844	100.773	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717.0	717.0	0.04122	118.1598	LAKEFIELD 3 - NOBLES 345KV CKT 1
3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717.0	717.0	0.04095	113.7203	LAKEFIELD 3 - NOBLES 345KV CKT 1
3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717.0	717.0	0.03871	101.5099	NOBLES - SPLIT ROCK 345KV CKT 1
3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717.0	717.0	0.03844	100.0496	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09577	144.5185	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	143.3307	BASE CASE
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09577	142.4204	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08601	142.1947	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08581	141.3174	HANLON - STORLA 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09350	139.2313	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08818	139.2044	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09350	138.797	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09350	138.793	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08600	138.6646	STORLA - WESSINGTON 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08818	138.4989	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08818	138.3975	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08538	138.0603	FT THOMPSON - LETCHER 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08538	138.0603	FT THOMPSON - LETCHER 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08818	138.0477	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08818	137.9126	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	137.8084	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	137.807	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	137.7935	GEN635214 4-NEAL UNIT 4
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08986	137.4852	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08986	137.4852	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09100	137.3535	BUFFALO RIDGE - YANKEE 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08954	137.1857	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08953	137.1446	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	136.7496	GEN635024 4-WALTER SCOTT UNIT 4
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	136.6954	COYOTE 345/24.0KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08606	136.4179	LETCHER - SIOUX FALLS 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	136.361	BASE CASE
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	136.2011	GEN635213 3-NEAL UNIT 3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08905	136.1506	BLAIR - GRANITE FALLS 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08905	136.1506	BLAIR - GRANITE FALLS 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09355	135.8675	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	135.805	GEN635023 3-WALTER SCOTT UNIT 3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09350	135.7765	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08614	135.6577	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	135.5963	GEN336821 1-GRAND GULF UNIT
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09254	135.5914	AURORA - BROOKINGS 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09254	135.5914	AURORA - BROOKINGS 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08811	135.5876	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	135.4971	ANSON - SPLIT ROCK 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	135.497	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08791	135.4727	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08942	135.4548	CHANARANBIE - FENTON 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08701	135.4061	BIG STONE - BLAIR 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08701	135.4061	BIG STONE - BLAIR 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08874	135.403	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08818	135.1507	AS KING - EAU CLAIRE 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08768	135.1193	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08640	135.0383	HANLON - SIOUX FALLS 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	134.9454	CENTER 230/22.0KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09254	134.9297	AURORA - FLANDRU 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09254	134.9297	AURORA - FLANDRU 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08593	134.8522	HANLON - STORLA 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	134.8356	ANSON - SPLIT ROCK 115KV CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	134.835	ANSON 115/17.5KV TRANSFORMER CKT 4
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	134.7389	GEN344225 1-1CAL G1 25.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09023	134.7014	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08881	134.6852	NUNDRWD - WAYSIDE 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09350	134.4162	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08806	134.4118	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08806	134.4118	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09350	134.4066	2810X2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	134.399	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08805	134.2437	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08805	134.2437	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	134.1842	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08886	134.1702	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08874	134.1599	ADAMS - MITCHLCO3 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08886	134.1453	MN VALLEY TAP - PANTHER 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08874	134.1335	ADAMS - PLEASANT VALLEY 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	134.1012	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	134.075	GEN336153 1-WATERFORD UNIT#3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09350	134.0231	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	134.0145	GEN600045 4-ANSON
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08817	133.9669	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08805	133.9547	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	133.919	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08675	133.8532	FT RANDAL - SIOUX CITY 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08989	133.8293	HANKINSON - WAHPETON 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08828	133.7912	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08816	133.754	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	133.648	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	133.6281	GEN335831 1-RIVERBEND UNIT#1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08828	133.6	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09362	133.5447	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08817	133.5255	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09577	133.4487	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09362	133.4054	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	133.3711	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08823	133.3687	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08877	133.3683	MCLEOD - PANTHER 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09362	133.362	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08707	133.343	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08828	133.3406	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08605	133.3391	FT RANDAL - UTICA JCT 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	133.3333	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08817	133.2867	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08965	133.2658	PIPESTONE - SPLIT ROCK 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08872	133.2616	BYRON - NORTH ROCHESTER 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08836	133.2537	BIG STONE - BROWNS VALLEY 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08906	133.2388	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08906	133.2388	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08707	133.165	BROOKINGS - WHITE 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08707	133.165	BROOKINGS - WHITE 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.10967	133.1191	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.10967	133.1191	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08906	133.0389	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08906	133.0389	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08780	133.0271	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08817	133.0266	HENNING - INMANN 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08805	133.0229	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.9337	GEN640009 1-COOPER NUCLEAR STATION
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08924	132.9041	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08924	132.9041	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08837	132.8996	PAYNSVILLE - WILLMAR 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09283	132.879	HELENA - SHEAS LK3 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08939	132.8771	BISON - HETINGER 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.842	GEN337653 1-WHITE BLUFF UNIT #2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08825	132.8328	GRANITE FALLS - WILLMAR 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08825	132.8328	GRANITE FALLS - WILLMAR 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.8129	GEN338146 1-INDEPENDENCE UNIT #2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.8096	GEN338143 1-INDEPENDENCE UNIT #1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08837	132.8005	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.7977	GEN337652 1-WHITE BLUFF UNIT #1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08836	132.7899	BROWNS VALLEY - HANKINSON 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08807	132.6561	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08869	132.6115	BYRON - PLEASANT VALLEY 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.5602	GEN501801 1-DOLET HILLS UNIT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.5031	GEN336252 1-NINEMILE POINT UNIT#5
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08776	132.5005	MISSION - ST FRANCIS 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08822	132.4507	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08669	132.4176	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.4066	GEN336251 1-NINEMILE POINT UNIT#4
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	132.4057	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.391	GEN336831 1-BAXTER WILSON SES
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08669	132.3898	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08939	132.3684	BISON - MAURINE 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08741	132.3655	GRAND ISLAND - MCCOOL 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08669	132.3506	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08780	132.3489	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.3433	GEN337041 1-GERALD ANDRUS
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08784	132.3311	AUDUBON - SHEYNNE 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.3286	GEN344897 4-1LAB G4 20.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08776	132.3285	HARMONY - ST FRANCIS 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.3267	GEN344894 1-1LAB G1 20.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.3264	GEN344895 2-1LAB G2 20.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.3262	GEN344896 3-1LAB G3 20.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.3153	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08822	132.3091	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.2905	GEN501813 1-RODEMACHER UNIT 3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.2901	GEN587153 1-G16-021-GEN10.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.2864	GEN636641 1-LOUISA UNIT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.2631	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.2576	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.2506	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.2479	GEN345671 2-1RUSH G2 18.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08823	132.2471	FENTON - NOBLES 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08924	132.2426	MITCHELL - MITCHELL NW 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08924	132.2426	MITCHELL - MITCHELL NW 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.2421	GEN345670 1-1RUSH G1 18.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08600	132.2187	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08600	132.2187	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08807	132.2034	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08809	132.198	GRACEVT7 - ORTONVILLE 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08806	132.1908	BIG STONE - HIGHWAY 12 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.1777	GEN600021 3-ANGUS ANSON2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.1701	GEN600020 2-ANGUS ANSON1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.1642	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09355	132.1491	FIELD SOUTH - WILMARTH 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08800	132.1478	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.1377	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.1377	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.1331	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08768	132.1304	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09045	132.0976	GLENHAM - WHITLOK 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09355	132.088	FIELD NORTH - FIELD SOUTH 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.0871	GEN335206 1-NELSON UNIT 6
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09355	132.0771	FIELD NORTH - LKFLDXL3 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08776	132.072	HARMONY - VALENTINE 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09045	132.0614	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09045	132.0614	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.0335	GEN645012 2-NEBRASKA CITY 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08819	132.0322	FENTON - NOBLES 115KV CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	132.0267	GEN334440 1-SABINE UNIT 4
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09045	132.0032	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09045	132.0031	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09045	131.9993	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08806	131.9709	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09060	131.9571	GLENHAM - L3 HAWDON 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08612	131.9398	STORLA - WESSINGTON 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.9386	GEN336191 1-LITTLE GYPSY UNIT#3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.9327	GEN645011 1-NEBRASKA CITY 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.9307	GEN501812 1-RODEMACHER UNIT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08909	131.9278	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08759	131.9238	G15088_T 345.00 - MOORE 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.9224	GEN338388 1-1PLUM PT U1 23.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.9028	GEN563232 1-G15089_3 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08745	131.899	MCCOOL - MOORE 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.8665	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.8613	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08759	131.861	RASMUSN - UTICA JCT 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.8504	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09045	131.8502	OAHE - SULLEY BUTTE 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09254	131.8471	FLANDRU - SIOUX FALLS 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08787	131.8299	AUDUBON - HUBBARD 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08789	131.827	CANBY - GRANITE FALLS 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08789	131.827	CANBY - GRANITE FALLS 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08736	131.8163	GRANT - MITCHELL 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08736	131.8163	GRANT - MITCHELL 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.8031	GEN335614 1-WILLOW GLENN UNIT#4
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.7965	GEN336801 1-BAXTER WILSON UNIT #1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.793	MEC345 - WILMARTH 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.7928	GEN336464 1-MICHOUD UNIT #3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.7916	MEC345 345/19.5KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.7814	GEN335204 1-NELSON UNIT 4
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08785	131.7725	FARGO - SHEYNNE 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08785	131.7725	FARGO - SHEYNNE 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.7625	GEN334441 1-SABINE UNIT 5
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08785	131.7585	ELM CREEK - MONTICELLO 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.7561	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.7559	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08776	131.7531	AINSWORTH - VALENTINE 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.7518	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.745	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.7339	NOBLES 115/34.5KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08809	131.7276	GRACEVT7 - MORRIS 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08809	131.7276	GRACEVT7 - MORRIS 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08551	131.7199	FT THOMPSON - LETCHER 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08551	131.7199	FT THOMPSON - LETCHER 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.699	MEC115 - WILMARTH 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.6989	MEC115 115/15.0KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.685	GEN600149 W-J183 PROSEW10.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.664	GEN600150 W-J183 PROSEW20.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08759	131.6622	RASMUSN - SIOUX CITY 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.6062	GEN334433 1-SABINE UNIT 3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08784	131.6028	KARLSTAD - WINGER 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08725	131.5918	SIDNEY - STEGALL 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09230	131.5735	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.568	GEN542962 2-IATAN UNIT #2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.5642	GEN336222 1-LITTLE GYPSY UNIT#2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08799	131.5465	MENNO JCT - TRIPP JCT 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.5348	488489510526345.00 - J526 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.5348	J526 345.00 345/34.5KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.5022	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.4996	RGBYWND4 230.00 - RUGBY 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.4944	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.4647	GEN336152 1-WATERFORD UNIT#2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.4645	GEN336151 1-WATERFORD UNIT#1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.4227	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.4073	GEN303007 1-1BC2 U2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08786	131.4064	AIRTECH - FEP TAP 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.3997	GEN303006 1-1BC2 U1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08799	131.397	MENNO JCT - UTICA 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08840	131.3933	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.3853	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08840	131.3807	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08786	131.3804	AIRTECH - WEST FARIBAULT 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.3757	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08840	131.3749	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.3706	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.3672	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08981	131.3652	HURON - WOONSOCKET 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08804	131.3342	FENTON 115/69KV TRANSFORMER CKT 5
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08799	131.3311	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.3281	GEN336170 1-GULF OXY U4
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.3201	GEN303008 1-1BC2 U3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	131.3181	GEN635214 4-NEAL UNIT 4
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08820	131.3151	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.3149	GEN563222 1-G15088_3 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.314	GENOA 161 161/24.0KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.3128	GEN542957 1-IATAN UNIT #1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08627	131.3014	UTICA JCT - VFODNES 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08736	131.2947	CHERRY CREEK - GRANT 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08805	131.2718	FORT RIDGELY - FRANKLIN 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.2695	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.2695	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.2608	GEN562003 1-G11_027_3 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08820	131.2531	P13:230-345:NPPD:STEGALL3:KV3A
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08784	131.2462	JAMES TOWN - PICKERT 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08820	131.2352	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.227	AS KING 345/20.0KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08784	131.2259	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08711	131.2234	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08486	131.2182	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08486	131.2182	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.2124	GEN542951 5-HAWTHORN UNIT #5
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08705	131.2022	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.1992	GEN501811 1-RODEMACHER UNIT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08847	131.1956	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08847	131.1956	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08771	131.1892	GRAND ISLAND - SWEETWATER 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08847	131.1855	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08996	131.1614	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08996	131.1614	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08981	131.1498	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08784	131.1498	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.148	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08822	131.1461	BLUE LAKE - MCLEOD 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08779	131.138	WINNER - WITTEN 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08799	131.137	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.1241	GEN345765 H-1SIOUX 2 18.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08784	131.1229	LAWERENCE CREEK - SHAEFER 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.1218	GEN542955 1-LACYGNE UNIT #1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08790	131.1185	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.1177	GEN334071 1-LEWIS CREEK 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.1138	GEN334070 1-LEWIS CREEK 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08812	131.1076	PAYNESVILLE - WAKEFIELD 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.1027	GEN629069 1-EMERY STEAM TURBINE 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08793	131.099	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.0782	GEN337766 1-TRACTEBEL UNIT S1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08784	131.0749	ELM CREEK - PARKERS LAKE 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08814	131.0744	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.0738	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08806	131.0611	MONTICELLO - WAITE PARK 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08831	131.0583	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08796	131.0542	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08790	131.0477	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.0476	GEN345756 H-1SIOUX 1 18.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.0472	GEN336221 1-LITTLE GYPSY UNIT#1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.0457	GEN501910 1-ACADIA UNIT ST1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08804	131.0446	LYON COUNTY 115/69KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08981	131.0412	STORLA - WOONSOCKET 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08784	131.0397	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	131.0327	COYOTE 345/24.0KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08822	131.0323	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.0314	NOBLES 115/34.5KV TRANSFORMER CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08766	131.0313	CLEARWATER - ONEILL 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08747	131.029	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.0271	FENTON 115/34.5KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08785	131.0266	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.0143	GEN542956 2-LACYGNE UNIT #2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09185	131.0124	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08992	131.0052	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08992	131.0052	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08784	131.0043	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08800	131.003	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08811	131.002	LYON COUNTY (8779072) 345/115/34.5KV TRANSFORMER CKT 9
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08784	131.002	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	131.0011	GEN337757 1-DUKE HOTSPRINGS STG1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08882	131.0002	HIGHLND 3 345.00 - RAUN 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08814	130.9985	MT VERN - STORLA 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08964	130.998	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08779	130.9975	GREGORY - WINNER 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.9924	GEN345832 1-1TS G1 13.800
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.992	GEN345841 2-1TS G2 13.800
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	130.9907	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08766	130.9851	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08779	130.9802	P12:115:UMZW:# 172 #: WI IN SD.
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.9776	LANGDON - LANGWIN7 115.00 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.9763	GEN334432 1-SABINE UNIT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.976	GEN334431 1-SABINE UNIT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.9733	GEN336446 1-MICHOUD UNIT #2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08790	130.9706	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08782	130.9657	FT RANDAL - WHITE SWAN 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.9627	GEN337765 1-TRACTEBEL UNIT C2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.9626	GEN337764 1-TRACTEBEL UNIT C1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08589	130.9609	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08589	130.9609	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08784	130.9589	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08589	130.9579	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08963	130.9559	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09185	130.953	GROTON - REDFIELD 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08766	130.95	CLEARWATER - NELIGH 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.9404	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.9363	GEN336242 1-1NMIL ST1 18.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08782	130.931	TYNDALL - WHITE SWAN 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.9208	GEN501823 1-TECHE UNIT 3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08782	130.9189	ARROWHEAD - FORBES 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08796	130.9187	ARNOLD - HAZLETON 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.9083	GEN645025 5-NORTH OMAHA 5
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08846	130.8982	BOWMAN - RHAME 4 230.00 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08800	130.8949	FRANKLIN - REDWOOD FALLS 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8936	GEN659116 1-SPIRIT MOUND UNIT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8935	GEN336944 1-REX BROWN
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08824	130.8897	KOSSUTH 3 345.00 - LEDYARD3 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8861	GEN345156 H-1MER 4 18.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	130.8808	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8789	GEN629046 3-FOX LAKE 5 GENERATOR NO 3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8717	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8717	GEN501970 1-EVANGELINE UNIT 7
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8716	GEN335612 1-WILLOW GLENN UNIT#2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8652	GEN334031 1-FRONTIER UNIT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8648	GEN334030 1-FRONTIER UNIT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08790	130.8568	NOBLES () 345/115/34.5KV TRANSFORMER CKT 9
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8541	GEN337430 1-PERYVILLE UNIT #3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.854	GEN337428 1-PERYVILLE UNIT #1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08790	130.8537	NOBLES () 345/115/34.5KV TRANSFORMER CKT 10
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09008	130.8483	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.846	GEN629992 1-G164_WF9 34.500
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09169	130.8434	HURON - REDFIELD 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8388	GEN336240 1-1NMIL CT1 18.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8388	GEN336241 1-1NMIL CT2 18.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8275	GEN501911 1-ACADIA UNIT CT1A
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8275	GEN501912 1-ACADIA UNIT CT1B
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8252	GEN338443 1-PANDA S1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.815	GEN335570 1-CARVILLE CTG
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8149	GEN335571 1-CARVILLE UNIT #1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8149	GEN501971 1-EVANGELINE UNIT 7-1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8149	GEN501972 1-EVANGELINE UNIT 7-2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08795	130.8109	BLUE LAKE - HAMPTON CORNER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.8012	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.7924	GEN659117 2-SPIRIT MOUND UNIT2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.7874	GEN587353 1-G16-050-GEN10.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.7846	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08783	130.782	AS KING - WILLOW RIVER 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.7777	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08786	130.7604	PLEZIOZO1ARC
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08786	130.7546	NORTH ROCHESTER (NROC TR) 345/161/34.5KV TRANSFORMER CKT 9
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08784	130.7426	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08784	130.7426	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.721	GEN600112 W-G287 NOB2G W0.5750
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08802	130.7156	WILMARTH () 161/115/13.8KV TRANSFORMER CKT 6
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	130.7056	GRE-CHUBLAK3345.00 - HAMPTON CORNER 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.6949	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09111	130.6552	BUFFALO RIDGE - YANKEE 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.629	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.6037	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08783	130.5886	HELENA - SCOTTCO3 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.5848	GEN660016 1-B_H WIND 0.7000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08728	130.1705	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	130.1365	GEN635024 4-WALTER SCOTT UNIT 4
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08915	130.1172	BLAIR - GRANITE FALLS 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08915	130.1172	BLAIR - GRANITE FALLS 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08728	130.1106	G13_001IST 115.00 - SUMMIT 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08753	130.1033	HAZEL CREEK - LYON COUNTY 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.0574	GEN600047 1-MECCT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08789	130.0497	BREWSTER - HERON LAKE 5 SPLIT INTO HRN EAST ELK1 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08618	130.0217	LETCHER - SIOUX FALLS 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	130.007	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08763	130.0062	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08797	129.9622	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08789	129.9526	BREWSTER - ELK 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.9272	GEN681540 5-ALMA UNIT 5
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09366	129.9209	FT THOMPSON - HURON 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09366	129.9209	FT THOMPSON - HURON 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09366	129.9209	FT THOMPSON - HURON 230KV CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09366	129.9209	FT THOMPSON - HURON 230KV CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08778	129.9044	SUB 1226 - TEKAMAH 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08778	129.9044	SUB 1226 - TEKAMAH 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08753	129.8886	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08854	129.8881	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08773	129.8851	RAUN - TEKAMAH 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08773	129.8851	RAUN - TEKAMAH 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08753	129.8681	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08770	129.8648	DIXONCO 230.00 - HOSKINS 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.8642	GEN615031 1-PLEASANT VALLEY
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08782	129.8604	CARROLL COUNTY - VICTORY 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.8601	GEN615032 2-PLEASANT VALLEY
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.838	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.8176	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.8176	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08817	129.8166	BROOKING COUNTY - YANKEE 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08817	129.8166	BROOKING COUNTY - YANKEE 115KV CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.8138	GEN619954 1-HUTCHINSON
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	129.8014	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.7791	GRE-STNYCRK7115.00 (STNYCR115-69) 115/69/12.8KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.7668	GEN652004 1-G13_001IS_3 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08785	129.7648	PLYMOUTH - SIOUX CITY 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08785	129.7648	PLYMOUTH - SIOUX CITY 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.7647	GEN600130 W-G586 - CWN 10.6000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.7623	GEN600131 W-G586 - CWN 20.6000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.7485	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.746	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.7387	GEN672370 1-COTEAU CREEK GENERATOR 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.7387	GEN672371 2-COTEAU CREEK GENERATOR 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.7387	GEN672372 3-COTEAU CREEK GENERATOR 3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08750	129.7369	SIOUX CITY - TWIN CHURCH 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08804	129.7367	HILLS - MONTEZUMA 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.7271	GEN600125 2-FEP ST G 13.800
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08780	129.7171	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.7149	COOPER - SUB 3458 NEB CTY 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.7149	COOPER - SUB 3458 NEB CTY 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	129.7117	GEN635213 3-NEAL UNIT 3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.7019	GEN659289 1-DAYCNTYWND W0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.7003	GEN563312 1-G15097_3 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.6955	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.6933	GEN657705 X-DRAYTON
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08785	129.6889	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08785	129.6889	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.6864	GEN672369 3-MERIDIAN GENERATOR 3 ST
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.6696	GEN659031 1-G12_014IS_4 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.6666	GEN620285 1-SOLWAY
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08947	129.6665	HESKETT - WISHEK 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.6544	GEN620115 1-HRDLKGEN 0.6000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.6392	GEN600013 3-BLACK DOG GEN 3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08782	129.623	COOPER - FAIRPORT 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.6226	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08784	129.6183	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.6178	GEN681522 3-GENOA 3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08777	129.6091	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.598	GEN652410 3-FT PECK
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.5955	GEN672384 1-CENTENNIAL WINDFARM
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08783	129.5719	COPSTJCPFRSJ
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08783	129.5719	STMDSJFAFACO
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08778	129.5707	COLUMEAST - SHELL CREEK 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.5537	GEN600056 W-BUFFALO RIDGE WIND GEN
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.5348	GEN652414 4-FT PECK
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.5348	GEN652415 5-FT PECK
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.5328	GEN672347 1-CORY COGEN GENERATOR 1 GT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.5327	GEN672348 2-CORY COGEN GENERATOR 2 GT2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.519	DONALDSON - DONALDSON PIPE 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.5182	GEN600018 S-LS POWER STEAM
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.5154	GEN603185 1-FIBROMINN GENERATION
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08782	129.4918	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.4718	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.4709	DENISON - EXIRA 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.4577	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.4577	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.4575	GEN672358 1-CHAPLN1W 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.4558	GEN672367 1-MERIDIAN GENERATOR 1 GT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.4558	GEN672368 2-MERIDIAN GENERATOR 2 GT2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.4488	YANKEE 115/34.5KV TRANSFORMER CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.4475	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.4428	GEN600050 1-FEP
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.4285	GEN672349 3-CORY COGEN GENERATOR 3 ST
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.428	GEN620323 2-HOOT LAKE 2 GEN
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.4155	GEN672350 1-NIPAWIN GENERATOR 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.4155	GEN672351 2-NIPAWIN GENERATOR 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.4155	GEN672352 3-NIPAWIN GENERATOR 3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.4144	H081 345.00 - H081-TAP 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.4144	H081 345.00 345/34.5KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.3599	GEN600012 2-BLACK DOG GEN 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08712	129.3546	BIG STONE - BLAIR 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08712	129.3546	BIG STONE - BLAIR 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.3445	GEN659162 4-RED WLCK
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.3445	GEN659163 5-BLACK WDCK
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.343	GEN659192 6-LYNN
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.3389	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08782	129.3299	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.3202	GEN657964 1-ASH2GEN9 0.5750
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.3147	GEN672339 16-QE 16G 13.800
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.3143	GEN659273 2-GROTON SYNC COND
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.3143	GEN659294 1-WILTONCOL9
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.3128	GEN659290 1-EDGECOL
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.3091	GEN587603 1-J488&J489GN10.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	129.3049	GEN635023 3-WALTER SCOTT UNIT 3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.302	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08737	129.2877	HOSKINS - SHELL CREEK 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.2783	GEN672393 2-NBECST2G 13.800
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	129.2757	GEN336821 1-GRAND GULF UNIT

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.274	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.2664	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08780	129.2637	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.2439	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.2433	GEN 11143 1-J436GEN1 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.2433	GEN 11153 1-J437GEN1 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08760	129.2419	GRIMES - LEHIGH 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09362	129.2205	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08789	129.2128	ELK - MAGNOLIA 5 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08783	129.2069	COOPER - ST JOE 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.1977	GEN660001 2-ABERDEEN SIEBRECHT
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.1835	GEN652556 2-OAHE
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.1835	GEN652557 4-OAHE
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.1835	GEN652558 6-OAHE
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.1804	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08776	129.1559	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.1456	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.1324	GEN600063 1-COLVILLE GEN 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.1323	GEN600064 2-COLVILLE GEN 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.1207	GEN659270 1-WEST SW
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.1029	LADISH 115/13.2KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.0875	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.0719	GEN562872 1-G15046_3 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.0674	GEN620324 3-HOOT LAKE 3 GEN
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.0524	GEN652353 2-GR PRAIRIEG 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.0397	GEN600014 4-BLACK DOG GEN 4
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.0082	GEN587663 1-H081-GEN1 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.005	GEN600065 7-HIGH BRIDGE
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	129.005	GEN600066 8-HIGH BRIDGE
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.9888	GEN600071 10-RIVER SIDE
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.9883	GEN600070 9-RIVER SIDE
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.9791	GEN600011 5-BLACK DOG GEN 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08802	128.9755	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.9651	GEN600007 7-RIVERSIDE GEN 7
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.9564	GEN600043 7-BLUE LAKE5
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.9564	GEN600044 8-BLUE LAKE6
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08953	128.9483	CHANARANBIE - FENTON 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.9479	GEN600017 C-LS POWER CT
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08751	128.9419	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.9302	GEN910006 1-G12_012IS_3 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08807	128.9187	BONDURANT - MONTEZUMA 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08784	128.8863	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08784	128.882	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08878	128.8458	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.8404	GEN659411 1-CAMPBLCNTY W0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08823	128.828	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07658	128.8229	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	128.8113	ANSON - SPLIT ROCK 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	128.8112	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	128.7983	CENTER 230/22.0KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.7777	GEN652345 W-G07_023IS_2 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.7766	GEN 10648 1-G830_GEN 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07655	128.7748	G16-044-TAP 345.00 - GROTON 345KV CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08784	128.7723	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08782	128.7717	DENISON - SIOUX CITY 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.7626	GEN 11104 1-J262_GEN 0.6000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.7626	GEN 11108 1-J263_GEN 0.6000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.7603	GEN659272 2-GROTON 2G13.800
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07658	128.7101	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07658	128.7075	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.6904	GEN615021 1-GRE-ER 14G 16.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.6779	GEN615015 1-GRE-SPRITWDG13.200
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09301	128.6741	AURORA - BROOKINGS 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09301	128.6741	AURORA - BROOKINGS 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.6594	GEN615052 1-CAMBRIDGE GENERATING STATION
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.6513	GEN659274 1-GROTON
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08778	128.6058	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	128.5936	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.5786	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08780	128.5697	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08652	128.5666	HANLON - SIOUX FALLS 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.565	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.549	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.549	GEN672304 4-BOUNDARY DAM GENERATOR 4
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.549	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08785	128.5328	DAN JUHL - SPLIT ROCK 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	128.5327	ANSON 115/17.5KV TRANSFORMER CKT 4
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08785	128.5297	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	128.5296	ANSON - SPLIT ROCK 115KV CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.4852	GEN600077 W-YANKEE 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.4852	GEN600099 W-YANKEE 4
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.4833	GEN659010 4-G07_027IS_2 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.4814	GEN681542 6-JP MADGETT
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.4654	GEN659366 3-WILTON 3 W0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.4625	GEN672392 1-NBECGT1G 18.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08804	128.4611	LEHIGH - RAUN 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.4572	GEN600078 W-YANKEE 3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.4566	GEN600067 9-HIGH BRIDGE
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.4553	GEN659194 1-NDPRAIRWND1W0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.4534	GEN652461 5-GARRISON
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.4531	GEN652460 4-GARRISON
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.4522	GEN600069 W-YANKEE 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08785	128.4241	DAN JUHL - MAGNOLIA 5 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.4088	GEN652457 1-GARRISON
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.4088	GEN652458 2-GARRISON
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.4088	GEN652459 3-GARRISON
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09362	128.3978	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09362	128.3825	Z810X2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08829	128.3597	AS KING - EAU CLAIRE 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.34	GEN659403 1-NDSUNFLWR W0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	128.3359	GEN344225 1-1CAL G1 25.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	128.311	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09398	128.2961	CARPENTER - WATERTOWN 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09398	128.2961	CARPENTER - WATERTOWN 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09398	128.276	HURON - WATERTOWN 230KV CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09398	128.276	HURON - WATERTOWN 230KV CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.2632	STANTON 230/18.0KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	128.25	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09301	128.1331	AURORA - FLANDRU 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09301	128.1331	AURORA - FLANDRU 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08817	128.0205	FT RANDAL - FT THOMPSON 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08817	128.0205	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	128.0174	GEN587053 1-G16-007-GEN10.6500
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09034	128.0168	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08755	127.9899	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09398	127.9887	CARPENTER - HURON 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09362	127.9606	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08897	127.8629	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08816	127.8615	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08816	127.8615	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08896	127.8424	MN VALLEY TAP - PANTHER 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	127.8212	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	127.8067	GEN587133 1-G16-017-GEN10.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08878	127.7276	ADAMS - MITCHLCO3 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08755	127.7214	PAHOJA - SIOUX FALLS 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	127.7202	GEN336153 1-WATERFORD UNIT#3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	127.683	GEN659453 1-GI1414GEN W0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	127.6681	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09365	127.6439	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	127.6381	GEN600045 4-ANSON
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08880	127.6184	ADAMS - PLEASANT VALLEY 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	127.6112	GEN659110 1-LELAND OLDS UNIT1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08838	127.6096	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16364	127.5816	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08816	127.5539	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16364	127.5514	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	127.5509	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16364	127.5464	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16364	127.5095	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08828	127.4956	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08892	127.4906	NUNDRWD - WAYSIDE 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08686	127.4807	FT RANDAL - SIOUX CITY 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	127.4494	GEN659141 1-K10215A
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08791	127.3655	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.10980	127.2915	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.10980	127.2915	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	127.2796	GEN335831 1-RIVERBEND UNIT#1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08828	127.2736	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08828	127.2555	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	127.2251	GEN615010 1-STANTON4
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08846	127.223	BIG STONE - BROWNS VALLEY 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08729	127.1082	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08810	127.1054	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	127.0976	GEN659407 1-ANTELPHILLSW0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08917	127.0634	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08917	127.0634	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08976	127.0591	PIPESTONE - SPLIT ROCK 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08887	127.0444	MCLEOD - PANTHER 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08828	127.0372	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.992	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08617	126.979	FT RANDAL - UTICA JCT 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08729	126.922	BROOKINGS - WHITE 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08729	126.922	BROOKINGS - WHITE 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	126.9184	YANKEE 115/34.5KV TRANSFORMER CKT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.9048	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	126.8935	YANKEE 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08917	126.8515	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08917	126.8515	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08834	126.8305	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08791	126.8264	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08816	126.7465	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08680	126.734	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08847	126.7338	PAYNSVILLE - WILLMAR 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08828	126.7308	HENNING - INMANN 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.7262	GEN640009 1-COOPER NUCLEAR STATION
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	126.7117	GEN672321 1-SHAND GENERATOR 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.6959	GEN645012 2-NEBRASKA CITY 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08836	126.6704	GRANITE FALLS - WILLMAR 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08836	126.6704	GRANITE FALLS - WILLMAR 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08680	126.6533	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	126.6452	BROOKING COUNTY - J432 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	126.6452	J432 345.00 345/34.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08846	126.644	BROWNS VALLEY - HANKINSON 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.6193	GEN338146 1-INDEPENDENCE UNIT #2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08847	126.6169	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.6159	GEN338143 1-INDEPENDENCE UNIT #1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.6043	GEN337652 1-WHITE BLUFF UNIT #1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08947	126.5948	BISON - HETINGER 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	126.5901	GEN672310 1-POPLAR RIVER GENERATOR 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	126.5901	GEN672311 2-POPLAR RIVER GENERATOR 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	126.5865	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08879	126.5735	BYRON - NORTH ROCHESTER 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	126.5571	GEN657749 1-YOUNG 1 GENERATOR
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	126.5444	GEN600004 2-PRAIRIE ISLAND G2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	126.5424	GEN587033 1-G16-004-GEN10.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08680	126.5353	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	126.5337	GEN600003 1-PRAIRIE ISLAND G1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.5232	GEN645011 1-NEBRASKA CITY 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08934	126.4845	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08934	126.4845	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.4798	GEN337653 1-WHITE BLUFF UNIT #2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.4125	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	126.4042	GEN587623 1-J493-GEN1 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.3739	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08797	126.3613	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08797	126.3613	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	126.3269	GEN659353 1-DEERCREK CTG18.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	126.2767	GEN659354 1-DEERCREK STG18.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.2739	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08833	126.245	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.1909	GEN501801 1-DOLET HILLS UNIT1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.1907	GEN336252 1-NINEMILE POINT UNIT#5
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.1512	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	126.123	AUDUBON - SHEYNNE 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.1171	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08876	126.0954	BYRON - PLEASANT VALLEY 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.0918	GEN336251 1-NINEMILE POINT UNIT#4
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08752	126.0904	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.0827	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08787	126.0642	MISSION - ST FRANCIS 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08819	126.0618	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	126.0481	GEN336831 1-BAXTER WILSON SES
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08817	126.0427	BIG STONE - HIGHWAY 12 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08714	126.0292	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08714	126.0292	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08833	126.008	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	125.9962	GEN587583 1-J432-GEN1 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.9915	GEN337041 1-GERALD ANDRUS
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.9759	GEN587153 1-G16-021-GEN10.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08820	125.9734	GRACEVT7 - ORTONVILLE 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08811	125.9673	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.9657	GEN344897 4-1LAB G4 20.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.9639	GEN344894 1-1LAB G1 20.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.9637	GEN344895 2-1LAB G2 20.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.9635	GEN344896 3-1LAB G3 20.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08834	125.9559	FENTON - NOBLES 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08795	125.9344	BURR - CANBY 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08787	125.9293	HARMONY - ST FRANCIS 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09056	125.9269	GLENHAM - WHITLOK 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.9248	GEN501813 1-RODEMACHER UNIT 3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08947	125.9173	BISON - MAURINE 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.9016	GEN636641 1-LOUISA UNIT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.8916	GEN345671 2-1RUSH G2 18.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.8857	GEN345670 1-1RUSH G1 18.000
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	125.8843	GEN600006 1-AS KING
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09056	125.8841	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09056	125.8841	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08612	125.8709	FT THOMPSON - WESSINGTON 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08612	125.8709	FT THOMPSON - WESSINGTON 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09071	125.8183	GLENHAM - L3 HAWDON 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09056	125.8162	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09056	125.8043	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09056	125.8043	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08818	125.8	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.787	BURR - J493 115.00 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.787	J493 115.00 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08934	125.7844	MITCHELL - MITCHELL NW 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08934	125.7844	MITCHELL - MITCHELL NW 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.7764	GEN600021 3-ANGUS ANSON2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08817	125.7522	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08800	125.7374	CANBY - GRANITE FALLS 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08800	125.7374	CANBY - GRANITE FALLS 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08829	125.7352	FENTON - NOBLES 115KV CKT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.7238	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.7238	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.7211	GEN335206 1-NELSON UNIT 6
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08778	125.7083	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.7019	GEN563232 1-G15089_3 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.6872	GEN338388 1-1PLUM PT U1 23.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.6854	GEN600020 2-ANGUS ANSON1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.679	GEN334440 1-SABINE UNIT 4
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.6773	NOBLES 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08787	125.6655	HARMONY - VALENTINE 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.6487	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.6427	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08919	125.639	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09056	125.6377	OAHE - SULLEY BUTTE 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.6376	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.6344	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.5974	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.5962	GEN336191 1-LITTLE GYPSY UNIT#3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.5768	GEN600149 W-J183 PROSEW10.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09214	125.5639	FLANDRU - SIOUX FALLS 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.5626	GEN501812 1-RODEMACHER UNIT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08756	125.5607	MCCOOL - MOORE 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.5532	GEN600150 W-J183 PROSEW20.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.5228	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.5226	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.5164	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08770	125.5154	G15088_T 345.00 - MOORE 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08796	125.5127	FARGO - SHEYNNE 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08796	125.5127	FARGO - SHEYNNE 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08797	125.5083	AUDUBON - HUBBARD 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	125.4874	GEN661015 1-COYOTE
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08769	125.4847	RASMUSN - UTICA JCT 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.4588	NOBLES 115/34.5KV TRANSFORMER CKT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.4436	GEN336801 1-BAXTER WILSON UNIT #1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.4433	GEN335614 1-WILLOW GLENN UNIT#4
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08747	125.4361	GRANT - MITCHELL 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08747	125.4361	GRANT - MITCHELL 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.4333	GEN336464 1-MICHOUD UNIT #3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.4292	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.4265	MEC345 - WILMARTH 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.4244	MEC345 345/19.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08736	125.4179	SIDNEY - STEGALL 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08820	125.4156	GRACEVT7 - MORRIS 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08820	125.4156	GRACEVT7 - MORRIS 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.4126	GEN334441 1-SABINE UNIT 5
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.4093	488489510526345.00 - J510 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.4093	J510 345.00 345/18.0KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.403	GEN335204 1-NELSON UNIT 4
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.3734	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08805	125.3439	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.3432	MEC115 - WILMARTH 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.3431	MEC115 115/15.0KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08795	125.3357	ELM CREEK - MONTICELLO 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.3179	GEN542962 2-IATAN UNIT #2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08787	125.3083	AINSWORTH - VALENTINE 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08769	125.2964	RASMUSN - SIOUX CITY 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08811	125.2734	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.2468	GEN334433 1-SABINE UNIT 3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.2294	RGBYWND4 230.00 - RUGBY 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.2217	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.2198	GEN336222 1-LITTLE GYPSY UNIT#2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.1999	488489510526345.00 - J526 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.1999	J526 345.00 345/34.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.1559	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08795	125.1396	KARLSTAD - WINGER 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08809	125.1363	MENNO JCT - TRIPP JCT 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08893	125.122	HIGHLND 3 345.00 - RAUN 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.1146	GEN336151 1-WATERFORD UNIT#1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.1146	GEN336152 1-WATERFORD UNIT#2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08795	125.1059	JAMES TOWN - PICKERT 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.1049	GEN635407 W-SHD415 W 0.6000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.1049	GEN635408 W-SHD425 W 0.6000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.1032	GEN635409 W-SHD435 W 0.6000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.102	GEN542957 1-IATAN UNIT #1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08639	125.0909	UTICA JCT - VFODNES 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.0793	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.0694	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	125.0625	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.0454	GEN303007 1-1BC2 U2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.0378	GEN303006 1-1BC2 U1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.0327	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	125.0214	GENOA 161 161/24.0KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08796	125.0126	AIRTECH - FEP TAP 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.9944	GEN563222 1-G15088_3 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08991	124.9887	HURON - WOONSOCKET 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08796	124.9823	AIRTECH - WEST FARIBAULT 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08809	124.9821	MENNO JCT - UTICA 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08660	124.979	RAUN - SIOUX CITY 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08660	124.979	RAUN - SIOUX CITY 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.9778	GEN542951 5-HAWTHORN UNIT #5
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	124.9728	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	124.9728	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08815	124.9695	FORT RIDGELY - FRANKLIN 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.9684	GEN336170 1-GULF OXY U4
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	124.967	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.9608	GEN303008 1-1BC2 U3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08814	124.9566	FENTON 115/69KV TRANSFORMER CKT 5
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	124.9496	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	124.9475	BROADLAND - HURON 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	124.9473	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	124.9473	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08722	124.9372	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.9317	GEN562003 1-G11_027_3 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08717	124.9197	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.9194	GEN542955 1-LACYGNE UNIT #1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08809	124.9179	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08747	124.9103	CHERRY CREEK - GRANT 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.9087	FENTON 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08776	124.8933	AXTELL - SWEETWATER 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08851	124.8917	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08851	124.8789	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.8756	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.8755	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08795	124.8704	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08851	124.868	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08823	124.8604	PAYNESVILLE - WAKEFIELD 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.8503	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.849	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.847	LANGDON - LANGWIN7 115.00 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.8429	GEN501811 1-RODEMACHER UNIT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08809	124.837	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.8369	AS KING 345/20.0KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08795	124.8313	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08833	124.8229	BLUE LAKE - MCLEOD 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08790	124.8206	WINNER - WITTEN 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08758	124.811	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08833	124.8059	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.8044	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08858	124.8013	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08858	124.7982	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08858	124.7982	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.7956	GEN542956 2-LACYGNE UNIT #2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08831	124.788	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08841	124.7748	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.7658	GEN345765 H-1SIOUX 2 18.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08831	124.7639	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08795	124.7638	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08801	124.7626	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.762	GEN334070 1-LEWIS CREEK 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.762	GEN334071 1-LEWIS CREEK 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08831	124.7603	P13:230-345:NPPD:STEGALL3:KV3A
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08991	124.7541	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08795	124.7451	LAWERENCE CREEK - SHAEFER 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.7432	GEN629069 1-EMERY STEAM TURBINE 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08758	124.735	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08758	124.7261	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.7251	GEN337766 1-TRACTEBEL UNIT S1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08795	124.7194	ELM CREEK - PARKERS LAKE 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08810	124.7191	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08807	124.7185	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08822	124.7164	LYON COUNTY (8779072) 345/115/34.5KV TRANSFORMER CKT 9
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.7089	GEN337757 1-DUKE HOTSPRINGS STG1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08804	124.7086	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.7034	GEN336221 1-LITTLE GYPSY UNIT#1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.7027	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08801	124.6966	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.6949	GEN501910 1-ACADIA UNIT ST1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08796	124.6916	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08758	124.6904	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09196	124.6877	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.6819	GEN345756 H-1SIOUX 1 18.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08991	124.6664	STORLA - WOONSOCKET 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08795	124.6627	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08790	124.6549	GREGORY - WINNER 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	124.6489	GEN659103 1-ANTELOPE VALLEY UNIT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	124.6489	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09196	124.645	GROTON - REDFIELD 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08793	124.6447	ARROWHEAD - FORBES 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08815	124.6411	LYON COUNTY 115/69KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08790	124.6396	P12:115:UMZW:# 172 #: WI IN SD.
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.6377	GEN645041 1-CASS COUNTY 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08825	124.6375	MT VERN - STORLA 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.6373	GEN345832 1-1TS G1 13.800
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.637	GEN345841 2-1TS G2 13.800
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08795	124.6365	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.6341	GEN336446 1-MICHOUD UNIT #2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.6332	GEN334432 1-SABINE UNIT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.6331	GEN334431 1-SABINE UNIT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08801	124.6289	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08793	124.6269	FT RANDAL - WHITE SWAN 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08777	124.6265	CLEARWATER - ONEILL 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	124.625	GEN657748 1-YOUNG 2 GENERATOR
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.6248	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08795	124.6246	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.6228	RUNNING 230/118KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.6209	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09003	124.6171	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09003	124.6171	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.612	GEN337764 1-TRACTEBEL UNIT C1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.612	GEN337765 1-TRACTEBEL UNIT C2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08810	124.6046	FRANKLIN - REDWOOD FALLS 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08489	124.6011	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08489	124.6011	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.5873	GEN336242 1-1NMIL ST1 18.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08801	124.587	NOBLES () 345/115/34.5KV TRANSFORMER CKT 9
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08801	124.5832	NOBLES () 345/115/34.5KV TRANSFORMER CKT 10
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	124.5797	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08793	124.5753	TYNDALL - WHITE SWAN 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.5733	GEN501823 1-TECHE UNIT 3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.5721	GEN659116 1-SPIRIT MOUND UNIT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	124.5719	J460 345.00 - J460-TAP 345.00 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	124.5719	J460 345.00 345/34.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.5676	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.5549	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.5489	GEN629046 3-FOX LAKE 5 GENERATOR NO 3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.548	GEN336944 1-REX BROWN
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08795	124.5479	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08795	124.5479	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08805	124.5448	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09020	124.544	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08856	124.5413	BOWMAN - RHAME 4 230.00 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.534	GEN345156 H-1MER 4 18.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08600	124.531	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08600	124.531	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08600	124.5276	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.5244	GEN338443 1-PANDA S1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.5242	GEN335612 1-WILLOW GLENN UNIT#2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.5234	GEN501970 1-EVANGELINE UNIT 7
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.5212	GRAND MEADOW - PLEASANT VALLEY 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.5155	GEN334030 1-FRONTIER UNIT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.5152	GEN334031 1-FRONTIER UNIT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.5041	GEN337430 1-PERYVILLE UNIT #3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.504	GEN337428 1-PERYVILLE UNIT #1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09180	124.4985	HURON - REDFIELD 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.4968	GEN587353 1-G16-050-GEN10.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.4913	GEN336240 1-1NMIL CT1 18.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.4913	GEN336241 1-1NMIL CT2 18.000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.4854	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.4803	GEN501912 1-ACADIA UNIT CT1B
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.48	GEN501911 1-ACADIA UNIT CT1A
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08807	124.4782	ARNOLD - HAZLETON 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08801	124.4707	GLENCOE MUNI - MCLEOD 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.4657	GEN659117 2-SPIRIT MOUND UNIT2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.46	GEN531447 1-HOLCOMB GENERATOR
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.4501	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.4383	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.4341	GEN600112 W-G287 NOB2G W0.5750
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	124.4227	HELENA - SCOTTCO3 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08796	124.4109	PLEZIOZO1ARC
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.4082	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	124.3989	AS KING - WILLOW RIVER 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08805	124.3863	GRE-CHUBLAK3345.00 - HAMPTON CORNER 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.3849	GEN660016 1-B_H WIND 0.7000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.3542	FENTON 115/34.5KV TRANSFORMER CKT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	124.3392	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	124.2715	GEN 11123 1-G736-GEN1 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	124.2617	GEN 11133 1-J442-GEN1 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	124.1436	GEN600005 1-MONTICELLO
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	123.9939	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08796	123.8926	CENTER - COYOTE 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08738	123.8863	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08763	123.8358	HAZEL CREEK - LYON COUNTY 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.7371	GEN600047 1-MECCT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	123.7282	GEN600000 1-SHERBURNECNTY G1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08800	123.7194	BREWSTER - ELK 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08808	123.6932	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.6838	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.6791	MONONA - NEAL SOUTH 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.6663	NEAL SOUTH - RAUN 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	123.6558	GEN659125 1-COVEY
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08811	123.6524	BROOKING COUNTY () 345/115/13.8KV TRANSFORMER CKT 10
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08812	123.6296	BROOKING COUNTY () 345/115/34.5KV TRANSFORMER CKT 9
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08793	123.6238	CRWFRD 5 161.00 - MONONA 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08763	123.6172	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.6057	GEN681540 5-ALMA UNIT 5
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08763	123.6011	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08793	123.5768	CRWFRD 5 161.00 - VICTORY 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08793	123.5615	POCAHONTAS COUNTY - POMEROY 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08783	123.5372	RAUN - TEKAMAH 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08783	123.5372	RAUN - TEKAMAH 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.5359	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08793	123.5356	CARROLL COUNTY - VICTORY 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08865	123.5343	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.5333	GEN600088 W-BUFFALO RIDGE WIND GEN 11
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	123.5325	DIXONCO 230.00 - HOSKINS 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.5308	P13:115-230:NPPD:NUCOR-3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.5283	GEN615031 1-PLEASANT VALLEY
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.5246	GEN615032 2-PLEASANT VALLEY
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09376	123.5244	FT THOMPSON - HURON 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09376	123.5244	FT THOMPSON - HURON 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09376	123.5244	FT THOMPSON - HURON 230KV CKT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09376	123.5244	FT THOMPSON - HURON 230KV CKT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.5109	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.5109	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08805	123.5066	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.4809	GEN619954 1-HUTCHINSON
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.4605	GRE-STNYCRK7115.00 (STNYCR115-69) 115/69/12.8KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.4486	GEN672369 3-MERIDIAN GENERATOR 3 ST
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.4419	GEN659289 1-DAYCNTYWND W0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.4403	GEN563312 1-G15097_3 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08549	123.4381	SPLIT ROCK (SPLT 11) 345/115/13.8KV TRANSFORMER CKT 11
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08796	123.437	PLYMOUTH - SIOUX CITY 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08796	123.437	PLYMOUTH - SIOUX CITY 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.4346	GEN652004 1-G13_001IS_3 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08679	123.4331	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.43	GEN600130 W-G586 - CWN 10.6000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.4293	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.4275	GEN600131 W-G586 - CWN 20.6000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08539	123.4176	SPLIT ROCK (SPLT 10) 345/115/13.8KV TRANSFORMER CKT 10
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08796	123.4142	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08796	123.4142	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.4135	GEN672370 1-COTEAU CREEK GENERATOR 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.4134	GEN672371 2-COTEAU CREEK GENERATOR 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.4134	GEN672372 3-COTEAU CREEK GENERATOR 3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.4116	GEN600125 2-FEP ST G 13.800
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.4112	GEN600081 W-BUFFALO RIDGE WIND GEN 4
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.4073	GEN659031 1-G12_014IS_4 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08828	123.4046	BROOKING COUNTY - YANKEE 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08828	123.4046	BROOKING COUNTY - YANKEE 115KV CKT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.3974	GEN672384 1-CENTENNIAL WINDFARM
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08761	123.3962	SIOUX CITY - TWIN CHURCH 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.3944	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.3891	THIEF RIVER FALLS (TRF) 115/69/13.2KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.3867	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08793	123.3724	COOPER - FAIRPORT 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08793	123.3724	COOPER - FAIRPORT 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08957	123.3717	MERRCRT4 230.00 - WISHEK 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.3656	GEN652410 3-FT PECK
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.3557	COOPER - SUB 3458 NEB CTY 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.3557	COOPER - SUB 3458 NEB CTY 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	123.352	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08793	123.3476	STMDSJFAFACO
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08793	123.3475	COPSTJCPFRSJ
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08793	123.3475	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.3279	GEN600013 3-BLACK DOG GEN 3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.311	GEN620285 1-SOLWAY
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	123.3106	EDEN 345 345.00 - HCKRYCK3 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08957	123.3076	HESKETT - WISHEK 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.3023	GEN652414 4-FT PECK
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.3023	GEN652415 5-FT PECK
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.2938	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.2873	GEN681522 3-GENOA 3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.2854	GEN600056 W-BUFFALO RIDGE WIND GEN
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08815	123.2848	HILLS - MONTEZUMA 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.2806	DENISON - EXIRA 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.2803	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08907	123.2785	ELLSBORO - LAKE YANKTON 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08791	123.2765	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.272	GEN672347 1-CORY COGEN GENERATOR 1 GT1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.272	GEN672348 2-CORY COGEN GENERATOR 2 GT2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08788	123.2713	COLUMEAST - SHELL CREEK 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08907	123.2525	CHANARANBIE - ELLSBORO 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.2364	GEN672358 1-CHAPLN1W 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.2309	DONALDSON - DONALDSON PIPE 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.2252	GEN672367 1-MERIDIAN GENERATOR 1 GT1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.2252	GEN672368 2-MERIDIAN GENERATOR 2 GT2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08793	123.2236	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.2158	GEN603185 1-FIBROMINN GENERATION
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.2142	FRONTER4 230.00 (FRONTIER) 230/69/13.8KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.209	GEN600018 S-LS POWER STEAM
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08787	123.1975	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.173	GEN672350 1-NIPAWIN GENERATOR 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.173	GEN672351 2-NIPAWIN GENERATOR 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.173	GEN672352 3-NIPAWIN GENERATOR 3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.166	GEN672349 3-CORY COGEN GENERATOR 3 ST
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.137	GEN659162 4-RED WLCK
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.137	GEN659163 5-BLACK WDCK
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.1361	GEN600050 1-FEP
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.1354	GEN659192 6-LYNN
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.1253	H081 345.00 - H081-TAP 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.1253	H081 345.00 345/34.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.1178	GEN659294 1-WILTONCOL9
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.1177	GEN659273 2-GROTON SYNC COND
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.105	GEN620323 2-HOOT LAKE 2 GEN
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.0865	GEN659290 1-EDGECOL
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.0761	GEN587603 1-J488&J489GN10.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.0708	YANKEE 115/34.5KV TRANSFORMER CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.0656	GEN657964 1-ASH2GEN9 0.5750
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.0635	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08791	123.0604	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.0566	GEN600012 2-BLACK DOG GEN 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.0525	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.0417	GEN672357 2-FUT-WL2X 13.800
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.0275	GEN672393 2-NBECST2G 13.800
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08793	123.0272	COOPER - ST JOE 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.0266	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.0258	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.0227	GEN672390 2-FUT-SW2X 13.800
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09240	123.0217	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08748	123.0179	HOSKINS - SHELL CREEK 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	123.0124	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.9988	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.9911	GEN 11143 1-J436GEN1 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.9911	GEN 11153 1-J437GEN1 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.9679	GEN660001 2-ABERDEEN SIEBRECHT
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.9567	GEN652556 2-OAHE
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.9567	GEN652557 4-OAHE
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.9567	GEN652558 6-OAHE
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.9233	GEN659270 1-WEST SW
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.8997	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.8991	GEN652353 2-GR PRAIRIEG 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.8749	GEN562872 1-G15046_3 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.8546	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08771	122.8535	GRIMES - LEHIGH 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08800	122.8515	ELK - MAGNOLIA 5 161KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	122.8457	GEN587593 1-J460-GEN1 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.8327	GEN600063 1-COLVILLE GEN 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.8327	GEN600064 2-COLVILLE GEN 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.787	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08893	122.7821	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.7616	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.7601	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.748	GEN620324 3-HOOT LAKE 3 GEN
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.7468	GEN600014 4-BLACK DOG GEN 4
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.7115	GEN600065 7-HIGH BRIDGE
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.7115	GEN600066 8-HIGH BRIDGE
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.7102	LADISH 115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.6983	GEN600071 10-RIVER SIDE
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.6978	GEN600070 9-RIVER SIDE
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	122.6892	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.6878	GEN600011 5-BLACK DOG GEN 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	122.687	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08786	122.6816	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.6805	GEN910006 1-G12_012IS_3 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.6788	GEN587663 1-H081-GEN1 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.6749	GEN600007 7-RIVERSIDE GEN 7
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.6643	GEN600043 7-BLUE LAKE5
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.6643	GEN600044 8-BLUE LAKE6
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.6504	GEN600017 C-LS POWER CT
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08818	122.6329	BONDURANT - MONTEZUMA 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09365	122.6116	FIELD SOUTH - WILMARTH 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07664	122.5873	G16-044-TAP 345.00 - GROTON 345KV CKT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08794	122.578	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.5726	GEN652345 W-G07_023IS_2 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07667	122.5655	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08761	122.5642	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09365	122.5514	FIELD NORTH - FIELD SOUTH 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09365	122.532	FIELD NORTH - LKFLDXL3 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.5266	GEN659411 1-CAMPBLCNTY W0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.515	GEN659272 2-GROTON 2G13.800
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08793	122.4924	DENISON - SIOUX CITY 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.4865	GEN657705 X-DRAYTON
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.4437	GEN 10648 1-G830_GEN 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.4228	GEN 11104 1-J262_GEN 0.6000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.4228	GEN 11108 1-J263_GEN 0.6000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07667	122.4109	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07667	122.4089	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.4045	GEN659274 1-GROTON
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.3989	GEN615052 1-CAMBRIDGE GENERATING STATION
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.3528	GEN615015 1-GRE-SPRITWDG13.200
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.3414	GEN615021 1-GRE-ER 14G 16.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.3137	GEN681542 6-JP MADGETT
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.3109	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.3109	GEN672304 4-BOUNDARY DAM GENERATOR 4
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.3109	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08796	122.2797	DAN JUHL - SPLIT ROCK 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08796	122.2793	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.2536	GEN672356 1-FUT-WL1X 18.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.2141	GEN600067 9-HIGH BRIDGE
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03711	122.2133	G09_001IST 345.00 - GROTON 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.2125	GEN672389 1-FUT-SW1X 18.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.198	GEN672392 1-NBECGT1G 18.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.1861	GEN600077 W-YANKEE 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.1861	GEN600099 W-YANKEE 4
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.1759	GEN659010 4-G07_027IS_2 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.1687	GEN600078 W-YANKEE 3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.1665	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.163	GEN600069 W-YANKEE 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08796	122.1612	DAN JUHL - MAGNOLIA 5 161KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.1583	GEN659366 3-WILTON 3 W0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	122.1526	GEN600002 3-SHERBURNE CNTY G3
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.1501	STANTON 230/18.0KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.1469	GEN659194 1-NDPRAIRWND1W0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.1452	GEN652460 4-GARRISON
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.1451	GEN652461 5-GARRISON
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.1275	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08815	122.1032	LEHIGH - RAUN 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.1004	GEN652457 1-GARRISON
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.1004	GEN652458 2-GARRISON
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.1004	GEN652459 3-GARRISON
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08791	122.0359	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	122.0232	GEN659403 1-NDSUNFLWR W0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09408	122.0197	CARPENTER - WATERTOWN 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09408	122.0197	CARPENTER - WATERTOWN 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	121.9872	GEN587653 1-J526-GEN1 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09408	121.914	HURON - WATERTOWN 230KV CKT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09408	121.914	HURON - WATERTOWN 230KV CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	121.8748	GEN615001 1-COAL CREEK
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.21284	121.75	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08766	121.7486	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	121.7427	GEN615002 2-COAL CREEK
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09408	121.7067	CARPENTER - HURON 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	121.6874	GEN587053 1-G16-007-GEN10.6500
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	121.6393	GEN600001 2-SHERBURNE CNTY G2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	121.63	GEN587133 1-G16-017-GEN10.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	121.5613	ALMA 161 161/24.0KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08766	121.4572	PAHOJA - SIOUX FALLS 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16373	121.412	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16373	121.3869	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16373	121.3729	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16373	121.3584	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	121.33	GEN659453 1-GI1414GEN W0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	121.2243	GEN659110 1-LELAND OLDS UNIT1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	121.2233	GEN587633 1-J510-GEN1 18.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	121.0793	GEN659141 1-K10215A
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	120.9957	GEN615010 1-STANTON4
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	120.8149	GEN659407 1-ANTELPHILLSW0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	120.7093	GEN587293 1-G16-044-GEN10.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	120.6255	YANKEE 115/34.5KV TRANSFORMER CKT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	120.6077	YANKEE 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	120.5612	GEN587033 1-G16-004-GEN10.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	120.4758	BROOKING COUNTY - J432 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	120.4758	J432 345.00 345/34.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	120.4049	GEN657749 1-YOUNG 1 GENERATOR
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	120.3987	GEN600004 2-PRAIRIE ISLAND G2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	120.3903	GEN672321 1-SHAND GENERATOR 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	120.3882	GEN600003 1-PRAIRIE ISLAND G1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	120.352	GEN672310 1-POPLAR RIVER GENERATOR 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	120.352	GEN672311 2-POPLAR RIVER GENERATOR 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	120.304	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	120.1264	GEN587623 1-J493-GEN1 0.6900
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.21284	119.9053	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	119.7978	GEN587583 1-J432-GEN1 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08725	119.7882	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08725	119.7882	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	119.7659	GEN600006 1-AS KING
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	119.7517	GEN659354 1-DEERCREK STG18.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	119.7511	GEN659353 1-DEERCREK CTG18.000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	119.5124	BASE CASE
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08673	119.2657	RAUN - SIOUX CITY 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08673	119.2657	RAUN - SIOUX CITY 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	119.1134	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	119.0912	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	119.0176	GEN661015 1-COYOTE
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	118.6832	GEN659103 1-ANTELOPE VALLEY UNIT1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	118.6832	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.21438	118.6016	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	118.2412	J460 345.00 - J460-TAP 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	118.2412	J460 345.00 345/34.5KV TRANSFORMER CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.21284	118.2371	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	118.1682	GEN600005 1-MONTICELLO
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	118.078	GEN 11123 1-G736-GEN1 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	118.0631	GEN 11133 1-J442-GEN1 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	117.7714	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	117.7571	GEN600000 1-SHERBURNECNTY G1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	117.5186	GEN659125 1-COVEY
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	117.3185	GEN657748 1-YOUNG 2 GENERATOR
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.21438	116.7414	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	116.6996	GEN587593 1-J460-GEN1 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	116.4799	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	116.4794	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	116.4386	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	116.4386	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	116.4149	RIEL - ROSEAU 500KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	116.3111	GEN600002 3-SHERBURNE CNTY G3
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	116.2473	GEN620315 1-BIG STONE GEN
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08281	116.2098	HANLON - STORLA 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08298	116.1192	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	116.011	GEN600001 2-SHERBURNE CNTY G2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	115.9438	COYOTE 345/24.0KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03716	115.8	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08407	115.7473	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08635	115.6231	HANKINSON - WAHPETON 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	115.5522	GEN587653 1-J526-GEN1 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08407	115.5341	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08897	115.4576	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.21438	115.4416	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	115.3993	GEN615001 1-COAL CREEK
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08897	115.3219	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08897	115.3196	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	115.2131	GEN615002 2-COAL CREEK
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	115.1237	GEN635214 4-NEAL UNIT 4
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08781	114.8757	BIG STONE 230/24.0KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	114.7426	GEN587633 1-J510-GEN1 18.000
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	114.43	GEN587293 1-G16-044-GEN10.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	114.4054	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08740	114.2958	BUFFALO RIDGE - YANKEE 115KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08588	114.0025	NOBLES - SPLIT ROCK 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08635	113.8721	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08635	113.8721	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04097	113.868	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08285	113.7992	STORLA - WESSINGTON 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	113.7852	GEN635024 4-WALTER SCOTT UNIT 4
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08603	113.7042	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	113.7026	GEN635213 3-NEAL UNIT 3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08602	113.6766	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08238	113.5449	FT THOMPSON - LETCHER 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08238	113.5449	FT THOMPSON - LETCHER 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08466	113.4814	AS KING - EAU CLAIRE 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04097	113.3849	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04097	113.3768	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04097	113.3768	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08513	113.3575	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08964	113.335	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	113.1562	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	113.1014	GEN635023 3-WALTER SCOTT UNIT 3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08888	113.0611	AURORA - BROOKINGS 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08888	113.0611	AURORA - BROOKINGS 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08297	112.9949	LETCHER - SIOUX FALLS 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	112.766	CENTER 230/22.0KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08586	112.672	CHANARANBIE - FENTON 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08458	112.6616	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08345	112.4825	BIG STONE - BLAIR 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08345	112.4825	BIG STONE - BLAIR 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08888	112.4316	AURORA - FLANDRU 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08888	112.4316	AURORA - FLANDRU 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08556	112.4066	BLAIR - GRANITE FALLS 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08556	112.4066	BLAIR - GRANITE FALLS 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08662	112.4008	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	112.2531	GEN336821 1-GRAND GULF UNIT
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08513	112.2139	ADAMS - MITCHLCO3 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08515	112.1079	ADAMS - PLEASANT VALLEY 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08320	112.0169	HANLON - SIOUX FALLS 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.10552	111.9599	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	111.9522	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	111.8917	GEN344225 1-1CAL G1 25.000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08897	111.814	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	111.7962	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	111.7746	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08491	111.7335	BIG STONE - BROWNS VALLEY 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08514	111.6991	BYRON - NORTH ROCHESTER 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08347	111.6002	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08470	111.4396	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08535	111.4069	MN VALLEY TAP - PANTHER 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08464	111.4045	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08535	111.3789	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08513	111.3666	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	111.3601	GEN620315 1-BIG STONE GEN
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08347	111.3477	BROOKINGS - WHITE 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08347	111.3477	BROOKINGS - WHITE 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08964	111.3379	FIELD SOUTH - WILMARTH 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08897	111.3127	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08897	111.3064	2810X2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08964	111.2969	FIELD NORTH - FIELD SOUTH 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08964	111.2724	FIELD NORTH - LKFLDXL3 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08491	111.2498	BROWNS VALLEY - HANKINSON 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	111.2269	GEN336153 1-WATERFORD UNIT#3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	111.1842	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08513	111.1841	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08513	111.1664	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08511	111.1619	BYRON - PLEASANT VALLEY 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08897	111.1549	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08454	111.1511	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08513	111.1385	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	111.1371	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08513	111.1307	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08332	111.0856	FT RANDAL - SIOUX CITY 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08602	111.0774	PIPESTONE - SPLIT ROCK 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.9903	GEN640009 1-COOPER NUCLEAR STATION
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07817	110.9443	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07817	110.9443	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.9304	GEN335831 1-RIVERBEND UNIT#1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08476	110.9243	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07817	110.9194	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.8811	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07817	110.8805	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08526	110.8656	MCLEOD - PANTHER 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08485	110.8574	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08485	110.8574	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08484	110.8342	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08484	110.8342	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08897	110.8166	HELENA - SHEAS LK3 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.7996	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08465	110.7475	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08265	110.743	FT RANDAL - UTICA JCT 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.7276	LANGDON - LANGWIN7 115.00 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08470	110.7136	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08484	110.637	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08465	110.6072	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08457	110.5887	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08435	110.581	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08559	110.5511	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08559	110.5511	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.5001	BARNES 4 230.00 230/34.5KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.491	GEN587153 1-G16-021-GEN10.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.4578	GEN337653 1-WHITE BLUFF UNIT #2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08418	110.4293	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08465	110.4222	HENNING - INMANN 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08559	110.4047	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08559	110.4047	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08792	110.3455	BIG STONE 230/24.0KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.3341	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08475	110.3278	GRANITE FALLS - WILLMAR 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08475	110.3278	GRANITE FALLS - WILLMAR 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.3168	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.3131	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.2832	GEN337652 1-WHITE BLUFF UNIT #1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.2775	GEN338146 1-INDEPENDENCE UNIT #2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.2752	GEN338143 1-INDEPENDENCE UNIT #1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08391	110.2616	GRAND ISLAND - MCCOOL 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.2522	GEN501801 1-DOLET HILLS UNIT1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08579	110.2519	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08579	110.2519	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08472	110.2372	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.2312	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08459	110.231	GRACEVT7 - ORTONVILLE 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.2265	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	110.2247	CHISAGO COUNTY - FORBES 500KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08436	110.2102	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08436	110.2102	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	110.201	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.2003	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.2003	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.1998	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.1769	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08487	110.1728	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.1412	GEN563232 1-G15089_3 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08407	110.121	G15088_T 345.00 - MOORE 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.0707	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.0698	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.051	GEN344897 4-1LAB G4 20.000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.0505	GEN344894 1-1LAB G1 20.000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.0502	GEN344896 3-1LAB G3 20.000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08456	110.0492	BIG STONE - HIGHWAY 12 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08471	110.0404	FENTON - NOBLES 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.0378	GEN501813 1-RODEMACHER UNIT 3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08449	110.0374	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08569	110.0297	BISON - HETINGER 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08426	110.0088	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.0081	GEN344895 2-1LAB G2 20.000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08434	110.0051	FORMAN - OAKES 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.0027	GEN345670 1-1RUSH G1 18.000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	110.0023	GEN345671 2-1RUSH G2 18.000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.9865	MEC345 - WILMARTH 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.9852	MEC345 345/19.5KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08411	109.9821	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08411	109.9821	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08658	109.9789	GLENHAM - WHITLOK 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08411	109.9708	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08395	109.9448	MCCOOL - MOORE 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08432	109.9433	AUDUBON - SHEYNNE 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08658	109.9325	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08658	109.9325	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08278	109.907	UTICA JCT - VFODNES 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.9042	GEN645012 2-NEBRASKA CITY 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.8999	GEN335206 1-NELSON UNIT 6
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08605	109.891	NOBLES - SPLIT ROCK 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08466	109.8872	FENTON - NOBLES 115KV CKT 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08458	109.8855	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08658	109.8853	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08658	109.8853	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08658	109.8849	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.8803	MEC115 - WILMARTH 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.8802	MEC115 115/15.0KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08579	109.8755	MITCHELL - MITCHELL NW 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08579	109.8755	MITCHELL - MITCHELL NW 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08456	109.859	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08459	109.8521	GRACEVT7 - MORRIS 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08459	109.8521	GRACEVT7 - MORRIS 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08285	109.836	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08285	109.836	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.8311	GEN645011 1-NEBRASKA CITY 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08426	109.8277	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08540	109.8262	NUNDRWD - WAYSIDE 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.8257	GEN636641 1-LOUISA UNIT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08455	109.8246	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08675	109.8229	GLENHAM - L3 HAWDON 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.8186	RGBYWND4 230.00 - RUGBY 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.8163	GEN336252 1-NINEMILE POINT UNIT#5
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.8148	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08395	109.8124	GRANT - MITCHELL 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08395	109.8124	GRANT - MITCHELL 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.7989	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08309	109.7978	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.788	GEN501812 1-RODEMACHER UNIT 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.7858	GEN600149 W-J183 PROSEW10.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.7807	GEN542962 2-IATAN UNIT #2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.7801	NOBLES 115/34.5KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08658	109.7686	OAHE - SULLEY BUTTE 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08309	109.7686	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.7684	GEN600150 W-J183 PROSEW20.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	109.7639	BURR - CANBY 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.7631	GEN336831 1-BAXTER WILSON SES
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08309	109.749	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.7403	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08847	109.7352	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08437	109.7266	CANBY - GRANITE FALLS 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08437	109.7266	CANBY - GRANITE FALLS 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08452	109.7175	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.717	GEN337041 1-GERALD ANDRUS
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	109.7035	ELM CREEK - MONTICELLO 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.6646	GEN336251 1-NINEMILE POINT UNIT#4
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08152	109.6571	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08152	109.6571	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.6215	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08409	109.6178	RASMUSN - UTICA JCT 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.6011	GEN334440 1-SABINE UNIT 4
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08434	109.5891	AIRTECH - FEP TAP 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08434	109.5755	AIRTECH - WEST FARIBAULT 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.5624	GEN562003 1-G11_027_3 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08395	109.5566	CHERRY CREEK - GRANT 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.5432	GEN563222 1-G15088_3 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.5373	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08409	109.5261	RASMUSN - SIOUX CITY 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08569	109.5178	BISON - MAURINE 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08452	109.5166	FENTON 115/69KV TRANSFORMER CKT 5
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.5166	GEN336191 1-LITTLE GYPSY UNIT#3

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.4988	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.4948	AS KING 345/20.0KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	109.4869	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.457	GEN335204 1-NELSON UNIT 4
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	109.4543	JAMES TOWN - PICKERT 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08434	109.4437	AUDUBON - HUBBARD 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.4412	GEN336801 1-BAXTER WILSON UNIT #1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08355	109.4393	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.4323	GEN335614 1-WILLOW GLENN UNIT#4
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	109.4311	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.4259	GEN336464 1-MICHOUD UNIT #3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08888	109.4162	FLANDRU - SIOUX FALLS 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	109.4157	LAWERENCE CREEK - SHAEFER 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.411	GEN303007 1-1BC2 U2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.4058	GEN303006 1-1BC2 U1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.4022	GEN334441 1-SABINE UNIT 5
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08471	109.3934	BLUE LAKE - MCLEOD 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.3828	GEN542957 1-IATAN UNIT #1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08256	109.3779	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08256	109.3779	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08256	109.3767	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08625	109.3689	HURON - WOONSOCKET 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.3591	GEN336170 1-GULF OXY U4
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08427	109.3549	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.3516	GEN303008 1-1BC2 U3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	109.3487	FARGO - SHEYNNE 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	109.3487	FARGO - SHEYNNE 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08820	109.3435	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08448	109.3416	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08407	109.3384	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08427	109.3366	MISSION - ST FRANCIS 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	109.3324	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08303	109.3297	SIOUX FALLS - VFODNES 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08370	109.3292	SIDNEY - STEGALL 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	109.3286	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.3282	GEN338388 1-1PLUM PT U1 23.000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08277	109.3202	MANNING - SPIRIT MOUND 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08471	109.3169	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08418	109.3155	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.315	GEN334433 1-SABINE UNIT 3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	109.3134	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08449	109.3069	MENNO JCT - TRIPP JCT 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08432	109.3045	ELM CREEK - PARKERS LAKE 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08453	109.2979	FORT RIDGELY - FRANKLIN 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08427	109.2902	HARMONY - ST FRANCIS 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.2804	GEN501811 1-RODEMACHER UNIT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08436	109.2738	MAPLE RIVER - WINGER 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.2645	GEN336222 1-LITTLE GYPSY UNIT#2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08820	109.2541	GROTON - REDFIELD 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08432	109.2524	KARLSTAD - WINGER 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08427	109.2519	HARMONY - VALENTINE 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08446	109.2503	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08478	109.2465	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	109.2435	WINNER - WITTEN 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.2416	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	109.2389	GRAND FORKS - PICKERT 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08449	109.2345	MENNO JCT - UTICA 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.2314	BURR - J493 115.00 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.2314	J493 115.00 115/34.5KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.23	GEN542955 1-LACYGNE UNIT #1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08348	109.2208	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08437	109.2205	AS KING - KOHLMAN LAKE 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08637	109.2169	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08637	109.2169	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.2088	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08625	109.2074	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.207	GEN336152 1-WATERFORD UNIT#2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.2064	GEN336151 1-WATERFORD UNIT#1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.2048	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.2024	GEN345765 H-1SIOUX 2 18.000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.2013	GEN334071 1-LEWIS CREEK 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1996	FENTON 115/34.5KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1973	GEN334070 1-LEWIS CREEK 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08443	109.1894	BLUE LAKE - HAMPTON CORNER 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08449	109.1888	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08452	109.1839	LYON COUNTY 115/69KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1832	GEN337766 1-TRACTEBEL UNIT S1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08277	109.1804	BERSFORD - MANNING 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1635	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1635	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.163	GEN501910 1-ACADIA UNIT ST1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1612	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1612	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1555	GEN542956 2-LACYGNE UNIT #2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1544	GEN659116 1-SPIRIT MOUND UNIT1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1544	GEN659117 2-SPIRIT MOUND UNIT2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1415	GEN345756 H-1SIOUX 1 18.000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1402	GEN629992 1-G164_WF9 34.500
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08461	109.1356	PAYNESVILLE - WAKEFIELD 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08448	109.1353	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1306	GEN542951 5-HAWTHORN UNIT #5
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1212	GRAND MEADOW - PLEASANT VALLEY 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1164	GEN345832 1-1TS G1 13.800
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1161	GEN345841 2-1TS G2 13.800
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1154	GEN562517 1-G14_021_S2 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08445	109.1066	ARNOLD - HAZLETON 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1038	GEN337765 1-TRACTEBEL UNIT C2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.1037	GEN337764 1-TRACTEBEL UNIT C1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.0917	GEN635407 W-SHD415 W 0.6000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.0917	GEN635408 W-SHD425 W 0.6000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.0917	GEN635409 W-SHD435 W 0.6000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.0847	GEN336242 1-1NMIL ST1 18.000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08445	109.0815	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08450	109.0745	WILMARTH () 161/115/13.8KV TRANSFORMER CKT 6
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.0731	TRIMONT WD 3345.00 345/34.5KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.071	TRIMONT WD 3345.00 345/34.5KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08450	109.0696	BLUE EARTH TAP - WILMARTH 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08442	109.0689	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.0668	GEN501823 1-TECHE UNIT 3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08432	109.0633	COON CREEK - KOHLMAN LAKE 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.0569	GEN587353 1-G16-050-GEN10.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08432	109.049	AS KING - WILLOW RIVER 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.0407	GEN660016 1-B_H WIND 0.7000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.0229	488489510526345.00 - J510 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	109.0229	J510 345.00 345/18.0KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.9361	488489510526345.00 - J526 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.9361	J526 345.00 345/34.5KV TRANSFORMER CKT 1
3	20L	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.12084	108.874	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.5448	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.2719	GEN600046 1-MECST
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08485	108.2592	STORLA (KV1A) 230/115/13.2KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.2556	CARROLL COUNTY - DRAGER5 161.00 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.2556	CARROLL COUNTY - DRAGER5 161.00 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.2507	P13:115-230:NPPD:NUCOR-3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08438	108.2389	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08435	108.2263	BREWSTER - ELK 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.2263	GEN681540 5-ALMA UNIT 5
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.2239	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.222	POCAHONTAS COUNTY - POMEROY 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.2108	GEN672383 1-MLTC 1G 13.800
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.2065	GEN600056 W-BUFFALO RIDGE WIND GEN
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.2016	GEN600047 1-MECCT1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08485	108.2	BOWMAN - HETINGER 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.1887	COOPER - SUB 3458 NEB CTY 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.1887	COOPER - SUB 3458 NEB CTY 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08431	108.1821	HAYES - POMEROY 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.1797	GEN672336 7-E B CAMPBELL GENERATOR 7
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.1797	GEN672337 8-E B CAMPBELL GENERATOR 8
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.1708	GEN672382 1-MEADOW LAKE GENERATOR 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08432	108.1702	EDEN 345 345.00 - HCKRYCK3 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.1688	GEN563302 1-G15096_3 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.167	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	108.1634	PLYMOUTH - SIOUX CITY 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	108.1634	PLYMOUTH - SIOUX CITY 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.1522	GEN652004 1-G13_001IS_3 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08431	108.1325	CARROLL COUNTY - VICTORY 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.1318	GEN672396 1-YHPS 1G 13.800
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.1318	GEN672397 2-YHPS 2G 13.800
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08465	108.1314	BROOKING COUNTY - YANKEE 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08465	108.1314	BROOKING COUNTY - YANKEE 115KV CKT 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.1295	GEN600130 W-G586 - CWN 10.6000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08442	108.1291	ALEXMRES3 345.00 () 345/115/34.5KV TRANSFORMER CKT 9
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08444	108.1275	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.127	GEN600131 W-G586 - CWN 20.6000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08325	108.1259	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08438	108.125	FALLOW 3 345.00 - GRIMES 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.122	GEN659289 1-DAYCNTYWND W0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.1214	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.1207	GEN563312 1-G15097_3 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08435	108.1195	CENTER - COYOTE 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.1158	GEN659031 1-G12_014IS_4 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08432	108.1016	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.0966	LAKOTA 115/69KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.096	GEN652559 1-OAHE
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.0895	GEN620115 1-HRDLKGEN 0.6000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.0809	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.0809	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.0779	YANKEE 115/34.5KV TRANSFORMER CKT 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08956	108.0714	FT THOMPSON - HURON 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08956	108.0714	FT THOMPSON - HURON 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08956	108.0714	FT THOMPSON - HURON 230KV CKT 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08956	108.0714	FT THOMPSON - HURON 230KV CKT 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.0693	GEN620857 1-LKPRSTN9 41.600
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.0674	GEN672378 1-ERMINE GENERATOR 4
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.0674	GEN672379 2-ERMINE2X 13.800
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.067	GEN652410 3-FT PECK
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08431	108.0655	COOPER - FAIRPORT 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08436	108.0635	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.0633	GEN600043 7-BLUE LAKE5
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08446	108.0624	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.0574	GEN672370 1-COTEAU CREEK GENERATOR 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.0574	GEN672371 2-COTEAU CREEK GENERATOR 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.0574	GEN672372 3-COTEAU CREEK GENERATOR 3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08429	108.0476	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.0399	GEN615032 2-PLEASANT VALLEY
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.0382	GEN600125 2-FEP ST G 13.800
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.0372	GEN672369 3-MERIDIAN GENERATOR 3 ST
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08452	108.0247	HILLS - MONTEZUMA 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.019	GEN672314 1-TNTLLN1X 13.800
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.019	GEN672315 2-TNTLLN2X 13.800
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08431	108.0153	COPSTJCPFRSJ
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08431	108.0153	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08431	108.0153	STMDSJFAFACO
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.0117	GEN652414 4-FT PECK
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	108.0117	GEN652415 5-FT PECK
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	108.0064	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08433	108.0064	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.9863	GEN620285 1-SOLWAY
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.9799	GEN652353 2-GR PRAIRIEG 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08426	107.9688	COLUMEAST - SHELL CREEK 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.9678	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.9647	DONALDSON - DONALDSON PIPE 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08429	107.9442	DENISON - EXIRA 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08429	107.9435	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.941	GEN600013 3-BLACK DOG GEN 3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.9261	GEN652556 2-OAHE
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.9258	GEN652558 6-OAHE
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.9222	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.9187	GEN652557 5-OAHE
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.8913	GEN672384 1-CENTENNIAL WINDFARM

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08210	107.8861	SPLIT ROCK (SPLT 11) 345/115/13.8KV TRANSFORMER CKT 11
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.8751	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.8722	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.872	GEN660001 2-ABERDEEN SIEBRECHT
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.8684	ULRICH (ULRICH) 115/69/41.6KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08201	107.8559	SPLIT ROCK (SPLT 10) 345/115/13.8KV TRANSFORMER CKT 10
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.8531	GEN659162 4-RED WLCK
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.8531	GEN659163 5-BLACK WDCK
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.852	GEN659192 6-LYNN
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.8439	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.8315	GEN659273 2-GROTON SYNC COND
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.8315	GEN659294 1-WILTONCOL9
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04104	107.8277	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08425	107.826	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.8248	H081 345.00 - H081-TAP 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.8248	H081 345.00 345/34.5KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.8193	GEN600018 S-LS POWER STEAM
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.801	THIEF RIVER FALLS (TRF) 115/69/13.2KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.8001	GEN659270 1-WEST SW
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08386	107.7846	HOSKINS - SHELL CREEK 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.7839	GEN659290 1-EDGECOL
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.7819	GEN657600 1-L1GEN3 9 0.5750
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.7786	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.7749	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16068	107.7674	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.7633	GEN657964 1-ASH2GEN9 0.5750
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.76	GEN603185 1-FIBROMINN GENERATION
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08423	107.7576	LAKEFIELD 3 - NOBLES 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08429	107.757	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16068	107.7533	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.7518	GEN672358 1-CHAPLN1W 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.7467	LADISH 115/13.2KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.7393	GEN681522 3-GENOA 3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08431	107.7363	COOPER - ST JOE 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.7322	GEN587603 1-J488&J489GN10.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.7246	GEN620323 2-HOOT LAKE 2 GEN
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08431	107.7237	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.7197	GEN600050 1-FEP
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16068	107.7121	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.7102	GEN672347 1-CORY COGEN GENERATOR 1 GT1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.7101	GEN672348 2-CORY COGEN GENERATOR 2 GT2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.16068	107.7098	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08435	107.6748	ELK - MAGNOLIA 5 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.6699	GEN672350 1-NIPAWIN GENERATOR 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.6699	GEN672351 2-NIPAWIN GENERATOR 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.6699	GEN672352 3-NIPAWIN GENERATOR 3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.6679	GEN 11143 1-J436GEN1 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.6679	GEN 11153 1-J437GEN1 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.6608	GEN672367 1-MERIDIAN GENERATOR 1 GT1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.6608	GEN672368 2-MERIDIAN GENERATOR 2 GT2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.6452	GEN600012 2-BLACK DOG GEN 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08527	107.6347	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.6262	FRONTER4 230.00 (FRONTIER) 230/69/13.8KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.6253	WINGER (WINGER) 115/69/41.6KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.6132	GEN562872 1-G15046_3 0.6900
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04104	107.6081	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.598	GEN672349 3-CORY COGEN GENERATOR 3 ST
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.5834	GEN672339 16-QE 16G 13.800
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.5834	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.5529	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.4966	GEN672393 2-NBECST2G 13.800
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04104	107.467	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.04104	107.467	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.4669	GEN910006 1-G12_012IS_3 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08429	107.446	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08432	107.4454	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.4418	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.437	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08432	107.4363	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.4303	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.4272	GEN659411 1-CAMPBLCNTY W0.6900
3	20L	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.12084	107.4071	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.3938	GEN587663 1-H081-GEN1 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08455	107.3759	BONDURANT - MONTEZUMA 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08408	107.3656	GRIMES - LEHIGH 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07314	107.3628	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.3546	GEN620324 3-HOOT LAKE 3 GEN
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07312	107.3451	G16-044-TAP 345.00 - GROTON 345KV CKT 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08432	107.335	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07314	107.3051	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07314	107.3047	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.293	GEN600014 4-BLACK DOG GEN 4
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.2817	GEN600065 7-HIGH BRIDGE
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.2817	GEN600066 8-HIGH BRIDGE
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.2756	GEN652345 W-G07_023IS_2 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.2735	DENISON - SIOUX CITY 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.2596	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.257	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.2513	GEN600071 10-RIVER SIDE
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.2509	GEN600070 9-RIVER SIDE
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08424	107.2504	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.242	GEN659272 2-GROTON 2G13.800
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.238	GEN600011 5-BLACK DOG GEN 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.2365	GEN657985 1-ASH1GEN9 0.5750
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.2307	GEN659274 1-GROTON
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.2292	GEN600007 7-RIVERSIDE GEN 7
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08399	107.2203	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.209	STANTON 230/18.0KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.2047	GEN600017 C-LS POWER CT
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.1986	GEN 10648 1-G830_GEN 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.1934	GEN 11104 1-J262_GEN 0.6000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.1934	GEN 11108 1-J263_GEN 0.6000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.1701	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.1512	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.1387	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.1381	DAN JUHL - SPLIT ROCK 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.1077	GEN615015 1-GRE-SPRITWDG13.200
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.0876	GEN652461 5-GARRISON
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.0875	GEN652460 4-GARRISON
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09000	107.0615	CARPENTER - WATERTOWN 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09000	107.0615	CARPENTER - WATERTOWN 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.0572	GEN652457 1-GARRISON
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.057	GEN652458 2-GARRISON
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.057	GEN652459 3-GARRISON
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.0294	GEN615052 1-CAMBRIDGE GENERATING STATION
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.0259	DAN JUHL - MAGNOLIA 5 161KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.0191	GEN659010 4-G07_027IS_2 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	107.0027	GEN659366 3-WILTON 3 W0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09000	106.9911	HURON - WATERTOWN 230KV CKT 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09000	106.9911	HURON - WATERTOWN 230KV CKT 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.9572	GEN659194 1-NDPRAIRWND1W0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.9345	GEN657705 X-DRAYTON
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.8932	GEN659403 1-NDSUNFLWR W0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.8788	GEN600078 W-YANKEE 3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.8782	GEN600077 W-YANKEE 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.8782	GEN600099 W-YANKEE 4
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08399	106.8686	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.8562	GEN600069 W-YANKEE 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.7129	GEN600067 9-HIGH BRIDGE
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.7079	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.7079	GEN672304 4-BOUNDARY DAM GENERATOR 4
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.7079	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.6863	GEN659110 1-LELAND OLDS UNIT1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.09000	106.6544	CARPENTER - HURON 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.6479	GEN587133 1-G16-017-GEN10.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.6362	GEN615021 1-GRE-ER 14G 16.000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08427	106.615	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.5996	GEN681542 6-JP MADGETT
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08451	106.5889	LEHIGH - RAUN 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08399	106.5772	PAHOJA - SIOUX FALLS 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.5372	GEN672392 1-NBECGT1G 18.000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.5201	GEN587053 1-G16-007-GEN10.6500
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08830	106.4822	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	106.4102	BASE CASE
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.3071	GEN659453 1-GI1414GEN W0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	106.0483	GEN659141 1-K10215A
3	20L	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.12084	105.8434	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	105.8101	GEN659407 1-ANTELPHILLSW0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	105.7634	GEN615010 1-STANTON4
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	105.6203	YANKEE 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07833	105.5652	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07833	105.5652	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	105.5651	YANKEE 115/34.5KV TRANSFORMER CKT 2
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07833	105.5253	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.07833	105.5044	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	105.3123	BROOKING COUNTY - J432 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	105.3123	J432 345.00 345/34.5KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	105.278	GEN587033 1-G16-004-GEN10.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	105.273	GEN659354 1-DEERCREK STG18.000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	105.272	GEN659353 1-DEERCREK CTG18.000
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08361	104.9746	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08361	104.9746	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.20816	104.9624	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.18235	104.9586	BASE CASE
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08300	104.853	RAUN - SIOUX CITY 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08300	104.853	RAUN - SIOUX CITY 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	104.8261	GEN587623 1-J493-GEN1 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	104.7926	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	104.7901	GEN657749 1-YOUNG 1 GENERATOR
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	104.7023	GEN659111 2-LELAND OLDS UNIT2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	104.5209	GEN600004 2-PRAIRIE ISLAND G2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	104.5137	GEN600003 1-PRAIRIE ISLAND G1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	104.4936	GEN587583 1-J432-GEN1 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	104.4545	GEN672321 1-SHAND GENERATOR 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	104.4028	GEN659103 1-ANTELOPE VALLEY UNIT1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	104.4028	GEN659107 2-ANTELOPE VALLEY UNIT2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	104.3593	GEN672310 1-POPLAR RIVER GENERATOR 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	104.3593	GEN672311 2-POPLAR RIVER GENERATOR 2
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	104.3146	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	103.9149	GEN600006 1-AS KING
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	103.8517	GEN635214 4-NEAL UNIT 4
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08079	103.3228	LETCHER - SIOUX FALLS 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.20816	103.1443	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	103.0925	J460 345.00 - J460-TAP 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	103.0925	J460 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	103.075	GEN635024 4-WALTER SCOTT UNIT 4
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.19597	103.0531	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	102.8189	ANSON - SPLIT ROCK 115KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	102.8187	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08733	102.8162	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08733	102.7	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	102.6769	GEN652173 1-G09_001IS_2 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	102.6292	GEN 11123 1-G736-GEN1 0.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	102.6203	GEN 11133 1-J442-GEN1 0.6900
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08570	102.5874	BUFFALO RIDGE - YANKEE 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	102.3937	GEN659125 1-COVEY
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	102.3914	GEN661015 1-COYOTE
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08733	102.3729	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08299	102.3504	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08299	102.2493	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	102.1876	GEN635213 3-NEAL UNIT 3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	102.1576	GEN600005 1-MONTICELLO
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	102.1546	GEN635023 3-WALTER SCOTT UNIT 3
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08110	102.0616	HANLON - SIOUX FALLS 230KV CKT 1
3	20L	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.20669	102.0443	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08299	101.9162	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08299	101.8747	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08284	101.8517	AS KING - EAU CLAIRE 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08438	101.8087	LAKEFIELD 3 - NOBLES 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	101.7952	GEN657748 1-YOUNG 2 GENERATOR

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.19597	101.7801	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	101.7564	GEN600000 1-SHERBURNECNTY G1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08457	101.6802	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08457	101.6802	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.19597	101.6735	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08348	101.6363	ADAMS - MITCHLCO3 345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08343	101.5445	ADAMS - PLEASANT VALLEY 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08426	101.5321	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08425	101.5061	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.20816	101.4786	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08276	101.4241	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08276	101.4241	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.19597	101.4194	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08696	101.4186	AURORA - BROOKINGS 115KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08696	101.4186	AURORA - BROOKINGS 115KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	101.3871	ANSON - SPLIT ROCK 115KV CKT 2
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	101.3863	ANSON 115/17.5KV TRANSFORMER CKT 4
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	101.2958	GEN587593 1-J460-GEN1 0.6900
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08290	101.2108	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
3	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.18358	101.2003	BASE CASE
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08276	101.1497	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.19597	101.1077	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.19693	101.09	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.19597	101.0759	2810X2
3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.19597	101.0579	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	100.713	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08696	100.705	AURORA - FLANDRU 115KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08696	100.705	AURORA - FLANDRU 115KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	100.7	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.03407	100.6288	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08338	100.5622	BYRON - NORTH ROCHESTER 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08830	100.5284	FIELD SOUTH - WILMARTH 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08350	100.526	HANKINSON - WAHPETON 230KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08830	100.486	FIELD NORTH - LKFLDXL3 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08830	100.4841	FIELD NORTH - FIELD SOUTH 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.20930	100.4629	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08147	100.4117	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08484	100.3723	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	100.3255	GEN344225 1-1CAL G1 25.000
3	20L	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.20669	100.3092	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	100.3	GEN336821 1-GRAND GULF UNIT
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	100.2822	GEN600001 2-SHERBURNE CNTY G2
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	100.2003	GEN600045 4-ANSON
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	100.2	GEN600002 3-SHERBURNE CNTY G3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	100.162	GEN587653 1-J526-GEN1 0.6900
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08408	100.1084	CHANARANBIE - FENTON 115KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	100.1	GEN615001 1-COAL CREEK
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08065	100.0568	FT RANDAL - UTICA JCT 230KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08335	100	BYRON - PLEASANT VALLEY 345KV CKT 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	100	GEN615002 2-COAL CREEK
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08268	99.9	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	99.9	COYOTE 345/24.0KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08745	99.8	HELENA - SHEAS LK3 345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08733	99.8	2810X2
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08733	99.8	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	99.8	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	99.6	GEN336153 1-WATERFORD UNIT#3
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	99.6	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08307	99.5	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08307	99.5	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	99.5	GEN640009 1-COOPER NUCLEAR STATION
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08342	99.4	MN VALLEY TAP - PANTHER 230KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08341	99.4	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	99.4	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	99.4	GEN587293 1-G16-044-GEN10.6900
3	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08430	99.4	GEN587633 1-J510-GEN1 18.000
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	99.3	GEN335831 1-RIVERBEND UNIT#1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	99.3	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	20L	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.10338	99.3	BASE CASE
3	16WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.10100	99.2	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08733	99.2	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08387	99.2	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08387	99.2	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08376	99.2	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08376	99.2	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08280	99.2	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08237	99.2	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08387	99.1	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08387	99.1	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	99.1	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08244	99.1	HARMONY - ST FRANCIS 115KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08248	99	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
3	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.08152	99	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18534	115.8383	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18534	115.8383	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18856	112.572	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18856	112.572	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18856	111.8123	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18856	111.8123	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18168	110.7778	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	110.6627	BASE CASE
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18168	110.5544	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18168	109.8416	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18168	109.753	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18299	109.327	HANKINSON - WAHPETON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.17938	108.6307	LETCHER - SIOUX FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18529	108.5741	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18143	108.3837	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28907	108.0675	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28907	108.0675	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18529	107.7	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28183	107.5113	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	107.5	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	107.4762	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18120	107.4165	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18120	107.4165	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18120	107.2239	FT RANDAL - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.17967	107.1156	HANLON - SIOUX FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18529	106.9024	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27844	106.4247	BASE CASE
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28168	106.3433	HANLON - STORLA 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.17977	106.0354	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.29354	105.8641	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.29354	105.8641	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18055	105.7888	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28011	105.6444	FT THOMPSON - LETCHER 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28011	105.6444	FT THOMPSON - LETCHER 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18149	105.615	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28126	105.5863	FORMAN - HANKINSON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	105.4951	J460 345.00 - J460-TAP 345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	105.4951	J460 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18083	105.2979	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18356	105.2249	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18356	105.1759	HAZEL CREEK - LYON COUNTY 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18356	105.1723	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.29354	105.1516	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.29354	105.1516	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18084	104.946	HARMONY - ST FRANCIS 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	104.9372	COYOTE 345/24.0KV TRANSFORMER CKT 1
3	17G	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.19160	104.8041	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	104.7865	GEN587593 1-J460-GEN1 0.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.17931	104.5739	FT RANDAL - UTICA JCT 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18346	104.5441	BROOKINGS - WATERTOWN 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18346	104.5441	BROOKINGS - WATERTOWN 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.26957	104.3656	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.26957	104.3656	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18132	104.3143	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18030	104.3131	GRAND ISLAND - MCCOOL 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28455	104.3034	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18086	104.2299	FARGO - JAMES TOWN 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27920	104.2082	STORLA - WESSINGTON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18086	104.1267	FARGO - JAMES TOWN 230KV CKT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18084	104.0962	HARMONY - VALENTINE 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	104.0901	GEN635024 4-WALTER SCOTT UNIT 4
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	104.0869	GEN635214 4-NEAL UNIT 4
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18132	104.0594	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18529	104.0557	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18529	104.0264	Z810X2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18293	103.9556	ARLINGTON - WATERTOWN 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18094	103.9174	AUDUBON - SHEYNNE 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	103.6885	YANKEE 115/34.5KV TRANSFORMER CKT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18035	103.6706	MCCOOL - MOORE 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18223	103.6296	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18223	103.6296	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	103.6258	YANKEE 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18053	103.6166	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18096	103.6104	ELM CREEK - MONTICELLO 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18096	103.6072	BURR - CANBY 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18017	103.606	SIDNEY - STEGALL 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18084	103.563	AINSWORTH - VALENTINE 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	103.5323	GEN635023 3-WALTER SCOTT UNIT 3
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	103.5112	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	103.3648	BROOKING COUNTY - J432 345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	103.3648	J432 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	103.3322	GEN659354 1-DEERCREK STG18.000
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18167	103.3292	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	103.3274	GEN659353 1-DEERCREK CTG18.000
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18188	103.3075	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18167	103.3006	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18167	103.2897	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	103.2779	GEN635213 3-NEAL UNIT 3
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	103.2399	GEN587583 1-J432-GEN1 0.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18153	103.2392	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18098	103.2344	AUDUBON - HUBBARD 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28157	103.222	FT RANDAL - FT THOMPSON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28157	103.222	FT RANDAL - FT THOMPSON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	103.2082	SHEYENNE SVC - SHEYNNE 115KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18106	103.1898	CANBY - GRANITE FALLS 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18106	103.1898	CANBY - GRANITE FALLS 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18191	103.1879	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18087	103.1869	BALTA - RAMSEY 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18293	103.1655	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18293	103.1655	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18293	103.1655	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18219	103.1555	BISON - HETINGER 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18095	103.1456	KARLSTAD - WINGER 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18293	103.1346	ARLINGTON - BROOKINGS 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18096	103.1294	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18096	103.1294	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18053	103.1265	RASMUSN - SIOUX CITY 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18063	103.1138	G15088_T 345.00 - MOORE 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18058	103.0867	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	103.0831	GEN640009 1-COOPER NUCLEAR STATION
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18097	103.0699	AS KING - EAU CLAIRE 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	103.0605	GEN344225 1-1CAL G1 25.000
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18141	103.021	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18219	103.01	BISON - MAURINE 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.991	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18062	102.9882	CENTER - COYOTE 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18173	102.9754	MN VALLEY TAP - PANTHER 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18086	102.9355	PRAIRIE - WINGER 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.9264	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18121	102.9194	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18529	102.9118	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18114	102.8891	MENNO JCT - TRIPP JCT 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.17947	102.8638	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.17947	102.8638	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18081	102.8577	FT RANDAL - SPENCER 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28224	102.8487	HANKINSON - WAHPETON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.848	ANSON - SPLIT ROCK 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.8478	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28149	102.8274	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28149	102.8274	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18081	102.8213	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18081	102.8213	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.8188	GEN336821 1-GRAND GULF UNIT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18096	102.7516	JAMES TOWN - PICKERT 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.7463	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18223	102.7333	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18223	102.7333	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18078	102.7283	JAMES TOWN - WEBER 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18081	102.7136	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18078	102.709	BISMARK - WEBER 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.667	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.17992	102.6596	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18141	102.6056	P13:230-345:NPPD:STEGALL3:KV3A
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18141	102.6056	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.5954	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18114	102.5898	MENNO JCT - UTICA 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18043	102.5759	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18043	102.5759	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18087	102.5654	PRAIRIE - RAMSEY 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18124	102.5359	BIG STONE - HIGHWAY 12 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18122	102.5206	GRACEVT7 - ORTONVILLE 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18110	102.5092	GAVINS POINT - YANKON JCT 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18110	102.5092	GAVINS POINT - YANKON JCT 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18114	102.5003	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18078	102.4401	BISMARK - JAMES TOWN 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.4344	WATERTOWN 230KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.4343	ANSON - SPLIT ROCK 115KV CKT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.4327	ANSON 115/17.5KV TRANSFORMER CKT 4
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.4318	WATERTOWN 230KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.4039	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.4021	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18066	102.381	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18096	102.3642	ADAMS - MITCHLCO3 345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.3613	GEN336153 1-WATERFORD UNIT#3
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.3604	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.3274	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18099	102.3145	ADAMS - PLEASANT VALLEY 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18095	102.304	ELM CREEK - PARKERS LAKE 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.3	BURR - J493 115.00 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.3	J493 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18094	102.2652	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18059	102.2535	AXTELL - SWEETWATER 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18046	102.2516	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18046	102.2513	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18046	102.2461	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18055	102.244	GRANT - MITCHELL 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18055	102.244	GRANT - MITCHELL 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28149	102.2183	FT RANDAL - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18147	102.2168	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18086	102.2112	BALTA - MCHENRY 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18124	102.2086	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18147	102.2067	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18147	102.2067	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18096	102.1978	GRAND FORKS - PICKERT 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.1962	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.196	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.1881	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18068	102.1775	CLEARWATER - ONEILL 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.17	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.17	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18165	102.1598	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18165	102.1598	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18068	102.1426	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.1152	GEN335831 1-RIVERBEND UNIT#1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28078	102.1105	LETCHER - SIOUX FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.105	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.19082	102.0824	BLAIR - WATERTOWN 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.19082	102.0824	BLAIR - WATERTOWN 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18046	102.0757	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.0741	GEN300003 1-THOMAS HILL UNIT 3
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18068	102.0705	CLEARWATER - NELIGH 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.0475	GEN645012 2-NEBRASKA CITY 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18070	102.0445	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18097	102.043	P12:230:UMZW:# 166 #: PL IN SD. TAP
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18097	102.043	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.17973	102.0152	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.17973	102.0152	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.0065	GEN542962 2-IATAN UNIT #2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.17973	102.0054	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	102.0008	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.9937	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.9937	GEN600045 4-ANSON
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18102	101.9775	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18102	101.9775	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	101.9766	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18150	101.9735	MCLEOD - PANTHER 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.17980	101.9684	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.17980	101.9684	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18102	101.965	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18122	101.9541	GRACEVT7 - MORRIS 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18122	101.9541	GRACEVT7 - MORRIS 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18125	101.951	MONTICELLO - WAITE PARK 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18097	101.9377	OAHE - PHILIP TAP 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18139	101.937	BIG STONE - BROWNS VALLEY 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.9325	GEN636641 1-LOUISA UNIT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18102	101.9283	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18102	101.9283	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.8997	MORANVILLE - ROSEAU 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18074	101.8934	CENTER - SQUARE BUTTE 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18101	101.8927	BYRON - NORTH ROCHESTER 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.8848	RICHER - ROSEAU 230KV CKT 1
3	17G	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.19160	101.8678	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
3	17G	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.19160	101.867	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.8411	MEC345 - WILMARTH 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.8401	MEC345 345/19.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.829	GEN338146 1-INDEPENDENCE UNIT #2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.8256	GEN338143 1-INDEPENDENCE UNIT #1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28124	101.8234	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18138	101.8186	MT VERN - STORLA 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18085	101.8082	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18085	101.8082	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18085	101.8082	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18085	101.8082	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.8075	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.805	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18092	101.7956	AS KING - CHISAGO COUNTY 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.7941	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18067	101.7928	P13:115-230:TSGT:SIDNEY-KV1A
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.7907	GEN337652 1-WHITE BLUFF UNIT #1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.7897	MEC115 115/15.0KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18085	101.7886	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18085	101.7886	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18085	101.7886	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18085	101.7886	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.7779	GEN337653 1-WHITE BLUFF UNIT #2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.7711	GEN600069 W-YANKEE 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.7677	MEC115 - WILMARTH 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.7662	GRANITE FALLS 230KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.7634	GRANITE FALLS 230KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.7593	GEN600078 W-YANKEE 3
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.7451	GEN600077 W-YANKEE 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.7451	GEN600099 W-YANKEE 4
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.7323	GEN587153 1-G16-021-GEN10.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18101	101.7306	BYRON - PLEASANT VALLEY 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18067	101.7299	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18067	101.7298	P13:230-345:NPPD:SIDNEY 3:KV2A
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18067	101.7298	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.7282	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.7282	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18301	101.7244	HURON - WOONSOCKET 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18075	101.7076	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18096	101.7041	BALTA - RUGBY 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.7	GEN344895 2-1LAB G2 20.000
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.6947	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.6917	MINNESOTA VALLEY - MINVALY CAP7115.00 115KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.6687	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18117	101.6669	GRANITE FALLS - WILLMAR 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18117	101.6669	GRANITE FALLS - WILLMAR 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18082	101.6642	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18082	101.6642	P12:230:UMZW:# 158 #: MH IN ND.
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.6605	GEN344897 4-1LAB G4 20.000
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18055	101.6549	CHERRY CREEK - GRANT 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.6529	GEN344894 1-1LAB G1 20.000
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.6527	GEN344896 3-1LAB G3 20.000
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	101.648	HARVEY - UNDERWOOD 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.6436	GEN542957 1-IATAN UNIT #1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	101.6392	COAL CREEK - UNDERWOOD 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.6378	EAGLE - PHILIP 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18082	101.628	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18091	101.6219	DICKINSON - PARKERS LAKE 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18645	101.6187	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.6135	GEN336252 1-NINEMILE POINT UNIT#5
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.6083	LUND - MORANVILLE 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18125	101.6079	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18097	101.6073	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.5999	GEN345670 1-1RUSH G1 18.000
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.5995	GEN542951 5-HAWTHORN UNIT #5
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18046	101.5979	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.5968	LUND - RUNNING 230KV CKT 1
3	17G	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.19160	101.5901	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	101.5896	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.5853	GEN345671 2-1RUSH G2 18.000
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	101.5845	BALTA - HARVEY 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.577	GEN501801 1-DOLET HILLS UNIT1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18096	101.572	COAL CREEK - MCHENRY 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18082	101.5662	FT RANDAL - WHITE SWAN 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.5617	GEN300007 1-NEW MADRID UNIT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18082	101.5572	MOOREHEAD - MORRIS 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18063	101.5535	G15088_T 345.00 - PAULINE 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.5518	GEN300006 1-NEW MADRID UNIT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18074	101.5515	KELLY - SHELL CREEK 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18645	101.5498	GROTON - REDFIELD 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27904	101.5459	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	101.541	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18074	101.5397	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18074	101.5397	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18004	101.5378	UTICA JCT - VFODNES 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18191	101.5372	FIELD NORTH - LKFLDXL3 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18082	101.5342	TYNDALL - WHITE SWAN 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.534	EAGLE - MARTIN 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18191	101.5292	FIELD SOUTH - WILMARTH 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18163	101.5218	P12:230:UMZB:# 171 #: WB IN ND.
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18163	101.5218	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.521	GEN542955 1-LACYGNE UNIT #1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.518	FALCONER - GRAND FORKS 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.518	FALCONER - GRAND FORKS 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18069	101.5173	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18069	101.5173	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18069	101.5127	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18069	101.5127	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18191	101.5108	FIELD NORTH - FIELD SOUTH 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	101.5031	CHADRON - WAYSIDE 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	101.5031	P13:115-230:NPPD:WAYSIDE4:T1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18159	101.5027	AURORA - BROOKINGS 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18159	101.5027	AURORA - BROOKINGS 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18163	101.4994	BISMARK - WASHBURN 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18095	101.4994	CASS LK4 230.00 - KARLSTAD 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18123	101.4964	PAYNSVILLE - WILLMAR 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.4934	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.493	GEN501813 1-RODEMACHER UNIT 3
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.4894	GEN336831 1-BAXTER WILSON SES
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.4868	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	101.4836	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.4808	GEN336251 1-NINEMILE POINT UNIT#4
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18163	101.4799	LELAND OLDS - WASHBURN 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.4656	GEN337041 1-GERALD ANDRUS
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18105	101.4639	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18125	101.4622	FRANKLIN - REDWOOD FALLS 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.444	AS KING 345/20.0KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27844	101.4408	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18342	101.438	BRISTOL - GROTON 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.4334	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.4253	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.4201	GRANITE FALLS 115KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18078	101.4197	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18078	101.4197	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.4179	GRANITE FALLS 115KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.4176	FARGO 115KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18089	101.4173	GRAND FORKS (GK KV1A) 230/115/12.47KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.4066	GEN335206 1-NELSON UNIT 6
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.4051	GEN542956 2-LACYGNE UNIT #2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.3994	FARGO 115KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18091	101.3906	ARROWHEAD - FORBES 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.382	AINSWORTH - AINSWORTH 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18139	101.3797	BROWNS VALLEY - HANKINSON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18622	101.373	HURON - REDFIELD 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.3718	H081 345.00 - H081-TAP 345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.3718	H081 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18089	101.3709	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18089	101.3709	P12:115:UMZB:# 119 #: IN NE.
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.37	GEN563222 1-G15088_3 0.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18270	101.3651	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18270	101.3651	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18123	101.3564	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18089	101.3521	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.3508	GEN587663 1-H081-GEN1 0.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18342	101.3501	BRISTOL - SUMMIT 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18168	101.3441	HELENA - SHEAS LK3 345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.3307	GEN600020 2-ANGUS ANSON1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	101.3278	CHADRON - DUNLAP 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18070	101.3252	OGALLALA - SIDNEY 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18139	101.3235	GRANITE FALLS - S3 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18139	101.3235	GRANITE FALLS - S3 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.3213	GEN501812 1-RODEMACHER UNIT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18082	101.3055	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.3029	GEN600021 3-ANGUS ANSON2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18080	101.3022	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.3006	GEN334440 1-SABINE UNIT 4
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.3001	GEN338388 1-1PLUM PT U1 23.000
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18301	101.2966	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.2915	GEN509403 1-PIRKEY GENERATION
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18301	101.2848	STORLA - WOONSOCKET 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18550	101.2845	GROTON - ORDWAY 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.2806	GEN336191 1-LITTLE GYPSY UNIT#3
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28697	101.2774	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.2737	PRAIRIE - PRAIRIE SVC 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.2642	SHERBURNE CO 345/26.0KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18086	101.2629	AINSWORTH - STUART 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.2627	GEN509416 1-TURK GENERATION
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.2603	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.2564	JAMESTOWN (345/115JAM2) 345/115/41.6KV TRANSFORMER CKT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18114	101.2559	MARSHALL ERIE ROAD - S3 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18114	101.2559	MARSHALL ERIE ROAD - S3 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.2534	GEN336801 1-BAXTER WILSON UNIT #1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18065	101.251	MINGO - SETAB 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18065	101.251	MINGO - SETAB 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18159	101.2493	AURORA - FLANDRU 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18159	101.2493	AURORA - FLANDRU 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28697	101.2437	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	101.2421	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.24	GEN509394 1-FLINT CREEK
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	101.2384	BADOURA - HUBBARD 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28697	101.2362	HAZEL CREEK - LYON COUNTY 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18082	101.2286	P12:115:TSGT:COVALT7-SNAKECK7
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.2285	GEN300002 1-THOMAS HILL UNIT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.2203	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.2199	GEN590011 2-ERCOT EQUIVALENCE
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18095	101.217	MARTIN - SHANNON 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28075	101.2117	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18286	101.2086	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18010	101.2081	SIOUX FALLS - VFODNES 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.2069	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.2031	LANGDON - LANGWIN7 115.00 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18138	101.1974	ARMOUR - MT VERN 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18429	101.1936	EDGELEY - JAMES TOWN 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.1922	GEN590010 1-ERCOT EQUIVALENCE
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18073	101.1869	AXTELL - PAULINE 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18212	101.1819	GLENHAM - WHITLOK 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18129	101.1811	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.1811	GEN513601 1-GRECCTG_1 20.000
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18081	101.1777	GAVINS POINT - HARTINGTON 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18082	101.1751	TYNDALL - YANKON JCT 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18084	101.1669	MALLARD - RUGBY 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18084	101.1669	MALLARD - RUGBY 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18082	101.1663	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18091	101.1567	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18086	101.1466	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18086	101.1466	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18100	101.1382	CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18212	101.1313	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18212	101.1313	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18991	101.128	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.1184	GEN600047 1-MECCT1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.1178	GEN600046 1-MECST
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.1142	RGBYWND4 230.00 - RUGBY 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.1094	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18212	101.1087	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.1046	BARNES 4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.0982	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18091	101.0961	COON CREEK - SHERBURNE CO 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.0954	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.0953	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18212	101.0929	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.0781	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18111	101.0685	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18111	101.0685	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18212	101.0683	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18220	101.0601	GLENHAM - L3 HAWDON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	101.0504	GEN587643 1-J525-GEN1 0.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	100.9518	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	100.9518	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27995	100.8547	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.36391	100.8363	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.36391	100.8363	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27934	100.7785	FARGO - JAMES TOWN 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27908	100.7129	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27920	100.7126	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27920	100.7126	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28036	100.6714	GLENHAM - L3 HAWDON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27908	100.6555	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27931	100.6519	FARGO - JAMES TOWN 230KV CKT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27908	100.6296	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100.6025	2516-WATERTNCAP 4230.00
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100.6025	2543-FARGO
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100.6025	2560-BRDLAND-LNX3345.00
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100.6025	2561-BRDLAND-LNX3345.00
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100.6025	NF

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100.6025	NF
3	17G	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.19549	100.5274	BLAIR - GRANITE FALLS 230KV CKT 1
3	17G	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.19549	100.5274	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27993	100.5021	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	100.4951	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27863	100.4828	BALTA - RAMSEY 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27873	100.4801	PRAIRIE - RAMSEY 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	100.4454	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	100.4361	BROADLAND - HURON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	100.4359	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	100.4359	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28036	100.4005	BISMARK - L3 HAWDON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28337	100.3716	BROOKINGS - WATERTOWN 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28337	100.3716	BROOKINGS - WATERTOWN 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28016	100.3589	HANLON - SIOUX FALLS 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27844	100.2827	GEN659354 1-DEERCREK STG18.000
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27844	100.2798	GEN659353 1-DEERCREK CTG18.000
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27933	100.2576	AUDUBON - SHEYNNE 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100.2125	WATERTN-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18073	100.1982	GRIMES - LEHIGH 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18100	100.1923	FRANKLIN - GRE-CEDARMT7115.00 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18100	100.1896	GRE-CEDARMT3345.00 () 345/115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18087	100.1729	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100.17	GEN620323 2-HOOT LAKE 2 GEN
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18051	100.1518	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18051	100.1518	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18161	100.1414	MERRCRT4 230.00 - WISHEK 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18161	100.1295	HESKETT - WISHEK 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28017	100.0937	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28017	100.0937	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100.0801	GEN615021 1-GRE-ER 14G 16.000
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100.066	GEN660003 3-HURON WEST PARK
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100.0648	ULRICH (ULRICH) 115/69/41.6KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100.0637	THIEF RIVER FALLS (TRF) 115/69/13.2KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18780	100.0602	FT THOMPSON - HURON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18780	100.0602	FT THOMPSON - HURON 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18780	100.0602	FT THOMPSON - HURON 230KV CKT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18780	100.0602	FT THOMPSON - HURON 230KV CKT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18089	100.0543	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28017	100	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28003	100	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27882	100	FT RANDAL - UTICA JCT 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100	COOPER - ST JOE 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100	DONALDSON - DONALDSON PIPE 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100	GEN563252 1-G15091_3 0.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100	GEN563342 1-G15098_3 0.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100	GEN615052 1-CAMBRIDGE GENERATING STATION
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100	GEN652007 1-G14_001IS_3 0.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100	GEN659018 1-G14_003IS_3 0.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100	GEN672369 3-MERIDIAN GENERATOR 3 ST
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100	GEN672370 1-COTEAU CREEK GENERATOR 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100	GEN672371 2-COTEAU CREEK GENERATOR 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100	GEN672372 3-COTEAU CREEK GENERATOR 3
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	100	WINGER (WINGER) 115/69/41.6KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18089	100	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18089	100	DENISON - EXIRA 161KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28226	99.9	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28226	99.9	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.9	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.9	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.9	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 4
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.9	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 5
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.9	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.9	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.9	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.9	GEN652004 1-G13_001IS_3 0.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.9	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.9	GEN672384 1-CENTENNIAL WINDFARM
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.9	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.9	J290_SUB 230.00 230/34.5KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28235	99.8	ARLINGTON - WATERTOWN 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28035	99.8	GLENHAM - WHITLOK 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28035	99.8	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28035	99.8	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.8	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.8	GEN620324 3-HOOT LAKE 3 GEN
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.8	GEN662101 1-WESSINGTON190.5750
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.8	GEN672347 1-CORY COGEN GENERATOR 1 GT1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.8	GEN672348 2-CORY COGEN GENERATOR 2 GT2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.8	GEN672367 1-MERIDIAN GENERATOR 1 GT1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.8	GEN672368 2-MERIDIAN GENERATOR 2 GT2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.8	GEN672393 2-NBECST2G 13.800
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18066	99.8	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27879	99.8	CENTER - COYOTE 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28035	99.7	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28035	99.7	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28012	99.7	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18351	99.7	ABERDEEN JCT - ELLENDALE 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.7	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.7	GEN563302 1-G15096_3 0.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.7	GEN659156 2-LONESMCRK 2G13.800
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.7	GEN659157 3-LONESMCRK 3G13.800
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.7	GEN659158 2-PIONEER G213.800
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.7	GEN659159 3-PIONEER G313.800
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.7	GEN659291 1-FT MP COLLECTOR
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.7	GEN672349 3-CORY COGEN GENERATOR 3 ST
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.7	GEN672350 1-NIPAWIN GENERATOR 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.7	GEN672351 2-NIPAWIN GENERATOR 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.7	GEN672352 3-NIPAWIN GENERATOR 3
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.7	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.7	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.7	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18018	99.7	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28035	99.6	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27965	99.6	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27888	99.6	PRAIRIE - WINGER 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.6	ALMA 161 161/24.0KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.6	GEN563312 1-G15097_3 0.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.6	GEN620115 1-HRDLKGEN 0.6000
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.6	GEN659031 1-G12_014IS_4 0.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.6	GEN659289 1-DAYCNTYWND W0.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.6	GEN672339 16-QE 16G 13.800
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.6	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18049	99.6	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18049	99.6	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28012	99.5	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27844	99.5	GEN635214 4-NEAL UNIT 4
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27844	99.5	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27844	99.5	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18351	99.5	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.5	BAGLEY - CLEARBROOK 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.5	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.5	GEN579459 1-G16-075-GEN10.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.5	GEN600006 1-AS KING
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.5	GEN652410 3-FT PECK
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.5	GEN657964 1-ASH2GEN9 0.5750
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.5	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28035	99.4	OAHE - SULLEY BUTTE 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28003	99.4	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.4	GEN562714 1-G15_023_4 0.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.4	GEN562715 1-G15_023_5 0.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.4	GEN652414 4-FT PECK
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.4	GEN652415 5-FT PECK
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.4	GEN652906 1-G09_006IS_3 0.6900
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.4	GEN659273 2-GROTON SYNC COND
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.4	GEN659294 1-WILTONCOL9
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18064	99.4	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
3	17G	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.19041	99.3	BASE CASE
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27914	99.3	ELM CREEK - MONTICELLO 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27872	99.3	BISMARK - JAMES TOWN 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18093	99.3	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.3	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.3	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.3	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.3	GEN659162 4-RED WLCK
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.3	GEN659163 5-BLACK WDCK
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.3	GEN659192 6-LYNN
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.3	GEN659290 1-EDGECOL
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.3	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28235	99.2	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28235	99.2	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28235	99.2	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28024	99.2	BOWMAN - RHAME 4 230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28012	99.2	HENNING - INMANN 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27952	99.2	KARLSTAD - WINGER 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27947	99.2	AUDUBON - HUBBARD 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27844	99.2	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18100	99.2	DRAYTON - LETELLIER 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.2	GEN652542 1-BIG BEND
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.2	GEN652543 3-BIG BEND
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.2	GEN652907 1-G09_007IS_3 0.6900
3	17G	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.19160	99.1	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28235	99.1	ARLINGTON - BROOKINGS 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28226	99.1	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28226	99.1	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.28118	99.1	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27872	99.1	BISMARK - HILKEN 4 230.00 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27872	99.1	JAMES TOWN - WEBER 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99.1	GEN600005 1-MONTICELLO
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.17999	99.1	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.17999	99.1	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27898	99	SIDNEY - STEGALL 345KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27872	99	BISMARK - WEBER 230KV CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.27844	99	COYOTE 345/24.0KV TRANSFORMER CKT 1
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.18090	99	GEN660001 2-ABERDEEN SIEBRECHT
3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.17996	99	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18534	116.6297	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18534	116.6297	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18856	113.3259	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18856	113.3259	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18856	112.5391	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18856	112.5391	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18168	111.6811	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	111.573	BASE CASE
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18168	111.4452	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18168	110.7154	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18168	110.6246	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18299	110.1906	HANKINSON - WAHPETON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18529	109.7246	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.17938	109.5355	LETCHER - SIOUX FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18143	109.3434	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28907	109.3413	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28907	109.3413	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28183	109.1353	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18529	108.8	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	108.5123	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	108.5	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18120	108.3517	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18120	108.3517	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18120	108.1616	FT RANDAL - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.17967	108.0213	HANLON - SIOUX FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18529	107.9633	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	107.899	BASE CASE
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28168	107.8644	HANLON - STORLA 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28126	107.4328	FORMAN - HANKINSON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28011	107.2473	FT THOMPSON - LETCHER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28011	107.2473	FT THOMPSON - LETCHER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.29354	107.1297	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.29354	107.1297	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.17977	106.9225	FT RANDAL - SIOUX CITY 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18055	106.696	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18149	106.5039	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.29354	106.386	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.29354	106.386	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	106.3137	J460 345.00 - J460-TAP 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	106.3137	J460 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18083	106.2337	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18356	105.9913	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
3	17G	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19160	105.9697	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18356	105.9365	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18356	105.9332	HAZEL CREEK - LYON COUNTY 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28455	105.927	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18084	105.8741	HARMONY - ST FRANCIS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	105.8471	COYOTE 345/24.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27920	105.8155	STORLA - WESSINGTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	105.618	GEN587593 1-J460-GEN1 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.26957	105.5198	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.26957	105.5198	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.17931	105.4502	FT RANDAL - UTICA JCT 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18346	105.3341	BROOKINGS - WATERTOWN 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18346	105.3341	BROOKINGS - WATERTOWN 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18030	105.1883	GRAND ISLAND - MCCOOL 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18132	105.1696	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18086	105.1649	FARGO - JAMES TOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18086	105.0588	FARGO - JAMES TOWN 230KV CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18084	105.0022	HARMONY - VALENTINE 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18529	104.996	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	104.9694	GEN635024 4-WALTER SCOTT UNIT 4
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18529	104.9615	2810X2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	104.934	GEN635214 4-NEAL UNIT 4
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18132	104.9114	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18094	104.8084	AUDUBON - SHEYNNE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28157	104.7658	FT RANDAL - FT THOMPSON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28157	104.7658	FT RANDAL - FT THOMPSON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18293	104.7566	ARLINGTON - WATERTOWN 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18035	104.5426	MCCOOL - MOORE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	104.5272	YANKEE 115/34.5KV TRANSFORMER CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18096	104.5236	BURR - CANBY 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18017	104.499	SIDNEY - STEGALL 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18053	104.474	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	104.4677	YANKEE 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18096	104.4609	ELM CREEK - MONTICELLO 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18223	104.4531	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18223	104.4531	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18084	104.451	AINSWORTH - VALENTINE 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	104.4021	GEN635023 3-WALTER SCOTT UNIT 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	104.3705	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28149	104.3565	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28149	104.3565	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28224	104.2298	HANKINSON - WAHPETON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18167	104.2179	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18167	104.1884	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18167	104.1775	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	104.1744	BROOKING COUNTY - J432 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	104.1744	J432 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	104.1297	SHEYENNE SVC - SHEYNNE 115KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	104.1158	GEN635213 3-NEAL UNIT 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18098	104.1135	AUDUBON - HUBBARD 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18087	104.0898	BALTA - RAMSEY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18153	104.0839	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18106	104.0664	CANBY - GRANITE FALLS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18106	104.0664	CANBY - GRANITE FALLS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	104.0607	GEN659354 1-DEERCREK STG18.000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18188	104.0587	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	104.0583	GEN587583 1-J432-GEN1 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	104.0478	GEN659353 1-DEERCREK CTG18.000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18219	104.0472	BISON - HETINGER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18095	104.023	KARLSTAD - WINGER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18096	104.0107	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18096	104.0107	FARGO - SHEYNNE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18191	103.9989	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18058	103.995	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18053	103.977	RASMUSN - SIOUX CITY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18063	103.9756	G15088_T 345.00 - MOORE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.9551	GEN640009 1-COOPER NUCLEAR STATION
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18293	103.9528	ARLINGTON - BROOKINGS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.9525	GEN344225 1-1CAL G1 25.000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18293	103.9502	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18293	103.9502	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18293	103.9502	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18097	103.9117	AS KING - EAU CLAIRE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18141	103.9052	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18219	103.898	BISON - MAURINE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18062	103.8941	CENTER - COYOTE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.8758	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18086	103.8301	PRAIRIE - WINGER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18529	103.8046	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18121	103.7621	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18114	103.7491	MENNO JCT - TRIPP JCT 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.7416	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18173	103.732	MN VALLEY TAP - PANTHER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.17947	103.7255	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.17947	103.7255	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28149	103.7204	FT RANDAL - LAKE PLATT 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18081	103.7197	FT RANDAL - SPENCER 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.7145	GEN336821 1-GRAND GULF UNIT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18081	103.6826	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18081	103.6826	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.6681	ANSON - SPLIT ROCK 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.6678	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18096	103.6299	JAMES TOWN - PICKERT 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18078	103.6209	JAMES TOWN - WEBER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.6194	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18078	103.6002	BISMARK - WEBER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18081	103.5735	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18223	103.5479	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18223	103.5479	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.17992	103.5348	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28078	103.5295	LETCHER - SIOUX FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.5251	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18141	103.4782	P13:230-345:NPPD:STEGALL3:KV3A
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18141	103.4782	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.4508	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.4466	WATERTOWN 230KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18114	103.4447	MENNO JCT - UTICA 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28124	103.4445	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18087	103.4445	PRAIRIE - RAMSEY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.4439	WATERTOWN 230KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18043	103.4398	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18043	103.4398	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18110	103.3677	GAVINS POINT - YANKON JCT 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18110	103.3677	GAVINS POINT - YANKON JCT 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18122	103.3672	GRACEVT7 - ORTONVILLE 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18124	103.3668	BIG STONE - HIGHWAY 12 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18114	103.3527	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18078	103.3216	BISMARK - JAMES TOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.2558	ANSON - SPLIT ROCK 115KV CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.2543	ANSON 115/17.5KV TRANSFORMER CKT 4
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.2436	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.2434	GEN336153 1-WATERFORD UNIT#3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18066	103.2434	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.2418	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.2386	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27904	103.2175	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18096	103.2049	ADAMS - MITCHLCO3 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.1883	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.1657	BURR - J493 115.00 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.1657	J493 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.1577	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.1577	WATERTNCAP 4230.00 230KV SWITCHED SHUNT

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18099	103.1503	ADAMS - PLEASANT VALLEY 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18095	103.1394	ELM CREEK - PARKERS LAKE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18046	103.1124	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18046	103.1121	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18046	103.1119	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18059	103.1053	AXTELL - SWEETWATER 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18094	103.1021	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18147	103.0829	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18086	103.0779	BALTA - MCHENRY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18055	103.0765	GRANT - MITCHELL 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18055	103.0765	GRANT - MITCHELL 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18147	103.0727	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18147	103.0727	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18096	103.0619	GRAND FORKS - PICKERT 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.0561	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.056	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	103.048	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18124	103.0339	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18165	103.03	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18165	103.03	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18068	103.0289	CLEARWATER - ONEILL 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18068	102.9943	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.9908	GEN335831 1-RIVERBEND UNIT#1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19082	102.972	BLAIR - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19082	102.972	BLAIR - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.9633	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	17G	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19160	102.9525	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
3	17G	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19160	102.9517	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.9339	GEN300003 1-THOMAS HILL UNIT 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18046	102.9329	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18068	102.9228	CLEARWATER - NELIGH 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18097	102.907	P12:230:UMZW:# 166 #: PL IN SD. TAP
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18097	102.907	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.901	GEN645012 2-NEBRASKA CITY 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18070	102.8985	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	102.8832	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.17973	102.8723	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.17973	102.8723	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.8627	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.17973	102.8623	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.86	GEN542962 2-IATAN UNIT #2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.8529	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.17980	102.8336	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.17980	102.8336	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18102	102.8303	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18102	102.8303	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	102.8288	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18102	102.8174	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.8136	GEN600045 4-ANSON
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18125	102.7997	MONTICELLO - WAITE PARK 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18097	102.7991	OAHE - PHILIP TAP 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.798	GEN636641 1-LOUISA UNIT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18122	102.7952	GRACEVT7 - MORRIS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18122	102.7952	GRACEVT7 - MORRIS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18102	102.7806	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18102	102.7806	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18074	102.7592	CENTER - SQUARE BUTTE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.7587	MORANVILLE - ROSEAU 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18150	102.7442	MCLEOD - PANTHER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.7431	RICHER - ROSEAU 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18139	102.7395	BIG STONE - BROWNS VALLEY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18101	102.7239	BYRON - NORTH ROCHESTER 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.6944	GEN338146 1-INDEPENDENCE UNIT #2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.6907	GEN338143 1-INDEPENDENCE UNIT #1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18085	102.6859	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18085	102.6859	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18085	102.6859	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18085	102.6859	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28075	102.6778	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.6685	MEC345 - WILMARTH 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17G	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19160	102.6681	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.6675	MEC345 345/19.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18085	102.6658	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18085	102.6658	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18085	102.6658	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18085	102.6658	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18138	102.6603	MT VERN - STORLA 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.6549	GEN337652 1-WHITE BLUFF UNIT #1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.6465	GRANITE FALLS 230KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18067	102.6458	P13:115-230:TSGT:SIDNEY-KV1A
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.6437	GRANITE FALLS 230KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.6418	GEN337653 1-WHITE BLUFF UNIT #2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18092	102.6411	AS KING - CHISAGO COUNTY 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.635	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.6326	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.6243	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.36391	102.6189	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.36391	102.6189	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.6176	MEC115 115/15.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.6064	GEN600069 W-YANKEE 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.6	GEN344895 2-1LAB G2 20.000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.5951	MEC115 - WILMARTH 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.5934	GEN600078 W-YANKEE 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.5844	GEN600077 W-YANKEE 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.5844	GEN600099 W-YANKEE 4
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28697	102.5829	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18067	102.5805	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18067	102.5804	P13:230-345:NPPD:SIDNEY 3:KV2A
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18067	102.5804	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.5708	GEN587153 1-G16-021-GEN10.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18101	102.5631	BYRON - PLEASANT VALLEY 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.5628	MINNESOTA VALLEY - MINVALY CAP7115.00 115KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18096	102.5583	BALTA - RUGBY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18075	102.5557	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18082	102.5524	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18082	102.5524	P12:230:UMZW:# 158 #: MH IN ND.
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.5511	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.5511	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.549	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28697	102.5465	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18301	102.5418	HURON - WOONSOCKET 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28697	102.5348	HAZEL CREEK - LYON COUNTY 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.5147	GEN344897 4-1LAB G4 20.000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.5117	GEN344894 1-1LAB G1 20.000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.5115	GEN344896 3-1LAB G3 20.000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	102.5054	HARVEY - UNDERWOOD 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	102.4958	COAL CREEK - UNDERWOOD 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.4932	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.4902	GEN542957 1-IATAN UNIT #1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.4863	EAGLE - PHILIP 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18055	102.4853	CHERRY CREEK - GRANT 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18082	102.4748	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.4724	GEN336252 1-NINEMILE POINT UNIT#5
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.4604	LUND - MORANVILLE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18645	102.4597	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.4537	GEN345670 1-1RUSH G1 18.000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18117	102.4528	GRANITE FALLS - WILLMAR 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18117	102.4528	GRANITE FALLS - WILLMAR 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18091	102.4528	DICKINSON - PARKERS LAKE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.4478	LUND - RUNNING 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.4459	GEN542951 5-HAWTHORN UNIT #5
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18046	102.4453	G16234&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18082	102.4423	MOOREHEAD - MORRIS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	102.4399	BALTA - HARVEY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.4388	GEN345671 2-1RUSH G2 18.000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18097	102.4383	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.4353	GEN501801 1-DOLET HILLS UNIT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	102.4277	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18096	102.4232	COAL CREEK - MCHENRY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.4149	GEN300007 1-NEW MADRID UNIT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18125	102.4138	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.4051	GEN300006 1-NEW MADRID UNIT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18082	102.4047	FT RANDAL - WHITE SWAN 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18074	102.395	KELLY - SHELL CREEK 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18645	102.3937	GROTON - REDFIELD 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18063	102.391	G15088_T 345.00 - PAULINE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	102.386	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18074	102.3829	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18074	102.3829	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.3802	EAGLE - MARTIN 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18163	102.3743	P12:230:UMZB:# 171 #: WB IN ND.
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18163	102.3743	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18082	102.3725	TYNDALL - WHITE SWAN 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18004	102.3715	UTICA JCT - VFODNES 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.3688	FALCONER - GRAND FORKS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.3688	FALCONER - GRAND FORKS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.3674	GEN542955 1-LACYGNE UNIT #1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18191	102.3593	FIELD NORTH - LKFLDXL3 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27934	102.3549	FARGO - JAMES TOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18191	102.3515	FIELD SOUTH - WILMARTH 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18163	102.3512	BISMARK - WASHBURN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	102.3476	CHADRON - WAYSIDE 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	102.3476	P13:115-230:NPPD:WAYSIDE4:T1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.345	GEN501813 1-RODEMACHER UNIT 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18095	102.3434	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.3418	GEN336831 1-BAXTER WILSON SES
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18191	102.3334	FIELD NORTH - FIELD SOUTH 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.3329	GEN336251 1-NINEMILE POINT UNIT#4
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.3319	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18163	102.3309	LELAND OLDS - WASHBURN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	102.3281	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18069	102.3212	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18069	102.3212	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.3172	GEN337041 1-GERALD ANDRUS
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18069	102.3168	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18069	102.3168	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27995	102.3149	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.3147	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28036	102.3053	GLENHAM - L3 HAWDON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18105	102.3033	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18159	102.3	AURORA - BROOKINGS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18159	102.3	AURORA - BROOKINGS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18342	102.291	BRISTOL - GROTON 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18078	102.2899	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18078	102.2899	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.2827	GRANITE FALLS 115KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.2804	GRANITE FALLS 115KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.2743	FARGO 115KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.2729	AS KING 345/20.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18123	102.2722	PAYNSVILLE - WILLMAR 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18125	102.2719	FRANKLIN - REDWOOD FALLS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18089	102.2688	GRAND FORKS (GK KV1A) 230/115/12.47KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.2643	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.2562	GEN335206 1-NELSON UNIT 6
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.2562	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.2556	FARGO 115KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.2491	GEN542956 2-LACYGNE UNIT #2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18091	102.2329	ARROWHEAD - FORBES 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27908	102.2273	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.2272	AINSWORTH - AINSWORTH 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27931	102.2212	FARGO - JAMES TOWN 230KV CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18270	102.2134	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18270	102.2134	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18622	102.213	HURON - REDFIELD 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.213	GEN563222 1-G15088_3 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18089	102.2107	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18089	102.2107	P12:115:UMZB:# 119 #: IN NE.
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18342	102.1993	BRISTOL - SUMMIT 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18089	102.1943	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.1855	H081 345.00 - H081-TAP 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.1855	H081 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27920	102.1794	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27920	102.1794	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.1731	GEN587663 1-H081-GEN1 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18139	102.1729	BROWNS VALLEY - HANKINSON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	102.1695	CHADRON - DUNLAP 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.1688	GEN501812 1-RODEMACHER UNIT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27908	102.1679	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18070	102.1671	OGALLALA - SIDNEY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18168	102.1668	HELENA - SHEAS LK3 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.1578	GEN600020 2-ANGUS ANSON1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.1475	GEN334440 1-SABINE UNIT 4
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.147	GEN338388 1-1PLUM PT U1 23.000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18139	102.1456	GRANITE FALLS - S3 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18139	102.1456	GRANITE FALLS - S3 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18082	102.1456	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27908	102.1422	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18080	102.1389	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.137	GEN509403 1-PIRKEY GENERATION
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.1311	GEN600021 3-ANGUS ANSON2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.1273	GEN336191 1-LITTLE GYPSY UNIT#3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18123	102.1255	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.1231	PRAIRIE - PRAIRIE SVC 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18550	102.1144	GROTON - ORDWAY 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.1072	GEN509416 1-TURK GENERATION
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.1046	JAMESTOWN (345/115JAM2) 345/115/41.6KV TRANSFORMER CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18086	102.1044	AINSWORTH - STUART 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18301	102.1043	STORLA - WOONSOCKET 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18301	102.1035	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.1034	SHERBURNE CO 345/26.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.0989	GEN336801 1-BAXTER WILSON UNIT #1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.0887	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18065	102.0878	MINGO - SETAB 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18065	102.0878	MINGO - SETAB 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.0824	GEN509394 1-FLINT CREEK
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	102.0822	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18114	102.082	MARSHALL ERIE ROAD - S3 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18114	102.082	MARSHALL ERIE ROAD - S3 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	102.0757	BADOURA - HUBBARD 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.0697	GEN300002 1-THOMAS HILL UNIT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18082	102.0677	P12:115:TSGT:COVALT7-SNAKECK7
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.0649	GEN590011 2-ERCOT EQUIVALENCE
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27863	102.0624	BALTA - RAMSEY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.0616	GEN335614 1-WILLOW GLENN UNIT#4
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18023	102.0602	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.06	GEN336464 1-MICHOUD UNIT #3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18095	102.0571	MARTIN - SHANNON 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.0549	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27873	102.0507	PRAIRIE - RAMSEY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18286	102.0467	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.0457	FARGO - MOORHEAD BROOKDALE 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.0451	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18159	102.041	AURORA - FLANDRU 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18159	102.041	AURORA - FLANDRU 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18010	102.0408	SIOUX FALLS - VFODNES 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.0365	GEN590010 1-ERCOT EQUIVALENCE
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18138	102.034	ARMOUR - MT VERN 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.0336	LANGDON - LANGWIN7 115.00 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18212	102.0308	GLENHAM - WHITLOK 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18429	102.0297	EDGELEY - JAMES TOWN 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.0266	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18129	102.0234	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.0223	GEN513601 1-GRECCTG_1 20.000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18073	102.0213	AXTELL - PAULINE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	102.0175	JAMESTOWN (345/115JAM1) 345/115/41.6KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28036	102.017	BISMARK - L3 HAWDON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18082	102.0107	TYNDALL - YANKON JCT 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18084	102.0088	MALLARD - RUGBY 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18084	102.0088	MALLARD - RUGBY 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18081	102.0086	GAVINS POINT - HARTINGTON 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	102.0085	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	102.0085	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18082	102.0045	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.9998	GEN514806 1-SOONER UNIT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.9962	GEN514805 1-SOONER UNIT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.9937	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18091	101.9877	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.9863	HENSEL - LANGDON 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.9852	GEN509406 1-WELSH #3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.9851	GEN509404 1-WELSH #1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18086	101.9822	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18086	101.9822	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18212	101.9788	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18212	101.9788	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18100	101.9749	CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18159	101.9708	BELFIELD - CHARLIE CREEK 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18991	101.962	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.9582	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.9551	GEN600047 1-MECCT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18212	101.9546	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.9538	GEN600046 1-MECST
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.9406	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18212	101.9392	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.936	BARNES 4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.928	RGBYWND4 230.00 - RUGBY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.9235	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.9235	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18091	101.9228	COON CREEK - SHERBURNE CO 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18212	101.9135	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.9115	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18220	101.904	GLENHAM - L3 HAWDON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18059	101.8985	SIOUX FALLS (SF KV3A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18059	101.8985	SIOUX FALLS (SF KV5A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18111	101.8859	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18111	101.8859	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27993	101.8813	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.8806	GEN587643 1-J525-GEN1 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18212	101.8509	OAHE - SULLEY BUTTE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28016	101.7532	HANLON - SIOUX FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27933	101.7399	AUDUBON - SHEYNNE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28337	101.6709	BROOKINGS - WATERTOWN 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28337	101.6709	BROOKINGS - WATERTOWN 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28017	101.6349	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28017	101.6349	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	101.5713	GEN659354 1-DEERCREK STG18.000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	101.5638	GEN659353 1-DEERCREK CTG18.000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28017	101.5559	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	101.5322	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	101.4781	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	101.4682	BROADLAND - HURON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	101.468	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	101.468	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.43	2516-WATERTNCAP 4230.00
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.43	2543-FARGO
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.43	2560-BRDLAND-LNX3345.00
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.43	2561-BRDLAND-LNX3345.00
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.43	NF
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.43	NF
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.43	NF
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28035	101.3987	GLENHAM - WHITLOK 230KV CKT 1
3	17G	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19549	101.3948	BLAIR - GRANITE FALLS 230KV CKT 1
3	17G	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19549	101.3948	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28003	101.3776	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27882	101.3592	FT RANDAL - UTICA JCT 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28035	101.3188	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28035	101.3188	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27879	101.3	CENTER - COYOTE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28035	101.2556	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28226	101.2447	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28226	101.2447	HURON WEST PARK - MITCHELL NW 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28035	101.214	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28035	101.1972	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27888	101.1638	PRAIRIE - WINGER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28235	101.1139	ARLINGTON - WATERTOWN 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28012	101.0595	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18073	101.0428	GRIMES - LEHIGH 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18100	101.0338	FRANKLIN - GRE-CEDARMT7115.00 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18100	101.0312	GRE-CEDARMT3345.00 () 345/115/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27965	101.0294	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	101.0157	GEN620323 2-HOOT LAKE 2 GEN
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18087	101.004	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18051	100.9924	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18051	100.9924	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28035	100.9908	OAHE - SULLEY BUTTE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18161	100.9672	MERRCRT4 230.00 - WISHEK 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18161	100.9564	HESKETT - WISHEK 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.9348	GEN660003 3-HURON WEST PARK
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.9196	GEN615021 1-GRE-ER 14G 16.000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18780	100.9182	FT THOMPSON - HURON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18780	100.9182	FT THOMPSON - HURON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18780	100.9182	FT THOMPSON - HURON 230KV CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18780	100.9182	FT THOMPSON - HURON 230KV CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	100.9015	GEN635214 4-NEAL UNIT 4
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	100.9	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.8987	GEN657745 1-MPC02100GEN90.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.8877	THIEF RIVER FALLS (TRF) 115/69/13.2KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.8847	ULRICH (ULRICH) 115/69/41.6KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18089	100.8764	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.8723	COOPER - ST JOE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.8676	GEN615052 1-CAMBRIDGE GENERATING STATION
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.861	GEN659018 1-G14_003IS_3 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18089	100.8598	DENISON - EXIRA 161KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.8547	GEN652007 1-G14_001IS_3 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.8483	WINGER (WINGER) 115/69/41.6KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.8479	GEN672370 1-COTEAU CREEK GENERATOR 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.8479	GEN672371 2-COTEAU CREEK GENERATOR 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.8479	GEN672372 3-COTEAU CREEK GENERATOR 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28012	100.8426	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28003	100.818	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27872	100.8125	BISMARK - JAMES TOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.8068	DONALDSON - DONALDSON PIPE 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.7978	GEN563342 1-G15098_3 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.7955	GEN672369 3-MERIDIAN GENERATOR 3 ST
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.7898	GEN652004 1-G13_001IS_3 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18089	100.7782	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.769	GEN563252 1-G15091_3 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.7446	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.743	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.743	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.7363	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.7212	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27914	100.7171	ELM CREEK - MONTICELLO 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.7025	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.699	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 4
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.699	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 5
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	100.6945	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	100.6921	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.6874	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.6862	GEN672384 1-CENTENNIAL WINDFARM
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.6765	J290_SUB 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18066	100.6719	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27947	100.6709	AUDUBON - HUBBARD 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28024	100.6621	BOWMAN - RHAME 4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.6571	GEN672393 2-NBECST2G 13.800
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.656	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.6543	GEN620324 3-HOOT LAKE 3 GEN
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.6337	GEN672347 1-CORY COGEN GENERATOR 1 GT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.6337	GEN672348 2-CORY COGEN GENERATOR 2 GT2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.6257	GEN662101 1-WESSINGTON190.5750
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27952	100.6249	KARLSTAD - WINGER 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27872	100.6233	JAMES TOWN - WEBER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27872	100.5947	BISMARK - HILKEN 4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18018	100.5724	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.5604	GEN672367 1-MERIDIAN GENERATOR 1 GT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.5604	GEN672368 2-MERIDIAN GENERATOR 2 GT2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.545	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28012	100.543	HENNING - INMANN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.5427	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18351	100.536	ABERDEEN JCT - ELLENDALE 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.5359	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.5355	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27872	100.5319	BISMARK - WEBER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.5303	GEN672350 1-NIPAWIN GENERATOR 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.5303	GEN672351 2-NIPAWIN GENERATOR 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.5303	GEN672352 3-NIPAWIN GENERATOR 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.5183	GEN672349 3-CORY COGEN GENERATOR 3 ST
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.5147	GEN659291 1-FT MP COLLECTOR
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.5063	GEN659158 2-PIONEER G213.800
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.5063	GEN659159 3-PIONEER G313.800
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.502	GEN659156 2-LONESMCRK 2G13.800
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.502	GEN659157 3-LONESMCRK 3G13.800
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	100.4898	WATERTOWN 230KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	100.4884	WATERTOWN 230KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27898	100.4792	SIDNEY - STEGALL 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28235	100.467	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28235	100.467	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28235	100.467	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18049	100.4656	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18049	100.4656	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.4617	GEN563302 1-G15096_3 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.4457	GEN659289 1-DAYCNTYWND W0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.4424	GEN563312 1-G15097_3 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28226	100.4396	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28226	100.4396	MITCHELL - MITCHELL NW 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28118	100.4382	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28235	100.438	ARLINGTON - BROOKINGS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.4298	ALMA 161 161/24.0KV TRANSFORMER CKT 1
3	17G	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19041	100.4002	BASE CASE
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.3996	GEN672339 16-QE 16G 13.800
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.3996	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.3884	GEN659031 1-G12_014IS_4 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27955	100.3778	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27955	100.3778	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.3688	GEN600006 1-AS KING
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.359	BAGLEY - CLEARBROOK 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.3547	GEN620115 1-HRDLKGEN 0.6000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18351	100.3328	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.3325	GEN657964 1-ASH2GEN9 0.5750
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.329	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.3176	GEN652410 3-FT PECK
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.3089	GEN579459 1-G16-075-GEN10.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.3078	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18093	100.286	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	100.2852	ANSON - SPLIT ROCK 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	100.2851	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.2639	GEN562714 1-G15_023_4 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.2639	GEN562715 1-G15_023_5 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	100.2532	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18064	100.2365	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	100.2034	COYOTE 345/24.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.1847	GEN652414 4-FT PECK
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.1847	GEN652415 5-FT PECK
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.1613	GEN659273 2-GROTON SYNC COND
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.1613	GEN659294 1-WILTONCOL9
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.1561	GEN652906 1-G09_006IS_3 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	100.1459	GEN635213 3-NEAL UNIT 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	100.1338	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	100.1338	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	100.133	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
3	17G	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19160	100.1291	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.1145	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27928	100.1084	GRAND ISLAND - MCCOOL 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.1034	GEN659290 1-EDGECOL
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	100.1	2516-WATERTNCAP 4230.00
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.0827	GEN659162 4-RED WLCK
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.0827	GEN659163 5-BLACK WDCK
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.078	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100.0769	GEN659192 6-LYNN
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27905	100	JAMES TOWN - PICKERT 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	100	GEN635024 4-WALTER SCOTT UNIT 4
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	100	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18100	100	DRAYTON - LETELLIER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100	GEN600005 1-MONTICELLO
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100	GEN652542 1-BIG BEND
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100	GEN652543 3-BIG BEND
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	100	GEN652907 1-G09_007IS_3 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27987	99.9	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27973	99.9	P13:230-345:NPPD:STEGALL3:KV3A
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27973	99.9	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27899	99.9	EAGLE - PHILIP 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.17999	99.9	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.17999	99.9	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
3	17G	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19052	99.8	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28224	99.8	HURON - WOONSOCKET 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28063	99.8	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27973	99.8	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27914	99.8	BIG STONE - HIGHWAY 12 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27907	99.8	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27899	99.8	EAGLE - MARTIN 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27888	99.8	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.8	ANSON - SPLIT ROCK 115KV CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.8	ANSON 115/17.5KV TRANSFORMER CKT 4
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.8	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.8	GEN600000 1-SHERBURNECNTY G1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.8	GEN660001 2-ABERDEEN SIEBRECHT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.17996	99.8	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.17996	99.8	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
3	17G	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19052	99.7	CHISAGO COUNTY - FORBES 500KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28063	99.7	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28063	99.7	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27908	99.7	ELM CREEK - PARKERS LAKE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.7	2525-GROTON
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.7	GEN635023 3-WALTER SCOTT UNIT 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.7	GROTON 115KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.7	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.7	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18249	99.7	BROOKINGS - WHITE 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18249	99.7	BROOKINGS - WHITE 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.7	GEN652559 1-OAHE
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.7	GEN659270 1-WEST SW
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.7	GEN659296 2-SDPRAIRWND1W0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18039	99.7	NOBLES - SPLIT ROCK 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.7	GROTON 115KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28122	99.6	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27913	99.6	MCCOOL - MOORE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27863	99.6	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27863	99.6	P12:230:UMZW:# 158 #: MH IN ND.
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.6	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.6	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.6	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.6	GEN562872 1-G15046_3 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.6	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.6	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	17G	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19160	99.5	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28483	99.5	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28224	99.5	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28050	99.5	BISMARK - WASHBURN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28050	99.5	P12:230:UMZB:# 171 #: WB IN ND.

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28050	99.5	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28024	99.5	BOWMAN - HETINGER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27914	99.5	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27863	99.5	MOOREHEAD - MORRIS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.5	2546-JAMES TOWN
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.5	GEN640009 1-COOPER NUCLEAR STATION
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.5	GEN645012 2-NEBRASKA CITY 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.5	JAMES TOWN 115KV SWITCHED SHUNT
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.5	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.5	GEN652345 W-G07_023IS_2 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.5	GEN672392 1-NBECGT1G 18.000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.5	GEN910006 1-G12_012IS_3 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.5	JAMES TOWN 115KV SWITCHED SHUNT
3	17G	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19160	99.4	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.29398	99.4	BLAIR - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.29398	99.4	BLAIR - WATERTOWN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28483	99.4	GROTON - REDFIELD 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28224	99.4	STORLA - WOONSOCKET 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28187	99.4	BRISTOL - GROTON 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28079	99.4	MN VALLEY TAP - PANTHER 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28050	99.4	LELAND OLDS - WASHBURN 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27905	99.4	GRAND FORKS - PICKERT 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27890	99.4	BALTA - MCHENRY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27889	99.4	AS KING - CHISAGO COUNTY 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27863	99.4	MARTIN - VETAL TAP 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.4	ELLENDALE - J316_SUB 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.4	GEN542962 2-IATAN UNIT #2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.4	GEN600045 4-ANSON
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.4	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18249	99.4	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.4	GEN652556 2-OAHE
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.4	GEN652557 4-OAHE
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.4	GEN652558 6-OAHE
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28170	99.3	MONTICELLO - WAITE PARK 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28159	99.3	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28159	99.3	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27892	99.3	AS KING - EAU CLAIRE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27889	99.3	CENTER - SQUARE BUTTE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27885	99.3	FT RANDAL - SPENCER 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27885	99.3	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27885	99.3	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27885	99.3	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27867	99.3	MISSION - ST FRANCIS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27867	99.3	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27863	99.3	MISSION - VETAL TAP 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27863	99.3	P12:115:UMZW:# 159 #: MS-VE-MR IN SD. VETAL TAP IS A TAP WITH NON-FAULT INTERUPTERS
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27852	99.3	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27852	99.3	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27852	99.3	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27850	99.3	MORANVILLE - ROSEAU 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27850	99.3	RICHER - ROSEAU 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.3	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.3	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.3	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.3	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.3	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.3	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.3	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.3	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.3	GEN300003 1-THOMAS HILL UNIT 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.3	GEN615015 1-GRE-SPRITWDG13.200
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18057	99.3	HELENA - SCOTTCO3 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28480	99.2	HURON - REDFIELD 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28187	99.2	BRISTOL - SUMMIT 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28088	99.2	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28088	99.2	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27930	99.2	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27911	99.2	CANBY - GRANITE FALLS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27911	99.2	CANBY - GRANITE FALLS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27896	99.2	GRACEVT7 - ORTONVILLE 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27890	99.2	AXTELL - SWEETWATER 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27867	99.2	HARMONY - ST FRANCIS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27853	99.2	GRAND FORKS (GK KV1A) 230/115/12.47KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27852	99.2	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27852	99.2	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.2	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.2	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.2	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.2	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.2	MEC115 - WILMARTH 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.2	MEC115 115/15.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.2	MEC345 - WILMARTH 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.2	MEC345 345/19.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.2	GEN 11104 1-J262_GEN 0.6000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.2	GEN 11108 1-J263_GEN 0.6000
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.2	GEN600001 2-SHERBURNE CNTY G2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.2	GEN600002 3-SHERBURNE CNTY G3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28118	99.1	FIELD NORTH - FIELD SOUTH 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28118	99.1	FIELD NORTH - LKFLDXL3 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.28118	99.1	FIELD SOUTH - WILMARTH 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27972	99.1	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27972	99.1	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27936	99.1	MT VERN - STORLA 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27903	99.1	GRANT - MITCHELL 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27903	99.1	GRANT - MITCHELL 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27876	99.1	COAL CREEK - UNDERWOOD 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27872	99.1	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27872	99.1	GRANITE FALLS - MORRIS 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27868	99.1	BURR - CANBY 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27861	99.1	FALCONER - GRAND FORKS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27861	99.1	FALCONER - GRAND FORKS 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27856	99.1	DICKINSON - PARKERS LAKE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27850	99.1	LUND - MORANVILLE 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27850	99.1	LUND - RUNNING 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.1	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.1	CENTER 230/22.0KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.1	GEN542955 1-LACYGNE UNIT #1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.1	GEN542957 1-IATAN UNIT #1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.1	J460 345.00 - J460-TAP 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.1	J460 345.00 345/34.5KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99.1	MINNESOTA VALLEY - MINVALY CAP7115.00 115KV CKT Z
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99.1	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	17G	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19160	99	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17G	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.19160	99	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27930	99	RASMUSN - SIOUX CITY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27903	99	GRANITE FALLS - WILLMAR 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27903	99	GRANITE FALLS - WILLMAR 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27880	99	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27876	99	BALTA - HARVEY 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27876	99	HARVEY - UNDERWOOD 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27875	99	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27874	99	GRAND ISLAND - SWEETWATER 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27867	99	HARMONY - VALENTINE 115KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27867	99	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27862	99	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27844	99	GEN587593 1-J460-GEN1 0.6900
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27829	99	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27829	99	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27829	99	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.27829	99	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18869	99	HURON - WATERTOWN 230KV CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18869	99	HURON - WATERTOWN 230KV CKT 2
3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.18090	99	GEN659118 1-LARAMIE RIVER UNIT1
3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33305	115.472	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33305	115.0558	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33305	115.0558	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33305	115.0194	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26727	114.9057	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26727	114.9057	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26727	114.846	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33250	114.8116	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26727	114.5154	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33250	114.4078	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33250	114.4078	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33250	114.3494	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26727	114.1508	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26727	114.1508	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26727	114.0912	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26750	113.7653	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26750	113.7653	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26750	113.6977	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26750	113.4382	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26727	113.3398	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26750	113.0648	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26750	113.0648	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33305	113.0271	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33305	113.0271	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26750	113.0133	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33305	112.9951	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33305	112.8535	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33250	112.458	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33250	112.458	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33250	112.4066	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26750	112.3022	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33250	112.2759	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33351	107.7131	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33351	107.2881	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33351	107.2613	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33351	107.2613	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.27860	106.4019	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.27860	106.4019	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.27860	106.3771	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.27860	106.3611	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33351	105.7073	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33351	105.6844	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33351	105.6844	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33351	105.5404	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.27860	104.9629	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.27860	104.9629	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.27860	104.9258	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.27860	104.39	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33082	102.9001	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33082	102.1183	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	20WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33082	102.1183	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33082	102.1105	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	16WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33337	101.3499	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	16WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33337	101.0809	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	16WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33337	101.0809	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	16WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33337	101.0534	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33082	100.9153	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33082	100.6674	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	20WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33082	100.6674	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33082	100.661	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26411	100.4916	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	16WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.27569	100.4361	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	16WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.27569	100.0796	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	16WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.27569	100.0796	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	16WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.27569	100.0605	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26411	100	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	20WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26411	100	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26411	100	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	16WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33337	99.8	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	16WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33337	99.8	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	16WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33337	99.7	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	16WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.33337	99.5	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	16WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.27569	99.1	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	16WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.27569	99.1	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.27569	99.1	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	16WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.27569	99.1	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20WP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	500.0	0.26411	99	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	20WP	G16_045	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.22292	116.0597	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	20L	G16_045	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.24632	114.2537	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	16WP	G16_045	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.24048	108.5156	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	20SP	G16_045	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.22252	101.8434	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	17SP	G16_045	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.23612	101.0434	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	17G	G16_045	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.24832	100.6367	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03217	109.6733	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05271	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05271	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05328	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05328	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03607	107.0835	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	104.4987	BASE CASE
0	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03217	104.4902	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06917	104.3491	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06999	103.6936	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05256	103.443	BASE CASE
0	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03607	102.1688	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	101.4903	GEN587433 1-G16-063-GEN10.6900
0	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05256	100.7184	GEN587433 1-G16-063-GEN10.6900
0	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05126	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05126	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	99.9	GEN509416 1-TURK GENERATION
0	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99.8	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99.5	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99.3	917X
0	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05345	99.3	P12:138:WFEC:MSL03
0	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05500	99.3	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05256	99.3	GEN509403 1-PIRKEY GENERATION
0	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05256	99.1	GEN509416 1-TURK GENERATION
0	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	99	GEN501801 1-DOLET HILLS UNIT1
0	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05500	99	G15066_T 345.00 - SOONER 345KV CKT 1
0	20WP	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.32060	113.1187	CIMARRON - NORTHWEST 345KV CKT 1
0	20L	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.34572	111.0109	CIMARRON - NORTHWEST 345KV CKT 1
0	20WP	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.37711	108.4165	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20WP	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.37711	106.3897	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.39477	104.7591	G15063_T 345.00 - WOODRING 345KV CKT 1
0	16WP	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.34346	104.3356	CIMARRON - NORTHWEST 345KV CKT 1
0	20L	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.39477	102.7019	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20WP	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.32331	102.6351	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.33992	100.4536	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20WP	G16_045	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.22317	115.4637	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	20L	G16_045	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.24651	113.8729	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	16WP	G16_045	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.24081	108.0239	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	20SP	G16_045	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.22278	101.4726	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	17SP	G16_045	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.23645	100.6881	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	17G	G16_045	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.24862	100.1359	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05327	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05327	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03218	108.9982	CIMARRON - MINCO 345KV CKT 1
2	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05271	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05271	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03605	107.7486	CIMARRON - MINCO 345KV CKT 1
2	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06998	104.6637	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	104.4426	BASE CASE
2	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	104.1902	BASE CASE
2	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06917	104.0601	CIMARRON - DRAPER LAKE 345KV CKT 1
2	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03218	103.8546	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03605	102.8482	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	101.6398	GEN587433 1-G16-063-GEN10.6900
2	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	101.2449	GEN587433 1-G16-063-GEN10.6900
2	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05500	100.27	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	100.2225	GEN509403 1-PIRKEY GENERATION
2	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	100.1495	GEN509416 1-TURK GENERATION
2	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05500	100	G15066_T 345.00 - SOONER 345KV CKT 1
2	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05218	100	PITTSBURG - VALLIANT 345KV CKT 1
2	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05218	100	PITTSBURG - VALLIANT 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05125	99.9	PITTSBURG - VALLIANT 345KV CKT 1
2	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05125	99.9	PITTSBURG - VALLIANT 345KV CKT 1
2	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05500	99.8	917X
2	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	99.6	GEN509416 1-TURK GENERATION
2	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99.5	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05461	99.3	P12:138:WFEC:MSL03
2	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99.2	G15066_T 345.00 - SOONER 345KV CKT 1
2	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	99.1	GEN501801 1-DOLET HILLS UNIT1
2	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99	917X
2	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05344	99	P12:138:WFEC:MSL03
2	20WP	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.32096	112.711	CIMARRON - NORTHWEST 345KV CKT 1
2	20L	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.34598	110.7311	CIMARRON - NORTHWEST 345KV CKT 1
2	20WP	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.37717	107.8324	G15063_T 345.00 - WOODRING 345KV CKT 1
2	20WP	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.37717	105.8222	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	20L	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.39466	104.4033	G15063_T 345.00 - WOODRING 345KV CKT 1
2	16WP	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.34382	103.9763	CIMARRON - NORTHWEST 345KV CKT 1
2	20L	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.39466	102.3646	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	20WP	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.32358	102.3046	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20L	G16_045	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.34003	100.2417	CIMARRON - DRAPER LAKE 345KV CKT 1
3	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05327	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
3	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05327	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
3	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03218	108.9982	CIMARRON - MINCO 345KV CKT 1
3	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05271	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
3	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05271	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
3	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03605	107.7487	CIMARRON - MINCO 345KV CKT 1
3	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06998	104.6637	CIMARRON - DRAPER LAKE 345KV CKT 1
3	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	104.4426	BASE CASE
3	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	104.1902	BASE CASE
3	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06917	104.0601	CIMARRON - DRAPER LAKE 345KV CKT 1
3	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03218	103.8546	GRACEMONT - MINCO 345KV CKT 1
3	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03605	102.8481	GRACEMONT - MINCO 345KV CKT 1
3	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	101.6398	GEN587433 1-G16-063-GEN10.6900
3	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	101.2449	GEN587433 1-G16-063-GEN10.6900
3	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05500	100.27	CLEVELAND - G15066_T 345.00 345KV CKT 1
3	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	100.2225	GEN509403 1-PIRKEY GENERATION
3	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	100.1495	GEN509416 1-TURK GENERATION
3	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05500	100	G15066_T 345.00 - SOONER 345KV CKT 1
3	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05218	100	PITTSBURG - VALLIANT 345KV CKT 1
3	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05218	100	PITTSBURG - VALLIANT 345KV CKT 1
3	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05125	99.9	PITTSBURG - VALLIANT 345KV CKT 1
3	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05125	99.9	PITTSBURG - VALLIANT 345KV CKT 1
3	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05500	99.8	917X
3	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	99.6	GEN509416 1-TURK GENERATION
3	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99.5	CLEVELAND - G15066_T 345.00 345KV CKT 1
3	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05461	99.3	P12:138:WFEC:MSL03
3	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99.2	G15066_T 345.00 - SOONER 345KV CKT 1
3	20WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	99.1	GEN501801 1-DOLET HILLS UNIT1
3	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99	917X
3	16WP	G16_045	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05344	99	P12:138:WFEC:MSL03
0	25SP	G16_046	FROM->TO	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	726.6	726.6	0.25218	107.5079	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	17G	G16_046	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.05394	106.9187	BASE CASE
0	17SP	G16_046	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.05381	105.5858	BASE CASE
0	20SP	G16_046	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.05279	103.0698	BASE CASE
0	16WP	G16_046	-	Non-Converged Contingency	726.6	726.6	0.19871	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	16WP	G16_046	-	Non-Converged Contingency	1793.0	1793.0	0.18713	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	16WP	G16_046	-	Non-Converged Contingency	1793.0	1793.0	0.18713	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	17G	G16_046	-	Non-Converged Contingency	726.6	726.6	0.19986	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17G	G16_046	-	Non-Converged Contingency	1505.0	1793.0	0.18183	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	17G	G16_046	-	Non-Converged Contingency	1505.0	1793.0	0.18183	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	17G	G16_046	-	Non-Converged Contingency	956.09	1051.7	0.11363	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	17SP	G16_046	-	Non-Converged Contingency	726.6	726.6	0.19844	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_046	-	Non-Converged Contingency	1505.0	1793.0	0.18598	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	17SP	G16_046	-	Non-Converged Contingency	1505.0	1793.0	0.18598	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_046	-	Non-Converged Contingency	726.6	726.6	0.20715	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_046	-	Non-Converged Contingency	726.6	726.6	0.20715	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_046	-	Non-Converged Contingency	1505.0	1793.0	0.17694	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	G16_046	-	Non-Converged Contingency	1505.0	1793.0	0.17694	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20SP	G16_046	-	Non-Converged Contingency	726.6	726.6	0.20215	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20SP	G16_046	-	Non-Converged Contingency	1505.0	1793.0	0.18347	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20SP	G16_046	-	Non-Converged Contingency	1505.0	1793.0	0.18347	-	G13-010T 345.00 - POST ROCK 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_046	-	Non-Converged Contingency	956.09	1051.7	0.11583	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_046	-	Non-Converged Contingency	726.6	726.6	0.20303	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20WP	G16_046	-	Non-Converged Contingency	1793.0	1793.0	0.18389	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20WP	G16_046	-	Non-Converged Contingency	1793.0	1793.0	0.18389	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_046	-	Non-Converged Contingency	1505.0	1793.0	0.18449	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_046	-	Non-Converged Contingency	956.09	1051.7	0.11357	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_046	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.04874	102.9656	BASE CASE
2	17SP	G16_046	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.04883	101.3121	BASE CASE
0	20L	G16_047_G	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.03012	109.7691	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G16_047_G	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.03012	104.8603	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20L	G16_047_G	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.03011	109.459	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20L	G16_047_G	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.03011	104.5523	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
3	20L	G16_047_G	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.03011	109.459	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
3	20L	G16_047_G	TO->FROM	PITTSBURG - SEMINOLE 345KV CKT 1	717.0	717.0	0.03011	104.5523	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15492	112.6949	DAYTON - HOBBY LOBBY 138KV CKT 1
0	25SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15502	111.3624	DAYTON - HOBBY LOBBY 138KV CKT 1
0	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14798	110.9367	COUNCIL - MUSTANG 138KV CKT 1
0	25SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14800	109.9701	COUNCIL - MUSTANG 138KV CKT 1
0	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14798	106.1296	COUNCIL - WESTOAKS 138KV CKT 1
0	25SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14800	105.0668	COUNCIL - WESTOAKS 138KV CKT 1
0	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14798	100.786	MERIDIAN - WESTOAKS 138KV CKT 1
0	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15492	99.7	36 & MERIDIAN - HOBBY LOBBY 138KV CKT 1
0	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.16099	99.6	DAYTON - MUSTANG 138KV CKT 1
0	25SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14800	99.6	MERIDIAN - WESTOAKS 138KV CKT 1
0	20SP	G16_047_SP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.15492	105.8222	DAYTON - HOBBY LOBBY 138KV CKT 1
0	20SP	G16_047_SP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.14798	103.9973	COUNCIL - MUSTANG 138KV CKT 1
0	20SP	G16_047_SP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.14798	99.2	COUNCIL - WESTOAKS 138KV CKT 1
2	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15492	112.7914	DAYTON - HOBBY LOBBY 138KV CKT 1
2	25SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15502	111.4522	DAYTON - HOBBY LOBBY 138KV CKT 1
2	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14798	110.9772	COUNCIL - MUSTANG 138KV CKT 1
2	25SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14800	110.014	COUNCIL - MUSTANG 138KV CKT 1
2	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14798	106.1726	COUNCIL - WESTOAKS 138KV CKT 1
2	25SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14800	105.1128	COUNCIL - WESTOAKS 138KV CKT 1
2	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14798	100.8314	MERIDIAN - WESTOAKS 138KV CKT 1
2	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15492	99.8	36 & MERIDIAN - HOBBY LOBBY 138KV CKT 1
2	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.16099	99.7	DAYTON - MUSTANG 138KV CKT 1
2	25SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14800	99.7	MERIDIAN - WESTOAKS 138KV CKT 1
2	20SP	G16_047_SP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.15492	105.9217	DAYTON - HOBBY LOBBY 138KV CKT 1
2	20SP	G16_047_SP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.14798	104.0405	COUNCIL - MUSTANG 138KV CKT 1
2	20SP	G16_047_SP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.14798	99.2	COUNCIL - WESTOAKS 138KV CKT 1
3	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15492	112.7914	DAYTON - HOBBY LOBBY 138KV CKT 1
3	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14798	110.9772	COUNCIL - MUSTANG 138KV CKT 1
3	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14798	106.1726	COUNCIL - WESTOAKS 138KV CKT 1
3	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14798	100.8314	MERIDIAN - WESTOAKS 138KV CKT 1
3	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15492	99.8	36 & MERIDIAN - HOBBY LOBBY 138KV CKT 1
3	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.16099	99.7	DAYTON - MUSTANG 138KV CKT 1
3	20SP	G16_047_SP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.15492	105.9217	DAYTON - HOBBY LOBBY 138KV CKT 1
3	20SP	G16_047_SP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.14798	104.0405	COUNCIL - MUSTANG 138KV CKT 1
3	20SP	G16_047_SP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.14798	99.2	COUNCIL - WESTOAKS 138KV CKT 1
4	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15491	112.8596	DAYTON - HOBBY LOBBY 138KV CKT 1
4	25SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15501	111.485	DAYTON - HOBBY LOBBY 138KV CKT 1
4	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14797	111.0454	COUNCIL - MUSTANG 138KV CKT 1
4	25SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14799	110.0464	COUNCIL - MUSTANG 138KV CKT 1
4	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14797	106.2411	COUNCIL - WESTOAKS 138KV CKT 1
4	25SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14799	105.1454	COUNCIL - WESTOAKS 138KV CKT 1
4	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14797	100.9002	MERIDIAN - WESTOAKS 138KV CKT 1
4	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15491	99.9	36 & MERIDIAN - HOBBY LOBBY 138KV CKT 1
4	20SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.16099	99.8	DAYTON - MUSTANG 138KV CKT 1
4	25SP	G16_047_SP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14799	99.7	MERIDIAN - WESTOAKS 138KV CKT 1
0	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15215	112.8704	DAYTON - MUSTANG 138KV CKT 1
0	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15215	112.7493	DAYTON - HOBBY LOBBY 138KV CKT 1
0	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14458	106.9824	COUNCIL - MUSTANG 138KV CKT 1
0	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14458	103.9247	COUNCIL - WESTOAKS 138KV CKT 1
0	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15215	103.6499	36 & MERIDIAN - HOBBY LOBBY 138KV CKT 1
0	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14458	100.5277	MERIDIAN - WESTOAKS 138KV CKT 1
0	20WP	G16_047_WP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.15215	108.494	DAYTON - MUSTANG 138KV CKT 1
0	20WP	G16_047_WP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.15215	108.3735	DAYTON - HOBBY LOBBY 138KV CKT 1
0	20WP	G16_047_WP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.14458	102.5742	COUNCIL - MUSTANG 138KV CKT 1
0	20WP	G16_047_WP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.14458	99.5	COUNCIL - WESTOAKS 138KV CKT 1
0	20WP	G16_047_WP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.15215	99.3	36 & MERIDIAN - HOBBY LOBBY 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03057	109.6733	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04175	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04175	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04189	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04189	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03201	107.0835	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789.0	0.03865	104.4987	BASE CASE
0	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03057	104.4902	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04497	104.3491	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04562	103.6936	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03913	103.443	BASE CASE
0	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03201	102.1688	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03865	101.4903	GEN587433 1-G16-063-GEN10.6900
0	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03913	100.7184	GEN587433 1-G16-063-GEN10.6900
0	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03858	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03858	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03865	99.9	GEN509416 1-TURK GENERATION
0	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04002	99.8	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04002	99.5	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04002	99.3	917X
0	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03708	99.3	P12:138:WFEC:MSL03
0	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04044	99.3	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03913	99.3	GEN509403 1-PIRKEY GENERATION
0	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03913	99.1	GEN509416 1-TURK GENERATION
0	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03865	99	GEN501801 1-DOLET HILLS UNIT1
0	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04044	99	G15066_T 345.00 - SOONER 345KV CKT 1
2	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15215	113.3113	DAYTON - MUSTANG 138KV CKT 1
2	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15215	113.1901	DAYTON - HOBBY LOBBY 138KV CKT 1
2	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14458	107.3053	COUNCIL - MUSTANG 138KV CKT 1
2	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14458	104.2478	COUNCIL - WESTOAKS 138KV CKT 1
2	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15215	104.0881	36 & MERIDIAN - HOBBY LOBBY 138KV CKT 1
2	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14458	100.851	MERIDIAN - WESTOAKS 138KV CKT 1
2	20WP	G16_047_WP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.15215	108.9345	DAYTON - MUSTANG 138KV CKT 1
2	20WP	G16_047_WP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.15215	108.8139	DAYTON - HOBBY LOBBY 138KV CKT 1
2	20WP	G16_047_WP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.14458	102.8974	COUNCIL - MUSTANG 138KV CKT 1
2	20WP	G16_047_WP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.14458	99.8	COUNCIL - WESTOAKS 138KV CKT 1
2	20WP	G16_047_WP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.15215	99.7	36 & MERIDIAN - HOBBY LOBBY 138KV CKT 1
2	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04189	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04189	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03061	108.9982	CIMARRON - MINCO 345KV CKT 1
2	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04175	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04175	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03202	107.7486	CIMARRON - MINCO 345KV CKT 1
2	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04562	104.6637	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03913	104.4426	BASE CASE
2	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03866	104.1902	BASE CASE
2	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04498	104.0601	CIMARRON - DRAPER LAKE 345KV CKT 1
2	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03061	103.8546	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03202	102.8482	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03913	101.6398	GEN587433 1-G16-063-GEN10.6900
2	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03866	101.2449	GEN587433 1-G16-063-GEN10.6900
2	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04044	100.27	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03913	100.2225	GEN509403 1-PIRKEY GENERATION
2	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03913	100.1495	GEN509416 1-TURK GENERATION
2	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04044	100	G15066_T 345.00 - SOONER 345KV CKT 1
2	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03902	100	PITTSBURG - VALLIANT 345KV CKT 1
2	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03902	100	PITTSBURG - VALLIANT 345KV CKT 1
2	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03859	99.9	PITTSBURG - VALLIANT 345KV CKT 1
2	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03859	99.9	PITTSBURG - VALLIANT 345KV CKT 1
2	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04044	99.8	917X
2	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03866	99.6	GEN509416 1-TURK GENERATION
2	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04003	99.5	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03769	99.3	P12:138:WFEC:MSL03
2	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04003	99.2	G15066_T 345.00 - SOONER 345KV CKT 1
2	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03913	99.1	GEN501801 1-DOLET HILLS UNIT1
2	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04003	99	917X
2	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03709	99	P12:138:WFEC:MSL03
3	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15215	113.3113	DAYTON - MUSTANG 138KV CKT 1
3	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15215	113.1902	DAYTON - HOBBY LOBBY 138KV CKT 1
3	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14458	107.3053	COUNCIL - MUSTANG 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14458	104.2478	COUNCIL - WESTOAKS 138KV CKT 1
3	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15215	104.0882	36 & MERIDIAN - HOBBY LOBBY 138KV CKT 1
3	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14458	100.851	MERIDIAN - WESTOAKS 138KV CKT 1
3	20WP	G16_047_WP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.15215	108.9345	DAYTON - MUSTANG 138KV CKT 1
3	20WP	G16_047_WP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.15215	108.8139	DAYTON - HOBBY LOBBY 138KV CKT 1
3	20WP	G16_047_WP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.14458	102.8974	COUNCIL - MUSTANG 138KV CKT 1
3	20WP	G16_047_WP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.14458	99.8	COUNCIL - WESTOAKS 138KV CKT 1
3	20WP	G16_047_WP	FROM->TO	CONTEMPG - SW 5TH 138KV CKT 1	191.0	191.0	0.15215	99.7	36 & MERIDIAN - HOBBY LOBBY 138KV CKT 1
3	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04189	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
3	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04189	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
3	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03061	108.9982	CIMARRON - MINCO 345KV CKT 1
3	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04175	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
3	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04175	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
3	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03202	107.7487	CIMARRON - MINCO 345KV CKT 1
3	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04562	104.6637	CIMARRON - DRAPER LAKE 345KV CKT 1
3	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03913	104.4426	BASE CASE
3	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03866	104.1902	BASE CASE
3	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04498	104.0601	CIMARRON - DRAPER LAKE 345KV CKT 1
3	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03061	103.8546	GRACEMONT - MINCO 345KV CKT 1
3	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03202	102.8481	GRACEMONT - MINCO 345KV CKT 1
3	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03913	101.6398	GEN587433 1-G16-063-GEN10.6900
3	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03866	101.2449	GEN587433 1-G16-063-GEN10.6900
3	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04044	100.27	CLEVELAND - G15066_T 345.00 345KV CKT 1
3	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03913	100.2225	GEN509403 1-PIRKEY GENERATION
3	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03913	100.1495	GEN509416 1-TURK GENERATION
3	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04044	100	G15066_T 345.00 - SOONER 345KV CKT 1
3	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03902	100	PITTSBURG - VALLIANT 345KV CKT 1
3	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03902	100	PITTSBURG - VALLIANT 345KV CKT 1
3	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03859	99.9	PITTSBURG - VALLIANT 345KV CKT 1
3	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03859	99.9	PITTSBURG - VALLIANT 345KV CKT 1
3	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04044	99.8	917X
3	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03866	99.6	GEN509416 1-TURK GENERATION
3	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04003	99.5	CLEVELAND - G15066_T 345.00 345KV CKT 1
3	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03769	99.3	P12:138:WFEC:MSL03
3	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04003	99.2	G15066_T 345.00 - SOONER 345KV CKT 1
3	20WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03913	99.1	GEN501801 1-DOLET HILLS UNIT1
3	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04003	99	917X
3	16WP	G16_047_WP	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03709	99	P12:138:WFEC:MSL03
4	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15214	113.3803	DAYTON - MUSTANG 138KV CKT 1
4	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15214	113.2591	DAYTON - HOBBY LOBBY 138KV CKT 1
4	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14458	107.3756	COUNCIL - MUSTANG 138KV CKT 1
4	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14458	104.3183	COUNCIL - WESTOAKS 138KV CKT 1
4	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.15214	104.1575	36 & MERIDIAN - HOBBY LOBBY 138KV CKT 1
4	20WP	G16_047_WP	TO->FROM	CONTEMPG - MUSTANG 138KV CKT 1	191.0	191.0	0.14458	100.9218	MERIDIAN - WESTOAKS 138KV CKT 1
0	20L	G16_048	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766.0	923.0	0.03046	106.1701	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G16_048	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766.0	923.0	0.03046	101.3097	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.03533	135.4459	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.03533	135.4459	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04441	118.7442	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04441	118.7442	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20SP	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04374	111.6105	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20SP	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04374	111.1326	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17SP	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04270	109.8022	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17SP	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04270	109.8022	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G16_048	FROM->TO	CLEAVELAND - SILVER CITY 138KV CKT 1	174.0	174.0	0.03222	107.892	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G16_048	FROM->TO	CLEAVELAND - SILVER CITY 138KV CKT 1	174.0	174.0	0.03222	107.892	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_048	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135.0	1195.0	0.12500	103.411	BASE CASE
0	20L	G16_048	FROM->TO	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	395.0	494.0	0.03533	108.5664	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_048	FROM->TO	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	395.0	494.0	0.03533	108.5664	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_048	FROM->TO	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	395.0	494.0	0.03533	103.7807	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_048	FROM->TO	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	395.0	494.0	0.03533	103.7807	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_048	FROM->TO	FAIRFAX TAP - SHIDLER 138KV CKT 1	181.0	211.0	0.06003	110.1603	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_048	FROM->TO	FAIRFAX TAP - SHIDLER 138KV CKT 1	181.0	211.0	0.06003	106.9636	917X
0	20L	G16_048	FROM->TO	FAIRFAX TAP - SHIDLER 138KV CKT 1	181.0	211.0	0.06003	103.2368	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_048	TO->FROM	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1	189.0	211.0	0.06003	110.165	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_048	TO->FROM	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1	189.0	211.0	0.06003	106.9683	917X
0	20L	G16_048	TO->FROM	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1	189.0	211.0	0.06003	103.2418	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.03418	122.5788	BASE CASE
0	17G	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.03305	121.2466	BASE CASE
0	17SP	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.03475	114.7127	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.03250	101.3711	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
0	17G	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.03001	99.6	OSAGE - WEBB CITY TAP 138KV CKT 1
0	17G	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.03001	99.6	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
0	17G	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.03250	99.5	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	17G	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.02970	99.3	P12:138:OKGE:3TERM2
0	16WP	G16_048	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.02968	104.4987	BASE CASE
0	16WP	G16_048	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03920	104.3491	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_048	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03852	103.6936	CIMARRON - DRAPER LAKE 345KV CKT 1
0	16WP	G16_048	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.02968	101.4903	GEN587433 1-G16-063-GEN10.6900
0	16WP	G16_048	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.02968	99.9	GEN509416 1-TURK GENERATION
0	16WP	G16_048	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03588	99.8	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_048	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03588	99.5	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_048	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03588	99.3	917X
0	16WP	G16_048	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03133	99.3	P12:138:WFEC:MSL03
0	20WP	G16_048	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03522	99.3	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_048	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.02968	99	GEN501801 1-DOLET HILLS UNIT1
0	20WP	G16_048	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03522	99	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_048	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.06655	110.913	BASE CASE
0	20L	G16_048	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.04584	110.0936	BASE CASE
0	20WP	G16_048	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.06600	109.1163	BASE CASE
0	17G	G16_048	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.06066	108.6019	BASE CASE
0	17G	G16_048	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.03104	106.8306	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	17G	G16_048	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.03104	103.5861	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	17G	G16_048	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.03294	100.5398	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17G	G16_048	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.03104	100.2714	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	17G	G16_048	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.03294	99.8	917X
0	17G	G16_048	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.03294	99.4	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G16_048	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03210	131.9177	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	17G	G16_048	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03210	124.9324	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G16_048	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03049	121.3588	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	17G	G16_048	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03366	117.4181	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	17G	G16_048	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03256	117.1805	P12:138:OKGE:3TERM2
0	17G	G16_048	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03023	113.0345	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
0	17G	G16_048	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03023	112.8782	MCELROY - UNVRSTY4 138.00 138KV CKT 1
0	17G	G16_048	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03023	112.3045	KINZE - MCELROY 138KV CKT 1
0	20L	G16_048	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02951	101.6186	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.10908	115.5184	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17G	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.10908	110.9436	917X
0	17G	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.12027	108.3002	SPVALLY4 138.00 - STILLWATER 138KV CKT 1
0	17G	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.10908	108.2693	G15066_T 345.00 - SOONER 345KV CKT 1
0	17SP	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.10160	107.8981	BASE CASE
0	17G	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.12027	107.5326	PAYNESB4 138.00 - SPVALLY4 138.00 138KV CKT 1
0	17G	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.12027	107.1058	CUSHING - PAYNESB4 138.00 138KV CKT 1
0	17G	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.10021	103.3015	BASE CASE
0	17G	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.23557	103.1848	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.23889	99	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G16_048	FROM->TO	KINZE - STILLWATER KINZIE 138KV CKT 1	287.0	287.0	0.07072	107.2124	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17G	G16_048	FROM->TO	KINZE - STILLWATER KINZIE 138KV CKT 1	287.0	287.0	0.07072	104.6999	917X
0	17SP	G16_048	FROM->TO	KINZE - STILLWATER KINZIE 138KV CKT 1	287.0	287.0	0.06944	102.1922	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G16_048	FROM->TO	KINZE - STILLWATER KINZIE 138KV CKT 1	287.0	287.0	0.06944	101.5695	917X
0	17SP	G16_048	FROM->TO	KINZE - STILLWATER KINZIE 138KV CKT 1	287.0	287.0	0.06944	100.2928	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G16_048	FROM->TO	KINZE - STILLWATER KINZIE 138KV CKT 1	287.0	287.0	0.07072	99.7	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_048	-	Non-Converged Contingency	1141.0	1195.0	0.04584	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06003	137.8406	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06003	134.0527	917X
0	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06003	129.5652	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06730	112.1156	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17G	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06730	108.2973	917X
0	20SP	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06614	106.255	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06690	105.8233	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.05118	105.7771	GEN301382 1-1OSAGEWINDG10.6900
0	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.05118	105.4511	4OSAGEWIND 138.00 138/34.5KV TRANSFORMER CKT 1
0	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.05118	105.4423	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
0	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06624	105.2581	P12:138:OKGE:3TERM2
0	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06576	105.1854	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.05251	105.1799	BASE CASE
0	17SP	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06690	104.8738	917X
0	20SP	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06614	104.7798	917X
0	20SP	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06614	104.1195	G15066_T 345.00 - SOONER 345KV CKT 1
0	20WP	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	189.0	191.0	0.06650	103.716	CLEVELAND - G15066_T 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06690	103.6648	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06730	103.3925	G15066_T 345.00 - SOONER 345KV CKT 1
0	20WP	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	189.0	191.0	0.06650	102.8003	917X
0	20WP	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	189.0	191.0	0.06650	101.6977	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.05118	99.8	BASE CASE
0	20L	G16_048	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189.0	189.0	0.03276	102.0052	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_048	TO->FROM	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1	189.0	189.0	0.03276	102.0052	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_048	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181.0	189.0	0.03276	102.4344	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_048	FROM->TO	SHIDLER - WEST PAWHUSKA 138KV CKT 1	181.0	189.0	0.03276	102.4344	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.03469	132.1456	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.03469	132.1456	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17G	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04365	113.9495	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17G	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04365	113.9495	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20SP	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04306	106.6256	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20SP	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04306	106.6256	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17SP	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04201	105.2587	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17SP	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04201	105.2587	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17G	G16_048	FROM->TO	CLEAVELAND - SILVER CITY 138KV CKT 1	174.0	174.0	0.03189	103.3983	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17G	G16_048	FROM->TO	CLEAVELAND - SILVER CITY 138KV CKT 1	174.0	174.0	0.03189	103.3983	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_048	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135.0	1195.0	0.12481	99.2	BASE CASE
2	20L	G16_048	FROM->TO	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	395.0	494.0	0.03469	106.1313	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_048	FROM->TO	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	395.0	494.0	0.03469	106.1313	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_048	FROM->TO	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	395.0	494.0	0.03469	101.5497	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_048	FROM->TO	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	395.0	494.0	0.03469	101.5497	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_048	FROM->TO	FAIRFAX TAP - SHIDLER 138KV CKT 1	181.0	211.0	0.05960	105.663	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20L	G16_048	FROM->TO	FAIRFAX TAP - SHIDLER 138KV CKT 1	181.0	211.0	0.05960	102.6161	917X
2	20L	G16_048	TO->FROM	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1	189.0	211.0	0.05960	105.6677	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20L	G16_048	TO->FROM	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1	189.0	211.0	0.05960	102.6209	917X
2	16WP	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.03418	126.1996	BASE CASE
2	17G	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.03306	124.7078	BASE CASE
2	17SP	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.03467	116.5609	BASE CASE
2	17G	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.03267	104.8009	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
2	17G	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.03267	102.9358	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
2	17G	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.03018	102.6165	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
2	17G	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.03018	102.5671	OSAGE - WEBB CITY TAP 138KV CKT 1
2	17G	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.02990	102.5528	P12:138:OKGE:3TERM2
2	17G	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.02967	102.4769	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	17G	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.06511	102.2406	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.03018	101.544	FAIRFAX TAP - SHIDLER 138KV CKT 1
2	17G	G16_048	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.03018	101.5437	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
2	16WP	G16_048	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03894	103.2535	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20WP	G16_048	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03827	102.6507	CIMARRON - DRAPER LAKE 345KV CKT 1
2	17G	G16_048	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03200	130.4408	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	G16_048	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03200	123.4955	G15063_T 345.00 - WOODRING 345KV CKT 1
2	20L	G16_048	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03041	121.0198	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	17G	G16_048	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03356	116.2249	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	17G	G16_048	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03246	115.9865	P12:138:OKGE:3TERM2
2	17G	G16_048	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03016	111.9719	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
2	17G	G16_048	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03016	111.8159	MCELROY - UNVRSTY4 138.00 138KV CKT 1
2	17G	G16_048	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03016	111.2425	KINZE - MCELROY 138KV CKT 1
2	17G	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.10874	111.7545	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.10874	107.2554	917X
2	17SP	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.10162	106.6183	BASE CASE
2	17G	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.12012	106.0228	SPVALLY4 138.00 - STILLWATER 138KV CKT 1
2	17G	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.12012	105.2568	PAYNESB4 138.00 - SPVALLY4 138.00 138KV CKT 1
2	17G	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.12012	104.8309	CUSHING - PAYNESB4 138.00 138KV CKT 1
2	17G	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.10874	104.6093	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.23550	101.5975	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.10016	101.2779	BASE CASE
2	17G	G16_048	FROM->TO	KINZE - STILLWATER KINZIE 138KV CKT 1	287.0	287.0	0.07022	102.8712	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_048	FROM->TO	KINZE - STILLWATER KINZIE 138KV CKT 1	287.0	287.0	0.07022	100.412	917X
2	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.05960	132.5101	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.05960	128.8918	917X
2	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.05960	124.4058	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06679	105.3701	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.05101	103.0939	GEN301382 1-1OSAGEWINDG10.6900
2	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.05101	102.798	4OSAGEWIND 138.00 138/34.5KV TRANSFORMER CKT 1
2	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.05101	102.789	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
2	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06600	102.2624	P12:138:OKGE:3TERM2
2	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06553	102.1869	MORISNT4 138.00 - STILLWATER 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06679	101.684	917X
2	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.05247	100.6082	BASE CASE
2	17SP	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06644	99.2	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20SP	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06568	99.2	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	25SP	G16_049	FROM->TO	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1	726.6	726.6	0.28793	107.5079	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	17G	G16_049	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.13305	106.9187	BASE CASE
0	17SP	G16_049	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.13295	105.5858	BASE CASE
0	20SP	G16_049	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.13196	103.0698	BASE CASE
0	16WP	G16_049	-	Non-Converged Contingency	1793.0	1793.0	0.46488	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	16WP	G16_049	-	Non-Converged Contingency	1793.0	1793.0	0.46488	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	16WP	G16_049	-	Non-Converged Contingency	726.6	726.6	0.15582	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17G	G16_049	-	Non-Converged Contingency	1505.0	1793.0	0.45956	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	17G	G16_049	-	Non-Converged Contingency	1505.0	1793.0	0.45956	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	17G	G16_049	-	Non-Converged Contingency	726.6	726.6	0.15696	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17G	G16_049	-	Non-Converged Contingency	956.09	1051.7	0.12003	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	17SP	G16_049	-	Non-Converged Contingency	1505.0	1793.0	0.46372	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	17SP	G16_049	-	Non-Converged Contingency	1505.0	1793.0	0.46372	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_049	-	Non-Converged Contingency	726.6	726.6	0.15554	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_049	-	Non-Converged Contingency	1505.0	1793.0	0.45540	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	G16_049	-	Non-Converged Contingency	1505.0	1793.0	0.45540	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_049	-	Non-Converged Contingency	726.6	726.6	0.16419	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_049	-	Non-Converged Contingency	726.6	726.6	0.16419	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20SP	G16_049	-	Non-Converged Contingency	1505.0	1793.0	0.46193	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20SP	G16_049	-	Non-Converged Contingency	1505.0	1793.0	0.46193	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20SP	G16_049	-	Non-Converged Contingency	726.6	726.6	0.15920	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20SP	G16_049	-	Non-Converged Contingency	956.09	1051.7	0.12126	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_049	-	Non-Converged Contingency	1793.0	1793.0	0.46235	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20WP	G16_049	-	Non-Converged Contingency	1793.0	1793.0	0.46235	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20WP	G16_049	-	Non-Converged Contingency	726.6	726.6	0.16007	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	25SP	G16_049	-	Non-Converged Contingency	1505.0	1793.0	0.46295	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_049	-	Non-Converged Contingency	956.09	1051.7	0.11899	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G16_049	FROM->TO	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1	600.0	600.0	0.32897	102.9535	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17G	G16_049	FROM->TO	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1	600.0	600.0	0.32733	102.72	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20SP	G16_049	FROM->TO	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1	600.0	600.0	0.32740	101.7236	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17SP	G16_049	FROM->TO	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1	600.0	600.0	0.32897	101.365	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17G	G16_049	FROM->TO	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1	600.0	600.0	0.32733	101.186	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20SP	G16_049	FROM->TO	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1	600.0	600.0	0.32740	100.1133	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20WP	G16_049	FROM->TO	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1	600.0	600.0	0.32648	99	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	G16_049	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.12966	102.9656	BASE CASE
2	17SP	G16_049	TO->FROM	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1	328.0	398.0	0.12975	101.3121	BASE CASE
0	20SP	G16_050	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04011	132.2553	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17SP	G16_050	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.03977	131.2162	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20SP	G16_050	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.04011	132.5532	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17SP	G16_050	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.03977	131.0719	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20SP	G16_050	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03217	130.3239	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	17SP	G16_050	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03200	126.9444	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	16WP	G16_050	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03208	123.3506	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	25SP	G16_050	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03206	120.1313	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	20WP	G16_050	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03360	114.0308	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	17G	G16_050	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03220	102.0368	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	20SP	G16_050	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03217	139.7556	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	17SP	G16_050	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03200	135.6949	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	25SP	G16_050	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03206	129.8862	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	16WP	G16_050	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03208	129.3604	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	20WP	G16_050	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03360	120.5679	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	17G	G16_050	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03220	109.3682	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	16WP	G16_050	-	Non-Converged Contingency	0.0	0.0	0.07611	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	17G	G16_050	-	Non-Converged Contingency	0.0	0.0	0.04716	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17G	G16_050	-	Non-Converged Contingency	0.0	0.0	0.03144	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	25SP	G16_050	-	Non-Converged Contingency	956.09	1051.7	0.08638	-	GEN525561 1-TOLK GEN #1 24 KV
0	25SP	G16_050	-	Non-Converged Contingency	956.09	1051.7	0.08638	-	GEN525562 1-TOLK GEN #2 24 KV
0	20SP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03217	120.7599	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	20SP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03217	118.7331	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	17SP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03200	116.3173	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	25SP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03206	116.1149	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	17SP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03200	115.0664	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	25SP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03206	114.6339	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	16WP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03208	101.0687	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	16WP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03208	100.0558	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	16WP	G16_050	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03212	123.4035	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_050	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03225	102.1065	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	16WP	G16_050	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03212	129.3999	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	17G	G16_050	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03225	109.4393	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	16WP	G16_050	-	Non-Converged Contingency	0.0	0.0	0.08090	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	16WP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03212	101.1236	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
2	16WP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03212	100.0688	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	17SP	G16_050	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.03965	129.4561	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	20SP	G16_050	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.03998	126.0459	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	25SP	G16_050	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.04056	121.9344	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	17SP	G16_050	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.03965	129.3197	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	20SP	G16_050	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.03998	126.3616	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	25SP	G16_050	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.04056	122.257	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	20SP	G16_050	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03217	129.7576	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	17SP	G16_050	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03200	127.0976	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	16WP	G16_050	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03212	123.4983	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	25SP	G16_050	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03206	119.2933	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	20WP	G16_050	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03360	114.1361	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	17G	G16_050	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83.0	99.0	0.03225	102.2305	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	20SP	G16_050	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03217	139.175	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	17SP	G16_050	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03200	135.8522	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	16WP	G16_050	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03212	129.4966	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	25SP	G16_050	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03206	128.9448	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	20WP	G16_050	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03360	120.6743	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	17G	G16_050	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83.0	99.0	0.03225	109.5717	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	20SP	G16_050	-	Non-Converged Contingency	1792.0	1792.0	0.03177	-	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	25SP	G16_050	-	Non-Converged Contingency	956.09	1051.7	0.08634	-	GEN525561 1-TOLK GEN #1 24 KV
3	20SP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03217	120.6495	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	20SP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03217	118.6157	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	17SP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03200	116.4513	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	25SP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03206	115.4456	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	17SP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03200	115.1868	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	25SP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03206	114.1576	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	16WP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03212	101.1752	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
3	16WP	G16_050	FROM->TO	SOUTH HAYS (S HAYS T1) 230/115/12.47KV TRANSFORMER CKT 1	166.7	166.7	0.03212	100.125	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67943	124.4787	GARRISON - JAMES TOWN 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67898	124.3262	GARRISON - JAMES TOWN 230KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62415	118.0514	P12:230:UMZB:# 171 #: WB IN ND.
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62415	118.0514	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67444	116.4151	GARRISON - JAMES TOWN 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62678	116.1027	LELAND OLDS - WASHBURN 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62678	116.0544	P12:230:UMZB:# 171 #: WB IN ND.
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62678	116.0544	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62678	115.9416	BISMARK - WASHBURN 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62719	115.4603	LELAND OLDS - WASHBURN 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62719	115.4254	P12:230:UMZB:# 171 #: WB IN ND.
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62719	115.4254	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62719	115.3044	BISMARK - WASHBURN 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66742	112.6526	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	16WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67539	111.7334	GARRISON - JAMES TOWN 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66742	110.159	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67695	109.7473	GARRISON - JAMES TOWN 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64189	109.0712	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64189	109.0712	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66184	108.8099	CENTER - COYOTE 345KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63873	108.4228	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63873	108.4227	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66219	108.4023	CENTER - COYOTE 345KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66445	108.0897	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63054	107.8813	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64162	107.6402	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64162	107.6402	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62137	107.5504	P12:230:UMZB:# 171 #: WB IN ND.
0	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62137	107.5504	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62137	107.5492	LELAND OLDS - WASHBURN 230KV CKT 1
0	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62137	107.4552	BISMARK - WASHBURN 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63115	107.3477	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65309	107.3366	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63086	106.2581	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63054	106.0198	BISMARK - GRANTE FALLS 230KV CKT 1
0	20L	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66456	105.9608	GARRISON - JAMES TOWN 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65503	105.7937	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
0	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65782	105.1208	CENTER - COYOTE 345KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63115	105.0661	BISMARK - GRANTE FALLS 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66575	104.9842	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66170	104.9446	BISON - HETINGER 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66539	104.9184	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65539	104.8617	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66575	104.7859	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66575	104.7817	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64189	104.7806	CENTER - MPC02100TAP4230.00 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66539	104.7734	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66539	104.7717	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63086	104.3549	BISMARK - GRANTE FALLS 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66142	104.3269	LELAND OLDS - STANTON 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66142	104.3269	LELAND OLDS - STANTON 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66170	104.0983	BISON - MAURINE 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66138	104.0979	BISON - HETINGER 230KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66401	103.8231	BEULAH - STANTONTAP 7115.00 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66401	103.8225	GARRISON - STANTONTAP 7115.00 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	103.7779	MALLARD - NELSON 7 115.00 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	103.7778	MALLARD - NELSON 7 115.00 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63873	103.711	CENTER - MPC02100TAP4230.00 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66138	103.5855	BISON - MAURINE 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64162	103.4383	CENTER - MPC02100TAP4230.00 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	103.4095	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66202	103.3239	MALLARD - NELSON 7 115.00 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66202	103.3239	MALLARD - NELSON 7 115.00 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66532	103.2528	BEULAH - STANTONTAP 7115.00 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66532	103.2504	GARRISON - STANTONTAP 7115.00 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65636	103.246	SQUARE BUTTE - STANTON 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66180	103.2151	LELAND OLDS - STANTON 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66180	103.2151	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	103.0887	P12:115:UMZW:# 160 #: MX IN ND.
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65309	103.0638	DICKINSON - HEBRON 4 230.00 230KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	103.0334	GARRISON - MAX WELL 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	102.9704	MAX WELL - NELSON 7 115.00 115KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66235	102.9087	MALLARD - NELSON 7 115.00 115KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66235	102.9087	MALLARD - NELSON 7 115.00 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65712	102.8798	COLLINS7 115.00 - HESKETT 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66103	102.7934	GARRISON - VOLTAIRE 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65503	102.7314	DICKINSON - HEBRON 4 230.00 230KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65712	102.7237	COLLINS7 115.00 - TRNPIKE7 115.00 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66202	102.7042	P12:115:UMZW:# 160 #: MX IN ND.
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	102.6967	P12:115:UMZW:# 169 #: SK IN ND. FAULT ON DOU-SK-GA 115 KV
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	102.6799	GARRISON - L8ORANG 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	102.6724	DGLASCRK-CP7115.00 - L8ORANG 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66202	102.662	GARRISON - MAX WELL 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65761	102.6603	MANDAN - MANDAN 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65761	102.6569	MANDAN - MANDAN 7 115.00 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	102.6528	DGLASCRK-CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	102.6164	RAUBTAP CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66045	102.6073	BALTA - RAMSEY 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66202	102.5988	MAX WELL - NELSON 7 115.00 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65825	102.5806	SQUARE BUTTE - STANTON 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65853	102.5759	COLLINS7 115.00 - HESKETT 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	102.568	MAKOTI -CP7115.00 - RAUBTAP CP7115.00 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	102.5242	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66078	102.451	BALTA - RAMSEY 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66235	102.4358	GARRISON - VOLTAIRE 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65853	102.432	COLLINS7 115.00 - TRNPIKE7 115.00 115KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65885	102.3805	COLLINS7 115.00 - HESKETT 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	102.3517	MAKOTI -CP7115.00 - PARSHALL-MW7115.00 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65904	102.3317	MANDAN - MANDAN 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65904	102.3287	MANDAN - MANDAN 7 115.00 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66055	102.3167	PRAIRIE - RAMSEY 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66235	102.3025	P12:115:UMZW:# 160 #: MX IN ND.
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66568	102.2918	BEULAH - STANTONTAP 7115.00 115KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66568	102.2893	GARRISON - STANTONTAP 7115.00 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	102.2836	P12:115:UMZW:# 169 #: SK IN ND. FAULT ON DOU-SK-GA 115 KV
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66202	102.2829	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	102.2769	GARRISON - L8ORANG 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	102.2717	DGLASCRK-CP7115.00 - L8ORANG 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66100	102.2693	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66235	102.2539	GARRISON - MAX WELL 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65953	102.2517	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	102.2392	DGLASCRK-CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65885	102.2198	COLLINS7 115.00 - TRNPIKE7 115.00 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	102.2146	RAUBTAP CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66134	102.2026	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66235	102.185	MAX WELL - NELSON 7 115.00 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66100	102.1698	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	102.162	MAKOTI -CP7115.00 - RAUBTAP CP7115.00 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66100	102.1604	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66100	102.1604	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65853	102.127	NW BISMARCK - TRNPIKE7 115.00 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65971	102.1122	MCHENRY (MCHEN230/115) 230/115/12.47KV TRANSFORMER CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66088	102.092	PRAIRIE - RAMSEY 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65936	102.0685	MANDAN - MANDAN 115KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65936	102.0651	MANDAN - MANDAN 7 115.00 115KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66173	102.0243	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66269	102.0073	GARRISON - VOLTAIRE 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	101.9953	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65853	101.9885	CENTURY - NW BISMARCK 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	101.9275	MAKOTI -CP7115.00 - PLAZA MW7115.00 115KV CKT 1
0	16WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62237	101.9029	LELAND OLDS - WASHBURN 230KV CKT 1
0	16WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62237	101.8959	P12:230:UMZB:# 171 #: WB IN ND.
0	16WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62237	101.8959	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65885	101.8816	NW BISMARCK - TRNPIKE7 115.00 115KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66235	101.8566	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66134	101.8479	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66134	101.8442	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66134	101.8442	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66172	101.8426	P12:115:UMZW:# 169 #: SK IN ND. FAULT ON DOU-SK-GA 115 KV
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66172	101.8351	GARRISON - L8ORANG 115KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66172	101.8304	DGLASCRK-CP7115.00 - L8ORANG 115KV CKT 1
0	16WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62237	101.8235	BISMARK - WASHBURN 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66172	101.7952	DGLASCRK-CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65539	101.7842	DICKINSON - HEBRON 4 230.00 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66172	101.7683	RAUBTAP CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65885	101.7316	CENTURY - NW BISMARCK 115KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66172	101.711	MAKOTI -CP7115.00 - RAUBTAP CP7115.00 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	101.5205	GEN657748 1-YOUNG 2 GENERATOR
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66051	101.5111	BELFIELD - CHARLIE CREEK 345KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	101.5025	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	101.5008	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66172	101.4974	MAKOTI -CP7115.00 - PLAZA MW7115.00 115KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66058	101.3783	P12:115:UMZB:# 122 #: RUTH IN ND. RUTH TAP
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	101.375	GEN657749 1-YOUNG 1 GENERATOR
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.3748	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.3725	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	101.3569	CENTER 230/22.0KV TRANSFORMER CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.2491	BASE CASE
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.2487	BASE CASE
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.2422	GEN657748 1-YOUNG 2 GENERATOR
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.2263	GEN657749 1-YOUNG 1 GENERATOR
0	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63622	101.2222	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63622	101.2222	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.2063	CENTER 230/22.0KV TRANSFORMER CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65816	101.1585	COAL CREEK - MCHENRY 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	101.0929	GEN657748 1-YOUNG 2 GENERATOR
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	101.0549	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	101.0531	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	100.8884	BASE CASE
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65787	100.8631	ABERDEEN JCT - ELLENDALE 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65962	100.8367	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	100.8063	GEN657749 1-YOUNG 1 GENERATOR
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	100.8043	CENTER 230/22.0KV TRANSFORMER CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.68082	100.6899	GARRISON 230/115KV TRANSFORMER CKT 1
0	20WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62499	100.5878	LELAND OLDS - WASHBURN 230KV CKT 1
0	20WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62499	100.521	P12:230:UMZB:# 171 #: WB IN ND.

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62499	100.521	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	20WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62499	100.4488	BISMARK - WASHBURN 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65938	100.4131	BROOKING COUNTY - BSSOUTH3 345.00 345KV CKT 1
0	20L	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.61462	100.3969	LELAND OLDS - WASHBURN 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	100.3863	BASE CASE
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65387	100.2758	BISMARK - EAST BISMARCK 115KV CKT 1
0	20L	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.61462	100.2526	P12:230:UMZB:# 171 #: WB IN ND.
0	20L	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.61462	100.2526	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	20L	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.61462	100.1717	BISMARK - WASHBURN 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65859	100.0715	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65859	100.0715	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62810	100.0668	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66027	100.0535	NESET 4 230.00 - TANDE 4230.00 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66027	100.0533	TANDE 3345.00 (TANDE KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65967	100	COAL CREEK - MCHENRY 230KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65873	99.9	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65967	99.9	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65515	99.9	BISMARK - EAST BISMARCK 115KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.75244	99.8	GARRISON - LELAND OLDS 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.75119	99.8	GARRISON - LELAND OLDS 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65995	99.8	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65995	99.8	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65993	99.8	FORMAN - OAKES 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65859	99.8	488489510526345.00 - BSSOUTH3 345.00 345KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	99.7	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	99.7	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	99.7	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	99.7	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	99.6	GEN659018 1-G14_003IS_3 0.6900
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	99.6	GEN659018 1-G14_003IS_3 0.6900
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65859	99.6	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66059	99.6	NESET 4 230.00 - TANDE 4230.00 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66059	99.6	TANDE 3345.00 (TANDE KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65052	99.5	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66065	99.5	BLAISDELL 4230.00 (BLAISDL KV2A) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65970	99.5	BROOKING COUNTY - BSSOUTH3 345.00 345KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66080	99.4	BLAISDELL 4230.00 - TIOGA 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66027	99.4	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66027	99.4	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66025	99.4	FORMAN - OAKES 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65999	99.4	COAL CREEK - MCHENRY 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65999	99.4	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
0	20L	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65308	99.3	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65891	99.3	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65891	99.3	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65891	99.3	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
0	16WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65872	99.2	CENTER - COYOTE 345KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65393	99.2	HESKETT - WISHEK 230KV CKT 1
0	20L	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65308	99.2	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20L	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65308	99.2	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.75154	99.2	GARRISON - LELAND OLDS 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	99.2	GEN659018 1-G14_003IS_3 0.6900
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	99.2	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	99.2	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62810	99.1	BISMARK - GRANTE FALLS 230KV CKT 1
0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65393	99.1	MERRCRT4 230.00 - WISHEK 230KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	99	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	99	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	99	GEN 10648 1-G830_GEN 0.6900
0	17SP	G16_052	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05452	112.4929	BASE CASE
0	17SP	G16_052	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05452	112.4918	BASE CASE
0	25SP	G16_052	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05111	107.2478	BASE CASE
0	20SP	G16_052	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05111	102.072	BASE CASE
0	17SP	G16_052	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.10335	103.5196	BASE CASE
0	17SP	G16_052	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.10335	103.5186	BASE CASE
0	17SP	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08962	109.7316	BASE CASE
0	17SP	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08962	109.7313	BASE CASE
0	25SP	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08723	107.1967	BASE CASE
0	17SP	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08962	105.7454	BASE CASE
0	17SP	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08962	105.7451	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08649	104.5522	BASE CASE
0	25SP	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08723	103.7454	BASE CASE
0	20SP	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08698	103.5593	BASE CASE
0	17G	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08649	101.2968	BASE CASE
0	20SP	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08698	100.5691	BASE CASE
0	16WP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.26532	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	16WP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.24005	-	2810X2
0	16WP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.24005	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	16WP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.18397	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	16WP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.12003	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	16WP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.12003	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	16WP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.12003	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	16WP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.12003	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	16WP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.10076	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	16WP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.10076	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	16WP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.09199	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	16WP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.09199	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	16WP	G16_052	-	Non-Converged Contingency	478.0	526.0	0.08844	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	16WP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08844	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	16WP	G16_052	-	Non-Converged Contingency	797.0	797.0	0.08844	-	BROADLAND - HURON 230KV CKT 1
0	16WP	G16_052	-	Non-Converged Contingency	400.0	400.0	0.08844	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.46750	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.36455	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.34598	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.25948	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.25948	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.24797	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.24797	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23375	-	2810X2
0	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23375	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.22731	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.22731	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.18227	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	17G	G16_052	-	Non-Converged Contingency	720.0	792.0	0.12399	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	17G	G16_052	-	Non-Converged Contingency	720.0	792.0	0.12399	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11687	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	17G	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11687	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11687	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.11687	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17G	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11366	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11366	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	17G	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11366	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11366	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.10781	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.10781	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	1793.0	1793.0	0.10619	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	717.0	789.0	0.10133	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	717.0	789.0	0.10133	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09773	-	FORBES - ROSEAU 500KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	1732.1	1905.3	0.09773	-	RIEL - ROSEAU 500KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09773	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09773	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	705.0	705.0	0.09312	-	CENTER - JAMESTOWN 345KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	705.0	705.0	0.09279	-	BUFFALO - JAMESTOWN 345KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	720.0	792.0	0.09143	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	717.0	789.0	0.09114	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.09114	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08649	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	17G	G16_052	-	Non-Converged Contingency	478.0	526.0	0.08649	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08649	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	17G	G16_052	-	Non-Converged Contingency	732.0	732.0	0.08649	-	BROADLAND - HURON 230KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	400.0	400.0	0.08649	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_052	-	Non-Converged Contingency	400.0	400.0	0.08649	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_052	-	Non-Converged Contingency	319.0	385.0	0.05310	-	BISON - HETINGER 230KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	400.0	400.0	0.05310	-	BISON - MAURINE 230KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	319.0	341.0	0.05028	-	NUNDRWD - WAYSIDE 230KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	335.0	429.4	0.04942	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	409.0	450.0	0.04541	-	FORMAN - HANKINSON 230KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	409.0	450.0	0.04375	-	FORMAN - OAKES 230KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	319.0	351.0	0.04342	-	ELLENDALE - OAKES 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_052	-	Non-Converged Contingency	319.0	351.0	0.04342	-	ELLENDALE - OAKES 230KV CKT 1
0	17G	G16_052	-	Non-Converged Contingency	1206.0	1336.0	0.04266	-	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	17G	G16_052	-	Non-Converged Contingency	1206.0	1336.0	0.04266	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
0	20L	G16_052	-	Non-Converged Contingency	0.0	0.0	0.32757	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	20SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.36079	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	20SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.35758	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	20SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.34791	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	20SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.26094	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.26094	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	20SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23839	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	20SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23839	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	20SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23763	-	2810X2
0	20SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23763	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.18040	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11919	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	20SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11919	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11919	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11919	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	20SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11919	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	20SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11881	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11881	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11881	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.10448	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.10448	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09439	-	FORBES - ROSEAU 500KV CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	1732.1	1905.3	0.09439	-	RIEL - ROSEAU 500KV CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09439	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09439	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	705.0	705.0	0.09247	-	CENTER - JAMESTOWN 345KV CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	705.0	705.0	0.09146	-	BUFFALO - JAMESTOWN 345KV CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.09071	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.09071	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.09020	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.09020	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	20SP	G16_052	-	Non-Converged Contingency	478.0	526.0	0.08698	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08698	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	20SP	G16_052	-	Non-Converged Contingency	732.0	732.0	0.08698	-	BROADLAND - HURON 230KV CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	400.0	400.0	0.08698	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	400.0	400.0	0.08698	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_052	-	Non-Converged Contingency	1206.0	1336.0	0.04150	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
0	25SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.47522	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	25SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.36496	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	25SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.36332	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	25SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.34891	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.26168	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	25SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.26168	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	25SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.24331	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	25SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.24331	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	25SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23761	-	2810X2
0	25SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23761	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	25SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.18166	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	25SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.12165	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	25SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.12165	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	25SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.12165	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	25SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.12165	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	25SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.12165	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	25SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11880	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	25SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11880	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	25SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11880	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	25SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.11880	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.10516	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	25SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.10516	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	25SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09487	-	FORBES - ROSEAU 500KV CKT 1
0	25SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09487	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	25SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09487	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	25SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.09148	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	25SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.09148	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	25SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.09083	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	25SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.09083	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	25SP	G16_052	-	Non-Converged Contingency	720.0	792.0	0.09059	-	BISON 3 345.00 - BUFFALO 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08723	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	25SP	G16_052	-	Non-Converged Contingency	478.0	526.0	0.08723	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	25SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08723	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	25SP	G16_052	-	Non-Converged Contingency	732.0	732.0	0.08723	-	BROADLAND - HURON 230KV CKT 1
0	25SP	G16_052	-	Non-Converged Contingency	400.0	400.0	0.08723	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_052	-	Non-Converged Contingency	400.0	400.0	0.08723	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_052	-	Non-Converged Contingency	1800.0	1980.0	0.06286	-	488489510526345.00 - BSSOUTH3 345.00 345KV CKT 1
0	20SP	G16_052	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.12532	102.7748	BASE CASE
0	17SP	G16_052	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.12689	102.6278	BASE CASE
0	17SP	G16_052	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.12689	102.6265	BASE CASE
0	17SP	G16_052	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.12689	104.4933	BASE CASE
0	17SP	G16_052	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.12689	104.4921	BASE CASE
2	17SP	G16_052	FROM->TO	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	478.0	526.0	0.08975	100.6065	BASE CASE
2	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67445	115.9071	GARRISON - JAMES TOWN 230KV CKT 1
2	16WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67539	111.9454	GARRISON - JAMES TOWN 230KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65311	108.2068	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63052	107.7516	BISMARK - GRANTE FALLS 230KV CKT 1
2	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62148	106.6976	LELAND OLDS - WASHBURN 230KV CKT 1
2	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62148	106.6834	P12:230:UMZB:# 171 #: WB IN ND.
2	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62148	106.6834	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
2	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62148	106.5922	BISMARK - WASHBURN 230KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	105.1857	MALLARD - NELSON 7 115.00 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	105.1857	MALLARD - NELSON 7 115.00 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66405	104.7311	BEULAH - STANTONTAP 7115.00 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66405	104.7288	GARRISON - STANTONTAP 7115.00 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	104.4459	P12:115:UMZW:# 160 #: MX IN ND.
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	104.3443	GARRISON - MAX WELL 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65311	104.3181	DICKINSON - HEBRON 4 230.00 230KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	104.2775	MAX WELL - NELSON 7 115.00 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65712	104.2718	COLLINS7 115.00 - HESKETT 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66102	104.2521	GARRISON - VOLTAIRE 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65712	104.0844	COLLINS7 115.00 - TRNPIKE7 115.00 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65761	103.859	MANDAN - MANDAN 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65761	103.8558	MANDAN - MANDAN 7 115.00 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	103.8531	P12:115:UMZW:# 169 #: SK IN ND. FAULT ON DOU-SK-GA 115 KV
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	103.8377	DGLASCRK-CP7115.00 - L8ORANG 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	103.8367	GARRISON - L8ORANG 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	103.8082	DGLASCRK-CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	103.7875	RAUBTAP CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	103.7389	MAKOTI -CP7115.00 - RAUBTAP CP7115.00 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	103.6566	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
2	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65777	103.6389	CENTER - COYOTE 345KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	103.499	MAKOTI -CP7115.00 - PARSHALL-MW7115.00 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65971	103.4619	MCHENRY (MCHEN230/115) 230/115/12.47KV TRANSFORMER CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65677	103.3088	BEULAH - MANDAN 7 115.00 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65885	102.6076	LEEDS - PLEASANT LK7115.00 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65885	102.6045	P12:115:UMZW:# 168 #: PLL IN ND. FAULT ON LE-PLL-RG 115 KV
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	102.427	BASE CASE
2	16WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62245	101.9256	LELAND OLDS - WASHBURN 230KV CKT 1
2	16WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62245	101.9141	P12:230:UMZB:# 171 #: WB IN ND.
2	16WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62245	101.9141	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.8841	MPC02100TAP4230.00 - MPC2100WIND4230.00 230KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.8678	MPC2100WIND4230.00 230/34.5KV TRANSFORMER CKT 1
2	16WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62245	101.8422	BISMARK - WASHBURN 230KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.6915	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.6893	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.534	GEN657748 1-YOUNG 2 GENERATOR
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65386	101.5144	BISMARK - EAST BISMARCK 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.75210	101.4192	GARRISON - LELAND OLDS 230KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.4021	CENTER 230/22.0KV TRANSFORMER CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.3826	GEN657749 1-YOUNG 1 GENERATOR
2	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63622	100.986	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
2	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63622	100.986	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65873	100.2234	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	100	GEN659018 1-G14_003IS_3 0.6900
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65393	99.9	HESKETT - WISHEK 230KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65393	99.8	MERRCRT4 230.00 - WISHEK 230KV CKT 1
2	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62809	99.7	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	99.3	GEN 10648 1-G830_GEN 0.6900
2	16WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65865	99.2	CENTER - COYOTE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	99.2	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	99.2	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
2	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65054	99.1	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
2	17SP	G16_052	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05446	115.4161	BASE CASE
2	17SP	G16_052	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.10343	100.5291	BASE CASE
2	17SP	G16_052	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.10343	105.6474	BASE CASE
2	17SP	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08975	110.0846	BASE CASE
2	17SP	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08975	106.0432	BASE CASE
2	17G	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08665	103.9446	BASE CASE
2	17G	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08665	100.9216	BASE CASE
2	16WP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.26569	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	16WP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.24011	-	2810X2
2	16WP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.24011	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	16WP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.18421	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	16WP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.12006	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	16WP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.12006	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	16WP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.12006	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	16WP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.12006	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	16WP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.10085	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	16WP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.10085	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	16WP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.09210	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	16WP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.09210	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	16WP	G16_052	-	Non-Converged Contingency	478.0	526.0	0.08856	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	16WP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08856	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	16WP	G16_052	-	Non-Converged Contingency	797.0	797.0	0.08856	-	BROADLAND - HURON 230KV CKT 1
2	16WP	G16_052	-	Non-Converged Contingency	400.0	400.0	0.08856	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.46789	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.36491	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
2	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.34658	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
2	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.25994	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.25994	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
2	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.24803	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
2	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.24803	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23395	-	2810X2
2	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23395	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.22729	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
2	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.18246	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	17G	G16_052	-	Non-Converged Contingency	720.0	792.0	0.12402	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	17G	G16_052	-	Non-Converged Contingency	720.0	792.0	0.12402	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11697	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	17G	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11697	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11697	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.11697	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17G	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11364	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11364	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11364	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
2	17G	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.10775	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.10775	-	CHISAGO COUNTY - FORBES 500KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	1793.0	1793.0	0.10611	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	717.0	789.0	0.10138	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	717.0	789.0	0.10138	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09767	-	FORBES - ROSEAU 500KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	1732.1	1905.3	0.09767	-	RIEL - ROSEAU 500KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09767	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09767	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	705.0	705.0	0.09299	-	CENTER - JAMESTOWN 345KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	705.0	705.0	0.09266	-	BUFFALO - JAMESTOWN 345KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	720.0	792.0	0.09131	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	717.0	789.0	0.09123	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.09123	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08665	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
2	17G	G16_052	-	Non-Converged Contingency	478.0	526.0	0.08665	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08665	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	17G	G16_052	-	Non-Converged Contingency	732.0	732.0	0.08665	-	BROADLAND - HURON 230KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	400.0	400.0	0.08665	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_052	-	Non-Converged Contingency	400.0	400.0	0.08665	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_052	-	Non-Converged Contingency	335.0	429.4	0.04939	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	409.0	450.0	0.04540	-	FORMAN - HANKINSON 230KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	409.0	450.0	0.04373	-	FORMAN - OAKES 230KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	319.0	351.0	0.04340	-	ELLENDALE - OAKES 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_052	-	Non-Converged Contingency	319.0	351.0	0.04340	-	ELLENDALE - OAKES 230KV CKT 1
2	17G	G16_052	-	Non-Converged Contingency	1206.0	1336.0	0.04259	-	CENTER - CNTSHNT3 345.00 345KV CKT Z1
2	17G	G16_052	-	Non-Converged Contingency	1206.0	1336.0	0.04259	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	373.0	373.0	0.65870	-	BISMARK - HILKEN 4 230.00 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.48325	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.37711	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.35900	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.34691	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.32989	-	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.32989	-	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.26925	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.26925	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.25400	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.25400	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.24162	-	2810X2
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.24162	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23128	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23128	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.21993	-	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.18856	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.18856	-	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
2	17SP	G16_052	-	Non-Converged Contingency	400.0	444.0	0.14073	-	CENTER - SQUARE BUTTE 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	720.0	792.0	0.12700	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	17SP	G16_052	-	Non-Converged Contingency	720.0	792.0	0.12700	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.12081	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	17SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.12081	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.12081	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.12081	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11564	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
2	17SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11564	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11564	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
2	17SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11564	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11564	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11564	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11564	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_052	-	Non-Converged Contingency	210.0	210.0	0.11014	-	BISMARK - L3 HAWDON 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	210.0	210.0	0.11014	-	GLENHAM - L3 HAWDON 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	240.0	260.0	0.10996	-	GLENHAM - WHITLOK 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	240.0	260.0	0.10996	-	OAHE - SULLEY BUTTE 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	240.0	260.0	0.10996	-	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
2	17SP	G16_052	-	Non-Converged Contingency	240.0	260.0	0.10996	-	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	720.0	792.0	0.10942	-	SPLIT ROCK - WHITE 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	720.0	792.0	0.10942	-	SPLIT ROCK - WHITE 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.10940	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.10940	-	CHISAGO COUNTY - FORBES 500KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	1793.0	1793.0	0.10912	-	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	1793.0	1793.0	0.10750	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	1793.0	1793.0	0.10750	-	GEN620315 1-BIG STONE GEN
2	17SP	G16_052	-	Non-Converged Contingency	1793.0	1793.0	0.10750	-	GEN657964 1-ASH2GEN9 0.5750
2	17SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.10343	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.10343	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	1792.7	1792.7	0.10206	-	MONTICELLO - WAITE PARK 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09901	-	FORBES - ROSEAU 500KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	1732.1	1905.3	0.09901	-	GEN600000 1-SHERBURNECNTY G1
2	17SP	G16_052	-	Non-Converged Contingency	1732.1	1905.3	0.09901	-	GEN600001 2-SHERBURNE CNTY G2
2	17SP	G16_052	-	Non-Converged Contingency	1732.1	1905.3	0.09901	-	GEN600002 3-SHERBURNE CNTY G3
2	17SP	G16_052	-	Non-Converged Contingency	1732.1	1905.3	0.09901	-	GEN600003 1-PRAIRIE ISLAND G1
2	17SP	G16_052	-	Non-Converged Contingency	1732.1	1905.3	0.09901	-	GEN600004 2-PRAIRIE ISLAND G2
2	17SP	G16_052	-	Non-Converged Contingency	1732.1	1905.3	0.09901	-	GEN600005 1-MONTICELLO
2	17SP	G16_052	-	Non-Converged Contingency	1732.1	1905.3	0.09901	-	GEN600006 1-AS KING
2	17SP	G16_052	-	Non-Converged Contingency	1732.1	1905.3	0.09901	-	RIEL - ROSEAU 500KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09901	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09901	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	956.1	956.1	0.09868	-	ADAMS - MITCHLCO3 345.00 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	705.0	705.0	0.09448	-	CENTER - JAMESTOWN 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.09428	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.09428	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.09428	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.09428	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
2	17SP	G16_052	-	Non-Converged Contingency	705.0	705.0	0.09413	-	BUFFALO - JAMESTOWN 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_052	-	Non-Converged Contingency	720.0	792.0	0.09274	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	1073.0	1195.0	0.09232	-	GEN542951 5-HAWTHORN UNIT #5
2	17SP	G16_052	-	Non-Converged Contingency	1073.0	1195.0	0.09232	-	GEN542955 1-LACYGNE UNIT #1
2	17SP	G16_052	-	Non-Converged Contingency	1073.0	1195.0	0.09232	-	GEN542956 2-LACYGNE UNIT #2
2	17SP	G16_052	-	Non-Converged Contingency	717.0	717.0	0.09192	-	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08975	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
2	17SP	G16_052	-	Non-Converged Contingency	478.0	526.0	0.08975	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08975	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	17SP	G16_052	-	Non-Converged Contingency	732.0	732.0	0.08975	-	BROADLAND - HURON 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	400.0	400.0	0.08975	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	400.0	400.0	0.08975	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08862	-	P13:230-345:NPPD:STEGALL3:KV3A
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08699	-	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
2	17SP	G16_052	-	Non-Converged Contingency	1378.0	1515.4	0.08688	-	HELENA - SHEAS LK3 345.00 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	342.0	342.0	0.08666	-	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	342.0	342.0	0.08666	-	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	1099.0	1195.0	0.08327	-	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	17SP	G16_052	-	Non-Converged Contingency	1099.0	1195.0	0.08327	-	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	17SP	G16_052	-	Non-Converged Contingency	1099.0	1195.0	0.08327	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08168	-	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08144	-	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08144	-	P12:230:UMZW:# 158 #: MH IN ND.
2	17SP	G16_052	-	Non-Converged Contingency	1173.6	1195.0	0.07899	-	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	318.0	350.0	0.07710	-	BISMARK - JAMES TOWN 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	318.0	350.0	0.07699	-	BISMARK - WEBER 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	318.0	350.0	0.07699	-	JAMES TOWN - WEBER 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	864.0	864.0	0.06957	-	HIGHLND 3 345.00 - RAUN 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	318.0	350.0	0.06536	-	FARGO - JAMES TOWN 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	318.0	350.0	0.06394	-	FARGO - JAMES TOWN 230KV CKT 2
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.06314	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	17SP	G16_052	-	Non-Converged Contingency	672.0	773.0	0.05861	-	CENTER (C1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	672.0	773.0	0.05861	-	CENTER (C2) 345/230/13.8KV TRANSFORMER CKT 2
2	17SP	G16_052	-	Non-Converged Contingency	1299.0	1299.0	0.05769	-	GEN514806 1-SOONER UNIT 2
2	17SP	G16_052	-	Non-Converged Contingency	1299.0	1299.0	0.05769	-	GEN515223 1-MUSKOGEE 4G
2	17SP	G16_052	-	Non-Converged Contingency	1299.0	1299.0	0.05769	-	GEN515225 1-MUSKOGEE 5G
2	17SP	G16_052	-	Non-Converged Contingency	800.0	1084.0	0.05635	-	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	1195.1	1195.1	0.05566	-	AS KING - CHISAGO COUNTY 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	215.0	236.0	0.05446	-	BISON - HETINGER 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	384.0	384.0	0.05446	-	BISON - MAURINE 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	318.0	318.0	0.05411	-	GARRISON - JAMES TOWN 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	956.0	956.0	0.05275	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	319.0	341.0	0.05201	-	NUNDRWD - WAYSIDE 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	335.0	429.4	0.05019	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	335.0	429.4	0.05019	-	J290_SUB 230.00 - RUGBY 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	409.0	450.0	0.04559	-	FORMAN - HANKINSON 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	400.0	480.0	0.04431	-	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	409.0	450.0	0.04393	-	FORMAN - OAKES 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	319.0	351.0	0.04358	-	ELLENDALE - OAKES 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	319.0	351.0	0.04358	-	ELLENDALE - OAKES 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	320.0	342.0	0.04349	-	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	320.0	342.0	0.04349	-	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
2	17SP	G16_052	-	Non-Converged Contingency	637.0	641.0	0.04345	-	CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	320.0	352.0	0.04342	-	MOOREHEAD - MORRIS 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	1206.0	1336.0	0.04319	-	CENTER - CNTSHNT3 345.00 345KV CKT Z1
2	17SP	G16_052	-	Non-Converged Contingency	1206.0	1336.0	0.04319	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	336.0	386.0	0.04293	-	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
2	17SP	G16_052	-	Non-Converged Contingency	400.0	400.0	0.04216	-	DRAYTON - PRAIRIE 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	390.0	429.0	0.04187	-	BIG STONE - BROWNS VALLEY 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	296.0	325.0	0.04187	-	BROWNS VALLEY - HANKINSON 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	319.0	351.0	0.04161	-	GRAND FORKS - PICKERT 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	319.0	351.0	0.04161	-	JAMES TOWN - PICKERT 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	280.0	280.0	0.04155	-	AUDUBON - SHEYNNE 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	239.0	299.0	0.04144	-	BOWMAN - HETINGER 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	239.0	299.0	0.04144	-	BOWMAN - RHAME 4 230.00 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	320.0	320.0	0.04130	-	FT RANDAL - FT THOMPSON 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	320.0	320.0	0.04130	-	FT RANDAL - FT THOMPSON 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.04093	-	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
2	17SP	G16_052	-	Non-Converged Contingency	364.0	364.0	0.04084	-	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
2	17SP	G16_052	-	Non-Converged Contingency	364.0	364.0	0.04084	-	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	320.0	352.0	0.04072	-	FARGO - MOOREHEAD 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_052	-	Non-Converged Contingency	318.7	318.7	0.04052	-	FT RANDAL - LAKE PLATT 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	352.0	352.0	0.04052	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	352.0	352.0	0.04052	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	641.0	641.0	0.04014	-	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	288.0	288.0	0.03998	-	KARLSTAD - WINGER 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.03953	-	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
2	17SP	G16_052	-	Non-Converged Contingency	1072.0	1195.0	0.03840	-	GEN300003 1-THOMAS HILL UNIT 3
2	17SP	G16_052	-	Non-Converged Contingency	1173.6	1195.1	0.03728	-	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	400.0	400.0	0.03722	-	PRAIRIE - WINGER 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	305.0	335.5	0.03625	-	AUDUBON - HUBBARD 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	478.0	526.0	0.03545	-	BIG STONE - BLAIR 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	478.0	526.0	0.03545	-	BIG STONE - BLAIR 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	320.0	320.0	0.03501	-	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	368.0	368.0	0.03501	-	KELLY - MEADOWGROVE4230.00 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	319.0	343.0	0.03388	-	ELLENDALE - J316_SUB 230.00 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	319.0	343.0	0.03388	-	J316_SUB 230.00 - TATANKA 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	460.0	460.0	0.03251	-	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	319.0	351.0	0.03229	-	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	956.0	1052.0	0.03226	-	SIDNEY - STEGALL 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	956.0	956.0	0.03176	-	HOSKINS - RAUN 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	956.0	956.0	0.03176	-	HOSKINS - RAUN 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	956.0	956.0	0.03173	-	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	956.0	956.0	0.03157	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	17SP	G16_052	-	Non-Converged Contingency	956.0	956.0	0.03157	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	17SP	G16_052	-	Non-Converged Contingency	187.0	205.7	0.02964	-	BADOURA - HUBBARD 230KV CKT 1
2	17SP	G16_052	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.12700	105.756	BASE CASE
2	17SP	G16_052	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.12700	107.8342	BASE CASE
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67606	122.3186	GARRISON - JAMES TOWN 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67757	120.7584	GARRISON - JAMES TOWN 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67800	120.6392	GARRISON - JAMES TOWN 230KV CKT 1
3	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67305	112.3506	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62274	112.1077	P12:230:UMZB:# 171 #: WB IN ND.
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62274	112.1077	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62532	112.1061	LELAND OLDS - WASHBURN 230KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62274	112.0995	LELAND OLDS - WASHBURN 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62532	112.0378	P12:230:UMZB:# 171 #: WB IN ND.
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62532	112.0378	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62274	112.008	BISMARK - WASHBURN 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62532	111.93	BISMARK - WASHBURN 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62572	111.3188	LELAND OLDS - WASHBURN 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62572	111.2622	P12:230:UMZB:# 171 #: WB IN ND.
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62572	111.2622	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62572	111.1454	BISMARK - WASHBURN 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66596	108.7865	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	16WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67398	108.7249	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65931	108.2	CENTER - COYOTE 345KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66596	107.6641	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66596	107.4415	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67556	107.1374	GARRISON - JAMES TOWN 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66627	106.7205	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64091	106.6762	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64091	106.6762	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66596	106.6005	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66596	106.5161	Z810X2
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66596	106.5055	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66596	106.5029	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66080	106.063	CENTER - COYOTE 345KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66114	105.5794	CENTER - COYOTE 345KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64065	105.0405	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64065	105.0405	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	105.0247	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63772	105.0141	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63772	105.0141	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66342	104.9835	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66342	104.9835	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	104.9831	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	104.9831	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	104.9825	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66342	104.9824	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63024	104.9294	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	104.9079	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	104.9077	BROADLAND - HURON 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	104.9073	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	104.9073	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66574	104.9004	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62958	104.8862	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66342	104.8798	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66342	104.8794	BROADLAND - HURON 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66342	104.8791	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66342	104.8791	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66539	104.8457	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	104.8456	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66342	104.7958	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66574	104.7424	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66539	104.7293	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66539	104.7074	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66539	104.7056	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66574	104.4966	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66574	104.4938	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62996	103.8752	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65204	103.5851	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
3	20L	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66326	103.5671	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62958	103.188	BISMARK - GRANTE FALLS 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65399	103.0779	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63024	102.6905	BISMARK - GRANTE FALLS 230KV CKT 1
3	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62003	102.4683	LELAND OLDS - WASHBURN 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64091	102.4358	CENTER - MPC02100TAP4230.00 230KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65869	102.433	G16-044-TAP 345.00 - GROTON 345KV CKT 2
3	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62003	102.3846	P12:230:UMZB:# 171 #: WB IN ND.
3	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62003	102.3846	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62003	102.3043	BISMARK - WASHBURN 230KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65868	102.0782	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65434	102.0758	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62996	102.0115	BISMARK - GRANTE FALLS 230KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65868	101.9712	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66022	101.2071	LELAND OLDS - STANTON 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66022	101.2071	LELAND OLDS - STANTON 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66017	101.1111	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66170	100.9707	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65854	100.9395	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65854	100.9395	LELAND OLDS - STANTON 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64065	100.9241	CENTER - MPC02100TAP4230.00 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66017	100.8898	G16-044-TAP 345.00 - GROTON 345KV CKT 2
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66063	100.8849	BISON - HETINGER 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66031	100.8592	BISON - HETINGER 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66105	100.8586	MALLARD - NELSON 7 115.00 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66105	100.8586	MALLARD - NELSON 7 115.00 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65796	100.8472	BALTA - RAMSEY 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66017	100.8216	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66017	100.8074	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66036	100.7904	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65975	100.6832	MALLARD - NELSON 7 115.00 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65975	100.6832	MALLARD - NELSON 7 115.00 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63772	100.6684	CENTER - MPC02100TAP4230.00 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66428	100.6682	BEULAH - STANTONTAP 7115.00 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66428	100.6663	GARRISON - STANTONTAP 7115.00 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65806	100.639	PRAIRIE - RAMSEY 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66031	100.5137	BISON - MAURINE 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66049	100.5091	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66063	100.4139	BISON - MAURINE 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66137	100.4	MALLARD - NELSON 7 115.00 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66137	100.4	MALLARD - NELSON 7 115.00 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66049	100.3979	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66298	100.3893	BEULAH - STANTONTAP 7115.00 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66298	100.3869	GARRISON - STANTONTAP 7115.00 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66019	100.3712	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66049	100.3185	G16-044-TAP 345.00 - GROTON 345KV CKT 2
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66049	100.2923	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65674	100.2809	CENTER - COYOTE 345KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66105	100.2425	P12:115:UMZW:# 160 #: MX IN ND.

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66105	100.2034	GARRISON - MAX WELL 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66019	100.1816	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66019	100.1716	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66019	100.1716	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66105	100.1402	MAX WELL - NELSON 7 115.00 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65946	100.1173	BALTA - RAMSEY 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65399	100.0681	DICKINSON - HEBRON 4 230.00 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65755	100.0637	COLLINS7 115.00 - HESKETT 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66058	100.056	LELAND OLDS - STANTON 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66058	100.056	LELAND OLDS - STANTON 230KV CKT 1
3	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66170	100	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.75218	100	GARRISON - LELAND OLDS 230KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65975	100	GARRISON - MAX WELL 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65975	100	P12:115:UMZW:# 160 #: MX IN ND.
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65204	100	DICKINSON - HEBRON 4 230.00 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65956	100	PRAIRIE - RAMSEY 230KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65975	99.9	MAX WELL - NELSON 7 115.00 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66135	99.9	GARRISON - VOLTAIRE 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66044	99.9	DGLASCRK-CP7115.00 - L8ORANG 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66044	99.9	GARRISON - L8ORANG 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66044	99.9	P12:115:UMZW:# 169 #: SK IN ND. FAULT ON DOU-SK-GA 115 KV
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65755	99.9	COLLINS7 115.00 - TRNPIKE7 115.00 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65612	99.8	COLLINS7 115.00 - HESKETT 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66105	99.8	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66044	99.8	DGLASCRK-CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66044	99.8	RAUBTAP CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65807	99.8	MANDAN - MANDAN 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65807	99.8	MANDAN - MANDAN 7 115.00 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66137	99.8	GARRISON - MAX WELL 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66137	99.8	P12:115:UMZW:# 160 #: MX IN ND.
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65787	99.8	COLLINS7 115.00 - HESKETT 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66000	99.7	GARRISON - VOLTAIRE 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65857	99.7	DGLASCRK-CP7115.00 - L8ORANG 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65857	99.7	GARRISON - L8ORANG 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65857	99.7	P12:115:UMZW:# 169 #: SK IN ND. FAULT ON DOU-SK-GA 115 KV
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65612	99.7	COLLINS7 115.00 - TRNPIKE7 115.00 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66044	99.7	MAKOTI -CP7115.00 - RAUBTAP CP7115.00 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65711	99.7	SQUARE BUTTE - STANTON 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66463	99.7	BEULAH - STANTONTAP 7115.00 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66463	99.7	GARRISON - STANTONTAP 7115.00 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66137	99.7	MAX WELL - NELSON 7 115.00 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66052	99.7	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65978	99.7	BALTA - RAMSEY 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65787	99.7	COLLINS7 115.00 - TRNPIKE7 115.00 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65975	99.6	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65857	99.6	DGLASCRK-CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65857	99.6	MAKOTI -CP7115.00 - RAUBTAP CP7115.00 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65857	99.6	RAUBTAP CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65661	99.6	MANDAN - MANDAN 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65661	99.6	MANDAN - MANDAN 7 115.00 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65755	99.6	NW BISMARCK - TRNPIKE7 115.00 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65522	99.5	SQUARE BUTTE - STANTON 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.75126	99.5	GARRISON - LELAND OLDS 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66044	99.5	MAKOTI -CP7115.00 - PLAZA MW7115.00 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65755	99.5	CENTURY - NW BISMARCK 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66052	99.5	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66052	99.5	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66052	99.5	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65988	99.5	PRAIRIE - RAMSEY 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65838	99.5	MANDAN - MANDAN 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65838	99.5	MANDAN - MANDAN 7 115.00 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65612	99.4	NW BISMARCK - TRNPIKE7 115.00 115KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65920	99.4	GEN657748 1-YOUNG 2 GENERATOR
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65920	99.4	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65920	99.4	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66168	99.4	GARRISON - VOLTAIRE 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66137	99.4	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	99.4	DGLASCRK-CP7115.00 - L8ORANG 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	99.4	GARRISON - L8ORANG 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	99.4	P12:115:UMZW:# 169 #: SK IN ND. FAULT ON DOU-SK-GA 115 KV

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65853	99.4	CENTER - JAMESTOWN 345KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65857	99.3	MAKOTI -CP7115.00 - PARSHALL-MW7115.00 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	99.3	DGLASCRK-CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	99.3	MAKOTI -CP7115.00 - RAUBTAP CP7115.00 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	99.3	RAUBTAP CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65787	99.3	NW BISMARCK - TRNPIKE7 115.00 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65770	99.2	GEN657748 1-YOUNG 2 GENERATOR
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65770	99.2	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65770	99.2	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65920	99.2	CENTER 230/22.0KV TRANSFORMER CKT 1
3	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65920	99.2	GEN657749 1-YOUNG 1 GENERATOR
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65787	99.2	CENTURY - NW BISMARCK 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65575	99.1	BEULAH - MANDAN 7 115.00 115KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66069	99.1	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65434	99.1	DICKINSON - HEBRON 4 230.00 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.75161	99	GARRISON - LELAND OLDS 230KV CKT 1
3	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	99	MAKOTI -CP7115.00 - PLAZA MW7115.00 115KV CKT 1
3	17SP	G16_052	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05343	109.8074	BASE CASE
3	25SP	G16_052	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05022	103.7294	BASE CASE
3	17SP	G16_052	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.11512	108.3898	BASE CASE
3	17SP	G16_052	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.11512	113.8693	BASE CASE
3	17SP	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08630	106.0622	BASE CASE
3	17SP	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08630	102.75	BASE CASE
3	25SP	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08396	102.0308	BASE CASE
3	25SP	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08396	99.2	BASE CASE
3	16WP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11224	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	16WP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11224	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.24992	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.22733	-	2810X2
3	17G	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11367	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17G	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11367	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.11367	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17G	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11267	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17G	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11267	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17G	G16_052	-	Non-Converged Contingency	478.0	526.0	0.08331	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17G	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08331	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17G	G16_052	-	Non-Converged Contingency	732.0	732.0	0.08331	-	BROADLAND - HURON 230KV CKT 1
3	17G	G16_052	-	Non-Converged Contingency	400.0	400.0	0.08331	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17G	G16_052	-	Non-Converged Contingency	319.0	351.0	0.04308	-	ELLENDALE - OAKES 230KV CKT 1
3	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.34542	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.26565	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.25889	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23476	-	2810X2
3	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23476	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23028	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23028	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.22367	-	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	17SP	G16_052	-	Non-Converged Contingency	720.0	792.0	0.13283	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	17SP	G16_052	-	Non-Converged Contingency	720.0	792.0	0.13283	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11738	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11738	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11738	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.11738	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11514	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11514	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	17SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11514	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
3	17SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11514	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11514	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11514	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11514	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11512	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11512	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11184	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.11184	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08630	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	17SP	G16_052	-	Non-Converged Contingency	478.0	526.0	0.08630	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.08630	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17SP	G16_052	-	Non-Converged Contingency	732.0	732.0	0.08630	-	BROADLAND - HURON 230KV CKT 1
3	17SP	G16_052	-	Non-Converged Contingency	400.0	400.0	0.08630	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.05588	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_052	-	Non-Converged Contingency	215.0	236.0	0.05343	-	BISON - HETINGER 230KV CKT 1
3	17SP	G16_052	-	Non-Converged Contingency	384.0	384.0	0.05343	-	BISON - MAURINE 230KV CKT 1
3	17SP	G16_052	-	Non-Converged Contingency	319.0	341.0	0.05174	-	NUNDRWD - WAYSIDE 230KV CKT 1
3	17SP	G16_052	-	Non-Converged Contingency	319.0	351.0	0.04325	-	ELLENDALE - OAKES 230KV CKT 1
3	17SP	G16_052	-	Non-Converged Contingency	478.0	526.0	0.03438	-	BIG STONE - BLAIR 230KV CKT 1
3	20SP	G16_052	-	Non-Converged Contingency	720.0	720.0	0.11854	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	20SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.10200	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.10200	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09312	-	FORBES - ROSEAU 500KV CKT 1
3	20SP	G16_052	-	Non-Converged Contingency	1732.1	1905.3	0.09312	-	RIEL - ROSEAU 500KV CKT 1
3	20SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09312	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
3	20SP	G16_052	-	Non-Converged Contingency	1732.1	2165.1	0.09312	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
3	20SP	G16_052	-	Non-Converged Contingency	705.0	705.0	0.08973	-	BUFFALO - JAMESTOWN 345KV CKT 1
3	25SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23117	-	2810X2
3	25SP	G16_052	-	Non-Converged Contingency	0.0	0.0	0.23117	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	25SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11558	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	25SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11558	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	25SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.11558	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	25SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.10284	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	25SP	G16_052	-	Non-Converged Contingency	717.0	789.0	0.10284	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	25SP	G16_052	-	Non-Converged Contingency	478.0	526.0	0.08396	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	20SP	G16_052	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.12782	104.9586	BASE CASE
3	25SP	G16_052	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.12902	101.2003	BASE CASE
3	17SP	G16_052	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.13283	106.4247	BASE CASE
3	17SP	G16_052	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.13283	107.899	BASE CASE
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67943	124.4787	GARRISON - JAMES TOWN 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67898	124.3262	GARRISON - JAMES TOWN 230KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62415	118.0514	P12:230:UMZB:# 171 #: WB IN ND.
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62415	118.0514	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67444	116.4151	GARRISON - JAMES TOWN 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62678	116.1027	LELAND OLDS - WASHBURN 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62678	116.0544	P12:230:UMZB:# 171 #: WB IN ND.
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62678	116.0544	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62678	115.9416	BISMARK - WASHBURN 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62719	115.4603	LELAND OLDS - WASHBURN 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62719	115.4254	P12:230:UMZB:# 171 #: WB IN ND.
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62719	115.4254	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62719	115.3044	BISMARK - WASHBURN 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66742	112.6526	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	16WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67539	111.7334	GARRISON - JAMES TOWN 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66742	110.159	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67695	109.7473	GARRISON - JAMES TOWN 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64189	109.0712	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64189	109.0712	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66184	108.8099	CENTER - COYOTE 345KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63873	108.4228	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63873	108.4227	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66219	108.4023	CENTER - COYOTE 345KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66445	108.0897	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63054	107.8813	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64162	107.6402	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64162	107.6402	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62137	107.5504	P12:230:UMZB:# 171 #: WB IN ND.
0	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62137	107.5504	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62137	107.5492	LELAND OLDS - WASHBURN 230KV CKT 1
0	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62137	107.4552	BISMARK - WASHBURN 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63115	107.3477	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65309	107.3366	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63086	106.2581	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63054	106.0198	BISMARK - GRANTE FALLS 230KV CKT 1
0	20L	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66456	105.9608	GARRISON - JAMES TOWN 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65503	105.7937	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
0	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65782	105.1208	CENTER - COYOTE 345KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63115	105.0661	BISMARK - GRANTE FALLS 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66575	104.9842	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66170	104.9446	BISON - HETINGER 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66539	104.9184	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65539	104.8617	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66575	104.7859	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66575	104.7817	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64189	104.7806	CENTER - MPC02100TAP4230.00 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66539	104.7734	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66539	104.7717	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63086	104.3549	BISMARK - GRANTE FALLS 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66142	104.3269	LELAND OLDS - STANTON 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66142	104.3269	LELAND OLDS - STANTON 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66170	104.0983	BISON - MAURINE 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66138	104.0979	BISON - HETINGER 230KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66401	103.8231	BEULAH - STANTONTAP 7115.00 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66401	103.8225	GARRISON - STANTONTAP 7115.00 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	103.7779	MALLARD - NELSON 7 115.00 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	103.7778	MALLARD - NELSON 7 115.00 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63873	103.711	CENTER - MPC02100TAP4230.00 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66138	103.5855	BISON - MAURINE 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64162	103.4383	CENTER - MPC02100TAP4230.00 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	103.4095	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66202	103.3239	MALLARD - NELSON 7 115.00 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66202	103.3239	MALLARD - NELSON 7 115.00 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66532	103.2528	BEULAH - STANTONTAP 7115.00 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66532	103.2504	GARRISON - STANTONTAP 7115.00 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65636	103.246	SQUARE BUTTE - STANTON 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66180	103.2151	LELAND OLDS - STANTON 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66180	103.2151	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	103.0887	P12:115:UMZW:# 160 #: MX IN ND.
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65309	103.0638	DICKINSON - HEBRON 4 230.00 230KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	103.0334	GARRISON - MAX WELL 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	102.9704	MAX WELL - NELSON 7 115.00 115KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66235	102.9087	MALLARD - NELSON 7 115.00 115KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66235	102.9087	MALLARD - NELSON 7 115.00 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65712	102.8798	COLLINS7 115.00 - HESKETT 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66103	102.7934	GARRISON - VOLTAIRE 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65503	102.7314	DICKINSON - HEBRON 4 230.00 230KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65712	102.7237	COLLINS7 115.00 - TRNPIKE7 115.00 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66202	102.7042	P12:115:UMZW:# 160 #: MX IN ND.
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	102.6967	P12:115:UMZW:# 169 #: SK IN ND. FAULT ON DOU-SK-GA 115 KV
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	102.6799	GARRISON - L8ORANG 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	102.6724	DGLASCRK-CP7115.00 - L8ORANG 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66202	102.662	GARRISON - MAX WELL 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65761	102.6603	MANDAN - MANDAN 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65761	102.6569	MANDAN - MANDAN 7 115.00 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	102.6528	DGLASCRK-CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	102.6164	RAUBTAP CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66045	102.6073	BALTA - RAMSEY 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66202	102.5988	MAX WELL - NELSON 7 115.00 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65825	102.5806	SQUARE BUTTE - STANTON 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65853	102.5759	COLLINS7 115.00 - HESKETT 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	102.568	MAKOTI -CP7115.00 - RAUBTAP CP7115.00 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	102.5242	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66078	102.451	BALTA - RAMSEY 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66235	102.4358	GARRISON - VOLTAIRE 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65853	102.432	COLLINS7 115.00 - TRNPIKE7 115.00 115KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65885	102.3805	COLLINS7 115.00 - HESKETT 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	102.3517	MAKOTI -CP7115.00 - PARSHALL-MW7115.00 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65904	102.3317	MANDAN - MANDAN 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65904	102.3287	MANDAN - MANDAN 7 115.00 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66055	102.3167	PRAIRIE - RAMSEY 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66235	102.3025	P12:115:UMZW:# 160 #: MX IN ND.
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66568	102.2918	BEULAH - STANTONTAP 7115.00 115KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66568	102.2893	GARRISON - STANTONTAP 7115.00 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	102.2836	P12:115:UMZW:# 169 #: SK IN ND. FAULT ON DOU-SK-GA 115 KV
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66202	102.2829	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	102.2769	GARRISON - L8ORANG 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	102.2717	DGLASCRK-CP7115.00 - L8ORANG 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66100	102.2693	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66235	102.2539	GARRISON - MAX WELL 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65953	102.2517	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	102.2392	DGLASCRK-CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65885	102.2198	COLLINS7 115.00 - TRNPIKE7 115.00 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	102.2146	RAUBTAP CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66134	102.2026	WATERTN-LNX3345.00 - WHITE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66235	102.185	MAX WELL - NELSON 7 115.00 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66100	102.1698	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	102.162	MAKOTI -CP7115.00 - RAUBTAP CP7115.00 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66100	102.1604	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66100	102.1604	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65853	102.127	NW BISMARCK - TRNPIKE7 115.00 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65971	102.1122	MCHENRY (MCHEN230/115) 230/115/12.47KV TRANSFORMER CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66088	102.092	PRAIRIE - RAMSEY 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65936	102.0685	MANDAN - MANDAN 115KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65936	102.0651	MANDAN - MANDAN 7 115.00 115KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66173	102.0243	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66269	102.0073	GARRISON - VOLTAIRE 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	101.9953	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65853	101.9885	CENTURY - NW BISMARCK 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66140	101.9275	MAKOTI -CP7115.00 - PLAZA MW7115.00 115KV CKT 1
0	16WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62237	101.9029	LELAND OLDS - WASHBURN 230KV CKT 1
0	16WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62237	101.8959	P12:230:UMZB:# 171 #: WB IN ND.
0	16WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62237	101.8959	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65885	101.8816	NW BISMARCK - TRNPIKE7 115.00 115KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66235	101.8566	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66134	101.8479	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66134	101.8442	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66134	101.8442	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66172	101.8426	P12:115:UMZW:# 169 #: SK IN ND. FAULT ON DOU-SK-GA 115 KV
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66172	101.8351	GARRISON - L8ORANG 115KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66172	101.8304	DGLASCRK-CP7115.00 - L8ORANG 115KV CKT 1
0	16WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62237	101.8235	BISMARK - WASHBURN 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66172	101.7952	DGLASCRK-CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65539	101.7842	DICKINSON - HEBRON 4 230.00 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66172	101.7683	RAUBTAP CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65885	101.7316	CENTURY - NW BISMARCK 115KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66172	101.711	MAKOTI -CP7115.00 - RAUBTAP CP7115.00 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	101.5205	GEN657748 1-YOUNG 2 GENERATOR
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66051	101.5111	BELFIELD - CHARLIE CREEK 345KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	101.5025	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	101.5008	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66172	101.4974	MAKOTI -CP7115.00 - PLAZA MW7115.00 115KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66058	101.3783	P12:115:UMZB:# 122 #: RUTH IN ND. RUTH TAP
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	101.375	GEN657749 1-YOUNG 1 GENERATOR
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.3748	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.3725	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	101.3569	CENTER 230/22.0KV TRANSFORMER CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.2491	BASE CASE
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.2487	BASE CASE
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.2422	GEN657748 1-YOUNG 2 GENERATOR
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.2263	GEN657749 1-YOUNG 1 GENERATOR
0	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63622	101.2222	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63622	101.2222	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.2063	CENTER 230/22.0KV TRANSFORMER CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65816	101.1585	COAL CREEK - MCHENRY 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	101.0929	GEN657748 1-YOUNG 2 GENERATOR
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	101.0549	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	101.0531	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	100.8884	BASE CASE
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65787	100.8631	ABERDEEN JCT - ELLENDALE 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65962	100.8367	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	100.8063	GEN657749 1-YOUNG 1 GENERATOR
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	100.8043	CENTER 230/22.0KV TRANSFORMER CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.68082	100.6899	GARRISON 230/115KV TRANSFORMER CKT 1
0	20WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62499	100.5878	LELAND OLDS - WASHBURN 230KV CKT 1
0	20WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62499	100.521	P12:230:UMZB:# 171 #: WB IN ND.
0	20WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62499	100.521	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	20WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62499	100.4488	BISMARK - WASHBURN 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65938	100.4131	BROOKING COUNTY - BSSOUTH3 345.00 345KV CKT 1
0	20L	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.61462	100.3969	LELAND OLDS - WASHBURN 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	100.3863	BASE CASE
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65387	100.2758	BISMARK - EAST BISMARCK 115KV CKT 1
0	20L	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.61462	100.2526	P12:230:UMZB:# 171 #: WB IN ND.
0	20L	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.61462	100.2526	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
0	20L	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.61462	100.1717	BISMARK - WASHBURN 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65859	100.0715	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65859	100.0715	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62810	100.0668	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66027	100.0535	NESET 4 230.00 - TANDE 4230.00 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66027	100.0533	TANDE 3345.00 (TANDE KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65967	100	COAL CREEK - MCHENRY 230KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65873	99.9	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65967	99.9	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65515	99.9	BISMARK - EAST BISMARCK 115KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.75244	99.8	GARRISON - LELAND OLDS 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.75119	99.8	GARRISON - LELAND OLDS 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65995	99.8	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65995	99.8	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65993	99.8	FORMAN - OAKES 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65859	99.8	488489510526345.00 - BSSOUTH3 345.00 345KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	99.7	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	99.7	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	99.7	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	99.7	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	99.6	GEN659018 1-G14_003IS_3 0.6900
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	99.6	GEN659018 1-G14_003IS_3 0.6900
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65859	99.6	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66059	99.6	NESET 4 230.00 - TANDE 4230.00 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66059	99.6	TANDE 3345.00 (TANDE KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65052	99.5	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66065	99.5	BLAISDELL 4230.00 (BLAISDL KV2A) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65970	99.5	BROOKING COUNTY - BSSOUTH3 345.00 345KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66080	99.4	BLAISDELL 4230.00 - TIOGA 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66027	99.4	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66027	99.4	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66025	99.4	FORMAN - OAKES 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65999	99.4	COAL CREEK - MCHENRY 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65999	99.4	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
0	20L	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65308	99.3	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65891	99.3	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65891	99.3	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65891	99.3	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
0	16WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65872	99.2	CENTER - COYOTE 345KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65393	99.2	HESKETT - WISHEK 230KV CKT 1
0	20L	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65308	99.2	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20L	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65308	99.2	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.75154	99.2	GARRISON - LELAND OLDS 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	99.2	GEN659018 1-G14_003IS_3 0.6900
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	99.2	RGBYWND4 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66050	99.2	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
0	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62810	99.1	BISMARK - GRANTE FALLS 230KV CKT 1
0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65393	99.1	MERRCRT4 230.00 - WISHEK 230KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	99	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	99	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66018	99	GEN 10648 1-G830_GEN 0.6900
0	17SP	G16_053	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05452	112.4929	BASE CASE
0	17SP	G16_053	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05452	112.4918	BASE CASE
0	25SP	G16_053	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05111	107.2478	BASE CASE
0	20SP	G16_053	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05111	102.072	BASE CASE
0	17SP	G16_053	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.10335	103.5196	BASE CASE
0	17SP	G16_053	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.10335	103.5186	BASE CASE
0	17SP	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08962	109.7316	BASE CASE
0	17SP	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08962	109.7313	BASE CASE
0	25SP	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08723	107.1967	BASE CASE
0	17SP	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08962	105.7454	BASE CASE
0	17SP	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08962	105.7451	BASE CASE
0	17G	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08649	104.5522	BASE CASE
0	25SP	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08723	103.7454	BASE CASE
0	20SP	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08698	103.5593	BASE CASE
0	17G	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08649	101.2968	BASE CASE
0	20SP	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08698	100.5691	BASE CASE
0	16WP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.26532	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	16WP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.24005	-	2810X2
0	16WP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.24005	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	16WP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.18397	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.12003	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	16WP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.12003	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	16WP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.12003	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	16WP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.12003	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	16WP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.10076	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	16WP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.10076	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	16WP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.09199	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	16WP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.09199	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	16WP	G16_053	-	Non-Converged Contingency	478.0	526.0	0.08844	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	16WP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08844	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	16WP	G16_053	-	Non-Converged Contingency	797.0	797.0	0.08844	-	BROADLAND - HURON 230KV CKT 1
0	16WP	G16_053	-	Non-Converged Contingency	400.0	400.0	0.08844	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.46750	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.36455	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.34598	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.25948	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.25948	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.24797	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.24797	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23375	-	2810X2
0	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23375	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.22731	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.22731	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.18227	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	17G	G16_053	-	Non-Converged Contingency	720.0	792.0	0.12399	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	17G	G16_053	-	Non-Converged Contingency	720.0	792.0	0.12399	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11687	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	17G	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11687	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11687	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.11687	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17G	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11366	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11366	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	17G	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11366	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11366	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.10781	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.10781	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	1793.0	1793.0	0.10619	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	717.0	789.0	0.10133	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	717.0	789.0	0.10133	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09773	-	FORBES - ROSEAU 500KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	1732.1	1905.3	0.09773	-	RIEL - ROSEAU 500KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09773	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09773	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	705.0	705.0	0.09312	-	CENTER - JAMESTOWN 345KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	705.0	705.0	0.09279	-	BUFFALO - JAMESTOWN 345KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	720.0	792.0	0.09143	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	717.0	789.0	0.09114	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.09114	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08649	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	17G	G16_053	-	Non-Converged Contingency	478.0	526.0	0.08649	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08649	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	17G	G16_053	-	Non-Converged Contingency	732.0	732.0	0.08649	-	BROADLAND - HURON 230KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	400.0	400.0	0.08649	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_053	-	Non-Converged Contingency	400.0	400.0	0.08649	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_053	-	Non-Converged Contingency	319.0	385.0	0.05310	-	BISON - HETINGER 230KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	400.0	400.0	0.05310	-	BISON - MAURINE 230KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	319.0	341.0	0.05028	-	NUNDRWD - WAYSIDE 230KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	335.0	429.4	0.04942	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	409.0	450.0	0.04541	-	FORMAN - HANKINSON 230KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	409.0	450.0	0.04375	-	FORMAN - OAKES 230KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	319.0	351.0	0.04342	-	ELLENDALE - OAKES 230KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	319.0	351.0	0.04342	-	ELLENDALE - OAKES 230KV CKT 1
0	17G	G16_053	-	Non-Converged Contingency	1206.0	1336.0	0.04266	-	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	17G	G16_053	-	Non-Converged Contingency	1206.0	1336.0	0.04266	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
0	20L	G16_053	-	Non-Converged Contingency	0.0	0.0	0.32757	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	20SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.36079	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	20SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.35758	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	20SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.34791	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	20SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.26094	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.26094	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23839	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	20SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23839	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	20SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23763	-	2810X2
0	20SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23763	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.18040	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11919	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	20SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11919	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11919	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11919	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	20SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11919	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	20SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11881	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11881	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11881	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.10448	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.10448	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09439	-	FORBES - ROSEAU 500KV CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	1732.1	1905.3	0.09439	-	RIEL - ROSEAU 500KV CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09439	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09439	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	705.0	705.0	0.09247	-	CENTER - JAMESTOWN 345KV CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	705.0	705.0	0.09146	-	BUFFALO - JAMESTOWN 345KV CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.09071	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.09071	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.09020	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.09020	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	20SP	G16_053	-	Non-Converged Contingency	478.0	526.0	0.08698	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08698	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	20SP	G16_053	-	Non-Converged Contingency	732.0	732.0	0.08698	-	BROADLAND - HURON 230KV CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	400.0	400.0	0.08698	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	400.0	400.0	0.08698	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_053	-	Non-Converged Contingency	1206.0	1336.0	0.04150	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.47522	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	25SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.36496	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	25SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.36332	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	25SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.34891	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.26168	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	25SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.26168	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	25SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.24331	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	25SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.24331	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	25SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23761	-	2810X2
0	25SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23761	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	25SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.18166	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	25SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.12165	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	25SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.12165	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.12165	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.12165	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	25SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.12165	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	25SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11880	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	25SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11880	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11880	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.11880	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.10516	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.10516	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09487	-	FORBES - ROSEAU 500KV CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09487	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09487	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.09148	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.09148	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.09083	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.09083	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	25SP	G16_053	-	Non-Converged Contingency	720.0	792.0	0.09059	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08723	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	25SP	G16_053	-	Non-Converged Contingency	478.0	526.0	0.08723	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08723	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	25SP	G16_053	-	Non-Converged Contingency	732.0	732.0	0.08723	-	BROADLAND - HURON 230KV CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	400.0	400.0	0.08723	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	400.0	400.0	0.08723	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_053	-	Non-Converged Contingency	1800.0	1980.0	0.06286	-	488489510526345.00 - BSSOUTH3 345.00 345KV CKT 1
0	20SP	G16_053	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.12532	102.7748	BASE CASE
0	17SP	G16_053	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.12689	102.6278	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_053	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.12689	102.6265	BASE CASE
0	17SP	G16_053	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.12689	104.4933	BASE CASE
0	17SP	G16_053	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.12689	104.4921	BASE CASE
2	17SP	G16_053	FROM->TO	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	478.0	526.0	0.08975	100.6065	BASE CASE
2	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67445	115.9071	GARRISON - JAMES TOWN 230KV CKT 1
2	16WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67539	111.9454	GARRISON - JAMES TOWN 230KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65311	108.2068	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63052	107.7516	BISMARK - GRANTE FALLS 230KV CKT 1
2	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62148	106.6976	LELAND OLDS - WASHBURN 230KV CKT 1
2	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62148	106.6834	P12:230:UMZB:# 171 #: WB IN ND.
2	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62148	106.6834	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
2	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62148	106.5922	BISMARK - WASHBURN 230KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	105.1857	MALLARD - NELSON 7 115.00 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	105.1857	MALLARD - NELSON 7 115.00 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66405	104.7311	BEULAH - STANTONTAP 7115.00 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66405	104.7288	GARRISON - STANTONTAP 7115.00 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	104.4459	P12:115:UMZW:# 160 #: MX IN ND.
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	104.3443	GARRISON - MAX WELL 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65311	104.3181	DICKINSON - HEBRON 4 230.00 230KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	104.2775	MAX WELL - NELSON 7 115.00 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65712	104.2718	COLLINS7 115.00 - HESKETT 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66102	104.2521	GARRISON - VOLTAIRE 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65712	104.0844	COLLINS7 115.00 - TRNPIKE7 115.00 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65761	103.859	MANDAN - MANDAN 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65761	103.8558	MANDAN - MANDAN 7 115.00 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	103.8531	P12:115:UMZW:# 169 #: SK IN ND. FAULT ON DOU-SK-GA 115 KV
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	103.8377	DGLASCRK-CP7115.00 - L8ORANG 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	103.8367	GARRISON - L8ORANG 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	103.8082	DGLASCRK-CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	103.7875	RAUBTAP CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	103.7389	MAKOTI -CP7115.00 - RAUBTAP CP7115.00 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	103.6566	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
2	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65777	103.6389	CENTER - COYOTE 345KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65957	103.499	MAKOTI -CP7115.00 - PARSHALL-MW7115.00 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65971	103.4619	MCHENRY (MCHEN230/115) 230/115/12.47KV TRANSFORMER CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65677	103.3088	BEULAH - MANDAN 7 115.00 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65885	102.6076	LEEDS - PLEASANT LK7115.00 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65885	102.6045	P12:115:UMZW:# 168 #: PLL IN ND. FAULT ON LE-PLL-RG 115 KV
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	102.427	BASE CASE
2	16WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62245	101.9256	LELAND OLDS - WASHBURN 230KV CKT 1
2	16WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62245	101.9141	P12:230:UMZB:# 171 #: WB IN ND.
2	16WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62245	101.9141	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.8841	MPC02100TAP4230.00 - MPC2100WIND4230.00 230KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.8678	MPC2100WIND4230.00 230/34.5KV TRANSFORMER CKT 1
2	16WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62245	101.8422	BISMARK - WASHBURN 230KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.6915	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.6893	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.534	GEN657748 1-YOUNG 2 GENERATOR
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65386	101.5144	BISMARK - EAST BISMARCK 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.75210	101.4192	GARRISON - LELAND OLDS 230KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.4021	CENTER 230/22.0KV TRANSFORMER CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	101.3826	GEN657749 1-YOUNG 1 GENERATOR
2	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63622	100.986	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
2	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63622	100.986	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65873	100.2234	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	100	GEN659018 1-G14_003IS_3 0.6900
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65393	99.9	HESKETT - WISHEK 230KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65393	99.8	MERRCRT4 230.00 - WISHEK 230KV CKT 1
2	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62809	99.7	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	99.3	GEN 10648 1-G830_GEN 0.6900
2	16WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65865	99.2	CENTER - COYOTE 345KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	99.2	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65870	99.2	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
2	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65054	99.1	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
2	17SP	G16_053	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05446	115.4161	BASE CASE
2	17SP	G16_053	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.10343	100.5291	BASE CASE
2	17SP	G16_053	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.10343	105.6474	BASE CASE
2	17SP	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08975	110.0846	BASE CASE
2	17SP	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08975	106.0432	BASE CASE
2	17G	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08665	103.9446	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08665	100.9216	BASE CASE
2	16WP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.26569	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	16WP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.24011	-	2810X2
2	16WP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.24011	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	16WP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.18421	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	16WP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.12006	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	16WP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.12006	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	16WP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.12006	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	16WP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.12006	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	16WP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.10085	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	16WP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.10085	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	16WP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.09210	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	16WP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.09210	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	16WP	G16_053	-	Non-Converged Contingency	478.0	526.0	0.08856	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	16WP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08856	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	16WP	G16_053	-	Non-Converged Contingency	797.0	797.0	0.08856	-	BROADLAND - HURON 230KV CKT 1
2	16WP	G16_053	-	Non-Converged Contingency	400.0	400.0	0.08856	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.46789	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.36491	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
2	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.34658	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
2	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.25994	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.25994	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
2	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.24803	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
2	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.24803	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23395	-	2810X2
2	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23395	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.22729	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
2	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.18246	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	17G	G16_053	-	Non-Converged Contingency	720.0	792.0	0.12402	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	17G	G16_053	-	Non-Converged Contingency	720.0	792.0	0.12402	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11697	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	17G	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11697	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11697	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.11697	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17G	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11364	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11364	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11364	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
2	17G	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.10775	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.10775	-	CHISAGO COUNTY - FORBES 500KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	1793.0	1793.0	0.10611	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	717.0	789.0	0.10138	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	717.0	789.0	0.10138	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09767	-	FORBES - ROSEAU 500KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	1732.1	1905.3	0.09767	-	RIEL - ROSEAU 500KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09767	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09767	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	705.0	705.0	0.09299	-	CENTER - JAMESTOWN 345KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	705.0	705.0	0.09266	-	BUFFALO - JAMESTOWN 345KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	720.0	792.0	0.09131	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	717.0	789.0	0.09123	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.09123	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08665	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
2	17G	G16_053	-	Non-Converged Contingency	478.0	526.0	0.08665	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08665	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	17G	G16_053	-	Non-Converged Contingency	732.0	732.0	0.08665	-	BROADLAND - HURON 230KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	400.0	400.0	0.08665	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_053	-	Non-Converged Contingency	400.0	400.0	0.08665	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_053	-	Non-Converged Contingency	335.0	429.4	0.04939	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	409.0	450.0	0.04540	-	FORMAN - HANKINSON 230KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	409.0	450.0	0.04373	-	FORMAN - OAKES 230KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	319.0	351.0	0.04340	-	ELLENDALE - OAKES 230KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	319.0	351.0	0.04340	-	ELLENDALE - OAKES 230KV CKT 1
2	17G	G16_053	-	Non-Converged Contingency	1206.0	1336.0	0.04259	-	CENTER - CNTSHNT3 345.00 345KV CKT Z1
2	17G	G16_053	-	Non-Converged Contingency	1206.0	1336.0	0.04259	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	373.0	373.0	0.65870	-	BISMARK - HILKEN 4 230.00 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.48325	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.37711	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.35900	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.34691	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.32989	-	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.32989	-	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.26925	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.26925	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.25400	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.25400	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.24162	-	2810X2
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.24162	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23128	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23128	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.21993	-	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.18856	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.18856	-	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
2	17SP	G16_053	-	Non-Converged Contingency	400.0	444.0	0.14073	-	CENTER - SQUARE BUTTE 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	720.0	792.0	0.12700	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	17SP	G16_053	-	Non-Converged Contingency	720.0	792.0	0.12700	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.12081	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	17SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.12081	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.12081	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.12081	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11564	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
2	17SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11564	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11564	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
2	17SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11564	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11564	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11564	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11564	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_053	-	Non-Converged Contingency	210.0	210.0	0.11014	-	BISMARK - L3 HAWDON 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	210.0	210.0	0.11014	-	GLENHAM - L3 HAWDON 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	240.0	260.0	0.10996	-	GLENHAM - WHITLOK 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	240.0	260.0	0.10996	-	OAHE - SULLEY BUTTE 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	240.0	260.0	0.10996	-	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
2	17SP	G16_053	-	Non-Converged Contingency	240.0	260.0	0.10996	-	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	720.0	792.0	0.10942	-	SPLIT ROCK - WHITE 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	720.0	792.0	0.10942	-	SPLIT ROCK - WHITE 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.10940	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.10940	-	CHISAGO COUNTY - FORBES 500KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	1793.0	1793.0	0.10912	-	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	1793.0	1793.0	0.10750	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	1793.0	1793.0	0.10750	-	GEN620315 1-BIG STONE GEN
2	17SP	G16_053	-	Non-Converged Contingency	1793.0	1793.0	0.10750	-	GEN657964 1-ASH2GEN9 0.5750
2	17SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.10343	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.10343	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	1792.7	1792.7	0.10206	-	MONTICELLO - WAITE PARK 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09901	-	FORBES - ROSEAU 500KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	1732.1	1905.3	0.09901	-	GEN600000 1-SHERBURNECNTY G1
2	17SP	G16_053	-	Non-Converged Contingency	1732.1	1905.3	0.09901	-	GEN600001 2-SHERBURNE CNTY G2
2	17SP	G16_053	-	Non-Converged Contingency	1732.1	1905.3	0.09901	-	GEN600002 3-SHERBURNE CNTY G3
2	17SP	G16_053	-	Non-Converged Contingency	1732.1	1905.3	0.09901	-	GEN600003 1-PRAIRIE ISLAND G1
2	17SP	G16_053	-	Non-Converged Contingency	1732.1	1905.3	0.09901	-	GEN600004 2-PRAIRIE ISLAND G2
2	17SP	G16_053	-	Non-Converged Contingency	1732.1	1905.3	0.09901	-	GEN600005 1-MONTICELLO
2	17SP	G16_053	-	Non-Converged Contingency	1732.1	1905.3	0.09901	-	GEN600006 1-AS KING
2	17SP	G16_053	-	Non-Converged Contingency	1732.1	1905.3	0.09901	-	RIEL - ROSEAU 500KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09901	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09901	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	956.1	956.1	0.09868	-	ADAMS - MITCHLCO3 345.00 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	705.0	705.0	0.09448	-	CENTER - JAMESTOWN 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.09428	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.09428	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.09428	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.09428	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
2	17SP	G16_053	-	Non-Converged Contingency	705.0	705.0	0.09413	-	BUFFALO - JAMESTOWN 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	720.0	792.0	0.09274	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	1073.0	1195.0	0.09232	-	GEN542951 5-HAWTHORN UNIT #5
2	17SP	G16_053	-	Non-Converged Contingency	1073.0	1195.0	0.09232	-	GEN542955 1-LACYGNE UNIT #1
2	17SP	G16_053	-	Non-Converged Contingency	1073.0	1195.0	0.09232	-	GEN542956 2-LACYGNE UNIT #2
2	17SP	G16_053	-	Non-Converged Contingency	717.0	717.0	0.09192	-	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08975	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
2	17SP	G16_053	-	Non-Converged Contingency	478.0	526.0	0.08975	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08975	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	17SP	G16_053	-	Non-Converged Contingency	732.0	732.0	0.08975	-	BROADLAND - HURON 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_053	-	Non-Converged Contingency	400.0	400.0	0.08975	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	400.0	400.0	0.08975	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08862	-	P13:230-345:NPPD:STEGALL3:KV3A
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08699	-	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
2	17SP	G16_053	-	Non-Converged Contingency	1378.0	1515.4	0.08688	-	HELENA - SHEAS LK3 345.00 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	342.0	342.0	0.08666	-	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	342.0	342.0	0.08666	-	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	1099.0	1195.0	0.08327	-	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	17SP	G16_053	-	Non-Converged Contingency	1099.0	1195.0	0.08327	-	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	17SP	G16_053	-	Non-Converged Contingency	1099.0	1195.0	0.08327	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08168	-	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08144	-	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08144	-	P12:230:UMZW:# 158 #: MH IN ND.
2	17SP	G16_053	-	Non-Converged Contingency	1173.6	1195.0	0.07899	-	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	318.0	350.0	0.07710	-	BISMARK - JAMES TOWN 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	318.0	350.0	0.07699	-	BISMARK - WEBER 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	318.0	350.0	0.07699	-	JAMES TOWN - WEBER 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	864.0	864.0	0.06957	-	HIGHLND 3 345.00 - RAUN 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	318.0	350.0	0.06536	-	FARGO - JAMES TOWN 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	318.0	350.0	0.06394	-	FARGO - JAMES TOWN 230KV CKT 2
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.06314	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	17SP	G16_053	-	Non-Converged Contingency	672.0	773.0	0.05861	-	CENTER (C1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	672.0	773.0	0.05861	-	CENTER (C2) 345/230/13.8KV TRANSFORMER CKT 2
2	17SP	G16_053	-	Non-Converged Contingency	1299.0	1299.0	0.05769	-	GEN514806 1-SOONER UNIT 2
2	17SP	G16_053	-	Non-Converged Contingency	1299.0	1299.0	0.05769	-	GEN515223 1-MUSKOGEE 4G
2	17SP	G16_053	-	Non-Converged Contingency	1299.0	1299.0	0.05769	-	GEN515225 1-MUSKOGEE 5G
2	17SP	G16_053	-	Non-Converged Contingency	800.0	1084.0	0.05635	-	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	1195.1	1195.1	0.05566	-	AS KING - CHISAGO COUNTY 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	215.0	236.0	0.05446	-	BISON - HETINGER 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	384.0	384.0	0.05446	-	BISON - MAURINE 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	318.0	318.0	0.05411	-	GARRISON - JAMES TOWN 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	956.0	956.0	0.05275	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	319.0	341.0	0.05201	-	NUNDRWD - WAYSIDE 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	335.0	429.4	0.05019	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	335.0	429.4	0.05019	-	J290_SUB 230.00 - RUGBY 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	409.0	450.0	0.04559	-	FORMAN - HANKINSON 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	400.0	480.0	0.04431	-	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	409.0	450.0	0.04393	-	FORMAN - OAKES 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	319.0	351.0	0.04358	-	ELLENDALE - OAKES 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	319.0	351.0	0.04358	-	ELLENDALE - OAKES 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	320.0	342.0	0.04349	-	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	320.0	342.0	0.04349	-	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
2	17SP	G16_053	-	Non-Converged Contingency	637.0	641.0	0.04345	-	CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	320.0	352.0	0.04342	-	MOOREHEAD - MORRIS 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	1206.0	1336.0	0.04319	-	CENTER - CNTSHNT3 345.00 345KV CKT Z1
2	17SP	G16_053	-	Non-Converged Contingency	1206.0	1336.0	0.04319	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	336.0	386.0	0.04293	-	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
2	17SP	G16_053	-	Non-Converged Contingency	400.0	400.0	0.04216	-	DRAYTON - PRAIRIE 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	390.0	429.0	0.04187	-	BIG STONE - BROWNS VALLEY 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	296.0	325.0	0.04187	-	BROWNS VALLEY - HANKINSON 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	319.0	351.0	0.04161	-	GRAND FORKS - PICKERT 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	319.0	351.0	0.04161	-	JAMES TOWN - PICKERT 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	280.0	280.0	0.04155	-	AUDUBON - SHEYNNE 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	239.0	299.0	0.04144	-	BOWMAN - HETINGER 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	239.0	299.0	0.04144	-	BOWMAN - RHAME 4 230.00 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	320.0	320.0	0.04130	-	FT RANDAL - FT THOMPSON 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	320.0	320.0	0.04130	-	FT RANDAL - FT THOMPSON 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.04093	-	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
2	17SP	G16_053	-	Non-Converged Contingency	364.0	364.0	0.04084	-	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
2	17SP	G16_053	-	Non-Converged Contingency	364.0	364.0	0.04084	-	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	320.0	352.0	0.04072	-	FARGO - MOOREHEAD 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	318.7	318.7	0.04052	-	FT RANDAL - LAKE PLATT 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	352.0	352.0	0.04052	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	352.0	352.0	0.04052	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	641.0	641.0	0.04014	-	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	288.0	288.0	0.03998	-	KARLSTAD - WINGER 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.03953	-	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
2	17SP	G16_053	-	Non-Converged Contingency	1072.0	1195.0	0.03840	-	GEN300003 1-THOMAS HILL UNIT 3
2	17SP	G16_053	-	Non-Converged Contingency	1173.6	1195.1	0.03728	-	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	400.0	400.0	0.03722	-	PRAIRIE - WINGER 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_053	-	Non-Converged Contingency	305.0	335.5	0.03625	-	AUDUBON - HUBBARD 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	478.0	526.0	0.03545	-	BIG STONE - BLAIR 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	478.0	526.0	0.03545	-	BIG STONE - BLAIR 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	320.0	320.0	0.03501	-	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	368.0	368.0	0.03501	-	KELLY - MEADOWGROVE4230.00 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	319.0	343.0	0.03388	-	ELLENDALE - J316_SUB 230.00 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	319.0	343.0	0.03388	-	J316_SUB 230.00 - TATANKA 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	460.0	460.0	0.03251	-	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	319.0	351.0	0.03229	-	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	956.0	1052.0	0.03226	-	SIDNEY - STEGALL 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	956.0	956.0	0.03176	-	HOSKINS - RAUN 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	956.0	956.0	0.03176	-	HOSKINS - RAUN 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	956.0	956.0	0.03173	-	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	956.0	956.0	0.03157	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	17SP	G16_053	-	Non-Converged Contingency	956.0	956.0	0.03157	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	17SP	G16_053	-	Non-Converged Contingency	187.0	205.7	0.02964	-	BADOURA - HUBBARD 230KV CKT 1
2	17SP	G16_053	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.12700	105.756	BASE CASE
2	17SP	G16_053	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.12700	107.8342	BASE CASE
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67606	122.3186	GARRISON - JAMES TOWN 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67757	120.7584	GARRISON - JAMES TOWN 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67800	120.6392	GARRISON - JAMES TOWN 230KV CKT 1
3	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67305	112.3506	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62274	112.1077	P12:230:UMZB:# 171 #: WB IN ND.
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62274	112.1077	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62532	112.1061	LELAND OLDS - WASHBURN 230KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62274	112.0995	LELAND OLDS - WASHBURN 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62532	112.0378	P12:230:UMZB:# 171 #: WB IN ND.
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62532	112.0378	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62274	112.008	BISMARK - WASHBURN 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62532	111.93	BISMARK - WASHBURN 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62572	111.3188	LELAND OLDS - WASHBURN 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62572	111.2622	P12:230:UMZB:# 171 #: WB IN ND.
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62572	111.2622	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62572	111.1454	BISMARK - WASHBURN 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66596	108.7865	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	16WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67398	108.7249	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65931	108.2	CENTER - COYOTE 345KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66596	107.6641	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66596	107.4415	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.67556	107.1374	GARRISON - JAMES TOWN 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66627	106.7205	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64091	106.6762	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64091	106.6762	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66596	106.6005	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66596	106.5161	2810X2
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66596	106.5055	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66596	106.5029	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66080	106.063	CENTER - COYOTE 345KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66114	105.5794	CENTER - COYOTE 345KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64065	105.0405	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64065	105.0405	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	105.0247	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63772	105.0141	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63772	105.0141	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66342	104.9835	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66342	104.9835	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	104.9831	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	104.9831	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	104.9825	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66342	104.9824	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63024	104.9294	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	104.9079	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	104.9077	BROADLAND - HURON 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	104.9073	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	104.9073	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66574	104.9004	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62958	104.8862	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66342	104.8798	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66342	104.8794	BROADLAND - HURON 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66342	104.8791	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66342	104.8791	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66539	104.8457	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66310	104.8456	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66342	104.7958	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66574	104.7424	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66539	104.7293	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66539	104.7074	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66539	104.7056	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66574	104.4966	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66574	104.4938	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62996	103.8752	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65204	103.5851	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
3	20L	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66326	103.5671	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62958	103.188	BISMARK - GRANTE FALLS 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65399	103.0779	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63024	102.6905	BISMARK - GRANTE FALLS 230KV CKT 1
3	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62003	102.4683	LELAND OLDS - WASHBURN 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64091	102.4358	CENTER - MPC02100TAP4230.00 230KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65869	102.433	G16-044-TAP 345.00 - GROTON 345KV CKT 2
3	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62003	102.3846	P12:230:UMZB:# 171 #: WB IN ND.
3	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62003	102.3846	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
3	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62003	102.3043	BISMARK - WASHBURN 230KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65868	102.0782	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65434	102.0758	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.62996	102.0115	BISMARK - GRANTE FALLS 230KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65868	101.9712	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66022	101.2071	LELAND OLDS - STANTON 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66022	101.2071	LELAND OLDS - STANTON 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66017	101.1111	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66170	100.9707	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65854	100.9395	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65854	100.9395	LELAND OLDS - STANTON 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.64065	100.9241	CENTER - MPC02100TAP4230.00 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66017	100.8898	G16-044-TAP 345.00 - GROTON 345KV CKT 2
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66063	100.8849	BISON - HETINGER 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66031	100.8592	BISON - HETINGER 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66105	100.8586	MALLARD - NELSON 7 115.00 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66105	100.8586	MALLARD - NELSON 7 115.00 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65796	100.8472	BALTA - RAMSEY 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66017	100.8216	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66017	100.8074	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66036	100.7904	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65975	100.6832	MALLARD - NELSON 7 115.00 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65975	100.6832	MALLARD - NELSON 7 115.00 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.63772	100.6684	CENTER - MPC02100TAP4230.00 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66428	100.6682	BEULAH - STANTONTAP 7115.00 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66428	100.6663	GARRISON - STANTONTAP 7115.00 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65806	100.639	PRAIRIE - RAMSEY 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66031	100.5137	BISON - MAURINE 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66049	100.5091	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66063	100.4139	BISON - MAURINE 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66137	100.4	MALLARD - NELSON 7 115.00 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66137	100.4	MALLARD - NELSON 7 115.00 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66049	100.3979	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66298	100.3893	BEULAH - STANTONTAP 7115.00 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66298	100.3869	GARRISON - STANTONTAP 7115.00 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66019	100.3712	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66049	100.3185	G16-044-TAP 345.00 - GROTON 345KV CKT 2
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66049	100.2923	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65674	100.2809	CENTER - COYOTE 345KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66105	100.2425	P12:115:UMZW:# 160 #: MX IN ND.
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66105	100.2034	GARRISON - MAX WELL 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66019	100.1816	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66019	100.1716	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66019	100.1716	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66105	100.1402	MAX WELL - NELSON 7 115.00 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65946	100.1173	BALTA - RAMSEY 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65399	100.0681	DICKINSON - HEBRON 4 230.00 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65755	100.0637	COLLINS7 115.00 - HESKETT 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66058	100.056	LELAND OLDS - STANTON 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66058	100.056	LELAND OLDS - STANTON 230KV CKT 1
3	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66170	100	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.75218	100	GARRISON - LELAND OLDS 230KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65975	100	GARRISON - MAX WELL 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65975	100	P12:115:UMZW:# 160 #: MX IN ND.
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65204	100	DICKINSON - HEBRON 4 230.00 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65956	100	PRAIRIE - RAMSEY 230KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65975	99.9	MAX WELL - NELSON 7 115.00 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66135	99.9	GARRISON - VOLTAIRE 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66044	99.9	DGLASCRK-CP7115.00 - L8ORANG 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66044	99.9	GARRISON - L8ORANG 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66044	99.9	P12:115:UMZW:# 169 #: SK IN ND. FAULT ON DOU-SK-GA 115 KV
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65755	99.9	COLLINS7 115.00 - TRNPIKE7 115.00 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65612	99.8	COLLINS7 115.00 - HESKETT 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66105	99.8	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66044	99.8	DGLASCRK-CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66044	99.8	RAUBTAP CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65807	99.8	MANDAN - MANDAN 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65807	99.8	MANDAN - MANDAN 7 115.00 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66137	99.8	GARRISON - MAX WELL 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66137	99.8	P12:115:UMZW:# 160 #: MX IN ND.
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65787	99.8	COLLINS7 115.00 - HESKETT 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66000	99.7	GARRISON - VOLTAIRE 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65857	99.7	DGLASCRK-CP7115.00 - L8ORANG 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65857	99.7	GARRISON - L8ORANG 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65857	99.7	P12:115:UMZW:# 169 #: SK IN ND. FAULT ON DOU-SK-GA 115 KV
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65612	99.7	COLLINS7 115.00 - TRNPIKE7 115.00 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66044	99.7	MAKOTI -CP7115.00 - RAUBTAP CP7115.00 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65711	99.7	SQUARE BUTTE - STANTON 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66463	99.7	BEULAH - STANTONTAP 7115.00 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66463	99.7	GARRISON - STANTONTAP 7115.00 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66137	99.7	MAX WELL - NELSON 7 115.00 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66052	99.7	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65978	99.7	BALTA - RAMSEY 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65787	99.7	COLLINS7 115.00 - TRNPIKE7 115.00 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65975	99.6	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65857	99.6	DGLASCRK-CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65857	99.6	MAKOTI -CP7115.00 - RAUBTAP CP7115.00 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65857	99.6	RAUBTAP CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65661	99.6	MANDAN - MANDAN 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65661	99.6	MANDAN - MANDAN 7 115.00 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65755	99.6	NW BISMARCK - TRNPIKE7 115.00 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65522	99.5	SQUARE BUTTE - STANTON 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.75126	99.5	GARRISON - LELAND OLDS 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66044	99.5	MAKOTI -CP7115.00 - PLAZA MW7115.00 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65755	99.5	CENTURY - NW BISMARCK 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66052	99.5	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66052	99.5	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66052	99.5	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65988	99.5	PRAIRIE - RAMSEY 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65838	99.5	MANDAN - MANDAN 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65838	99.5	MANDAN - MANDAN 7 115.00 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65612	99.4	NW BISMARCK - TRNPIKE7 115.00 115KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65920	99.4	GEN657748 1-YOUNG 2 GENERATOR
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65920	99.4	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65920	99.4	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66168	99.4	GARRISON - VOLTAIRE 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66137	99.4	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	99.4	DGLASCRK-CP7115.00 - L8ORANG 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	99.4	GARRISON - L8ORANG 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	99.4	P12:115:UMZW:# 169 #: SK IN ND. FAULT ON DOU-SK-GA 115 KV
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65853	99.4	CENTER - JAMESTOWN 345KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65857	99.3	MAKOTI -CP7115.00 - PARSHALL-MW7115.00 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	99.3	DGLASCRK-CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	99.3	MAKOTI -CP7115.00 - RAUBTAP CP7115.00 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	99.3	RAUBTAP CP7115.00 - ROSEGLEN-CP7115.00 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65787	99.3	NW BISMARCK - TRNPIKE7 115.00 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65770	99.2	GEN657748 1-YOUNG 2 GENERATOR
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65770	99.2	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65770	99.2	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65920	99.2	CENTER 230/22.0KV TRANSFORMER CKT 1
3	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65920	99.2	GEN657749 1-YOUNG 1 GENERATOR
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65787	99.2	CENTURY - NW BISMARCK 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65575	99.1	BEULAH - MANDAN 7 115.00 115KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66069	99.1	J290_SUB 230.00 - RUGBY 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.65434	99.1	DICKINSON - HEBRON 4 230.00 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.75161	99	GARRISON - LELAND OLDS 230KV CKT 1
3	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373.0	373.0	0.66075	99	MAKOTI -CP7115.00 - PLAZA MW7115.00 115KV CKT 1
3	17SP	G16_053	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05343	109.8074	BASE CASE
3	25SP	G16_053	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.05022	103.7294	BASE CASE
3	17SP	G16_053	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.11512	108.3898	BASE CASE
3	17SP	G16_053	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.11512	113.8693	BASE CASE
3	17SP	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08630	106.0622	BASE CASE
3	17SP	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08630	102.75	BASE CASE
3	25SP	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08396	102.0308	BASE CASE
3	25SP	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.08396	99.2	BASE CASE
3	16WP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11224	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	16WP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11224	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.24992	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.22733	-	2810X2
3	17G	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11367	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17G	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11367	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.11367	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17G	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11267	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17G	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11267	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17G	G16_053	-	Non-Converged Contingency	478.0	526.0	0.08331	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17G	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08331	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17G	G16_053	-	Non-Converged Contingency	732.0	732.0	0.08331	-	BROADLAND - HURON 230KV CKT 1
3	17G	G16_053	-	Non-Converged Contingency	400.0	400.0	0.08331	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17G	G16_053	-	Non-Converged Contingency	319.0	351.0	0.04308	-	ELLENDALE - OAKES 230KV CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.34542	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.26565	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.25889	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23476	-	2810X2
3	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23476	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23028	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23028	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.22367	-	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	17SP	G16_053	-	Non-Converged Contingency	720.0	792.0	0.13283	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	17SP	G16_053	-	Non-Converged Contingency	720.0	792.0	0.13283	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11738	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11738	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11738	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.11738	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11514	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11514	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11514	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
3	17SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11514	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11514	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11514	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11514	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11512	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11512	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11184	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.11184	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08630	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	17SP	G16_053	-	Non-Converged Contingency	478.0	526.0	0.08630	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.08630	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17SP	G16_053	-	Non-Converged Contingency	732.0	732.0	0.08630	-	BROADLAND - HURON 230KV CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	400.0	400.0	0.08630	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.05588	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	215.0	236.0	0.05343	-	BISON - HETINGER 230KV CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	384.0	384.0	0.05343	-	BISON - MAURINE 230KV CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	319.0	341.0	0.05174	-	NUNDRWD - WAYSIDE 230KV CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	319.0	351.0	0.04325	-	ELLENDALE - OAKES 230KV CKT 1
3	17SP	G16_053	-	Non-Converged Contingency	478.0	526.0	0.03438	-	BIG STONE - BLAIR 230KV CKT 1
3	20SP	G16_053	-	Non-Converged Contingency	720.0	720.0	0.11854	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	20SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.10200	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.10200	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09312	-	FORBES - ROSEAU 500KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_053	-	Non-Converged Contingency	1732.1	1905.3	0.09312	-	RIEL - ROSEAU 500KV CKT 1
3	20SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09312	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
3	20SP	G16_053	-	Non-Converged Contingency	1732.1	2165.1	0.09312	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
3	20SP	G16_053	-	Non-Converged Contingency	705.0	705.0	0.08973	-	BUFFALO - JAMESTOWN 345KV CKT 1
3	25SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23117	-	2810X2
3	25SP	G16_053	-	Non-Converged Contingency	0.0	0.0	0.23117	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	25SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11558	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	25SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11558	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	25SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.11558	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	25SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.10284	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	25SP	G16_053	-	Non-Converged Contingency	717.0	789.0	0.10284	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	25SP	G16_053	-	Non-Converged Contingency	478.0	526.0	0.08396	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	20SP	G16_053	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.12782	104.9586	BASE CASE
3	25SP	G16_053	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.12902	101.2003	BASE CASE
3	17SP	G16_053	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.13283	106.4247	BASE CASE
3	17SP	G16_053	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.13283	107.899	BASE CASE
0	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03143	117.1511	MCCOOL - MOORE 345KV CKT 1
0	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03746	112.8965	G15088_T 345.00 - MOORE 345KV CKT 1
0	20WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03649	106.3779	MCCOOL - MOORE 345KV CKT 1
0	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03167	105.1735	CRETE - FRIEND 115KV CKT 1
0	20WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.04230	104.4782	G15088_T 345.00 - MOORE 345KV CKT 1
0	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03746	103.0007	G15088_T 345.00 - PAULINE 345KV CKT 1
0	17G	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03201	102.2939	MCCOOL - MOORE 345KV CKT 1
0	17G	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03802	100.3294	G15088_T 345.00 - MOORE 345KV CKT 1
0	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.05843	99.2	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.05843	99.2	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_055	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.03196	106.433	G15088_T 345.00 - MOORE 345KV CKT 1
0	16WP	G16_055	-	Non-Converged Contingency	0.0	0.0	0.08524	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	17G	G16_055	-	Non-Converged Contingency	0.0	0.0	0.07405	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17G	G16_055	-	Non-Converged Contingency	0.0	0.0	0.04937	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	25SP	G16_055	-	Non-Converged Contingency	956.09	1051.7	0.07379	-	GEN525561 1-TOLK GEN #1 24 KV
0	25SP	G16_055	-	Non-Converged Contingency	956.09	1051.7	0.07379	-	GEN525562 1-TOLK GEN #2 24 KV
2	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03126	116.8913	MCCOOL - MOORE 345KV CKT 1
2	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03758	112.834	G15088_T 345.00 - MOORE 345KV CKT 1
2	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03166	105.0472	CRETE - FRIEND 115KV CKT 1
2	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03758	103.1936	G15088_T 345.00 - PAULINE 345KV CKT 1
2	17G	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03184	102.0796	MCCOOL - MOORE 345KV CKT 1
2	17G	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03814	100.2942	G15088_T 345.00 - MOORE 345KV CKT 1
2	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.05830	99	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.05830	99	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_055	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.03209	106.398	G15088_T 345.00 - MOORE 345KV CKT 1
2	16WP	G16_055	-	Non-Converged Contingency	0.0	0.0	0.08703	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
3	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03126	117.1481	MCCOOL - MOORE 345KV CKT 1
3	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03758	113.0602	G15088_T 345.00 - MOORE 345KV CKT 1
3	20WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03649	106.6719	MCCOOL - MOORE 345KV CKT 1
3	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03167	105.2853	CRETE - FRIEND 115KV CKT 1
3	20WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.04230	104.7261	G15088_T 345.00 - MOORE 345KV CKT 1
3	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03758	103.3677	G15088_T 345.00 - PAULINE 345KV CKT 1
3	17G	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03184	102.5185	MCCOOL - MOORE 345KV CKT 1
3	17G	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03815	100.6253	G15088_T 345.00 - MOORE 345KV CKT 1
3	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.05830	99.2	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	16WP	G16_055	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.03136	99	CRETE - SHELDON 115KV CKT 1
3	16WP	G16_055	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.03209	106.625	G15088_T 345.00 - MOORE 345KV CKT 1
3	20SP	G16_055	-	Non-Converged Contingency	1792.0	1792.0	0.04925	-	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	25SP	G16_055	-	Non-Converged Contingency	956.09	1051.7	0.07376	-	GEN525561 1-TOLK GEN #1 24 KV
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.06563	132.0544	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.06563	131.9956	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.13236	115.7084	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.22776	107.5416	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.22776	107.5416	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.16349	102.9062	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.16349	102.9062	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.16327	99.4	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28508	155.1081	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28508	155.1081	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28508	144.4695	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28508	144.4695	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26700	139.4948	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26700	131.8853	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25566	127.6091	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27929	126.2169	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25566	125.8663	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27456	125.7356	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27456	125.7356	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25566	125.0574	P12:115:SPS:V15.1.TUCO.INDANA
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25566	124.7606	INDIANA SUB - STANTON SUB 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	124.1537	GEN527166 1-MUSTANG_6 118.000
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29359	123.8128	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29359	123.805	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29359	123.805	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29359	123.7915	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25566	123.4175	P12:115:SPS:V15.1.TUCO.INDANA
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25566	123.1351	INDIANA SUB - STANTON SUB 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25566	120.6969	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	120.4581	GEN527903 1-HOBBS PLANT #3 (ST)
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29359	120.0848	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29359	120.0727	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29359	120.0727	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29359	120.0649	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25566	119.2123	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27456	119.1722	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27456	119.1722	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25566	119.009	P12:115:SPS:V62.1.CRLSLE.INDANA
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25566	118.803	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27929	118.7443	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27917	118.1529	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25566	117.6066	P12:115:SPS:V62.1.CRLSLE.INDANA
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25566	117.4069	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	117.2761	GEN527166 1-MUSTANG_6 118.000
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27917	116.756	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27871	116.4793	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27871	116.4781	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27871	116.4781	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	115.6905	GEN527901 1-HOBBS PLANT #1 (CT)
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27770	115.6871	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	115.2235	GEN527902 1-HOBBS PLANT #2 (CT)
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29300	115.1773	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29300	115.1773	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	115.1175	GEN527903 1-HOBBS PLANT #3 (ST)
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27830	114.5086	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27830	114.5086	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27917	114.1373	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27820	114.1158	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27820	114.1158	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29359	114.0543	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27917	113.1643	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27750	112.9092	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27750	112.9092	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26670	112.7464	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26670	112.7464	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27830	112.5646	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27830	112.5646	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27871	112.5047	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27871	112.504	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27871	112.504	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29300	112.3162	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29300	112.3162	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	112.2121	GEN527901 1-HOBBS PLANT #1 (CT)
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27820	112.1714	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27820	112.1714	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27770	112.17	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27667	112.1355	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27667	112.1355	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27800	112.0698	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27780	112.0434	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27607	112.0254	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27607	112.0254	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	111.7033	GEN527902 1-HOBBS PLANT #2 (CT)
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27653	111.623	P12:115:LCEC:W56.1.HOBBG.LE-LVN
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27701	111.6034	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27701	111.6034	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13696	111.6024	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29359	111.4117	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27679	111.3793	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	111.3765	GEN563132 1-G15078_3 0.3570
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27632	111.3545	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27750	111.3093	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27750	111.3093	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13696	111.2511	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27696	111.1809	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	111.0984	GEN562812 1-G15040_3 0.3570
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29313	111.0009	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29313	111.0009	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27778	110.953	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10733	110.9327	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	110.9228	GEN587423 1-G16-062-GEN10.6900
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27632	110.6552	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	110.6408	GEN563102 1-G15075_3 0.5500
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	110.5718	GEN587393 1-G16-058-GEN10.5500
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27620	110.5074	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27620	110.5074	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27696	110.3889	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27750	109.9687	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27750	109.9687	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27667	109.9541	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27667	109.9541	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27607	109.9463	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27607	109.9463	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27800	109.9346	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27701	109.5101	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27701	109.5101	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27780	109.4641	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27632	109.278	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	109.1786	GEN563132 1-G15078_3 0.3570
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29313	108.9863	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.29313	108.9863	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27778	108.9825	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	108.9435	GEN562812 1-G15040_3 0.3570
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27696	108.9182	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26670	108.8881	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26670	108.8881	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27679	108.8335	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	108.8246	GEN587423 1-G16-062-GEN10.6900
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27750	108.7503	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27750	108.7503	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27632	108.6249	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27653	108.6053	P12:115:LCEC:W56.1.HOBBG.LE-LVN
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	108.5854	2074-CARLISLE INTERCHANGE
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	108.5854	BASE CASE
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	108.5748	GEN563102 1-G15075_3 0.5500
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	108.4473	GEN587393 1-G16-058-GEN10.5500
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10733	107.2863	P12:115:SPS:V15.1.TUCO.INDANA
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10733	107.2336	INDIANA SUB - STANTON SUB 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27782	106.7761	P12:230:AEPW:ELKCITY6:SWEETWT6
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	106.76	GEN640009 1-COOPER NUCLEAR STATION
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	106.6432	BASE CASE
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27652	106.5195	P12:115:SPS:V80.1.DC_STH.LE-WAIT
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27778	106.4543	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27672	106.3694	P12:115:SPS:V49.1.YOAKUM.SHLCO2
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27761	106.2682	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27761	106.2662	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10733	105.7642	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26361	105.5965	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26361	105.5965	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	105.4944	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.23966	105.4603	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13696	104.9605	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27782	104.8547	P12:230:AEPW:ELKCITY6:SWEETWT6
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27652	104.7649	P12:115:SPS:V80.1.DC_STH.LE-WAIT
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13696	104.7627	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27672	104.6722	P12:115:SPS:V49.1.YOAKUM.SHLCO2
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27778	104.5349	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28599	104.5133	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11325	104.3633	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11325	104.3627	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25498	104.3074	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27761	104.3049	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27761	104.3025	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.23966	103.981	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27670	103.7299	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26361	103.7208	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26361	103.7208	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25498	102.9725	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28599	102.577	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10733	102.4289	P12:115:SPS:V15.1.TUCO.INDANA
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10733	102.3836	INDIANA SUB - STANTON SUB 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25498	102.2329	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25498	102.144	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25498	101.0487	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25498	100.9839	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	17SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27942	100.868	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10733	100.7865	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11325	100.2593	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11325	100.259	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25498	99.4	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25498	99.4	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	17SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27942	99.4	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	20SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26641	99.1	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	17SP	G16_056	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06322	111.2423	BASE CASE
0	20SP	G16_056	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06029	106.965	BASE CASE
0	17G	G16_056	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06312	104.3555	BASE CASE
0	20WP	G16_056	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06109	100.6452	BASE CASE
0	16WP	G16_056	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.25219	117.2755	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_056	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22326	113.9417	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_056	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.25219	112.5386	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G16_056	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.25050	107.9528	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17SP	G16_056	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.25050	103.4902	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.32881	197.2146	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.32881	189.9362	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29756	129.0423	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29756	124.2865	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33358	118.6552	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33358	115.7594	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34317	115.1329	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.34317	114.7364	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.16121	111.7808	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.16121	107.7227	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17G	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.23276	102.2735	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.42971	213.0015	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.44169	134.0852	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.24789	123.3294	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.39125	119.8072	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.44389	109.6936	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17G	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.35599	107.108	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_056	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.08427	117.8449	BASE CASE
0	17SP	G16_056	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.08374	113.6626	BASE CASE
0	20L	G16_056	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.09870	117.1249	BASE CASE
0	20WP	G16_056	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12159	109.9811	BASE CASE
0	16WP	G16_056	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.13164	108.8041	BASE CASE
0	17G	G16_056	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12948	107.5286	BASE CASE
0	20L	G16_056	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09870	131.0896	BASE CASE
0	20WP	G16_056	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12159	123.9661	BASE CASE
0	16WP	G16_056	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.13164	122.9494	BASE CASE
0	17G	G16_056	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12948	120.973	BASE CASE
0	17SP	G16_056	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.13115	106.8776	BASE CASE
0	20SP	G16_056	TO->FROM	G15039_T 230.00 - PLANT X STATION 230KV CKT 1	318.7	350.6	0.08427	101.2007	BASE CASE
0	16WP	G16_056	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.25219	106.6944	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_056	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.22326	103.5122	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_056	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.25219	102.1214	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G16_056	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03846	104.9056	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_056	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03766	103.3041	BASE CASE
0	17G	G16_056	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03324	102.2178	BASE CASE
0	25SP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07277	124.4658	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04010	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04010	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.13241	105.4088	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.13241	105.4088	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05406	103.1673	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04785	102.1679	GEN527166 1-MUSTANG_6 118.000
0	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05056	101.3882	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05056	101.3882	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04785	100.4324	GEN527903 1-HOBBS PLANT #3 (ST)
0	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07091	100.3914	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07091	100.3671	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07091	100.3647	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07091	100.3647	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05401	99.4	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G16_056	TO->FROM	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	1011.0	1176.0	0.22315	101.3643	BASE CASE
0	25SP	G16_056	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	159.0	175.0	0.06563	106.2038	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_056	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	159.0	175.0	0.06563	106.1228	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.22776	100	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.22776	100	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.05463	99.4	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.05463	99.4	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1	119.91	119.91	0.07283	101.3863	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_056	FROM->TO	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1	119.91	119.91	0.07283	101.3863	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.20980	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.20980	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.20190	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	1792.0	1792.0	0.19530	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.18891	-	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.18891	-	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	1330.0	1940.0	0.17545	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	1330.0	1940.0	0.17545	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.15941	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.15941	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	16WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.15796	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	987.2	1082.8	0.15704	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	987.16	1082.77	0.12990	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	956.09	1051.7	0.12990	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	1420.0	1775.0	0.09702	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	1420.0	1775.0	0.09702	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	1420.0	1775.0	0.09702	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.07839	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.07839	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	439.0	439.0	0.06704	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	450.0	450.0	0.06704	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	859.0	956.0	0.06175	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	560.0	560.0	0.06175	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_056	-	Non-Converged Contingency	439.0	439.0	0.04058	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17G	G16_056	-	Non-Converged Contingency	0.0	0.0	0.07227	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	17G	G16_056	-	Non-Converged Contingency	0.0	0.0	0.05996	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	17G	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.05211	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	17G	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.05211	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	17G	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.04530	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17G	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.04530	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17G	G16_056	-	Non-Converged Contingency	0.0	0.0	0.03623	-	P12:138:AEPW:REDROCKRD4:WTH_JCT4
0	17G	G16_056	-	Non-Converged Contingency	0.0	0.0	0.03332	-	P12:138:WFEC-AEPW:WASHITA4:CLINTJC4
0	17G	G16_056	-	Non-Converged Contingency	0.0	0.0	0.03243	-	P12:138:AEPW:HOB-JCT4:ELKCTY-4
0	17G	G16_056	-	Non-Converged Contingency	0.0	0.0	0.03196	-	P12:138:AEPW:WTHWF4:WTH_SE4
0	17G	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.02969	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	G16_056	-	Non-Converged Contingency	956.0	1042.0	0.22315	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17SP	G16_056	-	Non-Converged Contingency	956.0	1042.0	0.22315	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.20148	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G16_056	-	Non-Converged Contingency	1792.0	1792.0	0.18538	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.18235	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	17SP	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.18235	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	17SP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.17932	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	G16_056	-	Non-Converged Contingency	1330.0	1940.0	0.15993	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17SP	G16_056	-	Non-Converged Contingency	1330.0	1940.0	0.15993	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_056	-	Non-Converged Contingency	956.1	1051.7	0.14882	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17SP	G16_056	-	Non-Converged Contingency	956.09	1051.7	0.13442	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G16_056	-	Non-Converged Contingency	956.09	1051.7	0.11361	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	G16_056	-	Non-Converged Contingency	478.0	502.0	0.09757	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G16_056	-	Non-Converged Contingency	478.0	502.0	0.09721	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G16_056	-	Non-Converged Contingency	1420.0	1775.0	0.08984	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_056	-	Non-Converged Contingency	318.7	350.6	0.08374	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	17SP	G16_056	-	Non-Converged Contingency	318.7	350.6	0.08374	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	17SP	G16_056	-	Non-Converged Contingency	353.0	353.0	0.04383	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17SP	G16_056	-	Non-Converged Contingency	318.7	350.57	0.03846	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	497.0	547.0	0.24934	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.19232	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	0.0	0.0	0.18619	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G16_056	-	Non-Converged Contingency	560.0	644.0	0.17800	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_056	-	Non-Converged Contingency	560.0	644.0	0.17800	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_056	-	Non-Converged Contingency	560.0	644.0	0.17800	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G16_056	-	Non-Converged Contingency	560.0	644.0	0.17800	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G16_056	-	Non-Converged Contingency	1792.0	1792.0	0.16836	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.16556	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.16556	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.16556	-	OKLAUNION 345KV SWITCHED SHUNT
0	20L	G16_056	-	Non-Converged Contingency	560.0	560.0	0.15511	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.15136	-	CIMARRON - MINCO 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.15136	-	GRACEMONT - MINCO 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.14949	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.14949	-	GEN509403 1-PIRKEY GENERATION
0	20L	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.14949	-	GEN509416 1-TURK GENERATION
0	20L	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.14103	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1792.0	1792.0	0.13241	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1792.0	1792.0	0.13241	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
0	20L	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.13241	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.13241	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20L	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.13241	-	BORDER 7345.00 345KV SWITCHED SHUNT
0	20L	G16_056	-	Non-Converged Contingency	1584.0	2098.0	0.12547	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1584.0	2098.0	0.12547	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	956.1	1051.7	0.12323	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	956.1	1051.7	0.12323	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	956.09	1051.7	0.09874	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	956.09	1051.7	0.09874	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	717.0	789.0	0.09870	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	717.0	789.0	0.09870	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	717.0	789.0	0.09870	-	GEN515040 1-SEMINOLE 1G
0	20L	G16_056	-	Non-Converged Contingency	0.0	0.0	0.09287	-	P12:138:WFEC:MSL03
0	20L	G16_056	-	Non-Converged Contingency	0.0	0.0	0.08955	-	P12:345:SPS:J15.1.XRDS.TOLK
0	20L	G16_056	-	Non-Converged Contingency	956.09	1051.7	0.08745	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	956.09	1051.7	0.08745	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	956.09	1051.7	0.08745	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	956.09	1051.7	0.08745	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	478.0	502.0	0.07872	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.07836	-	ARCADIA - NORTHWEST 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	0.0	0.0	0.07321	-	P12:230:AEPW:ELKCITY6:SWEETWT6
0	20L	G16_056	-	Non-Converged Contingency	478.0	502.0	0.07118	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1561.0	1793.0	0.06650	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1561.0	1793.0	0.06650	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1561.0	1793.0	0.06650	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_056	-	Non-Converged Contingency	1561.0	1793.0	0.06650	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_056	-	Non-Converged Contingency	1192.0	1192.0	0.06614	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	956.0	956.0	0.06614	-	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	478.0	502.0	0.06563	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	478.0	502.0	0.06563	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	478.0	502.0	0.06563	-	BUSHLAND INTERCHANGE 230KV SWITCHED SHUNT
0	20L	G16_056	-	Non-Converged Contingency	318.7	350.57	0.05821	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	318.7	350.57	0.05821	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1420.0	1775.0	0.05784	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1420.0	1775.0	0.05784	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G16_056	-	Non-Converged Contingency	1420.0	1775.0	0.05784	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1420.0	1775.0	0.05784	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_056	-	Non-Converged Contingency	1420.0	1775.0	0.05784	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1420.0	1775.0	0.05784	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G16_056	-	Non-Converged Contingency	318.7	350.6	0.05711	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_056	-	Non-Converged Contingency	318.7	350.6	0.05711	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.05660	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	0.0	0.0	0.05568	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	20L	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.05304	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.05304	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1532.0	1793.0	0.05057	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1532.0	1793.0	0.05057	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20L	G16_056	-	Non-Converged Contingency	1532.0	1793.0	0.05057	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.04934	-	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1792.0	1792.0	0.04919	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1792.0	1792.0	0.04919	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
0	20L	G16_056	-	Non-Converged Contingency	1793.0	1793.0	0.04919	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1716.0	1793.0	0.04919	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	G16_056	-	Non-Converged Contingency	1793.0	1793.0	0.04919	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1716.0	1793.0	0.04919	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	G16_056	-	Non-Converged Contingency	1793.0	1793.0	0.04919	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1716.0	1793.0	0.04919	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_056	-	Non-Converged Contingency	0.0	0.0	0.04919	-	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
0	20L	G16_056	-	Non-Converged Contingency	439.0	439.0	0.04862	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	450.0	450.0	0.04862	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_056	-	Non-Converged Contingency	450.0	450.0	0.04862	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_056	-	Non-Converged Contingency	785.0	785.0	0.04854	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	785.0	785.0	0.04854	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	0.0	0.0	0.04783	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	20L	G16_056	-	Non-Converged Contingency	762.5	762.5	0.04754	-	MINGO - SETAB 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	762.5	762.5	0.04754	-	MINGO - SETAB 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	717.1	717.1	0.04676	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	717.1	717.1	0.04676	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	560.0	560.0	0.04591	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_056	-	Non-Converged Contingency	560.0	560.0	0.04591	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_056	-	Non-Converged Contingency	0.0	0.0	0.04375	-	P12:138:WFEC:MSL14
0	20L	G16_056	-	Non-Converged Contingency	0.0	0.0	0.04148	-	917X
0	20L	G16_056	-	Non-Converged Contingency	1504.0	1792.0	0.04120	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1504.0	1792.0	0.04120	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.04059	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.04059	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20L	G16_056	-	Non-Converged Contingency	1505.0	1793.0	0.04034	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1505.0	1793.0	0.04034	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1505.0	1793.0	0.04034	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	501.95	501.95	0.03868	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	501.95	501.95	0.03868	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	956.0	956.0	0.03778	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	726.6	726.6	0.03704	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	726.6	726.6	0.03704	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1413.0	1517.0	0.03704	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1413.0	1517.0	0.03704	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.03546	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.03546	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.03546	-	OKLAUNION 345KV SWITCHED SHUNT
0	20L	G16_056	-	Non-Converged Contingency	1141.0	1195.0	0.03435	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1141.0	1195.0	0.03435	-	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	1141.0	1195.0	0.03435	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	318.7	350.57	0.03380	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_056	-	Non-Converged Contingency	318.7	350.57	0.03380	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G16_056	-	Non-Converged Contingency	956.0	1042.0	0.21805	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20SP	G16_056	-	Non-Converged Contingency	956.0	1042.0	0.21805	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.18132	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20SP	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.18132	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20SP	G16_056	-	Non-Converged Contingency	956.1	1051.7	0.14935	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	1792.0	1792.0	0.19768	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.19265	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.19265	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.17623	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.16569	-	CIMARRON - MINCO 345KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.16569	-	GRACEMONT - MINCO 345KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	987.2	1082.8	0.15495	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.15408	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	1584.0	2098.0	0.15389	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	1584.0	2098.0	0.15389	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.14922	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.14922	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	G16_056	-	Non-Converged Contingency	987.16	1082.77	0.12653	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	717.0	789.0	0.12159	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	956.09	1051.7	0.11255	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	987.16	1082.77	0.11255	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.07547	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.07547	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	560.0	560.0	0.06424	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	439.0	439.0	0.06109	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	450.0	450.0	0.06109	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	329.05	360.92	0.04328	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	421.0	439.0	0.03876	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20WP	G16_056	-	Non-Converged Contingency	329.05	360.92	0.03429	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	25SP	G16_056	-	Non-Converged Contingency	0.0	0.0	0.16019	-	P12:345:SPS:J02.1.TOLK.EDDY
0	25SP	G16_056	-	Non-Converged Contingency	0.0	0.0	0.05856	-	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	25SP	G16_056	-	Non-Converged Contingency	0.0	0.0	0.03550	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06257	120.1031	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06257	120.0955	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06257	115.3634	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06257	115.3549	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05734	107.2039	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05734	107.1896	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03109	104.2339	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03109	104.2278	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03109	104.0911	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03109	104.0728	P12:230:SPS:K37.1.TOLK.LAMB
0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05734	102.9011	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05734	102.8836	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
0	25SP	G16_056	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.12586	104.2168	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G16_056	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.12586	104.166	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G16_056	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.08300	104.0555	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_056	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.08300	104.0254	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06264	125.9821	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06264	118.5504	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06264	115.2219	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06264	108.9635	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06264	107.2665	P12:115:SPS:T71.1.CRLSLE.YUMA
0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06264	105.2662	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1
0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06264	102.0623	P12:115:SPS:T71.1.CRLSLE.YUMA
0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.06264	100.1746	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.06239	123.8338	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.06239	123.8338	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.12654	104.6153	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.16199	101.4541	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26937	148.7448	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26937	148.7448	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26937	138.4514	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26937	138.4514	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26226	135.8101	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26226	128.2279	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27816	124.8306	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24382	122.6788	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26534	121.377	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26534	121.377	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24382	121.1426	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24382	119.9963	P12:115:SPS:V15.1.TUCO.INDANA
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24382	119.8657	INDIANA SUB - STANTON SUB 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27816	119.3497	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28255	119.2999	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28255	119.2999	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28255	119.2885	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28255	119.2878	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24382	118.5642	P12:115:SPS:V15.1.TUCO.INDANA
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24382	118.4407	INDIANA SUB - STANTON SUB 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26534	116.51	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26534	116.51	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28255	116.2765	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28255	116.2765	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28255	116.2702	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28255	116.2698	P12:230:LPL:K39.1.CRLSLE.LP-MLWK

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24382	115.8497	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27036	115.4574	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24382	114.5544	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26939	114.0895	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24382	114.0383	P12:115:SPS:V62.1.CRLSLE.INDANA
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24382	113.9569	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	113.1778	GEN527166 1-MUSTANG_6 118.000
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24382	112.8286	P12:115:SPS:V62.1.CRLSLE.INDANA
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24382	112.7492	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26939	112.3517	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27036	112.213	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13569	111.8377	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13569	111.8377	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	111.5706	GEN525561 1-TOLK GEN #1 24 KV
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26939	111.2902	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	110.5402	GEN527903 1-HOBBS PLANT #3 (ST)
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26658	110.4485	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26658	110.4485	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28255	110.118	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26939	110.1009	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26656	110.0808	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26656	110.0808	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	109.998	GEN527166 1-MUSTANG_6 118.000
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10582	109.5686	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	109.0035	GEN527901 1-HOBBS PLANT #1 (CT)
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26806	108.9977	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26703	108.7584	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27705	108.7391	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27705	108.7391	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26658	108.7343	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26658	108.7343	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26649	108.7267	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26649	108.7267	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	108.6747	GEN525561 1-TOLK GEN #1 24 KV
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25661	108.4955	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25661	108.4955	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	108.4823	GEN527902 1-HOBBS PLANT #2 (CT)
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26656	108.365	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26656	108.365	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	108.3162	GEN527903 1-HOBBS PLANT #3 (ST)
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28255	107.7349	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26638	107.6267	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26638	107.6267	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26687	107.6044	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26687	107.6044	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26666	107.5467	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26612	107.0768	P12:115:LCEC:W56.1.HOBBG.LE-LVN
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	107.07	GEN563132 1-G15078_3 0.3570
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26806	106.9711	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	106.9469	GEN527901 1-HOBBS PLANT #1 (CT)
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	106.9155	GEN563102 1-G15075_3 0.5500
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	106.8288	GEN562812 1-G15040_3 0.3570
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26649	106.7917	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26649	106.7917	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26703	106.7846	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26695	106.7777	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26666	106.7234	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27705	106.6426	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27705	106.6426	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	106.4754	GEN527902 1-HOBBS PLANT #2 (CT)
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10582	105.9019	P12:115:SPS:V15.1.TUCO.INDANA
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10582	105.8757	INDIANA SUB - STANTON SUB 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26638	105.7829	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26638	105.7829	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26687	105.627	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26687	105.627	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26666	105.5141	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25661	105.2708	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25661	105.2708	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	105.1522	GEN563132 1-G15078_3 0.3570

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	105.0805	GEN563102 1-G15075_3 0.5500
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26612	105.0284	P12:115:LCEC:W56.1.HOBBG.LE-LVN
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26695	105.0255	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13569	105.0193	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13569	105.0193	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	104.952	GEN562812 1-G15040_3 0.3570
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	104.8889	BASE CASE
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10582	104.4356	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11199	104.1725	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11199	104.1725	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	103.1547	BASE CASE
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27114	102.7497	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26612	102.7066	P12:115:SPS:V80.1.DC_STH.LE-WAIT
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26714	102.5953	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26714	102.5935	P12:LPL:SPS:K64.1.LP-SE.LUBBS
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	102.5287	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	102.4879	P12:115:SPS:V49.1.YOAKUM.SHLCO2
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25357	102.2946	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25357	102.2946	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26612	101.1371	P12:115:SPS:V80.1.DC_STH.LE-WAIT
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10582	101.0533	P12:115:SPS:V15.1.TUCO.INDANA
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10582	101.0319	INDIANA SUB - STANTON SUB 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27114	101.0098	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	100.9742	P12:115:SPS:V49.1.YOAKUM.SHLCO2
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	100.9236	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26714	100.8352	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26714	100.8335	P12:LPL:SPS:K64.1.LP-SE.LUBBS
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25357	100.6116	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25357	100.6116	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24474	100.5827	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11199	99.8	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11199	99.8	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
2	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24474	99.4	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
2	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10582	99.4	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	17SP	G16_056	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06590	113.9867	BASE CASE
2	20SP	G16_056	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06277	110.7777	BASE CASE
2	17G	G16_056	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06312	104.3556	BASE CASE
2	20WP	G16_056	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06112	99.1	BASE CASE
2	17SP	G16_056	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.31035	103.9462	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_056	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.04592	99.7	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20SP	G16_056	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.30557	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20L	G16_056	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.03860	99.3	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_056	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.25224	117.0258	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G16_056	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22336	112.9654	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G16_056	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.25224	112.441	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	G16_056	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22336	108.3696	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17SP	G16_056	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24555	108.1247	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17SP	G16_056	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24555	103.6738	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29759	122.5534	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29759	118.7382	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33359	115.9388	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33359	113.406	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30217	112.2087	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30217	110.2344	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.16121	108.0357	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30087	107.0133	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.16121	106.4735	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30087	104.9152	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.39629	126.3303	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.39509	117.4113	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.24789	115.1136	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.39128	110.5121	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.44390	105.6091	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G16_056	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.07131	102.4471	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	16WP	G16_056	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.07131	101.7764	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	20WP	G16_056	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12163	109.7093	BASE CASE
2	16WP	G16_056	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.13165	108.7418	BASE CASE
2	17G	G16_056	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12948	107.5286	BASE CASE
2	20WP	G16_056	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12163	123.7856	BASE CASE
2	16WP	G16_056	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.13165	122.9306	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_056	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12948	120.973	BASE CASE
2	17SP	G16_056	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12710	105.8511	BASE CASE
2	16WP	G16_056	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.25224	106.376	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G16_056	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.22336	102.3425	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G16_056	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.25224	101.9464	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_056	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03324	102.2178	BASE CASE
2	25SP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05929	114.0091	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.05092	104.8862	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09581	100.313	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.09581	100.313	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G16_056	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	159.0	175.0	0.06239	99.1	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G16_056	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	159.0	175.0	0.06239	99.1	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_056	FROM->TO	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1	119.91	119.91	0.06728	99.5	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_056	FROM->TO	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1	119.91	119.91	0.06728	99.5	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.20984	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.20984	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.20193	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	1792.0	1792.0	0.19534	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.18895	-	CIMARRON - MINCO 345KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.18895	-	GRACEMONT - MINCO 345KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	1330.0	1940.0	0.17547	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	1330.0	1940.0	0.17547	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.15943	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.15943	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	16WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.15800	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	987.2	1082.8	0.15708	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	987.16	1082.77	0.12993	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	956.09	1051.7	0.12993	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	1420.0	1775.0	0.09704	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	859.0	956.0	0.08404	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	560.0	560.0	0.08404	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.07841	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.07841	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	439.0	439.0	0.06705	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	16WP	G16_056	-	Non-Converged Contingency	450.0	450.0	0.06705	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_056	-	Non-Converged Contingency	478.0	502.0	0.71112	-	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	497.0	547.0	0.28750	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.21321	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	560.0	644.0	0.20911	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_056	-	Non-Converged Contingency	560.0	644.0	0.20911	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.20185	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.20185	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.19515	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.19515	-	GEN509403 1-PIRKEY GENERATION
2	17G	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.19515	-	GEN509404 1-WELSH #1
2	17G	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.19515	-	GEN509406 1-WELSH #3
2	17G	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.19515	-	GEN509416 1-TURK GENERATION
2	17G	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.19515	-	GEN511848 1-SOUTHWESTERN STATION #3
2	17G	G16_056	-	Non-Converged Contingency	1792.0	1792.0	0.18370	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	560.0	560.0	0.18284	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.18278	-	CIMARRON - MINCO 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.18278	-	GRACEMONT - MINCO 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1330.0	1940.0	0.16914	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1330.0	1940.0	0.16914	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1792.0	1792.0	0.15294	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1792.0	1792.0	0.15294	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
2	17G	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.15294	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.15294	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	17G	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.15157	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	956.1	1051.7	0.14660	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	717.0	789.0	0.12948	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	717.0	789.0	0.12948	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	956.09	1051.7	0.11877	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	956.09	1051.7	0.11877	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1420.0	1775.0	0.09640	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1420.0	1775.0	0.09640	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1420.0	1775.0	0.09640	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1561.0	1793.0	0.08918	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1561.0	1793.0	0.08918	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.08846	-	ARCADIA - NORTHWEST 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_056	-	Non-Converged Contingency	318.7	350.57	0.07980	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.07297	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.07297	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	478.0	502.0	0.07286	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1532.0	1793.0	0.07093	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1532.0	1793.0	0.07093	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	G16_056	-	Non-Converged Contingency	1532.0	1793.0	0.07093	-	G1524G1525 345.00 - WICHITA 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1532.0	1793.0	0.07093	-	G1524G1525 345.00 - WICHITA 345KV CKT 2
2	17G	G16_056	-	Non-Converged Contingency	1532.0	1793.0	0.07093	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	G16_056	-	Non-Converged Contingency	478.0	502.0	0.06575	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.06456	-	CIMARRON - DRAPER LAKE 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	439.0	439.0	0.06312	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	450.0	450.0	0.06312	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_056	-	Non-Converged Contingency	878.0	956.0	0.06210	-	BENTON - WICHITA 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1793.0	1793.0	0.06150	-	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1793.0	1793.0	0.06150	-	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1792.0	1792.0	0.06051	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1792.0	1792.0	0.06051	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
2	17G	G16_056	-	Non-Converged Contingency	1793.0	1793.0	0.06051	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1716.0	1793.0	0.06051	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	G16_056	-	Non-Converged Contingency	1793.0	1793.0	0.06051	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1716.0	1793.0	0.06051	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G16_056	-	Non-Converged Contingency	1793.0	1793.0	0.06051	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1716.0	1793.0	0.06051	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_056	-	Non-Converged Contingency	1792.0	1792.0	0.06051	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1792.0	1792.0	0.06051	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 2
2	17G	G16_056	-	Non-Converged Contingency	318.7	350.57	0.05943	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1192.0	1192.0	0.05829	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	956.0	956.0	0.05829	-	G15063_T 345.00 - WOODRING 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.05767	-	GEN520947 1-HUGO1
2	17G	G16_056	-	Non-Converged Contingency	717.1	717.1	0.05638	-	HOLCOMB - SETAB 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.05584	-	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1039.0	1195.0	0.05556	-	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	762.5	762.5	0.05525	-	MINGO - SETAB 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	785.0	785.0	0.05495	-	MINGO - RED WILLOW 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	318.7	350.6	0.05488	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	318.7	350.6	0.05488	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	560.0	644.0	0.04984	-	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G16_056	-	Non-Converged Contingency	1505.0	1793.0	0.04935	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1505.0	1793.0	0.04935	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1505.0	1793.0	0.04935	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	726.6	726.6	0.04871	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1413.0	1517.0	0.04871	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	501.95	501.95	0.04789	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	560.0	560.0	0.04731	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1035.0	1035.0	0.04724	-	G14_001T 345.00 - WICHITA 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1141.0	1195.0	0.04680	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1141.0	1195.0	0.04680	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1504.0	1792.0	0.04666	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1504.0	1792.0	0.04666	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.04530	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	560.0	644.0	0.04335	-	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_056	-	Non-Converged Contingency	318.7	350.57	0.04092	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	685.0	796.0	0.04069	-	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
2	17G	G16_056	-	Non-Converged Contingency	717.0	789.0	0.04016	-	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	1022.0	1143.0	0.03791	-	PITTSBURG - VALLIANT 345KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	343.79	343.79	0.03726	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	439.0	439.0	0.03712	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	502.0	502.0	0.03712	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	500.0	723.0	0.03712	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	560.0	560.0	0.03400	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_056	-	Non-Converged Contingency	560.0	560.0	0.03400	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G16_056	-	Non-Converged Contingency	318.7	350.57	0.03324	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
2	17G	G16_056	-	Non-Converged Contingency	502.0	502.0	0.03176	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
2	17SP	G16_056	-	Non-Converged Contingency	956.0	1042.0	0.20238	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20L	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.03546	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G16_056	-	Non-Converged Contingency	1792.0	1792.0	0.19778	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20WP	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.19272	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G16_056	-	Non-Converged Contingency	1022.0	1124.0	0.19272	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.17629	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.16577	-	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G16_056	-	Non-Converged Contingency	987.2	1082.8	0.15504	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.15417	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	20WP	G16_056	-	Non-Converged Contingency	1584.0	2098.0	0.15394	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	20WP	G16_056	-	Non-Converged Contingency	1584.0	2098.0	0.15394	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	20WP	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.14928	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	20WP	G16_056	-	Non-Converged Contingency	1792.0	1972.0	0.14928	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	20WP	G16_056	-	Non-Converged Contingency	987.16	1082.77	0.12661	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.07551	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	20WP	G16_056	-	Non-Converged Contingency	1195.0	1195.0	0.07551	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G16_056	-	Non-Converged Contingency	439.0	439.0	0.06112	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	20WP	G16_056	-	Non-Converged Contingency	450.0	450.0	0.06112	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	25SP	G16_056	-	Non-Converged Contingency	0.0	0.0	0.23093	-	P12:345:SPS:J02.1.TOLK.EDDY
2	25SP	G16_056	-	Non-Converged Contingency	0.0	0.0	0.03532	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
2	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06109	117.6151	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06109	117.6151	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06109	113.1066	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06109	113.1065	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05474	104.1679	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
2	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05474	104.1679	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
2	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03037	104.0057	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
2	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03037	103.9776	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03037	103.9776	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03037	103.9776	P12:230:SPS:K37.1.TOLK.LAMB
2	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05474	100	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
2	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05474	100	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
2	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05994	122.7214	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
2	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05994	115.6948	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
2	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05994	111.9828	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
2	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05994	105.9999	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
2	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05994	103.6938	P12:115:SPS:T71.1.CRLSLE.YUMA
2	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05994	102.0768	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.06217	123.6438	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.06217	123.6438	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.12615	104.3654	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26822	144.4934	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26822	144.4934	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26184	137.1427	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26822	134.4786	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26822	134.4786	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26184	129.3082	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27669	120.8492	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	118.9192	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26469	118.1075	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26469	118.1075	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	117.7839	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	117.7769	P12:345:SPS:J14.1.EDDY.XRDS
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	117.6291	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	117.6291	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	117.3285	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	116.2274	P12:115:SPS:V15.1.TUCO.INDANA
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	116.0899	INDIANA SUB - STANTON SUB 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28172	115.6785	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28172	115.6785	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28172	115.6666	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28172	115.6661	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27669	115.4472	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	114.7388	P12:115:SPS:V15.1.TUCO.INDANA
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	114.6065	INDIANA SUB - STANTON SUB 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26469	113.7131	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26469	113.7131	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13554	113.192	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13554	113.192	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	113.0062	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	113.0011	P12:345:SPS:J14.1.EDDY.XRDS
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	112.9322	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	112.9322	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28172	112.7143	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28172	112.7143	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28172	112.7076	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28172	112.7073	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	112.061	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	111.1621	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	110.71	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10568	110.5433	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26864	110.415	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	110.2477	P12:115:SPS:V62.1.CRLSLE.INDANA
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	110.1605	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	109.1582	GEN527166 1-MUSTANG_6 118.000
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26864	109.1208	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	108.9848	P12:115:SPS:V62.1.CRLSLE.INDANA
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	108.9006	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	108.7096	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	108.213	GEN525561 1-TOLK GEN #1 24 KV
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26864	108.0206	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	107.4183	GEN527903 1-HOBBS PLANT #3 (ST)
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26864	106.9044	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10568	106.8219	P12:115:SPS:V15.1.TUCO.INDANA
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10568	106.8103	INDIANA SUB - STANTON SUB 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	106.7493	GEN527166 1-MUSTANG_6 118.000
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28172	106.5686	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26566	106.5477	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26566	106.5477	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26565	106.2139	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26565	106.2139	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13554	106.0646	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13554	106.0646	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	106.0422	GEN525561 1-TOLK GEN #1 24 KV
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	105.8779	GEN527901 1-HOBBS PLANT #1 (CT)
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26728	105.6662	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11185	105.504	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11185	105.504	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26573	105.4458	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26573	105.4458	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	105.333	GEN527902 1-HOBBS PLANT #2 (CT)
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26621	105.266	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10568	105.2626	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	105.2508	GEN527903 1-HOBBS PLANT #3 (ST)
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	104.8952	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26566	104.7704	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26566	104.7704	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27602	104.6651	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27602	104.6651	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26565	104.4379	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26565	104.4379	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26888	104.3027	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25585	104.3015	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25585	104.3015	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26589	104.2591	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26609	104.2335	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26609	104.2335	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28172	104.2011	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26558	104.1825	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26558	104.1825	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	103.8402	GEN527901 1-HOBBS PLANT #1 (CT)
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	103.803	GEN563132 1-G15078_3 0.3570
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26533	103.7037	P12:115:LCEC:W56.1.HOBBG.LE-LVN
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26728	103.6436	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	103.5632	GEN563102 1-G15075_3 0.5500
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	103.5544	GEN562812 1-G15040_3 0.3570
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26573	103.5109	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26573	103.5109	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26589	103.4154	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26589	103.3584	LYNTEGAR REC-CLAUENE - LYNTEGAR REC-LEVELLAND 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	103.3269	GEN527902 1-HOBBS PLANT #2 (CT)
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26621	103.2934	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26573	103.2931	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	103.1602	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27602	102.5443	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27602	102.5443	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26888	102.5246	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26558	102.3289	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26558	102.3289	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26609	102.2594	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26609	102.2594	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26589	102.2268	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	101.8778	GEN563132 1-G15078_3 0.3570
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10568	101.8392	P12:115:SPS:V15.1.TUCO.INDANA
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10568	101.8325	INDIANA SUB - STANTON SUB 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25585	101.7585	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25585	101.7585	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	101.7397	GEN563102 1-G15075_3 0.5500
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26533	101.6804	P12:115:LCEC:W56.1.HOBBG.LE-LVN
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	101.6694	GEN562812 1-G15040_3 0.3570
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26573	101.5451	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26589	101.5439	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	101.4978	BASE CASE
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11185	100.8133	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11185	100.8133	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
3	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10568	100.2945	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	99.7	BASE CASE
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26533	99.3	P12:115:SPS:V80.1.DC_STH.LE-WAIT
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26635	99.2	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26635	99.2	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	99.1	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	99.1	P12:115:SPS:V49.1.YOAKUM.SHLCO2
3	17G	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.44649	219.0037	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.44649	218.7841	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38776	212.6842	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38776	212.3523	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.41449	206.7258	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.41449	206.6	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.45946	198.5451	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.45946	197.214	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.17752	191.4449	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.42333	191.0186	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.17752	189.1503	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.42333	188.8782	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.41961	182.2433	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.41961	180.1336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25029	177.7676	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25029	176.0572	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.43192	128.2336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.43192	124.1314	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21072	101.3834	P12:345:SPS:J02.1.TOLK.EDDY
3	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21072	100.9638	P12:345:SPS:J02.1.TOLK.EDDY
3	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26226	100.7674	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26226	100.7674	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26226	100.7674	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26226	100.7674	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26226	100.6264	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26226	100.6264	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26226	100.6264	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26226	100.6264	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27413	100.4252	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27413	100.4252	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27413	100.4252	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27413	100.4252	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27413	100.4196	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27413	100.4196	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27413	100.4196	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27413	100.4196	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	17G	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.52672	205.8094	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.46157	191.8466	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.48878	182.1676	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.26026	175.8259	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.48519	170.544	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.48009	165.6022	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.53997	158.3084	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.36938	157.2462	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.49495	130.4315	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_056	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.07155	102.99	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G16_056	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.07155	102.3933	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	25SP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05811	114.4952	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04685	100.4251	P12:345:SPS:J15.1.XRDS.TOLK
3	25SP	G16_056	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	159.0	175.0	0.06217	99	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_056	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	159.0	175.0	0.06217	99	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03126	145.2846	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03126	145.2816	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03043	108.9888	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03043	108.9184	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03043	108.8972	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03043	108.8972	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03104	106.8774	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
3	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03104	106.8544	P12:230:LPL:K26.1.JONES.LP-HOLLY
3	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03104	106.7727	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03104	106.7727	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	17G	G16_056	-	Non-Converged Contingency	3975.0	4570.0	0.39133	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	20L	G16_056	-	Non-Converged Contingency	3975.0	4570.0	0.33389	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06109	117.4855	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06109	117.4855	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06109	113.0243	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06109	113.0243	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05459	104.5285	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
3	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05459	104.5285	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
3	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	104.2469	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
3	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	104.2191	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	104.2191	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	104.2191	P12:230:SPS:K37.1.TOLK.LAMB
3	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05459	100.4058	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
3	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05459	100.4058	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
3	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	99.1	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
3	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	99.1	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	99.1	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	99.1	P12:230:SPS:K37.1.TOLK.LAMB
3	25SP	G16_056	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.08224	100.3388	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
3	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05976	123.4727	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
3	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05976	116.4174	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
3	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05976	112.751	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
3	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05976	106.7004	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
3	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05976	104.2947	P12:115:SPS:T71.1.CRLSLE.YUMA
3	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05976	102.8341	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1
3	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05976	99.2	P12:115:SPS:T71.1.CRLSLE.YUMA
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.06216	123.5209	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.06216	123.5209	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.12615	104.1799	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26822	144.3473	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26822	144.3473	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26184	137.0001	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26822	134.2951	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26822	134.2951	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26184	129.1788	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27668	120.7509	P12:345:SPS:J15.1.XRDS.TOLK
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	118.7631	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26469	117.9922	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26469	117.9922	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	117.6369	P12:345:SPS:J14.1.EDDY.XRDS
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	117.6297	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	117.5133	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	117.5133	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	117.1805	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	116.0713	P12:115:SPS:V15.1.TUCO.INDANA
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	115.9345	INDIANA SUB - STANTON SUB 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28171	115.5382	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28171	115.5382	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28171	115.5264	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28171	115.5258	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27668	115.3543	P12:345:SPS:J15.1.XRDS.TOLK
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	114.5907	P12:115:SPS:V15.1.TUCO.INDANA
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	114.4591	INDIANA SUB - STANTON SUB 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26469	113.6006	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26469	113.6006	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13554	113.1543	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13554	113.1543	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	112.9068	P12:345:SPS:J14.1.EDDY.XRDS
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	112.9055	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	112.8216	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	112.8216	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28171	112.5803	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28171	112.5803	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28171	112.5736	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28171	112.5733	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	111.9044	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	111.0786	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	110.562	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10568	110.5018	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26863	110.2877	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	110.0919	P12:115:SPS:V62.1.CRLSLE.INDANA
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	110.0021	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	109.0227	GEN527166 1-MUSTANG_6 118.000
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26863	108.9921	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	108.8363	P12:115:SPS:V62.1.CRLSLE.INDANA
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24297	108.75	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26958	108.6147	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	108.0446	GEN525561 1-TOLK GEN #1 24 KV
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26863	107.8983	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	107.2728	GEN527903 1-HOBBS PLANT #3 (ST)
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26863	106.7811	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10568	106.7723	P12:115:SPS:V15.1.TUCO.INDANA
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10568	106.7623	INDIANA SUB - STANTON SUB 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	106.6173	GEN527166 1-MUSTANG_6 118.000
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28171	106.4273	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26566	106.3985	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26566	106.3985	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26565	106.0654	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26565	106.0654	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13554	106.0318	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13554	106.0318	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	105.882	GEN525561 1-TOLK GEN #1 24 KV
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	105.7366	GEN527901 1-HOBBS PLANT #1 (CT)
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26727	105.5353	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11185	105.4517	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11185	105.4517	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26572	105.3151	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26572	105.3151	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10568	105.2181	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	105.193	GEN527902 1-HOBBS PLANT #2 (CT)
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26621	105.1276	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	105.1102	GEN527903 1-HOBBS PLANT #3 (ST)
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	104.8676	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26566	104.6279	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26566	104.6279	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27601	104.4941	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27601	104.4941	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26565	104.2961	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26565	104.2961	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26888	104.186	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25585	104.172	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25585	104.172	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26588	104.1266	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26609	104.1012	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26609	104.1012	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28171	104.0659	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26558	104.0459	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26558	104.0459	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	103.7047	GEN527901 1-HOBBS PLANT #1 (CT)
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	103.6678	GEN563132 1-G15078_3 0.3570
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26533	103.5707	P12:115:LCEC:W56.1.HOBBG.LE-LVN
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26727	103.5182	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	103.4298	GEN563102 1-G15075_3 0.5500

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	103.4173	GEN562812 1-G15040_3 0.3570
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26572	103.3859	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26572	103.3859	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26588	103.2829	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26588	103.226	LYNTEGAR REC-CLAUENE - LYNTEGAR REC-LEVELLAND 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	103.1927	GEN527902 1-HOBBS PLANT #2 (CT)
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26621	103.1622	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26572	103.1622	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	103.135	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26888	102.4108	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27601	102.3817	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27601	102.3817	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26558	102.198	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26558	102.198	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26609	102.132	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26609	102.132	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26588	102.1	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10568	101.7925	P12:115:SPS:V15.1.TUCO.INDANA
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10568	101.7863	INDIANA SUB - STANTON SUB 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	101.7486	GEN563132 1-G15078_3 0.3570
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25585	101.6351	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25585	101.6351	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	101.6107	GEN563102 1-G15075_3 0.5500
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26533	101.5527	P12:115:LCEC:W56.1.HOBBG.LE-LVN
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	101.5378	GEN562812 1-G15040_3 0.3570
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26572	101.4202	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26588	101.417	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	101.3635	BASE CASE
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11185	100.76	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11185	100.76	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
4	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10568	100.2461	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	99.6	BASE CASE
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26532	99.2	P12:115:SPS:V80.1.DC_STH.LE-WAIT
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26635	99.1	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26635	99.1	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26551	99	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
4	17G	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.44612	219.2477	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.44612	218.9034	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38736	212.5533	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38736	212.4877	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.41399	206.5319	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.41399	206.4431	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.45905	198.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.45905	197.0767	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.17754	191.5691	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.42290	191.0175	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.17754	189.0637	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.42290	188.7404	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.41911	181.83	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.41911	179.8003	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25031	177.5857	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25031	175.8792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.43139	128.3207	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.43139	124.1778	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21043	101.1639	P12:345:SPS:J02.1.TOLK.EDDY
4	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21043	100.7499	P12:345:SPS:J02.1.TOLK.EDDY
4	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26180	100.5697	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26180	100.5697	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26180	100.5697	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26180	100.5697	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26180	100.3504	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26180	100.3504	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26180	100.3504	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26180	100.3504	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27356	100.1644	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27356	100.1644	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27356	100.1644	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27356	100.1644	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27356	100.1193	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27356	100.1193	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27356	100.1193	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27356	100.1193	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	17G	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.52666	205.5105	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.46149	191.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.48869	182.0402	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.26026	175.8195	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.48510	170.4128	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.47999	165.4035	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.53990	158.2063	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.36938	157.178	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.49485	130.4862	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_056	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.07155	103.0572	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G16_056	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.07155	102.4534	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	25SP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05810	114.2489	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04683	100.3275	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03126	145.377	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03126	145.3632	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03043	108.9202	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03043	108.8874	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03043	108.8663	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03043	108.8663	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03104	106.8551	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
4	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03104	106.8483	P12:230:LPL:K26.1.JONES.LP-HOLLY
4	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03104	106.7494	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03104	106.7494	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	17G	G16_056	-	Non-Converged Contingency	3975.0	4570.0	0.38729	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	20L	G16_056	-	Non-Converged Contingency	3975.0	4570.0	0.32992	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06109	117.4776	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06109	117.4776	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06109	113.0162	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06109	113.0162	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05458	104.4905	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
4	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05458	104.4905	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
4	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	104.2691	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
4	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	104.2392	LAMB COUNTY INTERCHANGE (WH_ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	104.2392	LAMB COUNTY INTERCHANGE (WH_ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	104.2392	P12:230:SPS:K37.1.TOLK.LAMB
4	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05458	100.3658	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
4	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05458	100.3658	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
4	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	99.1	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
4	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	99.1	LAMB COUNTY INTERCHANGE (WH_ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	99.1	LAMB COUNTY INTERCHANGE (WH_ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	99.1	P12:230:SPS:K37.1.TOLK.LAMB
4	25SP	G16_056	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.08223	100	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
4	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05976	123.4275	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
4	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05976	116.3719	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
4	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05976	112.6763	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
4	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05976	106.6498	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
4	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05976	104.2497	P12:115:SPS:T71.1.CRLSLE.YUMA
4	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05976	102.7905	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1
4	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05976	99.1	P12:115:SPS:T71.1.CRLSLE.YUMA
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.06215	123.4542	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.06215	123.4542	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.12613	104.0718	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26815	144.4574	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26815	144.4574	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26182	136.9029	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26815	134.4484	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26815	134.4484	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26182	129.0847	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27660	120.8826	P12:345:SPS:J15.1.XRDS.TOLK
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24292	118.9077	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26465	118.0957	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26465	118.0957	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26953	117.7364	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26953	117.7295	P12:345:SPS:J14.1.EDDY.XRDS
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26953	117.6065	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26953	117.6065	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24292	117.3219	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24292	116.2161	P12:115:SPS:V15.1.TUCO.INDANA

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24292	116.0797	INDIANA SUB - STANTON SUB 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28166	115.6714	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28166	115.6714	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28166	115.6595	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28166	115.659	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27660	115.4973	P12:345:SPS:J15.1.XRDS.TOLK
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24292	114.7323	P12:115:SPS:V15.1.TUCO.INDANA
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24292	114.601	INDIANA SUB - STANTON SUB 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26465	113.7016	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26465	113.7016	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13554	113.1263	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13554	113.1263	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26953	113.008	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26953	113.0029	P12:345:SPS:J14.1.EDDY.XRDS
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26953	112.9186	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26953	112.9186	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28166	112.7108	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28166	112.7108	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28166	112.7041	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28166	112.7038	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24292	112.0513	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26953	111.2325	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24292	110.7049	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10567	110.472	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26859	110.4071	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24292	110.2372	P12:115:SPS:V62.1.CRLSLE.INDANA
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24292	110.151	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	109.1161	GEN527166 1-MUSTANG_6 118.000
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26859	109.1131	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24292	108.9787	P12:115:SPS:V62.1.CRLSLE.INDANA
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.24292	108.8955	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26953	108.7622	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	108.0981	GEN525561 1-TOLK GEN #1 24 KV
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26859	108.0164	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	107.3888	GEN527903 1-HOBBS PLANT #3 (ST)
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26859	106.9004	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10567	106.7356	P12:115:SPS:V15.1.TUCO.INDANA
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10567	106.7257	INDIANA SUB - STANTON SUB 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	106.7139	GEN527166 1-MUSTANG_6 118.000
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28166	106.5611	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26560	106.5417	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26560	106.5417	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26559	106.2078	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26559	106.2078	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13554	106.0039	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13554	106.0039	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	105.9363	GEN525561 1-TOLK GEN #1 24 KV
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	105.8492	GEN527901 1-HOBBS PLANT #1 (CT)
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26723	105.6613	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26568	105.4393	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26568	105.4393	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11184	105.43	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11184	105.43	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	105.3071	GEN527902 1-HOBBS PLANT #2 (CT)
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26616	105.2567	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	105.2255	GEN527903 1-HOBBS PLANT #3 (ST)
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10567	105.1912	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26628	105.0133	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26560	104.7692	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26560	104.7692	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27595	104.6524	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27595	104.6524	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26559	104.4366	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26559	104.4366	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26884	104.3044	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25580	104.2923	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25580	104.2923	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26584	104.2517	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26604	104.2259	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26604	104.2259	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.28166	104.1972	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26553	104.1752	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26553	104.1752	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	103.8156	GEN527901 1-HOBBS PLANT #1 (CT)
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	103.7876	GEN563132 1-G15078_3 0.3570
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26528	103.6971	P12:115:LCEC:W56.1.HOBBG.LE-LVN
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26723	103.6423	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	103.5553	GEN563102 1-G15075_3 0.5500
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	103.5392	GEN562812 1-G15040_3 0.3570
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26568	103.508	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26568	103.508	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26584	103.4088	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26584	103.3519	LYNTEGAR REC-CLAUENE - LYNTEGAR REC-LEVELLAND 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	103.3051	GEN527902 1-HOBBS PLANT #2 (CT)
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26616	103.2901	TOLK STATION TAP - TOLK STATION WEST 230KV CKT @1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26568	103.2874	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26628	103.2795	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27595	102.5361	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27595	102.5361	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26884	102.5275	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26553	102.3252	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26553	102.3252	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26604	102.2557	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26604	102.2557	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26584	102.2229	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	101.8662	GEN563132 1-G15078_3 0.3570
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10567	101.7567	P12:115:SPS:V15.1.TUCO.INDANA
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25580	101.7528	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25580	101.7528	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10567	101.7507	INDIANA SUB - STANTON SUB 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	101.7347	GEN563102 1-G15075_3 0.5500
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26528	101.6773	P12:115:LCEC:W56.1.HOBBG.LE-LVN
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	101.658	GEN562812 1-G15040_3 0.3570
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26568	101.5435	HOCKLEY COUNTY INTERCHANGE - Lamb County REC-Opdyke Sub 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26584	101.5408	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	101.492	BASE CASE
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11184	100.7411	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11184	100.7411	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
5	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10567	100.2052	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	99.7	BASE CASE
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26528	99.3	P12:115:SPS:V80.1.DC_STH.LE-WAIT
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	99.2	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26630	99.2	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	99.1	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
5	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26546	99.1	P12:115:SPS:V49.1.YOAKUM.SHLCO2
5	17G	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.44391	217.7095	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.44391	216.9825	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38560	211.2861	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.38560	210.7754	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.41179	204.8525	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.41179	204.7326	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.45667	196.7495	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.45667	195.2293	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.17793	189.9854	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.42062	189.7734	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.17793	187.4536	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.42062	187.2532	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.41687	180.5705	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.41687	178.2726	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25081	176.2821	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.25081	174.3386	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.42901	127.7475	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.42901	123.5792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20922	100.1792	P12:345:SPS:J02.1.TOLK.EDDY
5	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20922	99.8	P12:345:SPS:J02.1.TOLK.EDDY
5	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26047	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
5	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26047	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
5	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26047	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
5	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26047	99	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
5	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26047	99	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26047	99	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
5	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26047	99	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
5	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.26047	99	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
5	17G	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.52598	204.5119	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.46097	190.5492	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.48796	181.3291	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.26039	175.1034	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.48437	169.7873	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.47928	164.743	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.53917	157.4925	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.36950	156.5482	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.49407	130.3275	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_056	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.07157	103.0311	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	16WP	G16_056	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.07157	102.4344	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	25SP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05804	114.1042	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.04659	100.4572	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03126	145.3503	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03126	145.3476	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03043	108.9188	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03043	108.886	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03043	108.8649	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03043	108.8649	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03104	106.8535	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
5	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03104	106.8304	P12:230:LPL:K26.1.JONES.LP-HOLLY
5	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03104	106.7478	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03104	106.7478	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06109	117.4734	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06109	117.4734	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06109	113.012	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06109	113.012	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05458	104.4545	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
5	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05458	104.4545	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
5	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	104.2587	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
5	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	104.2309	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	104.2309	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	104.2309	P12:230:SPS:K37.1.TOLK.LAMB
5	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05458	100.3296	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
5	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05458	100.3296	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
5	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	99.1	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
5	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	99.1	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	99.1	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03029	99.1	P12:230:SPS:K37.1.TOLK.LAMB
5	25SP	G16_056	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.08221	99.9	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
5	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05975	123.3778	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
5	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05975	116.3242	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
5	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05975	112.6255	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
5	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05975	106.6009	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
5	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05975	104.1983	P12:115:SPS:T71.1.CRLSLE.YUMA
5	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05975	102.7392	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1
5	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05975	99.1	P12:115:SPS:T71.1.CRLSLE.YUMA
6	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.06216	123.254	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159.0	160.0	0.12600	103.7131	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26166	136.613	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26166	128.8535	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25481	122.2386	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25481	122.2386	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25481	117.1192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25481	117.1192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13554	113.106	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10565	110.3985	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
6	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10565	106.6507	INDIANA SUB - STANTON SUB 115KV CKT 1
6	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.13554	106.0126	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.23167	105.5429	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
6	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11182	105.3856	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
6	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10565	105.1434	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.23167	104.5324	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27168	104.3025	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27168	104.3025	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27168	104.2919	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27168	104.2915	P12:230:LPL:K39.1.CRLSLE.LP-MLWK

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26501	103.228	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.23167	102.8644	P12:115:SPS:V15.1.TUCO.INDANA
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.23167	102.7945	INDIANA SUB - STANTON SUB 115KV CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27168	102.0669	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27168	102.0669	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27168	102.061	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.27168	102.0608	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.23167	101.9392	P12:115:SPS:V15.1.TUCO.INDANA
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.23167	101.873	INDIANA SUB - STANTON SUB 115KV CKT 1
6	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10565	101.7005	INDIANA SUB - STANTON SUB 115KV CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26501	101.4423	CRAWFISH_DR 345.00 - YOAKUM_345 345.00 345KV CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26501	101.3468	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25411	100.8683	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25411	100.8683	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
6	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.11182	100.7162	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
6	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.10565	100.1405	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.26501	99.7	CRAWFISH_DR 345.00 - YOAKUM_345 345.00 345KV CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25984	99.7	P12:345:SPS:J02.1.TOLK.EDDY
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25411	99.1	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
6	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.25411	99.1	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
6	25SP	G16_056	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05753	113.6007	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03126	145.6657	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03043	108.792	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03043	108.7382	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03103	106.7814	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
6	25SP	G16_056	FROM->TO	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1	100.0	100.0	0.03103	106.6536	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06141	117.7718	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
6	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06141	113.4127	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
6	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05457	104.3702	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
6	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03037	104.3318	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
6	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03037	104.3045	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.05457	100.3213	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
6	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03037	99.2	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
6	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.03037	99.2	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05977	123.3648	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
6	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05977	116.379	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
6	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05977	112.5937	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
6	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05977	106.6319	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
6	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.05977	102.7295	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1
0	20WP	G16_057	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.22292	116.0597	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	20L	G16_057	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.24632	114.2537	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	16WP	G16_057	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.24048	108.5156	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	20SP	G16_057	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.22252	101.8434	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	17SP	G16_057	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.23612	101.0434	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	17G	G16_057	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.24832	100.6367	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03217	109.6733	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05271	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05271	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05328	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05328	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03607	107.0835	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	104.4987	BASE CASE
0	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03217	104.4902	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06917	104.3491	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06999	103.6936	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05256	103.443	BASE CASE
0	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03607	102.1688	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	101.4903	GEN587433 1-G16-063-GEN10.6900
0	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05256	100.7184	GEN587433 1-G16-063-GEN10.6900
0	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05126	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05126	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	99.9	GEN509416 1-TURK GENERATION
0	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99.8	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99.5	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99.3	917X
0	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05345	99.3	P12:138:WFEC:MSL03
0	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05500	99.3	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05256	99.3	GEN509403 1-PIRKEY GENERATION
0	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05256	99.1	GEN509416 1-TURK GENERATION
0	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	99	GEN501801 1-DOLET HILLS UNIT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05500	99	G15066_T 345.00 - SOONER 345KV CKT 1
0	20WP	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.32060	113.1187	CIMARRON - NORTHWEST 345KV CKT 1
0	20L	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.34572	111.0109	CIMARRON - NORTHWEST 345KV CKT 1
0	20WP	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.37711	108.4165	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20WP	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.37711	106.3897	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.39477	104.7591	G15063_T 345.00 - WOODRING 345KV CKT 1
0	16WP	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.34346	104.3356	CIMARRON - NORTHWEST 345KV CKT 1
0	20L	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.39477	102.7019	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20WP	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.32331	102.6351	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.33992	100.4536	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20WP	G16_057	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.22317	115.4637	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	20L	G16_057	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.24651	113.8729	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	16WP	G16_057	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.24081	108.0239	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	20SP	G16_057	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.22278	101.4726	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	17SP	G16_057	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.23645	100.6881	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	17G	G16_057	FROM->TO	CIMARRON - NORTHWEST 345KV CKT 1	956.0	956.0	0.24862	100.1359	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05327	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05327	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03218	108.9982	CIMARRON - MINCO 345KV CKT 1
2	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05271	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05271	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03605	107.7486	CIMARRON - MINCO 345KV CKT 1
2	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06998	104.6637	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	104.4426	BASE CASE
2	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	104.1902	BASE CASE
2	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06917	104.0601	CIMARRON - DRAPER LAKE 345KV CKT 1
2	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03218	103.8546	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03605	102.8482	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	101.6398	GEN587433 1-G16-063-GEN10.6900
2	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	101.2449	GEN587433 1-G16-063-GEN10.6900
2	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05500	100.27	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	100.2225	GEN509403 1-PIRKEY GENERATION
2	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	100.1495	GEN509416 1-TURK GENERATION
2	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05500	100	G15066_T 345.00 - SOONER 345KV CKT 1
2	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05218	100	PITTSBURG - VALLIANT 345KV CKT 1
2	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05218	100	PITTSBURG - VALLIANT 345KV CKT 1
2	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05125	99.9	PITTSBURG - VALLIANT 345KV CKT 1
2	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05125	99.9	PITTSBURG - VALLIANT 345KV CKT 1
2	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05500	99.8	917X
2	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	99.6	GEN509416 1-TURK GENERATION
2	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99.5	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05461	99.3	P12:138:WFEC:MSL03
2	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99.2	G15066_T 345.00 - SOONER 345KV CKT 1
2	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	99.1	GEN501801 1-DOLET HILLS UNIT1
2	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99	917X
2	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05344	99	P12:138:WFEC:MSL03
2	20WP	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.32096	112.711	CIMARRON - NORTHWEST 345KV CKT 1
2	20L	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.34598	110.7311	CIMARRON - NORTHWEST 345KV CKT 1
2	20WP	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.37717	107.8324	G15063_T 345.00 - WOODRING 345KV CKT 1
2	20WP	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.37717	105.8222	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	20L	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.39466	104.4033	G15063_T 345.00 - WOODRING 345KV CKT 1
2	16WP	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.34382	103.9763	CIMARRON - NORTHWEST 345KV CKT 1
2	20L	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.39466	102.3646	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	20WP	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.32358	102.3046	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20L	G16_057	FROM->TO	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1	1195.0	1195.0	0.34003	100.2417	CIMARRON - DRAPER LAKE 345KV CKT 1
3	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05327	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
3	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05327	109.1478	PITTSBURG - SEMINOLE 345KV CKT 1
3	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03218	108.9982	CIMARRON - MINCO 345KV CKT 1
3	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05271	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
3	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05271	108.9502	PITTSBURG - SEMINOLE 345KV CKT 1
3	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03605	107.7487	CIMARRON - MINCO 345KV CKT 1
3	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06998	104.6637	CIMARRON - DRAPER LAKE 345KV CKT 1
3	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	104.4426	BASE CASE
3	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	104.1902	BASE CASE
3	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.06917	104.0601	CIMARRON - DRAPER LAKE 345KV CKT 1
3	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03218	103.8546	GRACEMONT - MINCO 345KV CKT 1
3	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03605	102.8481	GRACEMONT - MINCO 345KV CKT 1
3	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	101.6398	GEN587433 1-G16-063-GEN10.6900
3	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	101.2449	GEN587433 1-G16-063-GEN10.6900
3	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05500	100.27	CLEVELAND - G15066_T 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	100.2225	GEN509403 1-PIRKEY GENERATION
3	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	100.1495	GEN509416 1-TURK GENERATION
3	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05500	100	G15066_T 345.00 - SOONER 345KV CKT 1
3	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05218	100	PITTSBURG - VALLIANT 345KV CKT 1
3	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05218	100	PITTSBURG - VALLIANT 345KV CKT 1
3	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05125	99.9	PITTSBURG - VALLIANT 345KV CKT 1
3	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05125	99.9	PITTSBURG - VALLIANT 345KV CKT 1
3	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05500	99.8	917X
3	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05157	99.6	GEN509416 1-TURK GENERATION
3	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99.5	CLEVELAND - G15066_T 345.00 345KV CKT 1
3	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05461	99.3	P12:138:WFEC:MSL03
3	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99.2	G15066_T 345.00 - SOONER 345KV CKT 1
3	20WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05254	99.1	GEN501801 1-DOLET HILLS UNIT1
3	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05411	99	917X
3	16WP	G16_057	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05344	99	P12:138:WFEC:MSL03
0	17SP	G16_058	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06306	111.2423	BASE CASE
0	20SP	G16_058	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06012	106.965	BASE CASE
0	17G	G16_058	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06332	104.3555	BASE CASE
0	20WP	G16_058	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06107	100.6452	BASE CASE
0	16WP	G16_058	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24840	117.2755	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_058	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22176	113.9417	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_058	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24840	112.5386	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G16_058	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24737	107.9528	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17SP	G16_058	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24737	103.4902	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30105	197.2146	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30105	189.9362	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20121	129.0423	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20121	124.2865	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20049	118.6552	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20049	115.7594	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31541	115.1329	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31541	114.7364	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.36028	213.0015	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.37225	134.0852	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.26335	119.8072	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.25757	109.6936	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_058	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.10043	117.8449	BASE CASE
0	17SP	G16_058	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.10304	113.6626	BASE CASE
0	20L	G16_058	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.09796	117.1249	BASE CASE
0	20WP	G16_058	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12085	109.9811	BASE CASE
0	16WP	G16_058	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12962	108.8041	BASE CASE
0	17G	G16_058	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12746	107.5286	BASE CASE
0	20L	G16_058	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09796	131.0896	BASE CASE
0	20WP	G16_058	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12085	123.9661	BASE CASE
0	16WP	G16_058	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12962	122.9494	BASE CASE
0	17G	G16_058	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12746	120.973	BASE CASE
0	17SP	G16_058	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12974	106.8776	BASE CASE
0	20SP	G16_058	TO->FROM	G15039_T 230.00 - PLANT X STATION 230KV CKT 1	318.7	350.6	0.10043	101.2007	BASE CASE
0	16WP	G16_058	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24840	106.6944	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_058	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.22176	103.5122	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_058	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24840	102.1214	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G16_058	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04176	104.9056	BASE CASE
0	20SP	G16_058	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03975	103.3041	BASE CASE
0	17G	G16_058	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03590	102.2178	BASE CASE
0	17SP	G16_058	TO->FROM	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	1011.0	1176.0	0.21888	101.3643	BASE CASE
0	16WP	G16_058	-	Non-Converged Contingency	1022.0	1124.0	0.20248	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	1022.0	1124.0	0.20248	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.19940	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.19089	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.18609	-	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.18609	-	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.18374	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	1330.0	1940.0	0.17605	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	1330.0	1940.0	0.17605	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	987.2	1082.8	0.16461	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.15032	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.15032	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	16WP	G16_058	-	Non-Converged Contingency	987.16	1082.77	0.13260	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	956.09	1051.7	0.13260	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	1420.0	1775.0	0.09895	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_058	-	Non-Converged Contingency	1420.0	1775.0	0.09895	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	1420.0	1775.0	0.09895	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.08965	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.08965	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	439.0	439.0	0.06723	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	450.0	450.0	0.06723	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_058	-	Non-Converged Contingency	439.0	439.0	0.04388	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17G	G16_058	-	Non-Converged Contingency	0.0	0.0	0.07234	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	17G	G16_058	-	Non-Converged Contingency	0.0	0.0	0.05890	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	17G	G16_058	-	Non-Converged Contingency	0.0	0.0	0.03616	-	P12:138:AEPW:REDROCKRD4:WTH_JCT4
0	17G	G16_058	-	Non-Converged Contingency	0.0	0.0	0.03404	-	P12:138:WFEC-AEPW:WASHITA4:CLINTJC4
0	17G	G16_058	-	Non-Converged Contingency	0.0	0.0	0.03285	-	P12:138:AEPW:HOB-JCT4:ELKCTY-4
0	17G	G16_058	-	Non-Converged Contingency	0.0	0.0	0.03189	-	P12:138:AEPW:WTHWF4:WTH_SE4
0	17SP	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.30617	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G16_058	-	Non-Converged Contingency	956.0	1042.0	0.21888	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17SP	G16_058	-	Non-Converged Contingency	956.0	1042.0	0.21888	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.17993	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.17697	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	17SP	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.17697	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	17SP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.17402	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	G16_058	-	Non-Converged Contingency	1330.0	1940.0	0.15893	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17SP	G16_058	-	Non-Converged Contingency	1330.0	1940.0	0.15893	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17SP	G16_058	-	Non-Converged Contingency	956.1	1051.7	0.15515	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17SP	G16_058	-	Non-Converged Contingency	956.09	1051.7	0.13711	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G16_058	-	Non-Converged Contingency	478.0	502.0	0.11623	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G16_058	-	Non-Converged Contingency	956.09	1051.7	0.11588	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	G16_058	-	Non-Converged Contingency	318.7	350.6	0.10304	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	17SP	G16_058	-	Non-Converged Contingency	318.7	350.6	0.10304	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	17SP	G16_058	-	Non-Converged Contingency	478.0	502.0	0.10022	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G16_058	-	Non-Converged Contingency	1420.0	1775.0	0.09128	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_058	-	Non-Converged Contingency	353.0	353.0	0.04798	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17SP	G16_058	-	Non-Converged Contingency	318.7	350.57	0.04176	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.40806	-	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.26630	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	0.0	0.0	0.18814	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.16674	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.16369	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1022.0	1124.0	0.16300	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1022.0	1124.0	0.16300	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1022.0	1124.0	0.16300	-	OKLAUNION 345KV SWITCHED SHUNT
0	20L	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.15021	-	CIMARRON - MINCO 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.15021	-	GRACEMONT - MINCO 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.14895	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.14895	-	GEN509403 1-PIRKEY GENERATION
0	20L	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.14895	-	GEN509416 1-TURK GENERATION
0	20L	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.12878	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
0	20L	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.12877	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.12877	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.12877	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20L	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.12877	-	BORDER 7345.00 345KV SWITCHED SHUNT
0	20L	G16_058	-	Non-Converged Contingency	956.1	1051.7	0.12718	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	956.1	1051.7	0.12718	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1584.0	2098.0	0.12553	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1584.0	2098.0	0.12553	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	0.0	0.0	0.10838	-	P12:345:SPS:J15.1.XRDS.TOLK
0	20L	G16_058	-	Non-Converged Contingency	717.0	926.0	0.10109	-	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	956.09	1051.7	0.09978	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	956.09	1051.7	0.09978	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	717.0	789.0	0.09796	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	717.0	789.0	0.09796	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	717.0	789.0	0.09796	-	GEN515040 1-SEMINOLE 1G
0	20L	G16_058	-	Non-Converged Contingency	0.0	0.0	0.09232	-	P12:138:WFEC:MSL03
0	20L	G16_058	-	Non-Converged Contingency	956.09	1051.7	0.08837	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	956.09	1051.7	0.08837	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	956.09	1051.7	0.08837	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	956.09	1051.7	0.08837	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.07842	-	ARCADIA - NORTHWEST 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	0.0	0.0	0.07377	-	P12:230:AEPW:ELKCITY6:SWEETWT6
0	20L	G16_058	-	Non-Converged Contingency	478.0	502.0	0.07146	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	478.0	502.0	0.07146	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_058	-	Non-Converged Contingency	478.0	502.0	0.07146	-	BUSHLAND INTERCHANGE 230KV SWITCHED SHUNT
0	20L	G16_058	-	Non-Converged Contingency	497.0	547.0	0.07070	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	478.0	502.0	0.06720	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1561.0	1793.0	0.06655	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1561.0	1793.0	0.06655	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1561.0	1793.0	0.06655	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_058	-	Non-Converged Contingency	1561.0	1793.0	0.06655	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_058	-	Non-Converged Contingency	478.0	502.0	0.06609	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1192.0	1192.0	0.06592	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	956.0	956.0	0.06592	-	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	318.7	350.6	0.06356	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	318.7	350.6	0.06356	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	318.7	350.57	0.06226	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	318.7	350.57	0.06226	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1420.0	1775.0	0.05838	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1420.0	1775.0	0.05838	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G16_058	-	Non-Converged Contingency	1420.0	1775.0	0.05838	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1420.0	1775.0	0.05838	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_058	-	Non-Converged Contingency	1420.0	1775.0	0.05838	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1420.0	1775.0	0.05838	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.05813	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.05813	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	0.0	0.0	0.05559	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	20L	G16_058	-	Non-Converged Contingency	1532.0	1793.0	0.05082	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1532.0	1793.0	0.05082	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20L	G16_058	-	Non-Converged Contingency	1532.0	1793.0	0.05082	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.05070	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.05070	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
0	20L	G16_058	-	Non-Converged Contingency	1793.0	1793.0	0.05070	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1716.0	1793.0	0.05070	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	G16_058	-	Non-Converged Contingency	1793.0	1793.0	0.05070	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1716.0	1793.0	0.05070	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	G16_058	-	Non-Converged Contingency	1793.0	1793.0	0.05070	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1716.0	1793.0	0.05070	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_058	-	Non-Converged Contingency	0.0	0.0	0.05035	-	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
0	20L	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.04944	-	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	785.0	785.0	0.04880	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	785.0	785.0	0.04880	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	439.0	439.0	0.04859	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	450.0	450.0	0.04859	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_058	-	Non-Converged Contingency	450.0	450.0	0.04859	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_058	-	Non-Converged Contingency	762.5	762.5	0.04783	-	MINGO - SETAB 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	762.5	762.5	0.04783	-	MINGO - SETAB 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	0.0	0.0	0.04740	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	20L	G16_058	-	Non-Converged Contingency	717.1	717.1	0.04705	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	717.1	717.1	0.04705	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	560.0	560.0	0.04425	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_058	-	Non-Converged Contingency	560.0	560.0	0.04425	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_058	-	Non-Converged Contingency	0.0	0.0	0.04348	-	P12:138:WFEC:MSL14
0	20L	G16_058	-	Non-Converged Contingency	0.0	0.0	0.04157	-	917X
0	20L	G16_058	-	Non-Converged Contingency	1504.0	1792.0	0.04130	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1504.0	1792.0	0.04130	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1505.0	1793.0	0.04050	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1505.0	1793.0	0.04050	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1505.0	1793.0	0.04050	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	501.95	501.95	0.03892	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	501.95	501.95	0.03892	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	956.0	956.0	0.03799	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	726.6	726.6	0.03767	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	726.6	726.6	0.03767	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1413.0	1517.0	0.03767	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1413.0	1517.0	0.03767	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1141.0	1195.0	0.03437	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1141.0	1195.0	0.03437	-	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	1141.0	1195.0	0.03437	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	318.7	350.57	0.03430	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_058	-	Non-Converged Contingency	318.7	350.57	0.03430	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20SP	G16_058	-	Non-Converged Contingency	956.0	1042.0	0.21549	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20SP	G16_058	-	Non-Converged Contingency	956.0	1042.0	0.21549	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.17773	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.17773	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20SP	G16_058	-	Non-Converged Contingency	956.1	1051.7	0.15356	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.19607	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	1022.0	1124.0	0.19010	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	1022.0	1124.0	0.19010	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.17675	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.17568	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.16454	-	CIMARRON - MINCO 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.16454	-	GRACEMONT - MINCO 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	987.2	1082.8	0.15890	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	1584.0	2098.0	0.15395	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	1584.0	2098.0	0.15395	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.14560	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.14560	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	G16_058	-	Non-Converged Contingency	987.16	1082.77	0.12756	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	717.0	789.0	0.12085	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	956.09	1051.7	0.11347	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	987.16	1082.77	0.11347	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.08056	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.08056	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	560.0	560.0	0.06256	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	439.0	439.0	0.06107	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	450.0	450.0	0.06107	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	329.05	360.92	0.04378	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	421.0	439.0	0.03933	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20WP	G16_058	-	Non-Converged Contingency	329.05	360.92	0.03477	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	17SP	G16_058	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	442.0	752.0	0.07005	100.8893	BASE CASE
0	17SP	G16_058	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	442.0	752.0	0.07102	100.8893	BASE CASE
2	17SP	G16_058	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06597	113.9867	BASE CASE
2	20SP	G16_058	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06274	110.7777	BASE CASE
2	17G	G16_058	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06332	104.3556	BASE CASE
2	20WP	G16_058	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06109	99.1	BASE CASE
2	17SP	G16_058	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.30774	103.9462	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20SP	G16_058	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.30403	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_058	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24844	117.0258	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G16_058	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22186	112.9654	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G16_058	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24844	112.441	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	G16_058	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.22186	108.3696	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17SP	G16_058	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24342	108.1247	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17SP	G16_058	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24342	103.6738	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20124	122.5534	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20124	118.7382	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20051	115.9388	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20051	113.406	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20135	112.2087	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20135	110.2344	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20452	107.0133	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20452	104.9152	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17SP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.26002	126.3303	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20SP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.26719	117.4113	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.26338	110.5121	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.25758	105.6091	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G16_058	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12088	109.7093	BASE CASE
2	16WP	G16_058	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12963	108.7418	BASE CASE
2	17G	G16_058	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12746	107.5286	BASE CASE
2	20WP	G16_058	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12088	123.7856	BASE CASE
2	16WP	G16_058	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12963	122.9306	BASE CASE
2	17G	G16_058	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12746	120.973	BASE CASE
2	17SP	G16_058	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12597	105.8511	BASE CASE
2	16WP	G16_058	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24844	106.376	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G16_058	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.22186	102.3425	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G16_058	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24844	101.9464	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_058	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03590	102.2178	BASE CASE
2	16WP	G16_058	-	Non-Converged Contingency	1022.0	1124.0	0.20251	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G16_058	-	Non-Converged Contingency	1022.0	1124.0	0.20251	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.19942	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	16WP	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.19092	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.18613	-	CIMARRON - MINCO 345KV CKT 1
2	16WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.18613	-	GRACEMONT - MINCO 345KV CKT 1
2	16WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.18378	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_058	-	Non-Converged Contingency	1330.0	1940.0	0.17608	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	16WP	G16_058	-	Non-Converged Contingency	1330.0	1940.0	0.17608	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	16WP	G16_058	-	Non-Converged Contingency	987.2	1082.8	0.16465	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.15034	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	16WP	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.15034	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	16WP	G16_058	-	Non-Converged Contingency	987.16	1082.77	0.13263	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	16WP	G16_058	-	Non-Converged Contingency	956.09	1051.7	0.13263	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	G16_058	-	Non-Converged Contingency	1420.0	1775.0	0.09897	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.08967	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	16WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.08967	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_058	-	Non-Converged Contingency	439.0	439.0	0.06724	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	16WP	G16_058	-	Non-Converged Contingency	450.0	450.0	0.06724	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.39658	-	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.25172	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1022.0	1124.0	0.19453	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1022.0	1124.0	0.19453	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.19265	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.19265	-	GEN509403 1-PIRKEY GENERATION
2	17G	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.19265	-	GEN509404 1-WELSH #1
2	17G	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.19265	-	GEN509406 1-WELSH #3
2	17G	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.19265	-	GEN509416 1-TURK GENERATION
2	17G	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.19265	-	GEN511848 1-SOUTHWESTERN STATION #3
2	17G	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.17996	-	CIMARRON - MINCO 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.17996	-	GRACEMONT - MINCO 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	414.0	414.0	0.17975	-	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.17929	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.17734	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1330.0	1940.0	0.16975	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1330.0	1940.0	0.16975	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	956.1	1051.7	0.15416	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.14385	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.14385	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
2	17G	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.14385	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.14385	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	17G	G16_058	-	Non-Converged Contingency	318.7	350.57	0.13985	-	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	717.0	789.0	0.12746	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	717.0	789.0	0.12746	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	956.09	1051.7	0.12147	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	956.09	1051.7	0.12147	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	717.0	926.0	0.10314	-	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1420.0	1775.0	0.09833	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1420.0	1775.0	0.09833	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1420.0	1775.0	0.09833	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1561.0	1793.0	0.08952	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1561.0	1793.0	0.08952	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.08852	-	ARCADIA - NORTHWEST 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	560.0	560.0	0.08602	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.08424	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.08424	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	478.0	502.0	0.08041	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	497.0	547.0	0.07479	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1532.0	1793.0	0.07175	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1532.0	1793.0	0.07175	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	G16_058	-	Non-Converged Contingency	1532.0	1793.0	0.07175	-	G1524G1525 345.00 - WICHITA 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1532.0	1793.0	0.07175	-	G1524G1525 345.00 - WICHITA 345KV CKT 2
2	17G	G16_058	-	Non-Converged Contingency	1532.0	1793.0	0.07175	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	G16_058	-	Non-Converged Contingency	318.7	350.6	0.07107	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	318.7	350.6	0.07107	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	478.0	502.0	0.07106	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	318.7	350.57	0.07097	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	478.05	547.36	0.06769	-	NEWHART 230 - PLANT X STATION 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	318.7	350.57	0.06679	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.06475	-	CIMARRON - DRAPER LAKE 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.06441	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.06441	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
2	17G	G16_058	-	Non-Converged Contingency	1793.0	1793.0	0.06441	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1716.0	1793.0	0.06441	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	G16_058	-	Non-Converged Contingency	1793.0	1793.0	0.06441	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1716.0	1793.0	0.06441	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G16_058	-	Non-Converged Contingency	1793.0	1793.0	0.06441	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_058	-	Non-Converged Contingency	1716.0	1793.0	0.06441	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.06441	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.06441	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 2
2	17G	G16_058	-	Non-Converged Contingency	439.0	439.0	0.06332	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	450.0	450.0	0.06332	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_058	-	Non-Converged Contingency	878.0	956.0	0.06291	-	BENTON - WICHITA 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1793.0	1793.0	0.06160	-	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1793.0	1793.0	0.06160	-	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	343.79	343.79	0.05821	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1192.0	1192.0	0.05749	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	956.0	956.0	0.05749	-	G15063_T 345.00 - WOODRING 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	717.1	717.1	0.05720	-	HOLCOMB - SETAB 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.05707	-	GEN520947 1-HUGO1
2	17G	G16_058	-	Non-Converged Contingency	762.5	762.5	0.05602	-	MINGO - SETAB 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	785.0	785.0	0.05562	-	MINGO - RED WILLOW 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1039.0	1195.0	0.05499	-	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.05485	-	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	560.0	644.0	0.05140	-	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G16_058	-	Non-Converged Contingency	726.6	726.6	0.05042	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1413.0	1517.0	0.05042	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1505.0	1793.0	0.04983	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1505.0	1793.0	0.04983	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1505.0	1793.0	0.04983	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	501.95	501.95	0.04960	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1035.0	1035.0	0.04731	-	G14_001T 345.00 - WICHITA 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1504.0	1792.0	0.04694	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1504.0	1792.0	0.04694	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1141.0	1195.0	0.04685	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1141.0	1195.0	0.04685	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	560.0	644.0	0.04472	-	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_058	-	Non-Converged Contingency	318.7	350.57	0.04273	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	439.0	439.0	0.04042	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	502.0	502.0	0.04042	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	500.0	723.0	0.04042	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	1022.0	1143.0	0.03790	-	PITTSBURG - VALLIANT 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	717.0	789.0	0.03646	-	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	318.7	350.57	0.03590	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	502.0	502.0	0.03455	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
2	17G	G16_058	-	Non-Converged Contingency	560.0	560.0	0.03053	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_058	-	Non-Converged Contingency	560.0	560.0	0.03053	-	POTTER COUNTY INTERCHANGE (WAUK 90343-A) 345/230/13.2KV TRANSFORMER CKT 2
2	17SP	G16_058	-	Non-Converged Contingency	956.0	1042.0	0.19835	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G16_058	-	Non-Converged Contingency	1792.0	1792.0	0.19616	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20WP	G16_058	-	Non-Converged Contingency	1022.0	1124.0	0.19016	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G16_058	-	Non-Converged Contingency	1022.0	1124.0	0.19016	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.17684	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	20WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.17574	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	20WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.16463	-	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G16_058	-	Non-Converged Contingency	987.2	1082.8	0.15899	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G16_058	-	Non-Converged Contingency	1584.0	2098.0	0.15401	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	20WP	G16_058	-	Non-Converged Contingency	1584.0	2098.0	0.15401	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	20WP	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.14565	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	20WP	G16_058	-	Non-Converged Contingency	1792.0	1972.0	0.14565	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	20WP	G16_058	-	Non-Converged Contingency	987.16	1082.77	0.12764	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.08060	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	20WP	G16_058	-	Non-Converged Contingency	1195.0	1195.0	0.08060	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G16_058	-	Non-Converged Contingency	439.0	439.0	0.06109	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	20WP	G16_058	-	Non-Converged Contingency	450.0	450.0	0.06109	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
3	17G	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30759	219.0037	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30759	218.7841	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28674	212.6842	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28674	212.3523	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31351	206.7258	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31351	206.6	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.32056	198.5451	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.32056	197.214	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31802	191.0186	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31802	188.8782	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31863	182.2433	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31863	180.1336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33094	128.2336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33094	124.1314	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33597	205.8094	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33008	191.8466	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.34909	182.1676	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.35378	170.544	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.34868	165.6022	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.34922	158.3084	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.36355	130.4315	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G16_058	-	Non-Converged Contingency	3975.0	4570.0	0.37819	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	20L	G16_058	-	Non-Converged Contingency	3975.0	4570.0	0.32846	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	17G	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30720	219.2477	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30720	218.9034	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28633	212.5533	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28633	212.4877	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31300	206.5319	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31300	206.4431	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.32014	198.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.32014	197.0767	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31759	191.0175	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31759	188.7404	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31813	181.83	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31813	179.8003	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33040	128.3207	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.33040	124.1778	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33591	205.5105	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33000	191.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.34900	182.0402	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.35369	170.4128	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.34858	165.4035	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.34915	158.2063	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.36344	130.4862	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G16_058	-	Non-Converged Contingency	3975.0	4570.0	0.37398	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	20L	G16_058	-	Non-Converged Contingency	3975.0	4570.0	0.32438	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
5	17G	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30489	217.7095	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.30489	216.9825	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28452	211.2861	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28452	210.7754	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31075	204.8525	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31075	204.7326	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31765	196.7495	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31765	195.2293	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31524	189.7734	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31524	187.2532	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31583	180.5705	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31583	178.2726	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.32797	127.7475	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.32797	123.5792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.33519	204.5119	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.32947	190.5492	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.34825	181.3291	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.35294	169.7873	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.34785	164.743	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.34839	157.4925	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.36265	130.3275	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17G	G16_059	FROM->TO	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1	318.7	350.57	0.11137	99.6	BASE CASE
0	25SP	G16_059	TO->FROM	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.05237	122.1957	BASE CASE
0	17G	G16_059	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.06179	136.6904	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_059	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.06179	136.6904	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_059	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.04545	99.1	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_059	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.04545	99.1	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_059	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.06179	108.7789	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_059	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.06179	108.7789	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.09479	107.5416	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.09479	107.5416	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05943	102.9062	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05943	102.9062	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05674	99.4	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04170	155.1081	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04170	155.1081	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04170	144.4695	JONES STATION - TUCO INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04170	144.4695	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	127.6091	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03141	126.2169	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	125.8663	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03304	125.7356	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03304	125.7356	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	125.0574	P12:115:SPS:V15.1.TUCO.INDANA
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	124.7606	INDIANA SUB - STANTON SUB 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	123.8128	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	123.805	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	123.805	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	123.7915	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	123.4175	P12:115:SPS:V15.1.TUCO.INDANA
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	123.1351	INDIANA SUB - STANTON SUB 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	120.6969	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	120.0848	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	120.0727	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	120.0727	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	120.0649	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	119.2123	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03304	119.1722	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03304	119.1722	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	119.009	P12:115:SPS:V62.1.CRLSLE.INDANA
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	118.803	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03141	118.7443	P12:345:SPS:J15.1.XRDS.TOLK
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03288	118.1529	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	117.6066	P12:115:SPS:V62.1.CRLSLE.INDANA
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03719	117.4069	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03288	116.756	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03134	116.4793	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03134	116.4781	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03134	116.4781	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03895	115.1773	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03895	115.1773	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03015	114.5086	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03015	114.5086	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03288	114.1373	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03006	114.1158	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03006	114.1158	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	114.0543	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03288	113.1643	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	112.9092	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	112.9092	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03054	112.7464	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03054	112.7464	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03015	112.5646	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03015	112.5646	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03134	112.5047	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03134	112.504	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03134	112.504	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03895	112.3162	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03895	112.3162	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03006	112.1714	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03006	112.1714	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02991	112.1355	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02991	112.1355	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03300	112.0698	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03025	112.0434	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03240	112.0254	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03240	112.0254	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02969	111.6034	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02969	111.6034	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	111.4117	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03184	111.3545	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	111.3093	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	111.3093	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03011	111.1809	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03575	111.0009	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03575	111.0009	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03184	110.6552	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02976	110.5074	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02976	110.5074	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03011	110.3889	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	109.9687	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	109.9687	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02991	109.9541	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02991	109.9541	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03240	109.9463	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03240	109.9463	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03300	109.9346	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02969	109.5101	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02969	109.5101	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03025	109.4641	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03184	109.278	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03575	108.9863	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03575	108.9863	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03011	108.9182	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03054	108.8881	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03054	108.8881	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	108.7503	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	108.7503	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03184	108.6249	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	17SP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03158	100.868	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	17SP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03158	99.4	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	17G	G16_059	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.06179	105.7283	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_059	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.06179	105.7283	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_059	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.06179	101.8175	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_059	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.06179	101.8175	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_059	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.04188	101.7932	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_059	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.04188	101.3961	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_059	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03140	100.679	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_059	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03140	100.6112	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
0	17G	G16_059	FROM->TO	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1	956.09	1051.7	0.17550	99.2	BASE CASE
0	20WP	G16_059	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.27530	105.2154	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	G16_059	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.26620	103.7367	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	16WP	G16_059	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.27883	100.2952	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20WP	G16_059	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.27530	105.2154	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	G16_059	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.26620	103.7367	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	16WP	G16_059	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.27883	100.2952	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	17G	G16_059	FROM->TO	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.11137	107.7528	BASE CASE
0	17G	G16_059	FROM->TO	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.16853	100.6447	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.27670	123.1957	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20SP	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.28058	108.1483	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	17SP	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.27141	104.3861	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	17G	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.07749	99.6	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20WP	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.27670	123.1957	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20SP	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.28058	108.1483	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	17SP	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.27141	104.3861	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	17G	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.07749	99.6	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20WP	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.27948	126.6254	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.27023	124.6416	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	16WP	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.28294	121.7059	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20SP	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.28341	111.3855	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17SP	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.27412	107.6482	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.07825	103.4359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.04534	102.8359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20WP	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.27948	126.6254	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.27023	124.6416	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.28294	121.7059	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20SP	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.28341	111.3855	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.27412	107.6482	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.07825	103.4359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.04534	102.8359	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_059	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04302	109.0517	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17G	G16_059	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.13226	106.8373	BASE CASE
0	20WP	G16_059	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	329.05	360.92	0.13158	101.3958	BASE CASE
0	17G	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.59013	118.0384	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
0	17G	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.59013	118.0384	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
0	17G	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.43101	101.0349	GEN523971 1-HARRINGTON GEN #1 24 KV
0	16WP	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	579.0	664.0	0.49974	100.099	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	579.0	664.0	0.49974	100.099	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
0	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.25800	125.9332	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.25800	125.9332	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.26988	123.2624	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.26988	123.2624	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.39852	110.2717	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.39852	110.2717	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.42264	101.7385	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.42264	101.7385	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10400	124.4658	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09151	112.9438	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09151	112.9438	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09151	112.9086	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09151	112.9086	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	112.5354	GEN526331 1-JONES GEN #1 22 KV
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	112.3468	GEN526332 1-JONES GEN #2 21 KV
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09914	111.3346	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09914	111.3053	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08860	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08860	109.3091	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09434	107.3472	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	107	GEN527884 1-CUNNINGHAM GEN #4 22 KV
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	106.0884	GEN563142 1-G15079_3 0.5500
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	106.0884	GEN563151 1-G15080_2 0.5500
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09434	106.0791	P12:115:SPS:V15.1.TUCO.INDANA
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09434	106.0442	INDIANA SUB - STANTON SUB 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09194	106.0084	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09194	105.974	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09121	105.4304	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08230	105.4088	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08230	105.4088	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09500	105.2063	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09121	105.1732	P12:345:SPS:J14.1.EDDY.XRDS
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09500	105.1386	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09183	105.0982	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09183	105.0934	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09101	105.0723	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09101	104.9891	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	104.8526	GEN527883 1-CUNNINGHAM GEN #3 22 KV
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09029	104.7091	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09185	104.6771	P12:345:SPS:J15.1.XRDS.TOLK
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09029	104.6596	P12:230:SPS:K37.1.TOLK.LAMB
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	104.4479	TUCO INTERCHANGE 230/13.0KV TRANSFORMER CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09166	104.442	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08994	104.1602	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09029	104.149	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08994	104.1458	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09029	104.0778	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09434	103.9914	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09166	103.9739	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09090	103.9293	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09090	103.8823	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09121	103.6702	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09121	103.6636	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09409	103.5765	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09409	103.5559	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	103.5169	GEN563132 1-G15078_3 0.3570
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09071	103.4535	LUBBOCK SOUTH INTERCHANGE - SOUTH PLAINS REC-WOODROW INTERCHANGE 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	103.4314	GEN587113 1-G16-015-GEN10.4180
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	103.3789	GEN563102 1-G15075_3 0.5500
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09215	103.2873	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09194	103.1846	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07945	103.1673	P12:345:SPS:J15.1.XRDS.TOLK
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09166	103.1627	P12:115:SPS:W54.1.KISER.KRESS
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09194	103.1541	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09166	103.0555	KISER 3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09434	103.0022	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08896	102.9892	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09434	102.9593	P12:115:SPS:V62.1.CRLSLE.INDANA
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	102.8077	GEN562812 1-G15040_3 0.3570

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09658	102.7303	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09340	102.7134	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09340	102.6722	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08896	102.6695	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	102.6062	GEN526678 1-CIRRUS_WND 10.6900
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09152	102.5983	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09258	102.2565	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09215	102.2379	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09561	102.2143	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07348	102.1679	GEN527166 1-MUSTANG_6 118.000
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09132	102.0607	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09409	101.9931	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09409	101.9797	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	101.5877	GEN525845 1-ELK_2 1 18.000
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09101	101.5349	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09101	101.5158	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08098	101.3882	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08098	101.3882	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09071	101.1826	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09071	101.0304	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	100.5597	BASE CASE
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	100.5354	BASE CASE
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08311	100.5005	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08311	100.4984	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07348	100.4324	GEN527903 1-HOBBS PLANT #3 (ST)
0	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07509	100.3914	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
0	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07509	100.3671	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
0	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07509	100.3647	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07509	100.3647	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08879	100.1483	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	100.1357	GEN562270 1-G12-020-2 0.6900
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09194	100.0549	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09034	99.8	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08981	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08897	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08897	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09194	99.5	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08354	99.4	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.3	GEN562762 1-G15033_3 0.6900
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08989	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08989	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08989	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08989	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09119	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09119	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.2	GEN300024 1-1CHOTST6 16.000
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.2	GEN300031 1-CHOUTEAU CTG 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09005	99.2	P12:115:SPS:V56.1.COCHRAN.SUNDWN
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09194	99.1	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.1	GEN300001 1-THOMAS HILL UNIT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.1	GEN300017 1-1G2GPDEL 18.000
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.1	GEN511938 1-OEC STEAM # 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.1	GEN511941 1-OEC STEAM # 2
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.1	GEN562517 1-G14_021_S2 0.6900
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.1	GEN562691 1-G15_015_3 0.6900
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99.1	GEN645041 1-CASS COUNTY 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99	GEN300016 1-1G1GPDEL 18.000
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99	GEN549893 2-SOUTHWEST 2
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99	GEN562023 1-G11_020_3 0.6900
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99	GEN562026 1-G11_019_3 0.6900
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	99	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08987	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08987	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_059	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.09479	100	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_059	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.09479	100	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	16WP	G16_059	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.03480	107.6192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_059	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.03480	107.6192	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	16WP	G16_059	-	Non-Converged Contingency	987.16	1082.77	0.18670	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.18670	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_059	-	Non-Converged Contingency	1793.0	1793.0	0.14990	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_059	-	Non-Converged Contingency	1716.0	1793.0	0.14990	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	16WP	G16_059	-	Non-Converged Contingency	1420.0	1775.0	0.12855	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_059	-	Non-Converged Contingency	1420.0	1775.0	0.12855	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_059	-	Non-Converged Contingency	1420.0	1775.0	0.12855	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_059	-	Non-Converged Contingency	859.0	956.0	0.07696	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_059	-	Non-Converged Contingency	560.0	560.0	0.07696	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	17G	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.17550	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.17550	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	439.0	439.0	0.15585	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	502.0	502.0	0.15585	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	500.0	723.0	0.15585	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	1330.0	1940.0	0.14801	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	1330.0	1940.0	0.14801	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	1793.0	1793.0	0.14598	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	1716.0	1793.0	0.14598	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	17G	G16_059	-	Non-Converged Contingency	1793.0	1793.0	0.14598	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	1716.0	1793.0	0.14598	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	17G	G16_059	-	Non-Converged Contingency	1793.0	1793.0	0.14598	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	1716.0	1793.0	0.14598	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G16_059	-	Non-Converged Contingency	318.7	350.57	0.13226	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	1420.0	1775.0	0.12779	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	1420.0	1775.0	0.12779	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	1420.0	1775.0	0.12779	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	1022.0	1124.0	0.11323	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	1022.0	1124.0	0.11323	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	318.7	350.57	0.11137	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	318.7	350.57	0.11137	-	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	1561.0	1793.0	0.09272	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	1561.0	1793.0	0.09272	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G16_059	-	Non-Converged Contingency	726.6	726.6	0.08495	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	1413.0	1517.0	0.08495	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	478.0	502.0	0.07572	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	478.0	502.0	0.07474	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	717.1	717.1	0.07300	-	HOLCOMB - SETAB 345KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	762.5	762.5	0.07084	-	MINGO - SETAB 345KV CKT 1
0	17G	G16_059	-	Non-Converged Contingency	1195.0	1195.0	0.05567	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.19879	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.16767	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_059	-	Non-Converged Contingency	0.0	0.0	0.32185	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.17069	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.17069	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.15116	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.15116	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.15116	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.15116	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_059	-	Non-Converged Contingency	1793.0	1793.0	0.14341	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	G16_059	-	Non-Converged Contingency	1716.0	1793.0	0.14341	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	G16_059	-	Non-Converged Contingency	0.0	0.0	0.03140	-	P12:345:SPS:J07.1.FINN.HITCH
0	20SP	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.18730	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_059	-	Non-Converged Contingency	987.16	1082.77	0.18469	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.16418	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G16_059	-	Non-Converged Contingency	987.16	1082.77	0.16418	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_059	-	Non-Converged Contingency	0.0	0.0	0.22056	-	P12:345:SPS:J02.1.TOLK.EDDY
0	25SP	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.19010	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.16883	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	25SP	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.16883	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_059	-	Non-Converged Contingency	478.0	502.0	0.14861	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_059	-	Non-Converged Contingency	318.7	350.57	0.13467	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	25SP	G16_059	-	Non-Converged Contingency	497.0	547.0	0.12117	-	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_059	-	Non-Converged Contingency	478.0	502.0	0.10969	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	25SP	G16_059	-	Non-Converged Contingency	343.79	343.79	0.09056	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_059	-	Non-Converged Contingency	1792.0	1972.0	0.07507	-	GEN525820 1-TUCO Interchange SVC Bus
0	25SP	G16_059	-	Non-Converged Contingency	478.0	502.0	0.07375	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_059	-	Non-Converged Contingency	478.0	502.0	0.07268	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_059	-	Non-Converged Contingency	318.7	350.6	0.06949	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	25SP	G16_059	-	Non-Converged Contingency	318.7	350.6	0.06949	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	25SP	G16_059	-	Non-Converged Contingency	478.0	502.0	0.06132	-	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_059	-	Non-Converged Contingency	318.7	350.57	0.05237	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_059	-	Non-Converged Contingency	0.0	0.0	0.05152	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
0	25SP	G16_059	-	Non-Converged Contingency	478.05	501.95	0.04819	-	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_059	-	Non-Converged Contingency	0.0	0.0	0.03933	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
0	25SP	G16_059	-	Non-Converged Contingency	0.0	0.0	0.03176	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	17G	G16_059	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.39661	116.9587	BASE CASE
0	25SP	G16_059	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.38872	115.2466	BASE CASE
0	25SP	G16_059	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03015	104.2168	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G16_059	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03015	104.166	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	17G	G16_059	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.06170	133.2361	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_059	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.06170	133.2361	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_059	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.06170	105.2691	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_059	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.06170	105.2691	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.09485	109.0656	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.09485	109.0656	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05947	103.7245	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05947	103.7245	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05677	99.9	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04174	156.1003	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04174	156.1003	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04174	145.3888	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04174	145.3888	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	128.3534	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03143	127.245	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	126.5976	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	125.804	P12:115:SPS:V15.1.TUCO.INDANA
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03306	125.6597	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03306	125.6597	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	125.5052	INDIANA SUB - STANTON SUB 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	124.1544	P12:115:SPS:V15.1.TUCO.INDANA
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03005	124.0435	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03005	124.0435	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03005	124.0305	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03005	124.0224	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	123.8697	INDIANA SUB - STANTON SUB 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	121.4715	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03005	120.6839	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03005	120.6839	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03005	120.6766	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03005	120.6686	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	119.9767	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	119.73	P12:115:SPS:V62.1.CRLSLE.INDANA
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03143	119.5769	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	119.5546	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03306	119.471	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03306	119.471	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03291	119.2013	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	118.3197	P12:115:SPS:V62.1.CRLSLE.INDANA
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03722	118.1502	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03137	117.9752	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03137	117.9739	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03137	117.9739	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03291	116.8902	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03898	115.998	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03898	115.998	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03018	115.271	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03018	115.271	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03291	114.9884	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03010	114.8706	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03010	114.8706	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03005	114.7472	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02995	113.9091	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02995	113.9091	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03291	113.6635	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03137	113.5585	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03137	113.5577	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03137	113.5577	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03056	113.3476	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03056	113.3476	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03018	113.3219	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03018	113.3219	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03898	113.1198	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03898	113.1198	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03010	112.921	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03010	112.921	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02994	112.8024	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02994	112.8024	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03303	112.7234	NEWHART 230 - PLANT X STATION 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03243	112.61	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03243	112.61	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02971	112.2809	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02971	112.2809	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03027	112.2805	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03005	112.0913	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03579	111.997	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03579	111.997	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03187	111.9665	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03014	111.8322	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02995	111.4933	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02995	111.4933	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03187	111.2605	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02979	111.1658	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02979	111.1658	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03014	111.0316	AMOCO TAP - LYNTEGAR REC-LEVELLAND 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02995	110.8047	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02995	110.8047	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02994	110.6141	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02994	110.6141	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03303	110.5756	NEWHART 230 - PLANT X STATION 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03243	110.5261	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03243	110.5261	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02971	110.1766	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02971	110.1766	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03027	110.0504	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03579	109.9561	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03579	109.9561	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03187	109.8863	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03014	109.5571	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03056	109.4717	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03056	109.4717	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02995	109.2965	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02995	109.2965	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03187	109.2328	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02951	104.9498	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02951	103.615	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02951	102.886	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02951	102.7983	P12:115:SPS:T83.1.SP-FKFD.ALLEN
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02951	101.6959	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02951	101.6345	P12:115:SPS:T83.1.SP-FKFD.ALLEN
2	17SP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03161	101.2869	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02951	100.0813	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02951	100.0813	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
2	17SP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03161	99.8	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02951	99.1	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
2	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02951	99.1	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
2	17G	G16_059	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.06170	102.1939	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_059	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.06170	102.1939	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_059	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.27286	102.7205	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	G16_059	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.27286	102.7205	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	17G	G16_059	FROM->TO	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.10974	103.4967	BASE CASE
2	17G	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.27425	120.3583	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	16WP	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.28125	114.6083	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17SP	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.27966	106.8903	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.27425	120.3583	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	16WP	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.28125	114.6083	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17SP	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.27966	106.8903	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.27703	123.543	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	16WP	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.28410	117.8517	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17SP	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.28249	110.1187	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.07813	101.8646	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.27703	123.543	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.28410	117.8517	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17SP	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.28249	110.1187	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.07813	101.8646	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_059	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.13062	100.4226	BASE CASE
2	17G	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.58909	115.4848	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
2	17G	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.58909	115.4848	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
2	17G	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.43100	100.4232	GEN523971 1-HARRINGTON GEN #1 24 KV
2	16WP	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	579.0	664.0	0.49962	99.2	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
2	16WP	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	579.0	664.0	0.49962	99.2	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
2	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.25825	128.8789	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.25825	128.8789	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.27016	126.6427	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.27016	126.6427	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.40067	115.6744	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.40067	115.6744	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.42512	108.6309	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.42512	108.6309	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.27828	100	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.27828	100	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08866	109.903	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08866	109.903	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08238	106.06	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08238	106.06	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07952	103.9952	P12:345:SPS:J15.1.XRDS.TOLK
2	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07355	102.7121	GEN527166 1-MUSTANG_6 118.000
2	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08106	102.1229	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08106	102.1229	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07355	101.2079	GEN527903 1-HOBBS PLANT #3 (ST)
2	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07517	101.1113	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
2	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07517	101.109	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07517	101.109	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07517	101.1046	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
2	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08361	100.4149	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08361	99.1	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08300	99.1	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
2	16WP	G16_059	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.09485	101.4839	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_059	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.09485	101.4839	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	16WP	G16_059	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.03482	108.1182	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_059	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.03482	108.1182	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	16WP	G16_059	-	Non-Converged Contingency	987.2	1082.8	0.19313	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	16WP	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.16007	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	G16_059	-	Non-Converged Contingency	987.2	1082.8	0.16007	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	16WP	G16_059	-	Non-Converged Contingency	859.0	956.0	0.07695	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_059	-	Non-Converged Contingency	560.0	560.0	0.07695	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.18149	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.14993	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.14993	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17SP	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.19506	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_059	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.38948	112.9939	BASE CASE
3	25SP	G16_059	TO->FROM	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.05065	115.3097	BASE CASE
3	17G	G16_059	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.06104	126.5747	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
3	17G	G16_059	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.06104	126.5747	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.09530	110.8107	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.09530	110.8107	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05974	104.6899	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05974	104.6899	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05701	100.3509	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05855	99.3	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05855	99.3	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04203	157.8597	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04203	157.8597	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04203	146.7186	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04203	146.7186	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03237	144.4934	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03237	144.4934	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03237	134.4786	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03237	134.4786	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03744	129.2348	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03744	127.4678	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03744	126.6753	P12:115:SPS:V15.1.TUCO.INDANA
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03744	126.3883	INDIANA SUB - STANTON SUB 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03324	126.3147	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03324	126.3147	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03164	126.108	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03744	125.0151	P12:115:SPS:V15.1.TUCO.INDANA
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03027	124.8488	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03027	124.8488	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03027	124.8366	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03027	124.8362	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03744	124.7422	INDIANA SUB - STANTON SUB 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03744	122.3272	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03027	121.4802	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03027	121.4802	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03027	121.4735	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03027	121.4733	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03336	120.8492	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03744	120.8233	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03744	120.6067	P12:115:SPS:V62.1.CRLSLE.INDANA
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03744	120.4127	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03324	120.0997	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03324	120.0997	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03311	119.9417	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03164	119.4241	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03744	119.1864	P12:115:SPS:V62.1.CRLSLE.INDANA
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03744	118.9988	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	118.9192	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03157	118.4604	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03157	118.4591	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03157	118.4591	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03311	117.6958	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	117.3285	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03922	116.9499	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03922	116.9499	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02959	116.6296	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	116.2274	P12:115:SPS:V15.1.TUCO.INDANA
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03042	116.1738	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03042	116.1738	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	116.0899	INDIANA SUB - STANTON SUB 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03033	115.7659	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03033	115.7659	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03311	115.7134	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03027	115.5634	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03336	115.4472	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	114.7388	P12:115:SPS:V15.1.TUCO.INDANA
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	114.6065	INDIANA SUB - STANTON SUB 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03311	114.4359	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03157	114.2458	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03157	114.2451	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03157	114.2451	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03042	114.2219	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03042	114.2219	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03015	114.1505	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03015	114.1505	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03076	114.0697	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03076	114.0697	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03922	114.053	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03922	114.053	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03033	113.813	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03033	113.813	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03014	113.5452	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03014	113.5452	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03323	113.4444	NEWHART 230 - PLANT X STATION 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02959	113.441	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03265	113.3041	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03265	113.3041	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03604	113.1432	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03604	113.1432	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	113.0726	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	113.0726	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03048	113.0448	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03027	112.8927	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03209	112.6926	G15039_T 230.00 - PLANT X STATION 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03034	112.5943	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03015	112.2539	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03015	112.2539	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	112.061	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03209	111.9646	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02999	111.9572	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02999	111.9572	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03015	111.4181	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03015	111.4181	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03014	111.3475	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03014	111.3475	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03323	111.3007	NEWHART 230 - PLANT X STATION 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03265	111.2148	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03265	111.2148	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03604	111.0814	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03604	111.0814	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	110.958	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02992	110.958	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03048	110.805	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	110.71	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03209	110.6039	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03034	110.307	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	110.2477	P12:115:SPS:V62.1.CRLSLE.INDANA
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03076	110.1732	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03076	110.1732	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	110.1605	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03015	110.0488	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03015	110.0488	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03209	109.9312	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	108.9848	P12:115:SPS:V62.1.CRLSLE.INDANA
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02984	108.9006	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02970	105.7265	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02966	104.6651	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02966	104.6651	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02970	104.387	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02970	103.665	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02970	103.5691	P12:115:SPS:T83.1.SP-FKFD.ALLEN
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02966	102.5443	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02966	102.5443	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02970	102.4714	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02970	102.4018	P12:115:SPS:T83.1.SP-FKFD.ALLEN
3	17SP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03186	101.8957	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02970	100.8551	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02970	100.8551	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
3	17SP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03186	100.3684	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02970	99.8	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
3	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02970	99.8	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
3	16WP	G16_059	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	557.0	557.0	0.31321	106.7484	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	557.0	557.0	0.31321	106.7484	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	557.0	557.0	0.31839	101.0044	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	557.0	557.0	0.31839	101.0044	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_059	FROM->TO	EAST PLANT INTERCHANGE (WH_ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.04155	103.2467	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_059	FROM->TO	EAST PLANT INTERCHANGE (WH_ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.04155	103.2467	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_059	FROM->TO	EAST PLANT INTERCHANGE (WH_ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03114	101.0198	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	FROM->TO	EAST PLANT INTERCHANGE (WH_ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03114	101.0198	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08870	102.99	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G16_059	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08870	102.3933	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	20WP	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.25059	100.96	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
3	20L	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.24045	99	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
3	20WP	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.25059	100.96	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
3	20L	G16_059	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.24045	99	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
3	20WP	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.25386	104.4778	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	20L	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.24358	102.4888	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	17G	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.25098	102.1788	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	20WP	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.25386	104.4778	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	20L	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.24358	102.4888	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	17G	G16_059	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.25098	102.1788	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	17G	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.58759	111.1082	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
3	17G	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.63141	100.98	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	579.0	664.0	0.54160	99.1	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	579.0	664.0	0.54160	99.1	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31726	156.5099	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31726	156.5099	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29942	155.2093	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29942	155.2093	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.26052	133.347	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.26052	133.347	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.27271	131.7296	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.27271	131.7296	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.40337	127.3081	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.42814	122.6167	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21482	113.0527	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21482	110.627	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
3	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28097	109.978	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28097	109.978	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29104	108.3319	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29104	108.3319	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20156	106.9685	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20154	105.9912	P12:230:AEPW:ELKCITY6:SWEETWT6
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19828	105.3146	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19828	105.3146	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.18812	104.3115	BASE CASE
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21967	103.4162	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.18515	101.0968	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.18515	101.0968	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19567	101.0027	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19567	101.0027	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19678	100.7149	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19678	100.7149	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19326	100.3813	P12:115:SPS:T67.1.HAPPY.KRESS
3	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28167	100.3746	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19326	100.3501	HAPPY INTERCHANGE - TULIA TAP 115KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19326	100.1308	KRESS INTERCHANGE - TULIA TAP 115KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20156	99.7	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20156	99.7	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
3	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29134	99.7	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20156	99.6	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19232	99.1	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19408	99	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1
3	25SP	G16_059	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03583	113.6961	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G16_059	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03583	113.6922	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11039	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11039	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10458	124.5219	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08789	119.248	GEN526333 1-JONES GEN #3 21 KV
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08789	118.8723	GEN526334 1-JONES_4 116.500
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09843	115.1164	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09843	115.1164	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09991	114.4952	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09204	112.8269	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09204	112.8269	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09204	112.8269	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09204	112.8269	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08781	112.8126	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08781	112.8111	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10305	111.8354	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	111.5115	GEN526331 1-JONES GEN #1 22 KV
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	111.4565	GEN526332 1-JONES GEN #2 21 KV
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09961	111.2518	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09961	111.2518	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08912	110.5112	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08912	110.5112	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09480	107.3881	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08300	107.2296	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08300	107.2296	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09608	106.8773	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09608	106.8773	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09480	106.1186	P12:115:SPS:V15.1.TUCO.INDANA
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09480	106.0961	INDIANA SUB - STANTON SUB 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09240	106.0064	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09240	106.0064	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09561	105.6608	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09561	105.6608	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09919	105.5745	P12:345:SPS:J02.1.TOLK.EDDY
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	105.1892	GEN527884 1-CUNNINGHAM GEN #4 22 KV
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09228	104.8208	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09228	104.8208	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	104.8068	GEN563142 1-G15079_3 0.5500
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	104.8068	GEN563151 1-G15080_2 0.5500
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09147	104.7375	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09147	104.7375	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09232	104.3598	P12:345:SPS:J15.1.XRDS.TOLK
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08011	104.3247	P12:345:SPS:J15.1.XRDS.TOLK
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	104.3018	GEN527883 1-CUNNINGHAM GEN #3 22 KV
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09211	104.2343	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09168	104.1816	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09168	104.1787	P12:345:SPS:J14.1.EDDY.XRDS
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09076	104.1328	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09043	104.1231	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09043	104.1231	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09076	104.0986	P12:230:SPS:K37.1.TOLK.LAMB
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07493	104.0964	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07493	104.0964	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09480	104.0626	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08993	103.9995	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08993	103.984	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08993	103.976	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08993	103.976	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09138	103.9156	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09138	103.9156	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09211	103.8721	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09076	103.8362	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09076	103.8362	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09118	103.7633	LUBBOCK SOUTH INTERCHANGE - SOUTH PLAINS REC-WOODROW INTERCHANGE 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	103.6645	GEN563102 1-G15075_3 0.5500
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09453	103.6601	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09453	103.6601	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08789	103.6041	GEN587373 1-G16-056-GEN10.6900
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	103.5007	TUCO INTERCHANGE 230/13.0KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09168	103.4971	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09168	103.4971	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	103.4286	GEN563132 1-G15078_3 0.3570
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07412	103.3805	GEN527166 1-MUSTANG_6 118.000
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	103.3383	GEN587113 1-G16-015-GEN10.4180
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09261	103.3085	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09240	103.2661	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09240	103.2661	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08910	103.2394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08910	103.2394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08910	103.2394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08910	103.2394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09594	103.2214	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09594	103.2214	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09211	103.1583	P12:115:SPS:W54.1.KISER.KRESS
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08920	103.1556	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08920	103.1556	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09703	103.1243	NEWHART 230 - PLANT X STATION 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09480	103.0922	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09211	103.0555	KISER 3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09480	103.0419	P12:115:SPS:V62.1.CRLSLE.INDANA
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08165	103.0089	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08165	103.0089	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09622	102.9873	P12:345:SPS:J15.1.XRDS.TOLK
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09199	102.8354	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09387	102.8198	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09387	102.8198	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	102.6426	GEN526678 1-CIRRUS_WND 10.6900
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09261	102.5845	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08789	102.4114	GEN526331 1-JONES GEN #1 22 KV
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08789	102.4061	GEN526332 1-JONES GEN #2 21 KV

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09305	102.3631	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09608	102.3262	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09182	102.1963	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09453	102.0461	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09453	102.0461	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07574	101.8753	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07574	101.873	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07574	101.8713	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07574	101.8713	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07412	101.7036	GEN527903 1-HOBBS PLANT #3 (ST)
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09147	101.6562	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09147	101.6562	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08417	101.1523	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09118	100.8227	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09118	100.8227	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	100.6997	GEN525844 1-ELK_1 118.000
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	100.6435	BASE CASE
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	100.5015	GEN525845 1-ELK_2 1 18.000
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08487	100.4251	P12:345:SPS:J15.1.XRDS.TOLK
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09172	100.2458	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09240	100.1411	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08927	100.1001	G14-074T 345.00 - OKLAUNION 345KV CKT 1
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08359	100	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08417	99.9	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09077	99.8	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09240	99.6	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09122	99.6	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08929	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08929	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08359	99.5	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07992	99.5	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07992	99.5	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07992	99.5	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07412	99.4	GEN527901 1-HOBBS PLANT #1 (CT)
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99.4	GEN562762 1-G15033_3 0.6900
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09032	99.4	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09032	99.4	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09032	99.4	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09032	99.4	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
3	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07547	99.3	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09165	99.3	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09165	99.3	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99.3	GEN300001 1-THOMAS HILL UNIT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99.3	GEN300017 1-1G2GPDEL 18.000
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99.3	GEN511938 1-OEC STEAM # 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99.3	GEN511941 1-OEC STEAM # 2
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99.3	GEN645041 1-CASS COUNTY 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09052	99.3	P12:115:SPS:V56.1.COCHRAN.SUNDWN
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09240	99.2	P12:115:SPS:T83.1.SP-FKFD.ALLEN
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99.2	GEN300016 1-1G1GPDEL 18.000
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99.2	GEN549893 2-SOUTHWEST 2
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99.2	GEN562026 1-G11_019_3 0.6900
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99.2	GEN563162 1-G15081_3 0.6900
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99.2	GEN563173 1-G15082_3 0.6900
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99.2	GEN659407 1-ANTELPHILLSW0.6900
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99.1	GEN547649 1-ASBURY UNIT #1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09177	99	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09177	99	LUBBOCK SOUTH INTERCHANGE (ABB LLM60043) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99	GEN513602 1-GRECSTG_1 17.500
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99	GEN520947 1-HUGO1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99	GEN530690 1-PRWINDG1 0.6900
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99	GEN562694 1-G15_016_3 0.6900
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99	GEN563082 1-G15073_3 0.6900
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99	GEN563232 1-G15089_3 0.6900
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99	GEN587033 1-G16-004-GEN10.6900
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99	GEN587084 1-G16-012-GEN10.6900
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99	GEN587213 1-G16-032-GEN10.6900
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09102	99	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09085	99	P12:345:SPS:J14.1.EDDY.XRDS
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09034	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09034	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08939	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08939	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	16WP	G16_059	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.09530	103.1998	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_059	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.09530	103.1998	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	16WP	G16_059	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.03501	108.7718	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	16WP	G16_059	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.03501	108.7718	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	150.821	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	150.8177	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.3664	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.3017	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1875	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1522	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	99	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	99	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.7208	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
3	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6974	P12:230:LPL:K26.1.JONES.LP-HOLLY
3	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6461	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6461	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	16WP	G16_059	-	Non-Converged Contingency	987.2	1082.8	0.18834	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	16WP	G16_059	-	Non-Converged Contingency	859.0	956.0	0.07689	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
3	16WP	G16_059	-	Non-Converged Contingency	560.0	560.0	0.07689	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
3	16WP	G16_059	-	Non-Converged Contingency	1195.0	1195.0	0.03042	-	GEN525561 1-TOLK GEN #1 24 KV
3	20L	G16_059	-	Non-Converged Contingency	0.0	0.0	0.31322	-	P12:345:SPS:J07.1.FINN.HITCH
3	20L	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.16608	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.16608	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.14714	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.14714	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.14714	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_059	-	Non-Converged Contingency	956.09	1051.7	0.14714	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20WP	G16_059	-	Non-Converged Contingency	987.16	1082.77	0.18015	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_059	-	Non-Converged Contingency	0.0	0.0	0.22022	-	P12:345:SPS:J02.1.TOLK.EDDY
3	25SP	G16_059	-	Non-Converged Contingency	478.0	502.0	0.14659	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
3	25SP	G16_059	-	Non-Converged Contingency	343.79	343.79	0.09102	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_059	-	Non-Converged Contingency	478.0	502.0	0.06182	-	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_059	-	Non-Converged Contingency	0.0	0.0	0.05153	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
3	25SP	G16_059	-	Non-Converged Contingency	0.0	0.0	0.03933	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G16_059	-	Non-Converged Contingency	0.0	0.0	0.03175	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_059	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.38159	109.7172	BASE CASE
3	17G	G16_059	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.38200	104.9495	BASE CASE
3	25SP	G16_059	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03043	104.5971	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03043	104.5971	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	25SP	G16_059	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03480	100.3388	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
4	25SP	G16_059	TO->FROM	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.04890	113.9114	BASE CASE
4	17G	G16_059	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.06097	125.1536	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
4	17G	G16_059	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.06097	125.1536	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.09535	111.1386	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.09535	111.1386	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05977	104.8629	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05977	104.8629	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05703	100.4992	P12:345:SPS:J15.1.XRDS.TOLK
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05857	99.6	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05857	99.6	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04206	158.0601	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04206	158.0601	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04206	146.9037	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04206	146.9037	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03237	144.3473	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03237	144.3473	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03237	134.2951	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03237	134.2951	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03746	129.3926	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03746	127.6233	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03746	126.8354	P12:115:SPS:V15.1.TUCO.INDANA
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03746	126.5465	INDIANA SUB - STANTON SUB 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03167	126.2293	P12:345:SPS:J15.1.XRDS.TOLK

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03326	125.7471	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03326	125.7471	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03746	125.1727	P12:115:SPS:V15.1.TUCO.INDANA
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	124.9986	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	124.9986	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	124.9865	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	124.986	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03746	124.8982	INDIANA SUB - STANTON SUB 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03746	122.4859	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	121.6261	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	121.6261	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	121.6194	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	121.6192	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03746	120.9798	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03746	120.7683	P12:115:SPS:V62.1.CRLSLE.INDANA
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03337	120.7509	P12:345:SPS:J15.1.XRDS.TOLK
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03746	120.5913	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03313	120.0797	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03326	119.9526	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03326	119.9526	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03167	119.5401	P12:345:SPS:J15.1.XRDS.TOLK
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03746	119.3457	P12:115:SPS:V62.1.CRLSLE.INDANA
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03746	119.1748	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	118.7631	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03160	118.5597	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03160	118.5585	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03160	118.5585	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03313	117.8348	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	117.1805	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03925	117.1264	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03925	117.1264	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02961	116.7711	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03045	116.3344	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03045	116.3344	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	116.0713	P12:115:SPS:V15.1.TUCO.INDANA
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	115.9345	INDIANA SUB - STANTON SUB 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03036	115.9251	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03036	115.9251	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03313	115.8466	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	115.7132	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03337	115.3543	P12:345:SPS:J15.1.XRDS.TOLK
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	114.5907	P12:115:SPS:V15.1.TUCO.INDANA
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03313	114.5707	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	114.4591	INDIANA SUB - STANTON SUB 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03045	114.3815	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03045	114.3815	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03160	114.3595	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03160	114.3587	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03160	114.3587	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03017	114.2874	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03017	114.2874	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03925	114.2252	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03925	114.2252	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03078	114.1987	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03078	114.1987	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03036	113.9713	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03036	113.9713	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03016	113.6844	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03016	113.6844	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03325	113.5823	NEWHART 230 - PLANT X STATION 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02961	113.5789	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03267	113.4332	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03267	113.4332	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03607	113.3549	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03607	113.3549	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02994	113.2177	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02994	113.2177	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03050	113.1855	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	113.0394	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03211	112.8249	G15039_T 230.00 - PLANT X STATION 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03036	112.7339	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03017	112.3925	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03017	112.3925	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	112.0983	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	112.0983	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03211	112.0959	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	111.9044	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03017	111.5554	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03017	111.5554	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03016	111.4844	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03016	111.4844	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03325	111.4368	NEWHART 230 - PLANT X STATION 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03267	111.3421	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03267	111.3421	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03607	111.2883	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03607	111.2883	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02994	111.1008	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02994	111.1008	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03050	110.9434	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03211	110.7345	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	110.562	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03036	110.444	AMOCO TAP - SUNDOWN INTERCHANGE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03078	110.2981	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03078	110.2981	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03017	110.187	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03017	110.187	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	110.0919	P12:115:SPS:V62.1.CRLSLE.INDANA
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03211	110.0609	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	110.0021	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	108.8363	P12:115:SPS:V62.1.CRLSLE.INDANA
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02985	108.75	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02973	105.8647	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02973	104.5242	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02967	104.4941	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02967	104.4941	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02973	103.8036	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02973	103.71	P12:115:SPS:T83.1.SP-FKFD.ALLEN
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02973	102.6091	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02973	102.5416	P12:115:SPS:T83.1.SP-FKFD.ALLEN
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02967	102.3817	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02967	102.3817	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	17SP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03189	101.9618	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02973	100.9968	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02973	100.9968	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
4	17SP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03189	100.4333	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02973	100	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
4	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02973	100	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
4	16WP	G16_059	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	557.0	557.0	0.31324	105.1334	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	557.0	557.0	0.31324	105.1334	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	17G	G16_059	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	478.0	502.0	0.42556	99	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	557.0	557.0	0.31843	99.3	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	557.0	557.0	0.31843	99.3	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_059	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.04151	103.2735	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_059	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.04151	103.2735	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_059	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03111	101.0121	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	FROM->TO	EAST PLANT INTERCHANGE (WH ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03111	101.0121	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08870	103.0572	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G16_059	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08870	102.4534	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	17G	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.58640	109.6596	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
4	17G	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.63264	101.8775	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31730	153.8256	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31730	153.8256	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29948	152.8272	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29948	152.8272	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.26075	134.0911	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.26075	134.0911	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.27298	132.5798	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.27298	132.5798	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.40580	131.0206	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.43094	127.188	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28125	113.3621	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28125	113.3621	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29135	112.2713	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29135	112.2713	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21491	111.531	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21491	109.1152	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20163	105.2431	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20161	104.4558	P12:230:AEPW:ELKCITY6:SWEETWT6
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19837	103.7306	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19837	103.7306	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.18821	102.6686	BASE CASE
4	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28283	102.1805	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21976	101.8523	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1
4	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29237	100.9379	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
4	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28283	99.9	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19577	99.5	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19577	99.5	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19686	99.1	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19686	99.1	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
4	25SP	G16_059	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03583	113.6646	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G16_059	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03583	113.6599	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11040	125.0569	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11040	125.0569	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10465	124.4426	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08790	119.0612	GEN526333 1-JONES GEN #3 21 KV
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08790	118.6856	GEN526334 1-JONES_4 116.500
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09846	115.2096	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09846	115.2096	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09992	114.2489	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09210	112.7825	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09210	112.7825	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09210	112.7825	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09210	112.7825	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08782	112.5996	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08782	112.5946	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10306	111.5567	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	111.4277	GEN526332 1-JONES GEN #2 21 KV
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	111.4262	GEN526331 1-JONES GEN #1 22 KV
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09966	111.1872	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09966	111.1872	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08917	110.6166	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08917	110.6166	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08307	107.3755	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08307	107.3755	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09486	107.2994	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09609	106.7476	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09609	106.7476	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09486	106.0503	P12:115:SPS:V15.1.TUCO.INDANA
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09486	106.0286	INDIANA SUB - STANTON SUB 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09246	105.9426	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09246	105.9426	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09568	105.5518	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09568	105.5518	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09920	105.4545	P12:345:SPS:J02.1.TOLK.EDDY
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	105.1919	GEN527884 1-CUNNINGHAM GEN #4 22 KV
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09234	104.7565	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09234	104.7565	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	104.7227	GEN563142 1-G15079_3 0.5500
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	104.7227	GEN563151 1-G15080_2 0.5500
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09153	104.701	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09153	104.701	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08017	104.4387	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09237	104.3096	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09216	104.1763	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09173	104.1716	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	104.169	GEN527883 1-CUNNINGHAM GEN #3 22 KV
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09173	104.1682	P12:345:SPS:J14.1.EDDY.XRDS
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09081	104.0759	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09486	104.0569	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09081	104.0503	P12:230:SPS:K37.1.TOLK.LAMB

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09049	104.0486	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09049	104.0486	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07494	104.0099	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07494	104.0099	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09143	103.8472	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09143	103.8472	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08994	103.8244	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09216	103.8112	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08994	103.8052	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08994	103.7969	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08994	103.7969	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09081	103.7811	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09081	103.7811	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09123	103.7042	LUBBOCK SOUTH INTERCHANGE - SOUTH PLAINS REC-WOODROW INTERCHANGE 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09458	103.6116	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09458	103.6116	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	103.61	GEN563102 1-G15075_3 0.5500
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07418	103.4791	GEN527166 1-MUSTANG_6 118.000
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	103.4413	TUCO INTERCHANGE 230/13.0KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09173	103.4247	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09173	103.4247	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08790	103.416	GEN587373 1-G16-056-GEN10.6900
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	103.3748	GEN563132 1-G15078_3 0.3570
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09595	103.2672	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09595	103.2672	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09266	103.237	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	103.2128	GEN587113 1-G16-015-GEN10.4180
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09246	103.2003	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09246	103.2003	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08171	103.1719	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08171	103.1719	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09216	103.1311	P12:115:SPS:W54.1.KISER.KRESS
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08923	103.0824	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08923	103.0824	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09708	103.063	NEWHART 230 - PLANT X STATION 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09486	103.0516	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08911	103.0315	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08911	103.0315	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08911	103.0315	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08911	103.0315	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09216	102.9902	KISER 3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09486	102.9728	P12:115:SPS:V62.1.CRLSLE.INDANA
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09393	102.7825	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09393	102.7825	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09625	102.755	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09204	102.7478	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	102.5867	GEN526678 1-CIRRUS_WND 10.6900
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09266	102.5168	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09310	102.2923	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09613	102.283	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08790	102.1709	GEN526331 1-JONES GEN #1 22 KV
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08790	102.1659	GEN526332 1-JONES GEN #2 21 KV
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09188	102.1196	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07581	102.029	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07581	102.0268	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07581	102.025	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07581	102.025	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09458	102.0027	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09458	102.0027	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07418	101.8062	GEN527903 1-HOBBS PLANT #3 (ST)
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09153	101.583	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09153	101.583	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08423	101.2908	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09123	100.8241	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09123	100.8241	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	100.6863	GEN525844 1-ELK_1 118.000
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	100.5854	BASE CASE
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	100.5324	GEN525845 1-ELK_2 1 18.000
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08490	100.3275	P12:345:SPS:J15.1.XRDS.TOLK
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08366	100.1603	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09246	100.122	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08423	100.0517	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08930	100.0499	G14-074T 345.00 - OKLAUNION 345KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09173	100	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09082	99.8	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08366	99.6	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07998	99.6	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07998	99.6	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07998	99.6	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08934	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08934	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07418	99.5	GEN527901 1-HOBBS PLANT #1 (CT)
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09246	99.5	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07553	99.4	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09123	99.4	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	99.3	GEN562762 1-G15033_3 0.6900
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09058	99.3	P12:115:SPS:V56.1.COCHRAN.SUNDWN
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09037	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09037	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09037	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09037	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09246	99.2	P12:115:SPS:T83.1.SP-FKFD.ALLEN
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09171	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09171	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	99.2	GEN300001 1-THOMAS HILL UNIT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	99.2	GEN300016 1-1G1GPDEL 18.000
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	99.2	GEN300017 1-1G2GPDEL 18.000
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	99.2	GEN511938 1-OEC STEAM # 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	99.2	GEN511941 1-OEC STEAM # 2
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	99.2	GEN562023 1-G11_020_3 0.6900
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	99.2	GEN645041 1-CASS COUNTY 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08366	99.1	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07358	99.1	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
4	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07358	99.1	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	99.1	GEN549893 2-SOUTHWEST 2
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	99.1	GEN562026 1-G11_019_3 0.6900
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	99.1	GEN563162 1-G15081_3 0.6900
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	99.1	GEN659407 1-ANTELPHILLSW0.6900
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	99	GEN513602 1-GRECSTG_1 17.500
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	99	GEN547649 1-ASBURY UNIT #1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	99	GEN563173 1-G15082_3 0.6900
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09039	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
4	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09039	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
4	16WP	G16_059	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.09535	103.5221	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_059	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.09535	103.5221	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	16WP	G16_059	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.03503	108.8773	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	16WP	G16_059	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.03503	108.8773	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	150.9857	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	150.9823	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.304	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.2713	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1568	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1421	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	99.3	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	99.3	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6999	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
4	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6899	P12:230:LPL:K26.1.JONES.LP-HOLLY
4	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6243	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6243	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	16WP	G16_059	-	Non-Converged Contingency	859.0	956.0	0.07688	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
4	16WP	G16_059	-	Non-Converged Contingency	560.0	560.0	0.07688	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G16_059	-	Non-Converged Contingency	0.0	0.0	0.22018	-	P12:345:SPS:J02.1.TOLK.EDDY
4	25SP	G16_059	-	Non-Converged Contingency	478.0	502.0	0.14636	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
4	25SP	G16_059	-	Non-Converged Contingency	343.79	343.79	0.09108	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_059	-	Non-Converged Contingency	478.0	502.0	0.06188	-	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_059	-	Non-Converged Contingency	0.0	0.0	0.05153	-	P12:230:LPL:K26.1.JONES.LP-HOLLY

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	25SP	G16_059	-	Non-Converged Contingency	0.0	0.0	0.03933	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G16_059	-	Non-Converged Contingency	0.0	0.0	0.03175	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_059	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.37425	108.6242	BASE CASE
4	17G	G16_059	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.37493	102.851	BASE CASE
4	25SP	G16_059	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03046	104.4944	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03046	104.4944	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	25SP	G16_059	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03481	100	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
5	17G	G16_059	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96.0	96.0	0.06097	125.1536	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.09535	111.1386	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05977	104.8629	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05703	100.4992	P12:345:SPS:J15.1.XRDS.TOLK
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165.0	177.0	0.05857	99.6	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04206	158.0601	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.04206	146.9036	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03242	144.4574	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03242	144.4574	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03242	134.4484	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03242	134.4484	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03746	126.8354	P12:115:SPS:V15.1.TUCO.INDANA
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03167	126.2293	P12:345:SPS:J15.1.XRDS.TOLK
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03326	125.7471	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03746	125.1727	P12:115:SPS:V15.1.TUCO.INDANA
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	124.9986	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	124.986	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	121.6261	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03029	121.6192	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03343	120.8826	P12:345:SPS:J15.1.XRDS.TOLK
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03746	120.7683	P12:115:SPS:V62.1.CRLSLE.INDANA
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03326	119.9526	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03167	119.5401	P12:345:SPS:J15.1.XRDS.TOLK
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03746	119.3457	P12:115:SPS:V62.1.CRLSLE.INDANA
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	118.9077	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03160	118.5585	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	117.3219	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03925	117.1264	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03045	116.3344	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	116.2161	P12:115:SPS:V15.1.TUCO.INDANA
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	116.0797	INDIANA SUB - STANTON SUB 115KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03036	115.9251	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03343	115.4973	P12:345:SPS:J15.1.XRDS.TOLK
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	114.7323	P12:115:SPS:V15.1.TUCO.INDANA
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	114.601	INDIANA SUB - STANTON SUB 115KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03045	114.3815	TUCO INTERCHANGE (GE M102345) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03160	114.3587	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03017	114.2874	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03925	114.2252	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03078	114.1987	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03036	113.9713	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03016	113.6844	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03267	113.4332	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03607	113.3549	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02994	113.2177	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03017	112.3925	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03002	112.0983	LUBBOCK EAST INTERCHANGE - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	112.0513	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03017	111.5554	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03016	111.4844	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03267	111.3421	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03607	111.2883	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02994	111.1008	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	110.7049	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03078	110.2981	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	110.2372	P12:115:SPS:V62.1.CRLSLE.INDANA
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.03017	110.187	OASIS INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	110.151	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	108.9787	P12:115:SPS:V62.1.CRLSLE.INDANA
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02988	108.8955	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02971	104.6524	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02971	104.6524	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02973	103.71	P12:115:SPS:T83.1.SP-FKFD.ALLEN

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02973	102.5416	P12:115:SPS:T83.1.SP-FKFD.ALLEN
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02971	102.5361	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02971	102.5361	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02973	100.9968	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
5	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.02973	100	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
5	16WP	G16_059	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	557.0	557.0	0.31349	105.4679	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_059	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	557.0	557.0	0.31349	105.4679	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	557.0	557.0	0.31871	99.6	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1	557.0	557.0	0.31871	99.6	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	25SP	G16_059	FROM->TO	EAST PLANT INTERCHANGE (WH_ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.04151	103.2735	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
5	25SP	G16_059	FROM->TO	EAST PLANT INTERCHANGE (WH_ALM21481) 230/115/13.2KV TRANSFORMER CKT 1	252.0	252.0	0.03111	101.0121	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
5	16WP	G16_059	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08869	103.0311	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	16WP	G16_059	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.08869	102.4344	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	17G	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.58640	109.6596	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
5	17G	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	478.0	610.0	0.63264	101.8775	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31758	154.411	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31758	154.411	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29973	153.3376	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29973	153.3376	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.26075	134.0911	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.27298	132.5798	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.40580	131.0206	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.43094	127.188	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28125	113.3621	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29135	112.2713	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21503	111.7681	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21503	109.3508	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20173	105.4633	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20172	104.6995	P12:230:AEPW:ELKCITY6:SWEETWT6
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19849	103.9902	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19849	103.9902	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.18838	103.0407	BASE CASE
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21993	102.1896	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1
5	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28283	102.1805	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
5	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29237	100.9379	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
5	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28283	99.9	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19592	99.8	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19592	99.8	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19699	99.4	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19699	99.4	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19351	99.2	HAPPY INTERCHANGE - TULIA TAP 115KV CKT 1
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19351	99.2	P12:115:SPS:T67.1.HAPPY.KRESS
5	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19351	99	KRESS INTERCHANGE - TULIA TAP 115KV CKT 1
5	25SP	G16_059	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03583	113.6714	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G16_059	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03583	113.6673	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11051	124.8975	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11051	124.8975	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08797	118.9383	GEN526333 1-JONES GEN #3 21 KV
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08797	118.5628	GEN526334 1-JONES_4 116.500
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09846	115.2096	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10001	114.1042	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09210	112.7825	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09210	112.7825	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08789	112.5331	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08789	112.531	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10315	111.409	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09966	111.1872	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08917	110.6166	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08307	107.3755	CARLISLE INTERCHANGE (WH_XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09614	106.6731	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09614	106.6731	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09486	106.0503	P12:115:SPS:V15.1.TUCO.INDANA
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09246	105.9426	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09568	105.5518	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09927	105.3409	P12:345:SPS:J02.1.TOLK.EDDY
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09234	104.7565	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09153	104.701	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
5	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08017	104.4387	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09237	104.3096	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09173	104.1682	P12:345:SPS:J14.1.EDDY.XRDS

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07501	104.1015	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07501	104.1015	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09081	104.0503	P12:230:SPS:K37.1.TOLK.LAMB
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09049	104.0486	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09143	103.8472	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09081	103.7811	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09001	103.707	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09001	103.6946	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09001	103.6865	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09001	103.6865	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09458	103.6115	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09173	103.4247	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08797	103.2876	GEN587373 1-G16-056-GEN10.6900
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09246	103.2003	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
5	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08171	103.1719	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09602	103.1458	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09602	103.1458	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09216	103.1311	P12:115:SPS:W54.1.KISER.KRESS
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08923	103.0824	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09486	102.9728	P12:115:SPS:V62.1.CRLSLE.INDANA
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08920	102.9044	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08920	102.9044	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08920	102.9044	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08920	102.9044	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09393	102.7825	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09638	102.6383	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08797	102.0561	GEN526331 1-JONES GEN #1 22 KV
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08797	102.051	GEN526332 1-JONES GEN #2 21 KV
5	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07581	102.0268	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07581	102.025	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09458	102.0028	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09153	101.5831	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09123	100.8241	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09108	100.5857	BASE CASE
5	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.08507	100.4572	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09181	99.9	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
5	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07998	99.6	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09130	99.3	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09058	99.3	P12:115:SPS:V56.1.COCHRAN.SUNDWN
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09037	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09037	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09246	99.2	P12:115:SPS:T83.1.SP-FKFD.ALLEN
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09171	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
5	16WP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	427.05	427.05	0.07358	99.1	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
5	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09039	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
5	16WP	G16_059	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.09535	103.5221	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	16WP	G16_059	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.03503	108.8773	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	150.9628	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	150.9601	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.3008	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.268	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1553	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.1406	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03489	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	99.2	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	99.2	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6972	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
5	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6738	P12:230:LPL:K26.1.JONES.LP-HOLLY
5	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6217	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03071	110.6217	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_059	-	Non-Converged Contingency	0.0	0.0	0.22018	-	P12:345:SPS:J02.1.TOLK.EDDY
5	25SP	G16_059	-	Non-Converged Contingency	478.0	502.0	0.14636	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
5	25SP	G16_059	-	Non-Converged Contingency	343.79	343.79	0.09108	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_059	-	Non-Converged Contingency	478.0	502.0	0.06188	-	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_059	-	Non-Converged Contingency	0.0	0.0	0.05153	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
5	25SP	G16_059	-	Non-Converged Contingency	0.0	0.0	0.03933	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G16_059	-	Non-Converged Contingency	0.0	0.0	0.03175	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	25SP	G16_059	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.37425	108.6241	BASE CASE
5	17G	G16_059	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.37493	102.851	BASE CASE
5	25SP	G16_059	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03046	104.4944	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	25SP	G16_059	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.03484	99.9	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
6	25SP	G16_059	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	160.0	160.0	0.07079	106.3405	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_059	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	160.0	160.0	0.07079	106.3405	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_059	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.06278	102.8122	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_059	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96.0	96.0	0.06278	102.8122	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_059	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.06278	99.5	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_059	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96.0	96.0	0.06278	99.5	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04392	108.5265	BASE CASE
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.06059	107.4781	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.06059	107.4781	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04543	104.6103	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04543	104.6103	CHERRY1 (WAUK WT01104) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.05636	103.6325	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.05636	103.6325	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.05206	102.2549	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.05206	102.2549	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04730	101.9368	RANDALL COUNTY INTERCHANGE (GE M100353) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04730	101.9368	RANDALL COUNTY INTERCHANGE (GE M100353) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04699	101.4194	RANDALL COUNTY INTERCHANGE (WAU WT01090) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04699	101.4194	RANDALL COUNTY INTERCHANGE (WAU WT01090) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04851	101.238	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04851	101.238	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04993	101.0555	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04412	100.8834	AMARILLO SOUTH INTERCHANGE (ABB 801466) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04412	100.8834	AMARILLO SOUTH INTERCHANGE (ABB 801466) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.05753	100.8025	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.05753	100.8025	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04701	100.3947	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04701	100.3947	HUTCHINSON COUNTY INTERCHANGE - NICHOLS STATION 230KV CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04297	100.2761	MOORE COUNTY INTERCHANGE W. - RB-S&S 3115.00 115KV CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04396	99.9	GRAPEVINE INTERCHANGE (WAUK WT01089) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04396	99.9	GRAPEVINE INTERCHANGE (WAUK WT01089) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	318.7	350.57	0.04297	99.8	P12:115:SPS:T25.1.MOOREW.DUMAS19
6	16WP	G16_059	TO->FROM	EAST PLANT INTERCHANGE - HARRINGTON STATION 230KV CKT 1	329.05	360.92	0.03825	99.6	BASE CASE
6	25SP	G16_059	FROM->TO	G15079_T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	318.7	350.57	0.06327	100.8357	HOBBS - YOAKUM_345 345.00 345KV CKT 1
6	16WP	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	579.0	664.0	0.50264	101.3823	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
6	16WP	G16_059	TO->FROM	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1	579.0	664.0	0.50264	101.3823	Harrington Station Mid Bus - NICHOLS STATION 230KV CKT 2
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31702	153.6698	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31702	153.6698	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29910	152.6087	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29910	152.6087	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.25723	130.3899	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.25723	130.3899	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.27119	130.2577	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.27119	130.2577	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21438	111.3237	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28929	110.1009	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.28929	110.1009	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
6	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.27715	109.9103	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	17G	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.27715	109.9103	CHERRY1 - HARRINGTON STATION 230KV CKT 1
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21438	108.9072	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20235	105.4412	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20233	104.68	P12:230:AEPW:ELKCITY6:SWEETWT6
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19879	103.8392	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19879	103.8392	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.18804	102.5758	BASE CASE
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21961	101.7579	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19542	99.4	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19542	99.4	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19726	99.2	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
6	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19726	99.2	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
6	25SP	G16_059	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03583	113.5161	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10942	124.2902	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
6	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08724	118.5502	GEN526333 1-JONES GEN #3 21 KV
6	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08724	118.1772	GEN526334 1-JONES_4 116.500
6	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09905	113.6007	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08716	111.9176	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
6	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10183	110.107	CRAWFISH_DR 345.00 - YOAKUM_345 345.00 345KV CKT 1
6	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09592	106.564	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
6	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08928	103.2173	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08928	103.216	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
6	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08724	102.8608	GEN587373 1-G16-056-GEN10.6900
6	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09526	102.7727	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
6	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08840	102.4925	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08840	102.4925	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08724	101.6462	GEN526331 1-JONES GEN #1 22 KV
6	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08724	101.6414	GEN526332 1-JONES GEN #2 21 KV
6	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09062	99.4	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
6	16WP	G16_059	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.09722	106.6113	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	16WP	G16_059	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.09722	106.6113	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	16WP	G16_059	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.06154	103.097	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G16_059	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.06154	103.097	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G16_059	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.05391	101.6558	GEN525561 1-TOLK GEN #1 24 KV
6	16WP	G16_059	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165.0	180.0	0.05889	99.3	P12:345:SPS:J15.1.XRDS.TOLK
6	25SP	G16_059	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	159.0	175.0	0.03031	99	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	16WP	G16_059	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.03479	108.9068	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	16WP	G16_059	TO->FROM	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1	164.53	177.08	0.03479	108.9068	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
6	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	151.3756	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03488	118.1734	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03488	118.1275	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03488	101.1279	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03488	101.1113	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03583	100.0897	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03070	110.6217	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
6	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03070	110.5253	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
6	16WP	G16_059	-	Non-Converged Contingency	859.0	956.0	0.07692	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
6	16WP	G16_059	-	Non-Converged Contingency	560.0	560.0	0.07692	-	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
6	25SP	G16_059	-	Non-Converged Contingency	0.0	0.0	0.22028	-	P12:345:SPS:J02.1.TOLK.EDDY
6	16WP	G16_059	FROM->TO	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1	165.0	180.0	0.09722	99.9	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	16WP	G16_059	FROM->TO	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1	165.0	180.0	0.09722	99.9	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	16WP	G16_059	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06637	101.0832	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
6	16WP	G16_059	FROM->TO	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187.0	187.0	0.06637	101.0832	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
7	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31708	153.7695	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
7	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.31708	153.7695	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
7	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29914	152.6837	CHERRY1 - HARRINGTON STATION 230KV CKT 1
7	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.29914	152.6837	CHERRY1 - HARRINGTON STATION 230KV CKT 1
7	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21439	111.3539	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
7	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21439	108.9383	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
7	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20240	105.5293	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
7	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.20238	104.7684	P12:230:AEPW:ELKCITY6:SWEETWT6
7	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19884	103.9163	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
7	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19884	103.9163	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
7	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.18807	102.6406	BASE CASE
7	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.21964	101.8163	HARRINGTON STATION - Harrington Station Mid Bus 230KV CKT @1
7	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19544	99.4	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
7	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19544	99.4	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
7	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19730	99.3	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
7	16WP	G16_059	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.19730	99.3	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
0	20L	G16_060	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766.0	923.0	0.10229	106.3795	BASE CASE
0	20L	G16_060	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135.0	1195.0	0.03494	103.411	BASE CASE
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84973	167.3426	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84973	165.481	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84973	163.7168	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84973	160.3957	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84936	157.4272	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84936	155.9306	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84880	154.2499	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84936	153.5384	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84880	152.6867	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84937	150.9634	P12:138:OKGE:3TERM7
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84936	150.9404	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69787	150.3185	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84880	149.7643	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69638	148.8439	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69370	146.8072	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84881	146.4665	P12:138:OKGE:3TERM7
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84880	146.4526	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69215	146.3132	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73589	143.5596	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65147	143.5185	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65147	142.8707	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65147	141.78	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65163	141.2346	P12:138:OKGE:3TERM7
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69882	140.873	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65147	140.6467	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69470	140.5469	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73516	138.9921	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73564	137.5963	SUMNER 4 - TIMBJCT4 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73676	137.3807	SUMNER 4 - TIMBJCT4 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69370	136.2617	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69215	135.7241	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71225	135.5873	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71225	135.2565	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73554	134.5028	TIMBER JUNCTION - UDALL 69KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71122	134.3345	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	134.1722	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71122	134.0358	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71084	133.9128	P12:069:WERE:BELL-CRSW_69::
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73554	133.5433	RICHLAND - UDALL 69KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73590	133.1283	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73430	132.8925	TIMBER JUNCTION - UDALL 69KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73564	132.8204	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73676	132.6828	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73430	132.6395	P12:069:WERE:TIMJ-WEAV_69::
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71084	132.3401	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71225	132.2728	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73554	132.2375	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65198	131.9636	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73749	131.804	SUMNER 4 - TIMBJCT4 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73430	131.6327	RICHLAND - UDALL 69KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70960	131.166	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69470	130.7204	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73554	130.6596	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65198	130.5	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73430	130.2769	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71225	129.8276	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70150	129.6024	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65198	129.4196	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65131	129.2502	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70838	129.1795	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70960	129.1335	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70298	128.9435	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69787	128.9012	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70298	128.8864	OSAGE - WEBB CITY TAP 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71084	128.8353	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70138	128.7863	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73430	128.4528	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71225	128.4462	BELL - PECK 69KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69638	128.4049	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70146	128.1513	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70146	128.1513	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65131	127.995	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	127.935	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70298	127.8494	FAIRFAX TAP - SHIDLER 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70298	127.8492	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70150	127.6473	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57868	127.6438	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73622	127.6067	TIMBER JUNCTION - UDALL 69KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70182	127.4632	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70389	127.4177	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70182	127.4041	OSAGE - WEBB CITY TAP 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65128	127.3901	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71278	127.3644	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70026	127.3271	P12:138:OKGE:3TERM2
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70838	127.3056	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70039	127.2866	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71084	127.2581	BELL - PECK 69KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70024	127.2573	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73622	127.2459	P12:069:WERE:TIMJ-WEAV_69::
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71084	127.1246	P12:069:WERE:BELL-MURR_69::
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73749	127.0381	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71225	126.8816	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	126.7782	917X
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65198	126.7556	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70249	126.6232	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	126.5349	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70182	126.4594	FAIRFAX TAP - SHIDLER 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70182	126.4591	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70030	126.3882	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70030	126.3882	CLEVELAND - TULSA NORTH 345KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65128	126.2214	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.68722	126.1689	EL PASO - ROSE HILL 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65131	126.0911	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69215	126.0751	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70133	126.0578	SHIDLER - WEST PAWHUSKA 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70015	126.0129	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70133	126.0009	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70133	125.825	DOMES - PAWHUSKA TAP 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70133	125.7696	P12:138:AEPW:MOUNDRD4:SHIDLER4
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70128	125.7653	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69370	125.7027	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70133	125.6675	DOMES - MOUND ROAD 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73622	125.6451	RICHLAND - UDALL 69KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70015	125.6405	917X
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71084	125.5287	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70039	125.4547	G15063_T 345.00 - WOODRING 345KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70015	125.3712	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.68611	125.3139	EL PASO - ROSE HILL 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71333	125.2908	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58412	125.262	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70099	125.2264	MORISNT4 138.00 - SOONER 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70101	125.1503	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	125.1492	GEN542955 1-LACYGNE UNIT #1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70101	125.1365	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71278	125.1359	P12:069:WERE:BELL-CRSW_69::
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70091	125.1099	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	125.0809	GEN542962 2-IATAN UNIT #2
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70091	125.0549	MCELROY - UNVRSTY4 138.00 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	124.9549	GEN562902 1-G15052_3 0.6900
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70018	124.9261	SHIDLER - WEST PAWHUSKA 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70094	124.9023	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	124.8996	GEN635024 4-WALTER SCOTT UNIT 4
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70018	124.8854	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71333	124.8637	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70091	124.8571	KINZE - MCELROY 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	124.7967	GEN542956 2-LACYGNE UNIT #2
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	124.7554	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	124.7545	GEN542957 1-IATAN UNIT #1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	124.751	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	124.7508	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70094	124.714	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70092	124.6749	SOONER - SPRING CREEK 345KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70018	124.6072	DOMES - PAWHUSKA TAP 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	124.6059	GEN532720 1-CANEYWF1 0.6900
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70092	124.599	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	124.5834	GEN635023 3-WALTER SCOTT UNIT 3
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70018	124.4899	P12:138:AEPW:MOUNDRD4:SHIDLER4
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70018	124.4855	DOMES - MOUND ROAD 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70007	124.4528	DELAWARE - NORTHEAST STATION 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70007	124.4528	DELAWARE - NORTHEAST STATION 345KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65128	124.322	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57388	124.1909	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70016	124.1347	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69988	123.9343	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69985	123.8486	MORISNT4 138.00 - SOONER 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69988	123.8101	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65142	123.7656	P12:138:OKGE:3TERM7

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73622	123.6532	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69977	123.621	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69977	123.5716	MCELROY - UNVRSTY4 138.00 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69981	123.5494	P12:138:WFEC:MSL15
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69981	123.5394	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58833	123.5328	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60164	123.5286	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65131	123.4048	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69977	123.3905	KINZE - MCELROY 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69977	123.3575	P12:138:OKGE:3TERM47
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69981	123.3482	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69959	123.2333	P12:069:WERE:ARKA-CRSW_69::
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71278	123.1663	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69959	123.159	P12:069:WERE:ARKA-OAK_69::
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57845	123.1153	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	122.8438	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	122.5788	BASE CASE
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58819	122.2856	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65139	122.1767	P12:138:OKGE:3TERM7
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65128	121.8373	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71035	121.6728	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57873	121.609	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70361	121.2573	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69952	121.2466	BASE CASE
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70206	121.2391	P12:138:OKGE:3TERM2
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70361	121.2074	OSAGE - WEBB CITY TAP 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70204	121.1577	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70216	121.1288	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73622	121.0697	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71278	121.0005	BELL - PECK 69KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71278	120.8184	P12:069:WERE:BELL-MURR_69::
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70051	120.6319	LACYGNE - STILWELL 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69882	120.5868	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70020	120.5634	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70431	120.4662	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69470	120.4661	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70042	120.4659	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	120.4193	GEN336821 1-GRAND GULF UNIT
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	120.3725	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	120.3351	GEN562882 1-G15047_3 0.6900
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70431	120.2991	DMNCRKT4 - MILLER 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71111	120.2216	WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70431	120.1809	MILLER - SOONER 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70361	120.1655	FAIRFAX TAP - SHIDLER 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70361	120.1653	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70207	120.1386	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70207	120.1386	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	120.1294	GEN514806 1-SOONER UNIT 2
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70014	120.0487	BLACKBERRY - NEOSHO 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70191	120.0243	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	120.0089	GEN587493 1-G16-072-GEN10.6900
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	120.0027	GEN562429 1-G13-029 0.6900
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70316	120.0013	OSAGE - SOONER PUMP TAP 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70316	119.9248	SOONER - SOONER PUMP TAP 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69829	119.8712	BOEING - STEARMAN 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	119.6109	GEN301382 1-1OSAGEWINDG10.6900
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69940	119.4046	LACYGNE - STILWELL 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	119.3998	GEN515483 1-BLKWLWD1 0.6900
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69909	119.3903	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70216	119.3645	G15063_T 345.00 - WOODRING 345KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69718	119.3586	BOEING - CANAL 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	119.2585	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71035	119.2139	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	119.1788	GEN563032 1-G15067_3 0.4180
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70191	118.9804	917X
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	118.955	GEN562611 1-G14_064_3 0.6900
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.68800	118.9274	EL PASO - ROSE HILL 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69902	118.7919	BLACKBERRY - NEOSHO 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70191	118.7897	G15066_T 345.00 - SOONER 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71278	118.4885	GILL ENERGY CENTER WEST - PECK 69KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69718	118.4307	BOEING - STEARMAN 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70197	118.3584	SHIDLER - WEST PAWHUSKA 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70329	118.3482	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70197	118.2974	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70329	118.201	DMNCRKT4 - MILLER 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	118.1657	GEN532722 1-EVANS ENERGY CENTER UNIT 2
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70329	118.0885	MILLER - SOONER 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70197	117.9534	DOMES - PAWHUSKA TAP 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69952	117.942	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70213	117.9174	OSAGE - SOONER PUMP TAP 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69743	117.9004	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70213	117.8462	SOONER - SOONER PUMP TAP 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69980	117.8108	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69283	117.808	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70197	117.7911	P12:138:AEPW:MOUNDRD4:SHIDLER4
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70197	117.7652	DOMES - MOUND ROAD 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57868	117.715	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70193	117.6792	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70986	117.6684	WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70136	117.614	P12:069:WERE:ARKA-CRSW_69::
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	117.6138	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	117.6034	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	117.603	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70165	117.5115	MORISNT4 138.00 - SOONER 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69283	117.4988	59TH ST - EL PASO 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70165	117.4764	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69795	117.4322	BENTON - WICHITA 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	117.4199	GEN542955 1-LACYGNE UNIT #1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70165	117.3551	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	117.3468	GEN542962 2-IATAN UNIT #2
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70157	117.2269	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58838	117.1694	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70157	117.161	MCELROY - UNVRSTY4 138.00 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70158	117.1596	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71423	117.0989	CHIKASKIA - KILDARE4 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70159	117.0687	P12:138:WFEC:MSL15
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	117.0577	GEN542956 2-LACYGNE UNIT #2
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70138	117.0565	GRDA1 - GREC TAP5 345.00 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70159	117.0356	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70136	117.0046	P12:069:WERE:ARKA-OAK_69::
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	116.9738	GEN562902 1-G15052_3 0.6900
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70038	116.9539	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	116.9409	GEN542957 1-IATAN UNIT #1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70028	116.9239	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70157	116.8735	KINZE - MCELROY 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70028	116.8735	45TH ST4 138.00 - COWSKIN 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70159	116.8448	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70028	116.8348	P12:138:WERE:COWS-GECT_138::
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70157	116.7964	P12:138:OKGE:3TERM47
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	116.7859	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	116.7701	GEN635024 4-WALTER SCOTT UNIT 4
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70269	116.753	BUTLER COUNTY NO. 10 BENTON - WEAVER 69KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70078	116.7399	DELAWARE - NORTHEAST STATION 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70078	116.7399	DELAWARE - NORTHEAST STATION 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70484	116.7381	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70269	116.7081	P12:069:WERE:MOBI-WEAV_69::
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70158	116.6777	SOONER - SPRING CREEK 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	116.6688	GEN532720 1-CANEYWF1 0.6900
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70038	116.6483	HOOVER NORTH - LAKERIDGE 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69874	116.5917	ROSE HILL (ROSE TX-3) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69633	116.5823	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69874	116.5793	ROSE HILL (ROSE TX-5) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69173	116.3187	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69173	115.9713	59TH ST - EL PASO 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69173	115.93	P12:138:WERE:ELPA-MURR_138::
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71301	115.7869	CHIKASKIA - KILDARE4 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60334	115.5657	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70960	115.4951	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70960	115.4877	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70243	115.3817	P13:069-138:WERE:WEAV_TX-2::

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	114.8745	GEN514805 1-SOONER UNIT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	114.7127	BASE CASE
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60306	114.7062	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	114.6995	GEN562691 1-G15_015_3 0.6900
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69743	114.6426	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70583	113.8794	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57388	113.8562	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70838	113.6364	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60207	113.6363	SUMNER 4 - TIMBJCT4 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70838	113.6288	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69633	113.3778	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58444	113.3058	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69856	113.1657	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69889	112.954	BOEING - CANAL 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57845	112.9295	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58125	112.8564	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	112.8186	GEN335831 1-RIVERBEND UNIT#1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	112.7995	P12:138:AEPW:CORNVIL4:DUNCAN-4
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	112.7584	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	112.7285	GEN587463 1-G16-068-GEN10.6900
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	112.694	GEN562992 1-G15063_3 0.6900
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	112.6261	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70082	112.5994	BLACKBERRY - NEOSHO 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	112.5894	GEN336153 1-WATERFORD UNIT#3
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58404	112.5474	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70136	112.5411	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69792	112.4883	EL PASO - SIXTY-FOURTH (64TH) 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	112.4881	GEN562882 1-G15047_3 0.6900
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69753	112.3778	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58227	112.3257	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	112.2556	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	112.2158	GEN562429 1-G13-029 0.6900
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	112.2124	GEN587493 1-G16-072-GEN10.6900
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	112.2089	GEN336821 1-GRAND GULF UNIT
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	112.143	GEN533561 1-CITY OF WINFIELD
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69325	112.1003	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70463	112.009	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69889	111.9915	BOEING - STEARMAN 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	111.9272	GEN514806 1-SOONER UNIT 2
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70377	111.8796	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	111.7606	GEN301382 1-1OSAGEWINDG10.6900
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59878	111.6701	SUMNER 4 - TIMBJCT4 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57873	111.6441	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69325	111.5941	59TH ST - EL PASO 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69325	111.5548	P12:138:WERE:ELPA-MURR_138::
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	111.5274	GEN515483 1-BLKWLWD1 0.6900
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69743	111.5065	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	111.4568	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70487	111.4155	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	111.3248	GEN563032 1-G15067_3 0.4180
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59794	111.3117	TIMBER JUNCTION - UDALL 69KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59794	111.2145	P12:069:WERE:TIMJ-WEAV_69::
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70487	111.1638	DMNCRKT4 - MILLER 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	111.1156	GEN562611 1-G14_064_3 0.6900
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	111.0944	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59794	111.0796	RICHLAND - UDALL 69KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69856	111.0215	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70487	111.0076	MILLER - SOONER 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70374	110.922	OSAGE - SOONER PUMP TAP 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70374	110.811	SOONER - SOONER PUMP TAP 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69818	110.8071	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60146	110.7832	TIMBER JUNCTION - UDALL 69KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60198	110.7776	SUMNER 4 - TIMBJCT4 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59794	110.7061	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60309	110.487	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58175	110.4346	GILL ENERGY CENTER SOUTH - VIOLA 4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60207	110.3939	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60146	110.3699	P12:069:WERE:TIMJ-WEAV_69::
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58519	110.2923	GILL ENERGY CENTER SOUTH - VIOLA 4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58622	110.273	CLEARWATER - VIOLA 4 138.00 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59794	110.2645	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69633	110.2389	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58280	110.1914	CLEARWATER - VIOLA 4 138.00 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58227	110.1881	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58594	110.1541	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58149	110.1357	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58594	110.061	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58153	110.0596	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58153	110.0596	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58594	110.0221	P12:069:WERE:BELL-CRSW_69::
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58241	110.0209	P12:138:WERE:MURR-MKEC_138P::
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60146	109.9801	RICHLAND - UDALL 69KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58427	109.9751	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58924	109.6249	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58224	109.6242	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71170	109.6159	WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58224	109.5989	OSAGE - WEBB CITY TAP 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58583	109.5367	P12:138:WERE:MURR-MKEC_138P::
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69753	109.5091	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71492	109.3619	CHIKASKIA - KILDARE4 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60212	109.3376	SUMNER 4 - TIMBJCT4 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58556	109.2992	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70387	109.217	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58427	109.121	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58149	109.1196	917X
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58150	109.0713	P12:138:OKGE:3TERM2
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58150	109.0569	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58224	109.0503	FAIRFAX TAP - SHIDLER 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58224	109.0502	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59878	108.8673	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58509	108.7573	GILL ENERGY CENTER SOUTH - VIOLA 4 138.00 138KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69856	108.687	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58958	108.5545	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60146	108.5522	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58553	108.5343	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58404	108.5218	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58149	108.5164	G15066_T 345.00 - SOONER 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58924	108.476	P12:069:WERE:BELL-CRSW_69::
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58594	108.4008	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58046	108.3983	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58958	108.2554	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58614	108.1975	CLEARWATER - VIOLA 4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58693	108.19	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69925	107.9722	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60148	107.9345	TIMBER JUNCTION - UDALL 69KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57868	107.8664	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58938	107.7869	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69818	107.6369	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58793	107.5978	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60148	107.5966	RICHLAND - UDALL 69KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58938	107.5686	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58098	107.5671	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58149	107.5665	SHIDLER - WEST PAWHUSKA 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58149	107.5494	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60198	107.5387	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58697	107.5228	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58385	107.3937	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58149	107.3878	DOMES - PAWHUSKA TAP 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58500	107.354	P12:138:OKGE:3TERM2
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58149	107.3473	DOMES - MOUND ROAD 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58149	107.3208	P12:138:AEPW:MOUNDRD4:SHIDLER4
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58500	107.2984	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58125	107.2828	GEN562902 1-G15052_3 0.6900
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57722	107.2393	BENTON - WICHITA 345KV CKT 1
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69753	107.2367	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58594	107.1633	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58556	107.154	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58585	107.0087	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58585	106.9827	OSAGE - WEBB CITY TAP 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58449	106.9364	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	106.9026	GEN562691 1-G15_015_3 0.6900
0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69215	106.8026	RANCHRD7 345.00 - SOONER 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58594	106.8009	BELL - PECK 69KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58594	106.7887	P12:069:WERE:BELL-MURR_69::
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58496	106.7625	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58125	106.7344	GEN532720 1-CANEYWF1 0.6900
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58157	106.7036	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58924	106.6884	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70431	106.6838	P13:069-138:WERE:WEAV_TX-2::
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60146	106.6654	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58505	106.6648	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58505	106.6648	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57047	106.6324	EL PASO - ROSE HILL 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60148	106.6295	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58788	106.6133	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58157	106.594	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58156	106.5585	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58125	106.467	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58375	106.4658	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58151	106.3927	P12:138:WFEC:MSL15
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58594	106.3922	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58151	106.3122	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58553	106.2319	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58496	106.1877	917X
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58585	106.1803	FAIRFAX TAP - SHIDLER 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58585	106.1802	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60212	106.1634	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60149	106.1384	TIMBER JUNCTION - UDALL 69KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70129	106.1051	GEN514805 1-SOONER UNIT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71035	106.0508	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71035	106.0428	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58495	106.0042	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58933	105.9398	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58559	105.9341	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69925	105.8914	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69370	105.8459	RANCHRD7 345.00 - SOONER 345KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58625	105.7936	CLEARWATER - VIOLA 4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58496	105.7738	G15066_T 345.00 - SOONER 345KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60149	105.7222	P12:069:WERE:TIMJ-WEAV_69::
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58584	105.5975	OSAGE - WEBB CITY TAP 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58793	105.5336	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60148	105.4734	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70385	105.4452	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58503	105.4351	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58345	105.3994	P12:138:WERE:GORD-MAIZ_138::
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58345	105.3992	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58345	105.3991	MAIZE - MAIZEW 4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	105.3651	GEN562902 1-G15052_3 0.6900
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58524	105.3329	GILL ENERGY CENTER SOUTH - VIOLA 4 138.00 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60149	105.3176	RICHLAND - UDALL 69KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58924	105.2904	BELL - PECK 69KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	105.2432	GEN542955 1-LACYGNE UNIT #1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58494	105.2252	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58924	105.221	P12:069:WERE:BELL-MURR_69::
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58042	105.1756	BENTON - WICHITA 345KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58926	105.1442	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58488	105.054	SHIDLER - WEST PAWHUSKA 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58345	105.0476	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58345	105.0476	P12:138:WERE:CHIS-MAIZ_138::
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58345	105.0467	MAIZE - MAIZEE 4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58488	105.0075	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58587	104.9488	P12:138:WERE:MURR-MKEC_138P::
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58480	104.939	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	104.8776	GEN542956 2-LACYGNE UNIT #2
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58480	104.8198	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	104.7868	GEN542962 2-IATAN UNIT #2
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	104.7583	GEN532720 1-CANEYWF1 0.6900
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58584	104.7438	FAIRFAX TAP - SHIDLER 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58584	104.7436	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58488	104.7396	DOMES - PAWHUSKA TAP 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58163	104.6585	ROSE HILL (ROSE TX-5) 345/138/13.8KV TRANSFORMER CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58788	104.6471	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58163	104.6415	ROSE HILL (ROSE TX-3) 345/138/13.8KV TRANSFORMER CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58167	104.6136	ROSE HILL (ROSE TX-1) 345/138/13.8KV TRANSFORMER CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58488	104.6064	P12:138:AEPW:MOUNDRD4:SHIDLER4
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58696	104.5999	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58488	104.5987	DOMES - MOUND ROAD 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58449	104.5784	P12:069:WERE:ARKA-CRSW_69::
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	104.5612	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	104.5569	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	104.5567	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58474	104.5412	P12:138:WFEC:MSL15
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58469	104.5379	MORISNT4 138.00 - SOONER 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69818	104.4982	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58483	104.4929	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	104.4695	GEN532722 1-EVANS ENERGY CENTER UNIT 2
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58474	104.4345	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	104.429	GEN542957 1-IATAN UNIT #1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58303	104.3835	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58494	104.3285	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58125	104.3098	BASE CASE
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58933	104.1958	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57037	104.1095	EL PASO - ROSE HILL 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58444	103.9977	GEN562902 1-G15052_3 0.6900
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58559	103.849	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58697	103.8318	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60149	103.8305	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69925	103.7781	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58795	103.7499	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58963	103.6605	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58444	103.6165	GEN542955 1-LACYGNE UNIT #1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58926	103.5855	P12:069:WERE:BELL-CRSW_69::
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	103.484	SHIDLER - WEST PAWHUSKA 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	103.4439	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58444	103.37	GEN532720 1-CANEYWF1 0.6900
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58963	103.3611	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58479	103.3204	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58933	103.2947	BELL - PECK 69KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	103.2854	DOMES - PAWHUSKA TAP 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58444	103.2524	GEN542962 2-IATAN UNIT #2
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58444	103.2506	GEN542956 2-LACYGNE UNIT #2
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58479	103.2385	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	103.1741	DOMES - MOUND ROAD 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57050	103.1225	EL PASO - ROSE HILL 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58588	103.0668	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58466	103.0394	MORISNT4 138.00 - SOONER 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58473	102.9312	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58505	102.9296	P12:138:OKGE:3TERM2
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58297	102.8955	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58444	102.8823	GEN542957 1-IATAN UNIT #1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58504	102.8587	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58473	102.7683	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70659	102.6811	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58106	102.5961	LACYGNE - STILWELL 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	102.4367	BASE CASE
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58125	102.2979	GEN301382 1-1OSAGEWINDG10.6900
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58391	102.1526	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57818	102.0445	BOEING - STEARMAN 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58125	101.9953	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58125	101.9943	4OSAGEWIND 138.00 138/34.5KV TRANSFORMER CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58125	101.9872	GEN515483 1-BLKWLWD1 0.6900
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58926	101.9628	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58591	101.9627	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58591	101.9342	OSAGE - WEBB CITY TAP 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60149	101.8648	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58125	101.8457	GEN563032 1-G15067_3 0.4180
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58795	101.83	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58501	101.7954	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57873	101.79	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58510	101.5775	CLEVELAND - TULSA NORTH 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58510	101.5775	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58079	101.5604	BLACKBERRY - NEOSHO 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58079	101.5604	BLACKBERRY - NEOSHO 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58125	101.5073	GEN562611 1-G14_064_3 0.6900
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58349	101.4549	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58349	101.4234	P12:138:WERE:GORD-MAIZ_138::
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58349	101.4197	MAIZE - MAIZEW 4 138.00 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58501	101.2211	917X
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58591	101.1147	FAIRFAX TAP - SHIDLER 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58591	101.1146	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58666	101.1113	CHIKASKIA - KILDARE4 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58449	101.0929	GEN542955 1-LACYGNE UNIT #1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58349	101.0424	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58349	101.0424	P12:138:WERE:CHIS-MAIZ_138::
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58349	101.0401	MAIZE - MAIZEE 4 138.00 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58449	101.0101	GEN562902 1-G15052_3 0.6900
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58444	100.9731	BASE CASE
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58483	100.9174	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58696	100.8842	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58125	100.8709	GEN587493 1-G16-072-GEN10.6900
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58125	100.8587	GEN562429 1-G13-029 0.6900
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58501	100.8173	G15066_T 345.00 - SOONER 345KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58483	100.7826	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58449	100.6972	GEN542956 2-LACYGNE UNIT #2
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58449	100.5861	GEN542962 2-IATAN UNIT #2
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58926	100.5655	BELL - PECK 69KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58926	100.536	P12:069:WERE:BELL-MURR_69::
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58167	100.5318	ROSE HILL (ROSE TX-3) 345/138/13.8KV TRANSFORMER CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58167	100.4934	ROSE HILL (ROSE TX-5) 345/138/13.8KV TRANSFORMER CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58477	100.4706	P12:138:WFEC:MSL15
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58170	100.4532	ROSE HILL (ROSE TX-1) 345/138/13.8KV TRANSFORMER CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	100.4132	GEN301382 1-1OSAGEWINDG10.6900
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58452	100.4009	P12:069:WERE:ARKA-CRSW_69::
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58355	100.3929	P12:069:WERE:64TH-NORT_69F::
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58449	100.3853	GEN532720 1-CANEYWF1 0.6900
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58477	100.3812	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58492	100.3719	SHIDLER - WEST PAWHUSKA 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58449	100.3528	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58449	100.3489	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58449	100.3487	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58492	100.3279	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58399	100.3079	BLACKBERRY - NEOSHO 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58399	100.3079	BLACKBERRY - NEOSHO 345KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58449	100.2519	GEN532722 1-EVANS ENERGY CENTER UNIT 2
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58477	100.2181	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58449	100.2058	GEN542957 1-IATAN UNIT #1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58473	100.1999	MORISNT4 138.00 - SOONER 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	100.1072	GEN515483 1-BLKWLWD1 0.6900
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	100.0995	GEN563032 1-G15067_3 0.4180
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	100.0855	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	100.0849	4OSAGEWIND 138.00 138/34.5KV TRANSFORMER CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58487	100.0543	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58227	100	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59016	100	CHIKASKIA - KILDARE4 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58350	100	BENTON - ROSE HILL 345KV CKT 1
0	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58492	100	DOMES - PAWHUSKA TAP 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58427	99.9	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58427	99.9	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58645	99.9	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58425	99.9	LACYGNE - STILWELL 345KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58320	99.9	EL PASO (ELPA TX-1) 138/69/13.2KV TRANSFORMER CKT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58125	99.8	GEN514805 1-SOONER UNIT 1
0	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57863	99.8	P13:069-138:WERE:WEAV_TX-2::
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58645	99.7	DMNCRKT4 - MILLER 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	99.7	GEN533561 1-CITY OF WINFIELD
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	99.7	GEN562611 1-G14_064_3 0.6900
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58645	99.6	MILLER - SOONER 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58583	99.5	OSAGE - SOONER PUMP TAP 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58583	99.5	SOONER - SOONER PUMP TAP 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58134	99.4	P13:069-138:WERE:CANA_TX-4::

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58132	99.4	BOEING - CANAL 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58101	99.4	EL PASO - SIXTY-FOURTH (64TH) 138KV CKT 1
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	99.1	GEN562429 1-G13-029 0.6900
0	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58446	99.1	GEN587493 1-G16-072-GEN10.6900
0	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69470	99	RANCHRD7 345.00 - SOONER 345KV CKT 1
0	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58649	99	MILLER - SOONER 138KV CKT 1
0	16WP	G16_060	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.12414	110.913	BASE CASE
0	20L	G16_060	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.09802	110.0936	BASE CASE
0	20WP	G16_060	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.11818	109.1163	BASE CASE
0	17G	G16_060	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.11823	108.6019	BASE CASE
0	20L	G16_060	-	Non-Converged Contingency	1141.0	1195.0	0.09802	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	20L	G16_060	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135.0	1195.0	0.03105	99.2	BASE CASE
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84975	167.456	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84975	165.595	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84975	163.8263	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84975	160.5404	P12:138:OKGE:3TERM7
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84975	160.5139	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84939	157.2806	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84939	155.7885	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69854	154.5392	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84882	154.1672	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84939	153.4024	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69705	152.8648	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84882	152.6045	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69459	151.2902	G15052_T 345.00 - ROSE HILL 345KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84939	151.002	P12:138:OKGE:3TERM7
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84939	150.9807	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69306	150.6868	G15052_T 345.00 - ROSE HILL 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84882	149.6217	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84882	146.3156	P12:138:OKGE:3TERM7
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.84882	146.3035	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73623	145.9314	KILDARE4 - WHITE EAGLE 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65166	143.5434	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69935	143.1581	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65166	142.8987	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69545	142.4171	G15052_T 345.00 - ROSE HILL 345KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65166	141.8063	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65181	141.2569	P12:138:OKGE:3TERM7
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69459	141.2029	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73613	141.1886	SUMNER 4 - TIMBJCT4 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73550	141.168	KILDARE4 - WHITE EAGLE 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73725	141.0051	SUMNER 4 - TIMBJCT4 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65166	140.6826	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69306	140.4024	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71277	139.5088	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71277	139.1787	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71277	139.0026	P12:069:WERE:BELL-CRSW_69::
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73607	138.5697	TIMBER JUNCTION - UDALL 69KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73607	138.3441	P12:069:WERE:TIMJ-WEAV_69::
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71175	138.1741	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71175	137.8761	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71136	137.7429	P12:069:WERE:BELL-CRSW_69::
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73607	137.5832	RICHLAND - UDALL 69KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73483	136.7659	TIMBER JUNCTION - UDALL 69KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73483	136.5192	P12:069:WERE:TIMJ-WEAV_69::
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73725	136.4257	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73607	136.2806	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71277	136.2021	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71136	136.187	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	135.8974	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73483	135.5116	RICHLAND - UDALL 69KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71010	134.8887	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73607	134.71	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73483	134.1595	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73619	134.1318	KILDARE4 - WHITE EAGLE 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71277	133.7334	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73789	133.6873	SUMNER 4 - TIMBJCT4 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69854	133.5164	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70199	133.3501	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65217	133.0502	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69545	132.9283	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69705	132.9044	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71010	132.8702	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70888	132.7542	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71136	132.6044	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70188	132.4601	P12:138:OKGE:3TERM2
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70186	132.4045	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70343	132.3671	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71277	132.3524	BELL - PECK 69KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73483	132.3431	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70343	132.311	OSAGE - WEBB CITY TAP 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71277	132.2286	P12:069:WERE:BELL-MURR_69::
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70181	131.9065	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70195	131.89	CLEVELAND - TULSA NORTH 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70195	131.89	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65217	131.5886	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70199	131.5044	G15063_T 345.00 - WOODRING 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70343	131.27	FAIRFAX TAP - SHIDLER 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70343	131.2697	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70439	131.1576	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71136	131.105	BELL - PECK 69KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69306	131.0775	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69459	130.9969	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71136	130.9761	P12:069:WERE:BELL-MURR_69::
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70888	130.9622	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70073	130.8061	P12:138:OKGE:3TERM2
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71277	130.7945	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70089	130.7679	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70072	130.7379	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70227	130.7238	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70181	130.7227	917X
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70227	130.6687	OSAGE - WEBB CITY TAP 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70079	130.6461	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70079	130.6461	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65217	130.6032	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70181	130.4156	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70297	130.1957	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70066	129.8613	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70227	129.6425	FAIRFAX TAP - SHIDLER 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70227	129.6422	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70089	129.6359	G15063_T 345.00 - WOODRING 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73665	129.6273	TIMBER JUNCTION - UDALL 69KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70180	129.5867	SHIDLER - WEST PAWHUSKA 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.68767	129.5723	EL PASO - ROSE HILL 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70180	129.5302	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71320	129.4328	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71136	129.373	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70177	129.3522	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70066	129.3506	917X
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70180	129.3183	DOMES - PAWHUSKA TAP 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73665	129.2672	P12:069:WERE:TIMJ-WEAV_69::
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70180	129.2535	P12:138:AEPW:MOUNDRD4:SHIDLER4
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70180	129.1593	DOMES - MOUND ROAD 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65148	129.1439	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70066	129.0467	G15066_T 345.00 - SOONER 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73789	128.9316	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70149	128.8458	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70147	128.8458	MORISNT4 138.00 - SOONER 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57934	128.8039	G15052_T 345.00 - ROSE HILL 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	128.7852	GEN542962 2-IATAN UNIT #2
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70149	128.767	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70139	128.7379	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	128.7118	GEN542955 1-LACYGNE UNIT #1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70139	128.6831	MCELROY - UNVRSTY4 138.00 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.68656	128.6505	EL PASO - ROSE HILL 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70143	128.5447	P12:138:WFEC:MSL15
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70143	128.5087	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70139	128.485	KINZE - MCELROY 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70139	128.4743	P12:138:OKGE:3TERM47
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	128.4678	GEN562902 1-G15052_3 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	128.4302	GEN635024 4-WALTER SCOTT UNIT 4
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70141	128.4068	SOONER - SPRING CREEK 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	128.3801	GEN542956 2-LACYGNE UNIT #2
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	128.3485	GEN542957 1-IATAN UNIT #1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70143	128.3203	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	128.3159	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	128.3136	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	128.3134	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65228	128.2938	P12:138:OKGE:3TERM7
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	128.2813	SHIDLER - WEST PAWHUSKA 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70120	128.2502	P12:069:WERE:ARKA-OAK_69::
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	128.2397	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	128.2026	GEN532720 1-CANEYWF1 0.6900
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	127.963	DOMES - PAWHUSKA TAP 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65148	127.8822	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65217	127.8576	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	127.8449	DOMES - MOUND ROAD 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	127.8345	P12:138:AEPW:MOUNDRD4:SHIDLER4
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73665	127.6688	RICHLAND - UDALL 69KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70065	127.573	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57921	127.467	G15052_T 345.00 - ROSE HILL 345KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70036	127.4011	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71375	127.3424	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65145	127.3271	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70034	127.2887	MORISNT4 138.00 - SOONER 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70036	127.2764	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71320	127.1887	P12:069:WERE:BELL-CRSW_69::
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70026	127.0743	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70030	127.0275	P12:138:WFEC:MSL15
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70026	127.0243	MCELROY - UNVRSTY4 138.00 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70030	126.9954	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71375	126.9161	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70026	126.8439	KINZE - MCELROY 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70026	126.821	P12:138:OKGE:3TERM47
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69707	126.8143	BENTON - WICHITA 345KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70030	126.804	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70008	126.6907	P12:069:WERE:ARKA-CRSW_69::
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70008	126.6102	P12:069:WERE:ARKA-OAK_69::
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58870	126.5154	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58465	126.3825	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	126.1996	BASE CASE
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65145	126.1592	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65148	125.9794	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	125.7346	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73665	125.6804	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58875	125.3689	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71320	125.2454	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57468	124.9562	G15052_T 345.00 - ROSE HILL 345KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70001	124.7078	BASE CASE
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70070	124.4025	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65145	124.2582	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70093	124.2396	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71163	124.1937	WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	124.128	GEN336821 1-GRAND GULF UNIT
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	124.0903	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70479	124.0333	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60198	124.0183	KILDARE4 - WHITE EAGLE 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69871	123.9815	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	123.9523	GEN562882 1-G15047_3 0.6900
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70479	123.8662	DMNCRKT4 - MILLER 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70479	123.748	MILLER - SOONER 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	123.7007	GEN514806 1-SOONER UNIT 2
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71076	123.7004	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65159	123.6803	P12:138:OKGE:3TERM7
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	123.5822	GEN587493 1-G16-072-GEN10.6900
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	123.576	GEN562429 1-G13-029 0.6900
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69878	123.5716	BOEING - STEARMAN 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70365	123.5411	OSAGE - SOONER PUMP TAP 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70365	123.465	SOONER - SOONER PUMP TAP 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65148	123.3311	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69935	123.2499	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	123.2224	GEN301382 1-1OSAGEWINDG10.6900
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70245	123.1049	P12:138:OKGE:3TERM2
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.73665	123.101	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71320	123.0852	BELL - PECK 69KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70257	123.0561	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70243	123.0231	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	123.0049	GEN515483 1-BLKWLWD1 0.6900
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69960	122.9998	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69545	122.9696	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71320	122.9042	P12:069:WERE:BELL-MURR_69::
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70397	122.889	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	122.8601	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70397	122.8413	OSAGE - WEBB CITY TAP 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69767	122.8325	BOEING - CANAL 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	122.8019	GEN563032 1-G15067_3 0.4180
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57943	122.7689	G15052_T 345.00 - ROSE HILL 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70047	122.7452	BLACKBERRY - NEOSHO 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	122.5762	GEN562611 1-G14_064_3 0.6900
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69762	122.4789	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70060	122.4727	NEOSHO - WOLF CREEK 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70019	122.4078	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70233	122.2897	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70247	122.1622	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70247	122.1622	CLEVELAND - TULSA NORTH 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65156	122.1395	P12:138:OKGE:3TERM7
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70421	121.9618	P13:069-138:WERE:WEAV_TX-2::
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69767	121.9354	BOEING - STEARMAN 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.65145	121.8111	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70397	121.7947	FAIRFAX TAP - SHIDLER 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70397	121.7944	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70377	121.6933	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69334	121.6011	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70377	121.541	DMNCRKT4 - MILLER 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70377	121.4282	MILLER - SOONER 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70001	121.4095	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69871	121.3015	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69334	121.3008	59TH ST - EL PASO 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70261	121.281	OSAGE - SOONER PUMP TAP 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69334	121.2632	P12:138:WERE:ELPA-MURR_138::
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70233	121.2494	917X
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71076	121.2478	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70261	121.209	SOONER - SOONER PUMP TAP 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70257	121.2058	G15063_T 345.00 - WOODRING 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70019	121.1653	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69912	121.0604	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69946	121.0555	NEOSHO - WOLF CREEK 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70233	120.9413	G15066_T 345.00 - SOONER 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.68836	120.8207	EL PASO - ROSE HILL 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71472	120.7313	CHIKASKIA - KILDARE4 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71320	120.5795	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70234	120.1078	SHIDLER - WEST PAWHUSKA 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70234	120.0464	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	119.9558	GEN532722 1-EVANS ENERGY CENTER UNIT 2
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69224	119.9054	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69762	119.8411	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69912	119.8405	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70019	119.8177	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70234	119.6979	DOMES - PAWHUSKA TAP 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69224	119.5598	59TH ST - EL PASO 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70234	119.535	P12:138:AEPW:MOUNDRD4:SHIDLER4
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69224	119.5208	P12:138:WERE:ELPA-MURR_138::
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70232	119.5188	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70234	119.5084	DOMES - MOUND ROAD 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70175	119.4554	P12:069:WERE:ARKA-CRSW_69::
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	119.4057	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	119.3973	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	119.397	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70204	119.3732	MORISNT4 138.00 - SOONER 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70204	119.3206	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71010	119.274	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71010	119.2667	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71350	119.2593	CHIKASKIA - KILDARE4 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70297	119.231	P13:069-138:WERE:WEAV_TX-2::
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70204	119.1989	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	119.1891	GEN542962 2-IATAN UNIT #2
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	119.188	GEN542955 1-LACYGNE UNIT #1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57934	119.1432	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70196	119.1061	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70024	119.0287	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70196	119.0263	MCELROY - UNVRSTY4 138.00 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70198	119.0131	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69862	118.981	BENTON - WICHITA 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58882	118.9376	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70198	118.9228	P12:138:WFEC:MSL15
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70177	118.91	GRDA1 - GREC TAP5 345.00 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70198	118.8798	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70175	118.8484	P12:069:WERE:ARKA-OAK_69::
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	118.8426	GEN542956 2-LACYGNE UNIT #2
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70078	118.791	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	118.779	GEN542957 1-IATAN UNIT #1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70067	118.7651	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	118.7645	GEN562902 1-G15052_3 0.6900
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70196	118.7384	KINZE - MCELROY 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69871	118.7207	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70067	118.7173	45TH ST4 138.00 - COWSKIN 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70198	118.6893	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70196	118.6807	P12:138:OKGE:3TERM47
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70067	118.6727	P12:138:WERE:COWS-GECT_138::
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69912	118.614	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70308	118.5783	BUTLER COUNTY NO. 10 BENTON - WEAVER 69KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70523	118.5402	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70308	118.5331	P12:069:WERE:MOBI-WEAV_69::
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	118.5245	GEN532720 1-CANEYWF1 0.6900
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	118.444	GEN514805 1-SOONER UNIT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70114	118.305	GEN562691 1-G15_015_3 0.6900
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60367	117.9715	KILDARE4 - WHITE EAGLE 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70635	117.7971	RENFROW7 345.00 (BANK 1) 345/138/13.8KV TRANSFORMER CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57921	117.6152	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70888	117.2569	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70888	117.2495	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69762	117.2349	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	116.5609	BASE CASE
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70514	115.7424	RENFROW7 345.00 (BANK 1) 345/138/13.8KV TRANSFORMER CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70420	115.3012	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60335	115.2633	KILDARE4 - WHITE EAGLE 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58168	115.0961	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57468	114.9454	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	114.9448	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60243	114.7385	SUMNER 4 - TIMBJCT4 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69929	114.7352	BOEING - CANAL 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	114.6504	P12:138:AEPW:CORNVIL4:DUNCAN-4
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69933	114.6141	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	114.5738	GEN562992 1-G15063_3 0.6900
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	114.5725	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	114.5256	GEN336153 1-WATERFORD UNIT#3
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70176	114.4336	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	114.3729	GEN562882 1-G15047_3 0.6900
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69832	114.33	EL PASO - SIXTY-FOURTH (64TH) 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	114.2195	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60240	114.1677	SUMNER 4 - TIMBJCT4 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	114.1674	GEN336821 1-GRAND GULF UNIT
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	114.0808	GEN533561 1-CITY OF WINFIELD
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	114.0627	GEN562429 1-G13-029 0.6900
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	114.0589	GEN587493 1-G16-072-GEN10.6900
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	113.8084	GEN514806 1-SOONER UNIT 2
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69929	113.7808	BOEING - STEARMAN 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69367	113.7511	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	113.6681	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	113.6298	GEN301382 1-1OSAGEWINDG10.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70106	113.4944	BLACKBERRY - NEOSHO 345KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58447	113.4056	HUNTERS7 345.00 - WOODRING 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	113.3747	GEN515483 1-BLKWLWD1 0.6900
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	113.306	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58269	113.2963	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69367	113.2399	59TH ST - EL PASO 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	113.2147	GEN563032 1-G15067_3 0.4180
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70076	113.2079	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70526	113.2004	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69367	113.1981	P12:138:WERE:ELPA-MURR_138::
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57943	113.0593	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	113.0015	GEN562611 1-G14_064_3 0.6900
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70526	112.9486	DMNCRKT4 - MILLER 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70117	112.9248	NEOSHO - WOLF CREEK 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70526	112.7863	MILLER - SOONER 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70414	112.7108	OSAGE - SOONER PUMP TAP 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70414	112.6009	SOONER - SOONER PUMP TAP 138KV CKT 1
2	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69306	112.5456	RANCHRD7 345.00 - SOONER 345KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59920	112.5224	SUMNER 4 - TIMBJCT4 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58554	112.343	GILL ENERGY CENTER SOUTH - VIOLA 4 138.00 138KV CKT 1
2	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69459	112.2598	RANCHRD7 345.00 - SOONER 345KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59839	112.2269	TIMBER JUNCTION - UDALL 69KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59839	112.1297	P12:069:WERE:TIMJ-WEAV_69::
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70076	112.0553	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69933	112.0058	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59839	111.9963	RICHLAND - UDALL 69KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60184	111.957	TIMBER JUNCTION - UDALL 69KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58596	111.8765	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58658	111.706	CLEARWATER - VIOLA 4 138.00 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71213	111.6254	WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59839	111.6243	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60193	111.5908	TIMBER JUNCTION - UDALL 69KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60184	111.5478	P12:069:WERE:TIMJ-WEAV_69::
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60243	111.5	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58619	111.4645	P12:138:WERE:MURR-MKEC_138P::
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58558	111.4602	GILL ENERGY CENTER SOUTH - VIOLA 4 138.00 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58659	111.4365	CLEARWATER - VIOLA 4 138.00 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58982	111.3796	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58220	111.3463	GILL ENERGY CENTER SOUTH - VIOLA 4 138.00 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60193	111.3401	P12:069:WERE:TIMJ-WEAV_69::
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71532	111.3152	CHIKASKIA - KILDARE4 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60193	111.2534	RICHLAND - UDALL 69KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58977	111.2413	P12:069:WERE:BELL-CRSW_69::
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59839	111.1853	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58982	111.1621	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60184	111.1556	RICHLAND - UDALL 69KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58325	111.1096	CLEARWATER - VIOLA 4 138.00 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58638	111.0868	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58194	111.0503	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58194	111.0503	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58269	111.0204	G15063_T 345.00 - WOODRING 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60339	111.0088	KILDARE4 - WHITE EAGLE 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58638	110.9941	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58638	110.9784	P12:069:WERE:BELL-CRSW_69::
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60240	110.9347	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58286	110.9246	P12:138:WERE:MURR-MKEC_138P::
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58471	110.8936	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70423	110.8596	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58192	110.8433	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58962	110.8387	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70076	110.8144	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58740	110.7689	HUNTERS7 345.00 - WOODRING 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58622	110.7014	P12:138:WERE:MURR-MKEC_138P::
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58593	110.4128	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60251	110.3599	SUMNER 4 - TIMBJCT4 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58263	110.3042	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60193	110.2885	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58263	110.2848	OSAGE - WEBB CITY TAP 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58192	110.0708	917X
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58420	110.056	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58471	110.0489	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58831	110.041	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58191	109.9947	P12:138:OKGE:3TERM2
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58192	109.9787	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58596	109.8159	G15063_T 345.00 - WOODRING 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58996	109.7572	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59920	109.7346	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58263	109.7318	FAIRFAX TAP - SHIDLER 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58263	109.7317	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60184	109.7304	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58962	109.6785	P12:069:WERE:BELL-CRSW_69::
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57934	109.5679	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58977	109.563	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58192	109.5607	G15066_T 345.00 - SOONER 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58996	109.4581	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58447	109.4273	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69933	109.4017	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58538	109.3939	P12:138:OKGE:3TERM2
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58537	109.3565	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58638	109.3458	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58091	109.2935	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58487	109.2799	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58539	109.2091	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58731	109.1693	HUNTERS7 345.00 - WOODRING 345KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60193	109.1344	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58546	108.9545	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58546	108.9545	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58830	108.8128	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70474	108.8053	P13:069-138:WERE:WEAV_TX-2::
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58623	108.7832	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	108.7715	GEN562691 1-G15_015_3 0.6900
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58623	108.7629	OSAGE - WEBB CITY TAP 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58141	108.5422	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58424	108.5385	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58539	108.5095	917X
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58536	108.4949	P12:138:OKGE:3TERM2
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58535	108.4388	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57796	108.4015	BENTON - WICHITA 345KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58190	108.3625	SHIDLER - WEST PAWHUSKA 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58190	108.3464	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58593	108.3158	G15063_T 345.00 - WOODRING 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58534	108.2721	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58190	108.1843	DOMES - PAWHUSKA TAP 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58168	108.1568	GEN562902 1-G15052_3 0.6900
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58190	108.1417	DOMES - MOUND ROAD 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71076	108.1214	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58638	108.118	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58190	108.1151	P12:138:AEPW:MOUNDRD4:SHIDLER4
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.71076	108.1138	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58831	108.0603	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58539	108.0085	G15066_T 345.00 - SOONER 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58619	107.9885	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70169	107.9647	GEN514805 1-SOONER UNIT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58619	107.9636	OSAGE - WEBB CITY TAP 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58962	107.9092	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58542	107.9054	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58542	107.9054	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58623	107.8949	FAIRFAX TAP - SHIDLER 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58623	107.8947	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60184	107.8475	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57079	107.7874	EL PASO - ROSE HILL 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58977	107.7851	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58638	107.7579	BELL - PECK 69KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57921	107.7481	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58638	107.745	P12:069:WERE:BELL-MURR_69::
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58168	107.6467	GEN532720 1-CANEYWF1 0.6900
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58534	107.621	917X
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58200	107.5777	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58200	107.4636	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58199	107.4228	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58638	107.3517	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58193	107.2643	P12:138:WFEC:MSL15
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60190	107.2641	TIMBER JUNCTION - UDALL 69KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	107.2218	GEN562902 1-G15052_3 0.6900
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58193	107.1857	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60251	107.171	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58619	107.1476	FAIRFAX TAP - SHIDLER 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58619	107.1474	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58534	107.1281	G15066_T 345.00 - SOONER 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58598	107.1071	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57074	107.1047	EL PASO - ROSE HILL 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70422	107.0193	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	106.9143	GEN542955 1-LACYGNE UNIT #1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58664	106.907	CLEARWATER - VIOLA 4 138.00 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58740	106.8796	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58977	106.839	BELL - PECK 69KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60190	106.8273	P12:069:WERE:TIMJ-WEAV_69::
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58977	106.791	P12:069:WERE:BELL-MURR_69::
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58527	106.7632	SHIDLER - WEST PAWHUSKA 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58830	106.7488	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58527	106.7234	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58521	106.6681	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	106.667	GEN532720 1-CANEYWF1 0.6900
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58521	106.5867	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	106.5856	GEN542962 2-IATAN UNIT #2
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	106.5666	GEN542956 2-LACYGNE UNIT #2
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58527	106.5616	DOMES - PAWHUSKA TAP 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58523	106.5456	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58127	106.5303	BENTON - WICHITA 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58962	106.5141	BELL - PECK 69KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58630	106.507	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58527	106.503	P12:138:AEPW:MOUNDRD4:SHIDLER4
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58564	106.4537	GILL ENERGY CENTER SOUTH - VIOLA 4 138.00 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58962	106.446	P12:069:WERE:BELL-MURR_69::
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58383	106.4444	P12:138:WERE:GORD-MAIZ_138::
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58383	106.4439	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58527	106.4433	DOMES - MOUND ROAD 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58383	106.443	MAIZE - MAIZEW 4 138.00 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60190	106.4206	RICHLAND - UDALL 69KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	106.4157	GEN562902 1-G15052_3 0.6900
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58508	106.4007	MORISNT4 138.00 - SOONER 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58515	106.3883	P12:138:WFEC:MSL15
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58966	106.3049	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	106.2962	GEN542955 1-LACYGNE UNIT #1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58515	106.2839	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58383	106.1156	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58383	106.1156	P12:138:WERE:CHIS-MAIZ_138::
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58383	106.1145	MAIZE - MAIZEE 4 138.00 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58523	106.092	SHIDLER - WEST PAWHUSKA 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58627	106.0694	P12:138:WERE:MURR-MKEC_138P::
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58516	106.0476	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58523	106.0451	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58112	106.0423	BENTON - WICHITA 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	105.932	GEN542956 2-LACYGNE UNIT #2
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58516	105.9179	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	105.9079	GEN542962 2-IATAN UNIT #2
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	105.8647	GEN532720 1-CANEYWF1 0.6900
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58523	105.7725	DOMES - PAWHUSKA TAP 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58198	105.7636	ROSE HILL (ROSE TX-3) 345/138/13.8KV TRANSFORMER CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58198	105.7422	ROSE HILL (ROSE TX-5) 345/138/13.8KV TRANSFORMER CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58201	105.7368	ROSE HILL (ROSE TX-1) 345/138/13.8KV TRANSFORMER CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58485	105.6749	P12:069:WERE:ARKA-CRSW_69::
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58510	105.6504	P12:138:WFEC:MSL15
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58505	105.6496	MORISNT4 138.00 - SOONER 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	105.6415	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	105.6388	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	105.6386	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58523	105.6377	P12:138:AEPW:MOUNDRD4:SHIDLER4
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58523	105.6281	DOMES - MOUND ROAD 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58519	105.5902	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58348	105.5476	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58735	105.5425	HUNTERS7 345.00 - WOODRING 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58510	105.5334	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	105.5261	GEN542957 1-IATAN UNIT #1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	105.5207	GEN532722 1-EVANS ENERGY CENTER UNIT 2
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58168	105.1972	BASE CASE
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58598	104.9687	G15063_T 345.00 - WOODRING 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60190	104.9393	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58834	104.8884	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.70700	104.8234	RENFROW7 345.00 (BANK 1) 345/138/13.8KV TRANSFORMER CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59002	104.7968	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58966	104.7218	P12:069:WERE:BELL-CRSW_69::
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59002	104.4984	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	104.299	BASE CASE
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57083	104.1618	EL PASO - ROSE HILL 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58542	103.9976	P12:138:OKGE:3TERM2
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58541	103.9258	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	103.5367	BASE CASE
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57943	103.429	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58431	103.2359	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58168	103.1953	GEN301382 1-1OSAGEWINDG10.6900
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58541	103.161	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58966	103.1078	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.60190	102.986	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58834	102.9758	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57861	102.9112	BOEING - STEARMAN 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58168	102.8835	GEN515483 1-BLKWLWD1 0.6900
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58627	102.8716	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58168	102.8576	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58168	102.8503	GEN563032 1-G15067_3 0.4180
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58627	102.8449	OSAGE - WEBB CITY TAP 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58549	102.7096	CLEVELAND - TULSA NORTH 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58549	102.7096	CLEVELAND - TULSA NORTH 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58541	102.5049	917X
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58168	102.4949	GEN562611 1-G14_064_3 0.6900
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58388	102.4334	P12:138:WERE:GORD-MAIZ_138::
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58388	102.4332	MAIZE - MAIZEW 4 138.00 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58388	102.4324	EVANS ENERGY CENTER NORTH - MAIZEW 4 138.00 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58691	102.3939	DMNCRKT4 - MILLER 138KV CKT 1
2	17SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69545	102.2856	RANCHRD7 345.00 - SOONER 345KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58691	102.2846	MILLER - SOONER 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	102.2597	GEN301382 1-1OSAGEWINDG10.6900
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57308	102.2159	P12:138:WERE:ELPA-MURR_138::
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58997	102.1559	WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58628	102.1483	OSAGE - SOONER PUMP TAP 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58628	102.0969	SOONER - SOONER PUMP TAP 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57308	102.0791	59TH ST - EL PASO 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58140	102.0694	EL PASO - SIXTY-FOURTH (64TH) 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58487	102.0692	GEN542955 1-LACYGNE UNIT #1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58709	102.0548	CHIKASKIA - KILDARE4 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58541	102.043	G15066_T 345.00 - SOONER 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58388	102.0237	CHISHOLM - MAIZEE 4 138.00 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58388	102.0237	P12:138:WERE:CHIS-MAIZ_138::
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58388	102.0215	MAIZE - MAIZEE 4 138.00 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58627	102.0174	FAIRFAX TAP - SHIDLER 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58627	102.0173	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58487	102.015	GEN562902 1-G15052_3 0.6900
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58470	101.9831	LACYGNE - STILWELL 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58521	101.9533	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	101.9266	GEN563032 1-G15067_3 0.4180
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	101.913	GEN515483 1-BLKWLWD1 0.6900
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	101.8865	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58179	101.8365	P13:069-138:WERE:CANA_TX-4::
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58178	101.8245	BOEING - CANAL 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58168	101.8209	GEN587493 1-G16-072-GEN10.6900
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58521	101.8186	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58168	101.8114	GEN562429 1-G13-029 0.6900
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58735	101.7517	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58966	101.7104	BELL - PECK 69KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58389	101.695	BENTON - ROSE HILL 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58487	101.6852	GEN542956 2-LACYGNE UNIT #2
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58966	101.6816	P12:069:WERE:BELL-MURR_69::
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58243	101.6808	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58487	101.6502	GEN542962 2-IATAN UNIT #2
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58203	101.614	ROSE HILL (ROSE TX-5) 345/138/13.8KV TRANSFORMER CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58203	101.6126	ROSE HILL (ROSE TX-3) 345/138/13.8KV TRANSFORMER CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	101.5532	GEN562611 1-G14_064_3 0.6900
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58206	101.5435	ROSE HILL (ROSE TX-1) 345/138/13.8KV TRANSFORMER CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58242	101.5426	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	101.538	GEN301382 1-1OSAGEWINDG10.6900
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58515	101.5177	P12:138:WFEC:MSL15
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58391	101.4885	P12:069:WERE:64TH-NORT_69F::
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58487	101.4455	GEN532720 1-CANEYWF1 0.6900
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59055	101.4438	CHIKASKIA - KILDARE4 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58490	101.4381	P12:069:WERE:ARKA-CRSW_69::
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58515	101.4177	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58487	101.3662	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58487	101.3633	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58487	101.3631	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58529	101.3522	SHIDLER - WEST PAWHUSKA 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58108	101.3477	BLACKBERRY - NEOSHO 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58529	101.3078	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58465	101.2608	LACYGNE - STILWELL 345KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58515	101.2551	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58487	101.2519	GEN532722 1-EVANS ENERGY CENTER UNIT 2
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58487	101.2495	GEN542957 1-IATAN UNIT #1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58511	101.2479	MORISNT4 138.00 - SOONER 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	101.2253	GEN563032 1-G15067_3 0.4180
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57951	101.209	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	101.2046	GEN515483 1-BLKWLWD1 0.6900
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.59052	101.1948	CHIKASKIA - KILDARE4 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	101.187	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	101.1864	4OSAGEWIND 138.00 138/34.5KV TRANSFORMER CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58525	101.0946	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58272	101.0438	RENFROW7 345.00 (BANK 1) 345/138/13.8KV TRANSFORMER CKT 1
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58966	101.0246	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58124	101.0089	NEOSHO - WOLF CREEK 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58357	100.9771	EL PASO (ELPA TX-1) 138/69/13.2KV TRANSFORMER CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58681	100.9366	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.57908	100.9124	P13:069-138:WERE:WEAV_TX-2::
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58471	100.8816	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58471	100.8742	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	100.8676	GEN562611 1-G14_064_3 0.6900
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	100.7985	GEN587493 1-G16-072-GEN10.6900
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58423	100.7965	BLACKBERRY - NEOSHO 345KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58486	100.7853	GEN562429 1-G13-029 0.6900
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	100.7828	GEN533561 1-CITY OF WINFIELD
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58441	100.7752	NEOSHO - WOLF CREEK 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58681	100.7674	DMNCRKT4 - MILLER 138KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58168	100.7391	GEN514805 1-SOONER UNIT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58681	100.6515	MILLER - SOONER 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58619	100.6215	OSAGE - SOONER PUMP TAP 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58619	100.5458	SOONER - SOONER PUMP TAP 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58421	100.4789	BLACKBERRY - NEOSHO 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58421	100.4789	BLACKBERRY - NEOSHO 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58137	100.4624	EL PASO - SIXTY-FOURTH (64TH) 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58169	100.4238	BOEING - CANAL 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58171	100.4071	P13:069-138:WERE:CANA_TX-4::
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58378	100.3225	BENTON - ROSE HILL 345KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58178	100.2553	BOEING - STEARMAN 138KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58438	100.2444	NEOSHO - WOLF CREEK 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	100.1661	GEN562429 1-G13-029 0.6900
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58482	100.1661	GEN587493 1-G16-072-GEN10.6900
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58831	100.0889	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58831	100.0846	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
2	20WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58374	99.8	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58372	99.7	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58078	99.5	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	20SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58990	99.5	WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1
2	20L	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58168	99.3	GEN562691 1-G15_015_3 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	25SP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.58487	99.1	BASE CASE
0	20L	G16_061	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766.0	923.0	0.03136	106.3795	BASE CASE
0	20L	G16_061	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135.0	1195.0	0.12907	103.411	BASE CASE
0	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30552	123.7516	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30527	119.0208	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29985	118.7605	SOONER - SPRING CREEK 345KV CKT 1
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29985	118.5964	NORTHWEST - SPRING CREEK 345KV CKT 1
0	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30608	118.1324	SOONER - SPRING CREEK 345KV CKT 1
0	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30546	116.9985	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30265	115.0782	SOONER - SPRING CREEK 345KV CKT 1
0	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30265	114.9124	NORTHWEST - SPRING CREEK 345KV CKT 1
0	17SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30341	114.7557	NORTHWEST - SPRING CREEK 345KV CKT 1
0	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.27913	112.9039	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29224	112.8507	SOONER - SPRING CREEK 345KV CKT 1
0	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29224	112.6347	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29001	112.1032	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30932	111.768	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30477	110.5395	SOONER - SPRING CREEK 345KV CKT 1
0	20WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30477	110.3508	NORTHWEST - SPRING CREEK 345KV CKT 1
0	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29200	109.7706	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30391	109.2805	SOONER - SPRING CREEK 345KV CKT 1
0	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29438	108.5758	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.27913	108.4974	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29001	108.1729	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.27913	107.1362	917X
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29001	106.5924	917X
0	20SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30657	106.4705	NORTHWEST - SPRING CREEK 345KV CKT 1
0	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29200	105.9213	G15066_T 345.00 - SOONER 345KV CKT 1
0	20WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29355	105.91	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.27815	105.779	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.27815	105.779	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26961	105.494	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26961	105.494	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29169	104.9021	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29438	104.8826	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29200	104.3285	917X
0	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.28565	103.5312	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.28025	103.4644	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.28025	103.4644	CLEVELAND - TULSA NORTH 345KV CKT 1
0	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29438	103.3523	917X
0	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.28247	102.5918	CLEVELAND - TULSA NORTH 345KV CKT 1
0	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.28247	102.5918	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26208	102.4061	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
0	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.27447	102.3205	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29355	102.1003	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.53566	101.9002	G16-061-TAP 345.00 - SOONER 345KV CKT 1
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25953	101.5219	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.28803	101.2831	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
0	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.31447	101.1682	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	17SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29169	101.157	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30527	101.0177	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	20SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30711	101.0041	SOONER - SPRING CREEK 345KV CKT 1
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24520	100.9301	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26706	100.9212	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.53593	100.837	G16-061-TAP 345.00 - SOONER 345KV CKT 1
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25953	100.8326	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26102	100.6685	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26690	100.3261	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26693	100.2721	P12:138:OKGE:3TERM2
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.28369	99.8	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26396	99.8	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25953	99.7	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25920	99.6	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	17SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29169	99.5	917X
0	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26470	99.4	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
0	20WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.28180	99.4	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25906	99.3	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
0	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26928	99.2	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30546	99.1	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25595	99.1	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.28480	99	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	25SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30552	123.214	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30527	117.1692	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	16WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29985	116.9068	SOONER - SPRING CREEK 345KV CKT 1
0	16WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29985	116.7031	NORTHWEST - SPRING CREEK 345KV CKT 1
0	25SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30608	116.3018	SOONER - SPRING CREEK 345KV CKT 1
0	17G	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30546	114.6874	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17G	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30265	112.3679	SOONER - SPRING CREEK 345KV CKT 1
0	17G	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30265	112.1626	NORTHWEST - SPRING CREEK 345KV CKT 1
0	17SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30341	112.0701	NORTHWEST - SPRING CREEK 345KV CKT 1
0	20L	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29224	109.685	SOONER - SPRING CREEK 345KV CKT 1
0	20L	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29224	109.4128	NORTHWEST - SPRING CREEK 345KV CKT 1
0	20L	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.27913	109.231	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29001	108.5072	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30932	108.4155	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30477	106.7791	SOONER - SPRING CREEK 345KV CKT 1
0	20WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30477	106.5426	NORTHWEST - SPRING CREEK 345KV CKT 1
0	17G	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29200	105.6554	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30391	105.3269	SOONER - SPRING CREEK 345KV CKT 1
0	25SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29438	104.3514	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.27913	104.0684	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29001	103.698	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.27913	102.3509	917X
0	20SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30657	101.8605	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29001	101.7539	917X
0	17G	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29200	100.941	G15066_T 345.00 - SOONER 345KV CKT 1
0	20WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29355	100.9191	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.27815	100.7225	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.27815	100.7225	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25642	100.7076	GEN562992 1-G15063_3 0.6900
0	20L	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26961	100.3618	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26961	100.3618	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29169	99.8	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	25SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29438	99.8	G15066_T 345.00 - SOONER 345KV CKT 1
0	25SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26141	99.3	GEN562992 1-G15063_3 0.6900
0	17G	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29200	99	917X
0	16WP	G16_061	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.06811	110.913	BASE CASE
0	20L	G16_061	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.04828	110.0936	BASE CASE
0	20WP	G16_061	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.06843	109.1163	BASE CASE
0	17G	G16_061	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.06222	108.6019	BASE CASE
0	20L	G16_061	-	Non-Converged Contingency	1141.0	1195.0	0.04828	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	25SP	G16_061	TO->FROM	NORTHWEST - SPRING CREEK 345KV CKT 1	1039.0	1195.0	0.19941	101.86	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	20L	G16_061	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135.0	1195.0	0.12850	99.2	BASE CASE
2	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30579	123.2091	NORTHWEST - SPRING CREEK 345KV CKT 1
2	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30529	118.4276	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30636	117.5858	SOONER - SPRING CREEK 345KV CKT 1
2	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29972	116.905	SOONER - SPRING CREEK 345KV CKT 1
2	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29972	116.7859	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30548	116.4877	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	17SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30391	113.9556	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30251	113.3565	SOONER - SPRING CREEK 345KV CKT 1
2	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30251	113.2334	NORTHWEST - SPRING CREEK 345KV CKT 1
2	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29184	113.0234	SOONER - SPRING CREEK 345KV CKT 1
2	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29184	112.8311	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30961	111.7706	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.27827	111.4816	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.28917	109.3181	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30466	108.617	SOONER - SPRING CREEK 345KV CKT 1
2	17SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30441	108.4735	SOONER - SPRING CREEK 345KV CKT 1
2	20WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30466	108.4559	NORTHWEST - SPRING CREEK 345KV CKT 1
2	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.27827	107.513	G15066_T 345.00 - SOONER 345KV CKT 1
2	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29392	107.2082	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29115	107.1239	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.27827	106.0003	917X
2	20SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30697	105.8567	NORTHWEST - SPRING CREEK 345KV CKT 1
2	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.28917	105.5738	G15066_T 345.00 - SOONER 345KV CKT 1
2	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26895	104.76	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26895	104.76	CLEVELAND - TULSA NORTH 345KV CKT 1
2	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.28917	103.8843	917X
2	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29392	103.6524	G15066_T 345.00 - SOONER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29115	103.4835	G15066_T 345.00 - SOONER 345KV CKT 1
2	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.27756	103.419	CLEVELAND - TULSA NORTH 345KV CKT 1
2	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.27756	103.419	CLEVELAND - TULSA NORTH 345KV CKT 1
2	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.28588	103.4019	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	17SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29142	103.2004	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29278	103.1724	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.27428	102.6399	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29392	102.0716	917X
2	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29115	101.7959	917X
2	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.53515	101.4962	G16-061-TAP 345.00 - SOONER 345KV CKT 1
2	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.28225	101.4788	CLEVELAND - TULSA NORTH 345KV CKT 1
2	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.28225	101.4788	CLEVELAND - TULSA NORTH 345KV CKT 1
2	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.31466	101.3494	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
2	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.27965	101.2597	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.27965	101.2597	CLEVELAND - TULSA NORTH 345KV CKT 1
2	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26198	100.8016	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
2	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.28825	100.6755	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
2	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30529	100.5125	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
2	20SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30751	100.3989	SOONER - SPRING CREEK 345KV CKT 1
2	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26729	100.3345	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
2	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26713	99.7	P12:138:OKGE:3TERM2
2	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26710	99.7	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	17SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29142	99.6	G15066_T 345.00 - SOONER 345KV CKT 1
2	20WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29278	99.4	G15066_T 345.00 - SOONER 345KV CKT 1
2	20L	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25874	99.3	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
2	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24514	99.2	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26089	99.1	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.53561	99	G16-061-TAP 345.00 - SOONER 345KV CKT 1
2	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26093	99	P12:138:OKGE:3TERM2
2	25SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30579	122.5437	NORTHWEST - SPRING CREEK 345KV CKT 1
2	16WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30529	116.4463	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	25SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30636	115.6235	SOONER - SPRING CREEK 345KV CKT 1
2	16WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29972	114.6217	SOONER - SPRING CREEK 345KV CKT 1
2	16WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29972	114.4738	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30548	114.0625	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	17SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30391	111.0813	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30251	110.2462	SOONER - SPRING CREEK 345KV CKT 1
2	17G	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30251	110.0937	NORTHWEST - SPRING CREEK 345KV CKT 1
2	20L	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29184	109.9038	SOONER - SPRING CREEK 345KV CKT 1
2	20L	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29184	109.663	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30961	108.4173	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	20L	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.27827	107.8095	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	16WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.28917	105.1032	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30466	104.4066	SOONER - SPRING CREEK 345KV CKT 1
2	17SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30441	104.3258	SOONER - SPRING CREEK 345KV CKT 1
2	20WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30466	104.2057	NORTHWEST - SPRING CREEK 345KV CKT 1
2	20L	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.27827	102.9603	G15066_T 345.00 - SOONER 345KV CKT 1
2	25SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29392	102.6653	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.29115	102.4118	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.30697	101.1001	NORTHWEST - SPRING CREEK 345KV CKT 1
2	20L	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.27827	101.0863	917X
2	16WP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.28917	100.5125	G15066_T 345.00 - SOONER 345KV CKT 1
2	20L	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26895	99.5	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26895	99.5	CLEVELAND - TULSA NORTH 345KV CKT 1
2	25SP	G16_061	TO->FROM	NORTHWEST - SPRING CREEK 345KV CKT 1	1039.0	1195.0	0.19958	101.732	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	25SP	G16_062	FROM->TO	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1	525.0	525.0	1.00000	102.8262	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	157.2913	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	156.8383	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3507	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3507	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1117	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1117	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.9024	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.9024	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.8698	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.7161	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.6734	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.5483	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.5256	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.4876	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.346	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0234	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0234	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9074	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9074	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8127	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8127	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7986	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7179	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7102	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6707	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6494	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6354	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.5732	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.5215	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.0701	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8346	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8346	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.5969	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.5969	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3886	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3886	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3561	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.2032	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.1607	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.0363	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.0136	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.9758	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.8349	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5146	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5146	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3992	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3992	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3049	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3049	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2909	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2106	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2029	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1636	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1425	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1285	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.0666	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_062	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06302	111.2423	BASE CASE
0	20SP	G16_062	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06002	106.965	BASE CASE
0	17G	G16_062	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06346	104.3555	BASE CASE
0	20WP	G16_062	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06123	100.6452	BASE CASE
0	16WP	G16_062	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195	0.24663	117.2755	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_062	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21927	113.9417	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_062	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24663	112.5386	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G16_062	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24478	107.9528	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17SP	G16_062	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24478	103.4902	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29676	197.2146	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29676	189.9362	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31112	115.1329	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.31112	114.7364	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.34022	213.0015	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.35220	134.0852	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.21457	119.8072	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.21402	109.6936	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_062	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.10919	117.8449	BASE CASE
0	17SP	G16_062	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.10921	113.6626	BASE CASE
0	25SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51048	189.9035	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64281	167.7508	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64281	167.7508	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64499	161.4746	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64499	161.4746	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64265	153.0965	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64265	153.0965	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	20L	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51146	114.8595	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20L	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51146	114.2331	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51053	103.3308	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	20SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51053	102.7352	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51048	99.5	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
0	25SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.51048	136.318	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64281	117.3847	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64281	117.3847	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64499	115.1282	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64499	115.1282	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64265	107.6702	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64265	107.6702	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_062	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.51048	105.028	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.64281	101.0095	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.64281	101.0095	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.5033	ANDRWSXFMR12
0	25SP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.4881	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1
0	20L	G16_062	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.09665	117.1249	BASE CASE
0	20WP	G16_062	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11955	109.9811	BASE CASE
0	16WP	G16_062	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12864	108.8041	BASE CASE
0	17G	G16_062	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12648	107.5286	BASE CASE
0	20L	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09665	131.0896	BASE CASE
0	20WP	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11955	123.9661	BASE CASE
0	16WP	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12864	122.9494	BASE CASE
0	17G	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12648	120.973	BASE CASE
0	17SP	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12852	106.8776	BASE CASE
0	20SP	G16_062	TO->FROM	G15039_T 230.00 - PLANT X STATION 230KV CKT 1	318.7	350.6	0.10919	101.2007	BASE CASE
0	16WP	G16_062	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24663	106.6944	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_062	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.21927	103.5122	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_062	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24663	102.1214	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G16_062	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04451	104.9056	BASE CASE
0	20SP	G16_062	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04342	103.3041	BASE CASE
0	17G	G16_062	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03711	102.2178	BASE CASE
0	25SP	G16_062	TO->FROM	JAL SUB - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24991	101.658	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_062	TO->FROM	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	1011.0	1176.0	0.21496	101.3643	BASE CASE
0	25SP	G16_062	FROM->TO	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1	143.4	179.3	0.04337	100.1195	BASE CASE
0	17G	G16_062	FROM->TO	National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35719	112.5656	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	FROM->TO	National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35719	112.5656	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	TO->FROM	National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35719	102.3847	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	TO->FROM	National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35719	102.3847	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	25SP	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24991	108.4988	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35719	102.3407	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17G	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35719	102.3407	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35501	101.4644	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	17SP	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35501	101.4644	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	1022.0	1124.0	0.19886	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	1022.0	1124.0	0.19886	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.19848	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.19694	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.18904	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.18479	-	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.18479	-	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	1330.0	1940.0	0.17649	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	1330.0	1940.0	0.17649	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	987.2	1082.8	0.16804	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.14644	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.14643	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	16WP	G16_062	-	Non-Converged Contingency	987.16	1082.77	0.13381	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	956.09	1051.7	0.13381	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	1420.0	1775.0	0.09986	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	1420.0	1775.0	0.09986	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	1420.0	1775.0	0.09986	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.09465	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.09465	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	439.0	439.0	0.06737	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	450.0	450.0	0.06737	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_062	-	Non-Converged Contingency	439.0	439.0	0.04538	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17G	G16_062	-	Non-Converged Contingency	0.0	0.0	0.07240	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	17G	G16_062	-	Non-Converged Contingency	0.0	0.0	0.05838	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	17G	G16_062	-	Non-Converged Contingency	0.0	0.0	0.03614	-	P12:138:AEPW:REDROCKRD4:WTH_JCT4
0	17G	G16_062	-	Non-Converged Contingency	0.0	0.0	0.03440	-	P12:138:WFEC-AEPW:WASHITA4:CLINTJC4
0	17G	G16_062	-	Non-Converged Contingency	0.0	0.0	0.03308	-	P12:138:AEPW:HOB-JCT4:ELKCTY-4

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_062	-	Non-Converged Contingency	0.0	0.0	0.03188	-	P12:138:AEPW:WTHWF4:WTH_SE4
0	17SP	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.28055	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G16_062	-	Non-Converged Contingency	956.0	1042.0	0.21496	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17SP	G16_062	-	Non-Converged Contingency	956.0	1042.0	0.21496	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.17579	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.17290	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	17SP	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.17290	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	17SP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.17001	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	G16_062	-	Non-Converged Contingency	956.1	1051.7	0.16004	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17SP	G16_062	-	Non-Converged Contingency	1330.0	1940.0	0.15840	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17SP	G16_062	-	Non-Converged Contingency	1330.0	1940.0	0.15840	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17SP	G16_062	-	Non-Converged Contingency	956.09	1051.7	0.13925	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G16_062	-	Non-Converged Contingency	478.0	502.0	0.12417	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G16_062	-	Non-Converged Contingency	956.09	1051.7	0.11770	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	G16_062	-	Non-Converged Contingency	318.7	350.6	0.10921	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	17SP	G16_062	-	Non-Converged Contingency	318.7	350.6	0.10921	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	17SP	G16_062	-	Non-Converged Contingency	478.0	502.0	0.10296	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G16_062	-	Non-Converged Contingency	1420.0	1775.0	0.09250	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_062	-	Non-Converged Contingency	353.0	353.0	0.05142	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17SP	G16_062	-	Non-Converged Contingency	318.7	350.57	0.04451	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.29244	-	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	0.0	0.0	0.23129	-	P12:345:SPS:J15.1.XRDS.TOLK
0	20L	G16_062	-	Non-Converged Contingency	0.0	0.0	0.19116	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.18877	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.17611	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	717.0	926.0	0.17603	-	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.16445	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1022.0	1124.0	0.15821	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1022.0	1124.0	0.15821	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1022.0	1124.0	0.15821	-	OKLAUNION 345KV SWITCHED SHUNT
0	20L	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.14834	-	CIMARRON - MINCO 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.14834	-	GRACEMONT - MINCO 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.14733	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.14733	-	GEN509403 1-PIRKEY GENERATION
0	20L	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.14733	-	GEN509416 1-TURK GENERATION
0	20L	G16_062	-	Non-Converged Contingency	956.1	1051.7	0.13136	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	956.1	1051.7	0.13136	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1584.0	2098.0	0.12593	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1584.0	2098.0	0.12593	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.12369	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
0	20L	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.12369	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.12369	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20L	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.12369	-	BORDER 7345.00 345KV SWITCHED SHUNT
0	20L	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.12368	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	956.09	1051.7	0.10138	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	956.09	1051.7	0.10138	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	717.0	789.0	0.09665	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	717.0	789.0	0.09665	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	717.0	789.0	0.09665	-	GEN515040 1-SEMINOLE 1G
0	20L	G16_062	-	Non-Converged Contingency	0.0	0.0	0.09146	-	P12:138:WFEC:MSL03
0	20L	G16_062	-	Non-Converged Contingency	956.09	1051.7	0.08979	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	956.09	1051.7	0.08979	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	956.09	1051.7	0.08979	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	956.09	1051.7	0.08979	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.07853	-	ARCADIA - NORTHWEST 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	0.0	0.0	0.07611	-	P12:230:AEPW:ELKCITY6:SWEETWT6
0	20L	G16_062	-	Non-Converged Contingency	497.0	547.0	0.07502	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	478.0	502.0	0.07480	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	478.0	502.0	0.07480	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	478.0	502.0	0.07480	-	BUSHLAND INTERCHANGE 230KV SWITCHED SHUNT
0	20L	G16_062	-	Non-Converged Contingency	1561.0	1793.0	0.06665	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1561.0	1793.0	0.06665	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1561.0	1793.0	0.06665	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_062	-	Non-Converged Contingency	1561.0	1793.0	0.06665	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_062	-	Non-Converged Contingency	478.0	502.0	0.06627	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	318.7	350.6	0.06579	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	318.7	350.6	0.06579	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1192.0	1192.0	0.06557	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	956.0	956.0	0.06557	-	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	478.0	502.0	0.06551	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_062	-	Non-Converged Contingency	318.7	350.57	0.06494	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	318.7	350.57	0.06494	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.06442	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.06442	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1420.0	1775.0	0.05925	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1420.0	1775.0	0.05925	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G16_062	-	Non-Converged Contingency	1420.0	1775.0	0.05925	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1420.0	1775.0	0.05925	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_062	-	Non-Converged Contingency	1420.0	1775.0	0.05925	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1420.0	1775.0	0.05925	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G16_062	-	Non-Converged Contingency	0.0	0.0	0.05560	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	20L	G16_062	-	Non-Converged Contingency	0.0	0.0	0.05471	-	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
0	20L	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.05301	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.05301	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
0	20L	G16_062	-	Non-Converged Contingency	1793.0	1793.0	0.05301	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1716.0	1793.0	0.05301	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	G16_062	-	Non-Converged Contingency	1793.0	1793.0	0.05301	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1716.0	1793.0	0.05301	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	G16_062	-	Non-Converged Contingency	1793.0	1793.0	0.05301	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1716.0	1793.0	0.05301	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_062	-	Non-Converged Contingency	1532.0	1793.0	0.05122	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1532.0	1793.0	0.05122	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20L	G16_062	-	Non-Converged Contingency	1532.0	1793.0	0.05122	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	G16_062	-	Non-Converged Contingency	0.0	0.0	0.04970	-	P12:115:SPS:T14.1.MADDOX.WBENDR
0	20L	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.04962	-	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	785.0	785.0	0.04920	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	785.0	785.0	0.04920	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	439.0	439.0	0.04876	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	450.0	450.0	0.04876	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_062	-	Non-Converged Contingency	450.0	450.0	0.04876	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_062	-	Non-Converged Contingency	762.5	762.5	0.04827	-	MINGO - SETAB 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	762.5	762.5	0.04827	-	MINGO - SETAB 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	717.1	717.1	0.04750	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	717.1	717.1	0.04750	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	0.0	0.0	0.04672	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	20L	G16_062	-	Non-Converged Contingency	0.0	0.0	0.04323	-	P12:138:WFEC:MSL14
0	20L	G16_062	-	Non-Converged Contingency	0.0	0.0	0.04173	-	917X
0	20L	G16_062	-	Non-Converged Contingency	1504.0	1792.0	0.04146	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1504.0	1792.0	0.04146	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1505.0	1793.0	0.04077	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1505.0	1793.0	0.04077	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1505.0	1793.0	0.04077	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	501.95	501.95	0.04002	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	501.95	501.95	0.04002	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	726.6	726.6	0.03864	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	726.6	726.6	0.03864	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1413.0	1517.0	0.03864	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1413.0	1517.0	0.03864	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	956.0	956.0	0.03831	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	318.7	350.57	0.03532	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	318.7	350.57	0.03532	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	560.0	560.0	0.03514	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_062	-	Non-Converged Contingency	560.0	560.0	0.03514	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1141.0	1195.0	0.03439	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1141.0	1195.0	0.03439	-	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G16_062	-	Non-Converged Contingency	1141.0	1195.0	0.03439	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20SP	G16_062	-	Non-Converged Contingency	956.0	1042.0	0.21016	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20SP	G16_062	-	Non-Converged Contingency	956.0	1042.0	0.21016	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.17229	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20SP	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.17229	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20SP	G16_062	-	Non-Converged Contingency	956.1	1051.7	0.16012	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.19378	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.18916	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	1022.0	1124.0	0.18530	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	1022.0	1124.0	0.18530	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.17407	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	987.2	1082.8	0.16308	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.16267	-	CIMARRON - MINCO 345KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.16267	-	GRACEMONT - MINCO 345KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	1584.0	2098.0	0.15435	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_062	-	Non-Converged Contingency	1584.0	2098.0	0.15435	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.14051	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.14051	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	G16_062	-	Non-Converged Contingency	987.16	1082.77	0.12916	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	717.0	789.0	0.11955	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	956.09	1051.7	0.11489	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	987.16	1082.77	0.11489	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.08684	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.08684	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	439.0	439.0	0.06123	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	450.0	450.0	0.06123	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	560.0	560.0	0.05345	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	329.05	360.92	0.04480	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	421.0	439.0	0.04151	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20WP	G16_062	-	Non-Converged Contingency	329.05	360.92	0.03653	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	17SP	G16_062	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	442.0	752.0	0.09234	100.8893	BASE CASE
0	17SP	G16_062	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	442.0	752.0	0.09326	100.8893	BASE CASE
2	25SP	G16_062	FROM->TO	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1	525.0	525.0	1.00000	102.8243	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	157.29	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	156.84	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3472	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3472	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1122	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1122	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.9024	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.9024	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.8711	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.7174	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.551	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.4948	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.353	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0217	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0217	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9076	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9076	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8127	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8127	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7991	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7107	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6718	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6519	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.5754	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.5202	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.0718	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8311	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8311	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.5973	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.5973	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3886	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3886	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3574	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.2045	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.0389	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.983	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.8418	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5129	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5129	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3994	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3994	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3049	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3049	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2914	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2035	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1647	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1449	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.0688	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_062	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06611	113.9867	BASE CASE
2	20SP	G16_062	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06290	110.7777	BASE CASE
2	17G	G16_062	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06346	104.3556	BASE CASE
2	20WP	G16_062	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06125	99.1	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_062	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.30569	103.9462	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20SP	G16_062	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.30101	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_062	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24668	117.0258	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G16_062	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21938	112.9654	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G16_062	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24668	112.441	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	G16_062	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21938	108.3696	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17SP	G16_062	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24163	108.1247	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17SP	G16_062	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24163	103.6738	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17SP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.21626	126.3303	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20SP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.21841	117.4113	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.21460	110.5121	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.21403	105.6091	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	25SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.50999	189.2747	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64281	167.7508	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64281	167.7508	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64395	158.5987	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64395	158.5987	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64265	153.104	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64265	153.104	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	20SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51007	102.1	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
2	20SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51007	101.5007	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.50999	135.9092	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64281	117.3847	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64281	117.3847	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64395	113.2781	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64395	113.2781	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64265	107.675	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64265	107.675	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_062	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.50999	104.613	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.64281	101.0095	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.64281	101.0095	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.5032	ANDRWSXFMR12
2	25SP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.4881	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1
2	20WP	G16_062	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11958	109.7093	BASE CASE
2	16WP	G16_062	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12866	108.7418	BASE CASE
2	17G	G16_062	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12648	107.5286	BASE CASE
2	20WP	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11958	123.7856	BASE CASE
2	16WP	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12866	122.9306	BASE CASE
2	17G	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12648	120.973	BASE CASE
2	17SP	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12499	105.8511	BASE CASE
2	16WP	G16_062	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24668	106.376	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G16_062	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.21938	102.3425	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G16_062	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24668	101.9464	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_062	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.03711	102.2178	BASE CASE
2	25SP	G16_062	TO->FROM	JAL SUB - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24983	101.5521	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	FROM->TO	National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35719	112.5656	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	FROM->TO	National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35719	112.5656	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	TO->FROM	National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35719	102.3847	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	TO->FROM	National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35719	102.3847	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	25SP	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24983	108.392	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35605	104.0494	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17SP	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35605	104.0494	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35719	102.3407	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	17G	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35719	102.3407	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
2	16WP	G16_062	-	Non-Converged Contingency	1022.0	1124.0	0.19889	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G16_062	-	Non-Converged Contingency	1022.0	1124.0	0.19889	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.19851	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	16WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.19698	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	16WP	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.18908	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.18483	-	CIMARRON - MINCO 345KV CKT 1
2	16WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.18483	-	GRACEMONT - MINCO 345KV CKT 1
2	16WP	G16_062	-	Non-Converged Contingency	1330.0	1940.0	0.17652	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	16WP	G16_062	-	Non-Converged Contingency	1330.0	1940.0	0.17652	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	16WP	G16_062	-	Non-Converged Contingency	987.2	1082.8	0.16808	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.14646	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	16WP	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.14646	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	16WP	G16_062	-	Non-Converged Contingency	987.16	1082.77	0.13384	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	16WP	G16_062	-	Non-Converged Contingency	956.09	1051.7	0.13384	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	G16_062	-	Non-Converged Contingency	1420.0	1775.0	0.09988	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.09467	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.09467	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_062	-	Non-Converged Contingency	439.0	439.0	0.06738	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	16WP	G16_062	-	Non-Converged Contingency	450.0	450.0	0.06738	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.33347	-	HOBBS - YOAKUM_345 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	560.0	644.0	0.33347	-	HOBBS (HUPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.31856	-	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.19174	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.19174	-	GEN509403 1-PIRKEY GENERATION
2	17G	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.19174	-	GEN509404 1-WELSH #1
2	17G	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.19174	-	GEN509406 1-WELSH #3
2	17G	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.19174	-	GEN509416 1-TURK GENERATION
2	17G	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.19174	-	GEN511848 1-SOUTHWESTERN STATION #3
2	17G	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.19100	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1022.0	1124.0	0.19091	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1022.0	1124.0	0.19091	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.19054	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	717.0	926.0	0.18926	-	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.17866	-	CIMARRON - MINCO 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.17866	-	GRACEMONT - MINCO 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.17744	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1330.0	1940.0	0.17019	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1330.0	1940.0	0.17019	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	956.1	1051.7	0.15759	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	414.0	414.0	0.14898	-	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.13997	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.13997	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
2	17G	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.13997	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.13997	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	17G	G16_062	-	Non-Converged Contingency	717.0	789.0	0.12648	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	717.0	789.0	0.12648	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	956.09	1051.7	0.12268	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	956.09	1051.7	0.12268	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	318.7	350.57	0.11493	-	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1420.0	1775.0	0.09924	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1420.0	1775.0	0.09924	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1420.0	1775.0	0.09924	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1561.0	1793.0	0.08969	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1561.0	1793.0	0.08969	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.08924	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.08924	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.08856	-	ARCADIA - NORTHWEST 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	478.0	502.0	0.08176	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	497.0	547.0	0.07285	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1532.0	1793.0	0.07214	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1532.0	1793.0	0.07214	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	G16_062	-	Non-Converged Contingency	1532.0	1793.0	0.07214	-	G1524G1525 345.00 - WICHITA 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1532.0	1793.0	0.07214	-	G1524G1525 345.00 - WICHITA 345KV CKT 2
2	17G	G16_062	-	Non-Converged Contingency	1532.0	1793.0	0.07214	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	G16_062	-	Non-Converged Contingency	318.7	350.57	0.07189	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	318.7	350.6	0.07090	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	318.7	350.6	0.07090	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	478.05	547.36	0.07086	-	NEWHART 230 - PLANT X STATION 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	478.0	502.0	0.07001	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.06614	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.06614	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
2	17G	G16_062	-	Non-Converged Contingency	1793.0	1793.0	0.06614	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1716.0	1793.0	0.06614	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	G16_062	-	Non-Converged Contingency	1793.0	1793.0	0.06614	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1716.0	1793.0	0.06614	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G16_062	-	Non-Converged Contingency	1793.0	1793.0	0.06614	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1716.0	1793.0	0.06614	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.06614	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.06614	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 2
2	17G	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.06485	-	CIMARRON - DRAPER LAKE 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	318.7	350.57	0.06470	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	439.0	439.0	0.06346	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	450.0	450.0	0.06346	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_062	-	Non-Converged Contingency	878.0	956.0	0.06329	-	BENTON - WICHITA 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1793.0	1793.0	0.06166	-	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1793.0	1793.0	0.06166	-	G15066_T 345.00 - SOONER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_062	-	Non-Converged Contingency	560.0	560.0	0.06101	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_062	-	Non-Converged Contingency	717.1	717.1	0.05757	-	HOLCOMB - SETAB 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1192.0	1192.0	0.05712	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	956.0	956.0	0.05712	-	G15063_T 345.00 - WOODRING 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.05678	-	GEN520947 1-HUGO1
2	17G	G16_062	-	Non-Converged Contingency	343.79	343.79	0.05658	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	762.5	762.5	0.05637	-	MINGO - SETAB 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	785.0	785.0	0.05593	-	MINGO - RED WILLOW 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1039.0	1195.0	0.05473	-	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.05437	-	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	560.0	644.0	0.05207	-	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G16_062	-	Non-Converged Contingency	726.6	726.6	0.05119	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1413.0	1517.0	0.05119	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	501.95	501.95	0.05029	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1505.0	1793.0	0.05005	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1505.0	1793.0	0.05005	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1505.0	1793.0	0.05005	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1035.0	1035.0	0.04735	-	G14_001T 345.00 - WICHITA 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1504.0	1792.0	0.04708	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1504.0	1792.0	0.04708	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1141.0	1195.0	0.04688	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1141.0	1195.0	0.04688	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	560.0	644.0	0.04530	-	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_062	-	Non-Converged Contingency	318.7	350.57	0.04342	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	439.0	439.0	0.04191	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	502.0	502.0	0.04191	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	500.0	723.0	0.04191	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	1022.0	1143.0	0.03790	-	PITTSBURG - VALLIANT 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	318.7	350.57	0.03711	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	502.0	502.0	0.03581	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	717.0	789.0	0.03460	-	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_062	-	Non-Converged Contingency	560.0	644.0	0.03167	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_062	-	Non-Converged Contingency	560.0	644.0	0.03167	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
2	17SP	G16_062	-	Non-Converged Contingency	956.0	1042.0	0.19471	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G16_062	-	Non-Converged Contingency	1792.0	1792.0	0.19388	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.18925	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	20WP	G16_062	-	Non-Converged Contingency	1022.0	1124.0	0.18537	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G16_062	-	Non-Converged Contingency	1022.0	1124.0	0.18537	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.17413	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	20WP	G16_062	-	Non-Converged Contingency	987.2	1082.8	0.16317	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.16276	-	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G16_062	-	Non-Converged Contingency	1584.0	2098.0	0.15441	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	20WP	G16_062	-	Non-Converged Contingency	1584.0	2098.0	0.15441	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	20WP	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.14056	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	20WP	G16_062	-	Non-Converged Contingency	1792.0	1972.0	0.14056	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	20WP	G16_062	-	Non-Converged Contingency	987.16	1082.77	0.12924	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.08688	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	20WP	G16_062	-	Non-Converged Contingency	1195.0	1195.0	0.08688	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G16_062	-	Non-Converged Contingency	439.0	439.0	0.06125	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	20WP	G16_062	-	Non-Converged Contingency	450.0	450.0	0.06125	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
3	25SP	G16_062	FROM->TO	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1	525.0	525.0	1.00000	102.82	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	157.2869	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	156.8438	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3525	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3525	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1181	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1181	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.9093	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.8761	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.7223	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.682	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.5565	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.5339	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.4962	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.3543	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0243	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0243	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9104	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9104	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8157	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8013	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7213	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7127	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6739	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6524	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6386	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.5759	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.5172	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.0756	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8364	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8364	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.6032	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.6032	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3954	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3624	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.2093	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.1693	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.0444	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.0219	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.9844	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.8431	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5155	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5155	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.4021	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.4021	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.3079	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2936	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.214	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2054	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1668	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1454	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1317	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.0692	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27279	219.0037	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27279	218.7841	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24971	212.6842	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24971	212.3523	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27647	206.7258	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27647	206.6	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28576	198.5451	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28576	197.214	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28309	191.0186	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28309	188.8782	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28159	182.2433	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28159	180.1336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29390	128.2336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29390	124.1314	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.29281	205.8094	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20L	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.28170	191.8466	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30572	182.1676	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30540	170.544	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.30029	165.6022	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.30606	158.3084	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.31516	130.4315	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51001	189.3334	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64297	168.3042	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64410	159.1024	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64410	159.1024	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64281	153.5899	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64281	153.5899	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20L	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51158	114.8944	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20L	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51158	114.2671	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	20SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51008	102.173	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
3	20SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51008	101.5739	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.51001	135.9454	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64297	117.7405	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64410	113.6018	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64410	113.6018	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64281	107.9873	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	16WP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64281	107.9873	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_062	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.51001	104.648	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_062	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.64297	101.3667	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.5032	ANDRWSXFMR12
3	25SP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.4881	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1
3	25SP	G16_062	TO->FROM	JAL SUB - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24986	101.5772	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_062	FROM->TO	National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35703	112.072	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_062	TO->FROM	National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35703	101.898	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	25SP	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24986	108.4174	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35590	103.5966	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17SP	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35590	103.5966	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35703	101.8537	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
3	17G	G16_062	-	Non-Converged Contingency	3975.0	4570.0	0.37267	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	20L	G16_062	-	Non-Converged Contingency	3975.0	4570.0	0.32098	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	25SP	G16_062	FROM->TO	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1	525.0	525.0	1.00000	102.8199	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	157.2869	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	156.8439	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3524	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3524	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1181	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1181	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.9095	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.8764	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.7225	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.6825	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.5566	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.5344	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.4963	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.3544	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0243	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0243	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9104	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9104	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8158	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8014	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7215	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7128	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6739	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6524	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6388	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.5759	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.5171	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.0757	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8364	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8364	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.6033	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.6033	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3956	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3627	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.2095	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.1697	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.0445	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.0224	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.9844	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.8432	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5155	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5155	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.4022	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.4022	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.308	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2937	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2142	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2055	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1668	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1454	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1319	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.0693	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27240	219.2477	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27240	218.9034	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24928	212.5533	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24928	212.4877	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	20WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27595	206.5319	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27595	206.4431	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28534	198.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28534	197.0767	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28264	191.0175	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28264	188.7404	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28107	181.83	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28107	179.8003	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29335	128.3207	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29335	124.1778	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.29274	205.5105	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20L	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.28163	191.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30563	182.0402	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30530	170.4128	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.30019	165.4035	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.30598	158.2063	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.31505	130.4862	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51000	189.3327	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64297	168.2918	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64410	159.0923	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64410	159.0923	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64281	153.5814	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64281	153.5814	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20L	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51158	114.8899	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20L	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51158	114.2626	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	20SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51008	102.1702	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
4	20SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51008	101.5711	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.51000	135.9449	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64297	117.7326	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64410	113.5953	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64410	113.5953	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64281	107.9819	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	16WP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64281	107.9819	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_062	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.51000	104.6475	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_062	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.64297	101.3589	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.5032	ANDRWSXFMR12
4	25SP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.4881	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1
4	25SP	G16_062	TO->FROM	JAL SUB - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24986	101.5765	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_062	FROM->TO	National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35703	112.0825	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_062	TO->FROM	National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35703	101.9083	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	25SP	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24986	108.4167	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35590	103.6057	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17SP	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35590	103.6057	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35703	101.8641	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
4	17G	G16_062	-	Non-Converged Contingency	3975.0	4570.0	0.36838	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	20L	G16_062	-	Non-Converged Contingency	3975.0	4570.0	0.31679	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
5	25SP	G16_062	FROM->TO	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1	525.0	525.0	1.00000	102.8198	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	157.2868	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	156.844	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3524	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.3524	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1183	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	105.1183	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.9097	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.8766	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.7227	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.6832	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.5567	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.535	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.4964	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.3545	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0243	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	104.0243	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9105	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.9105	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8158	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.8015	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7218	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.7129	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.674	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.6524	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.639	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168.0	168.0	0.50123	103.5759	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.5171	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	156.0758	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8363	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.8363	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.6034	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.6034	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3958	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.3629	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.2098	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.1704	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.0446	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	104.023	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.9845	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.8433	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5155	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.5155	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.4022	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.4022	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.308	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2938	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2144	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.2056	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1669	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1454	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.1321	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168.0	168.0	0.49877	103.0693	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27005	217.7095	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27005	216.9825	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24743	211.2861	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.24743	210.7754	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27365	204.8525	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27365	204.7326	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28281	196.7495	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28281	195.2293	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28026	189.7734	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28026	187.2532	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27874	180.5705	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.27874	178.2726	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29087	127.7475	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29087	123.5792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.29202	204.5119	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20L	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.28108	190.5492	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30486	181.3291	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30454	169.7873	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.29945	164.743	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.30521	157.4925	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.31425	130.3275	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51000	189.3317	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64296	168.253	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64409	159.062	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.64409	159.062	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64280	153.5494	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103.0	114.0	0.64280	153.5494	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20L	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51158	114.8869	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20L	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51158	114.2595	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	20SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51008	102.1678	ANDREWS 6230.00 - G14_012T 230.00 230KV CKT 1
5	20SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93.0	103.0	0.51008	101.5686	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.51000	135.9442	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64296	117.7077	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64409	113.5758	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159.0	160.0	0.64409	113.5758	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64280	107.9614	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	16WP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	165.0	177.0	0.64280	107.9614	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_062	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.51000	104.6468	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_062	FROM->TO	DRINKARD TAP - WEST HOBBS SWITCHING STATION 115KV CKT 1	159.0	160.0	0.64296	101.3343	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.5032	ANDRWSXFMR12
5	25SP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422.0	422.0	1.00000	123.4881	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	25SP	G16_062	TO->FROM	JAL SUB - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24986	101.5736	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_062	FROM->TO	National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35704	112.1161	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_062	TO->FROM	National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.35704	101.9414	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	25SP	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.24986	108.4137	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35591	103.6331	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17SP	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35591	103.6331	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
5	17G	G16_062	FROM->TO	National Enrichment Plant Tap - TEAGUE SUB 115KV CKT 1	120.0	120.0	0.35704	101.8972	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
6	17G	G16_062	FROM->TO	National Enrichment Plant Sub - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.38033	112.2897	ANDREWS 6345.00 - HOBBS 345KV CKT 1
6	17G	G16_062	TO->FROM	National Enrichment Plant Tap - TARGA 3115.00 115KV CKT 1	120.0	120.0	0.38033	101.9184	ANDREWS 6345.00 - HOBBS 345KV CKT 1
0	16WP	G16_063	FROM->TO	HUGO POWER PLANT - VALLIANT 138KV CKT 1	287.0	287.0	0.13698	104.323	HUGO - VALLIANT 345KV CKT 1
0	16WP	G16_063	FROM->TO	HUGO POWER PLANT - VALLIANT 138KV CKT 1	287.0	287.0	0.13698	104.323	HUGO - VALLIANT 345KV CKT 1
0	16WP	G16_063	TO->FROM	LYDIA - VALLIANT 345KV CKT 1	956.0	1052.0	0.13265	105.8951	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	16WP	G16_063	TO->FROM	LYDIA - VALLIANT 345KV CKT 1	956.0	1052.0	0.13265	105.8951	NORTHWEST TEXARKANA - VALLIANT 345KV CKT 1
0	16WP	G16_064	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99.0	99.0	0.06347	119.9098	KNOB HILL - STEELE CITY 115KV CKT 1
0	17G	G16_064	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99.0	99.0	0.06374	109.5032	KNOB HILL - STEELE CITY 115KV CKT 1
0	16WP	G16_064	TO->FROM	CRETE - FRIEND 115KV CKT 1	137.0	137.0	0.03258	106.7649	MCCOOL - MOORE 345KV CKT 1
0	20WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.41322	120.8774	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	17G	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.40816	120.6508	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.41342	120.1203	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20L	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.41010	119.4475	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.07789	117.1511	MCCOOL - MOORE 345KV CKT 1
0	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.40776	113.0142	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.08331	112.8965	G15088_T 345.00 - MOORE 345KV CKT 1
0	17SP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.41358	111.7733	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.41043	108.9735	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20SP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.41348	106.8797	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.08293	106.3779	MCCOOL - MOORE 345KV CKT 1
0	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.07979	105.1735	CRETE - FRIEND 115KV CKT 1
0	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.07564	104.4899	GEN640555 W-S.FLATS.GENW0.6900
0	20WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.08819	104.4782	G15088_T 345.00 - MOORE 345KV CKT 1
0	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.08331	103.0007	G15088_T 345.00 - PAULINE 345KV CKT 1
0	17G	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.07847	102.2939	MCCOOL - MOORE 345KV CKT 1
0	17G	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.08387	100.3294	G15088_T 345.00 - MOORE 345KV CKT 1
0	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.10620	99.2	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.10620	99.2	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	17G	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.40250	113.6194	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20L	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.40457	112.7932	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20WP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.41259	111.0614	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	16WP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.07239	110.7066	MCCOOL - MOORE 345KV CKT 1
0	16WP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.41276	110.6289	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	16WP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.40227	106.6478	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	16WP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.07782	106.433	G15088_T 345.00 - MOORE 345KV CKT 1
0	17SP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.41314	101.6601	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20WP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	175.4756	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	17SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	175.1319	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	16WP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	175.0863	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	173.6398	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	25SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	172.282	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20L	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	158.5241	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	17G	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.5338	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	17SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	109.6445	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	25SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	109.5829	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20WP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	109.5368	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	16WP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	109.5338	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	109.5327	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20WP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	167.1211	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	16WP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	166.6984	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	17SP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	161.2715	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20SP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	160.3548	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	25SP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	158.991	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20L	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	154.8125	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	17G	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	151.3066	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20WP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	102.1098	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	16WP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	102.0458	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20WP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120.0	120.0	1.00000	153.1278	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	16WP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120.0	120.0	1.00000	152.6461	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20L	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120.0	120.0	1.00000	148.5307	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	17SP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120.0	120.0	1.00000	142.6055	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20SP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120.0	120.0	1.00000	141.8403	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	25SP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120.0	120.0	1.00000	140.2384	PAULINE - ROSEMONT 115.00 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120.0	120.0	1.00000	138.7851	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20WP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	162.5306	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	16WP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	162.0733	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	17SP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	151.6359	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20L	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	151.5658	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	20SP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	150.7432	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	25SP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	149.0103	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	17G	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	147.2023	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	16WP	G16_064	-	Non-Converged Contingency	0.0	0.0	0.08347	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	17G	G16_064	-	Non-Converged Contingency	120.0	120.0	0.83597	-	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	17G	G16_064	-	Non-Converged Contingency	0.0	0.0	0.06787	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17G	G16_064	-	Non-Converged Contingency	0.0	0.0	0.04525	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	20L	G16_064	-	Non-Converged Contingency	120.0	120.0	0.83624	-	PAULINE - ROSEMONT 115.00 115KV CKT 1
0	25SP	G16_064	-	Non-Converged Contingency	956.09	1051.7	0.06976	-	GEN525561 1-TOLK GEN #1 24 KV
0	25SP	G16_064	-	Non-Converged Contingency	956.09	1051.7	0.06976	-	GEN525562 1-TOLK GEN #2 24 KV
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5922	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5888	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5716	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5647	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5643	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5607	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5538	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5513	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5491	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5398	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5335	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5315	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5285	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5116	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	165.3842	GUIDE ROCK - SUPERIOR 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	163.0853	GUIDE ROCK - SUPERIOR 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	162.5116	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	162.5108	HEBRON - SUPERIOR 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	161.4401	GUIDE ROCK - SUPERIOR 115KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	161.4183	GUIDE ROCK - SUPERIOR 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	159.4126	HEBRON - SUPERIOR 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	159.3988	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	158.7567	HEBRON - NORTH HEBRON 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.5113	GUIDE ROCK - SUPERIOR 115KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.4043	HEBRON - SUPERIOR 115KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.3992	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.3282	HEBRON - SUPERIOR 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.3237	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.2712	GUIDE ROCK - SUPERIOR 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.1441	GUIDE ROCK - SUPERIOR 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	154.4741	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	154.4736	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	154.249	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	154.2437	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	152.8251	HEBRON - NORTH HEBRON 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	151.3179	GUIDE ROCK - SUPERIOR 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	149.6808	HEBRON - SUPERIOR 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	149.6786	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	149.3866	HEBRON - SUPERIOR 115KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	149.3805	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	149.0774	HEBRON - SUPERIOR 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	149.0754	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	148.8069	GUIDE ROCK - SUPERIOR 115KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	148.7974	HEBRON - NORTH HEBRON 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	148.4828	HEBRON - NORTH HEBRON 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	148.4534	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	148.4525	HEBRON - SUPERIOR 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86183	146.4622	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86164	146.3965	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	145.1365	HEBRON - SUPERIOR 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	145.1276	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	144.709	HEBRON - NORTH HEBRON 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86164	143.9748	FAIRBURY - HARBINE 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86182	141.3144	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86158	141.2281	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	140.6423	HEBRON - NORTH HEBRON 115KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	140.3719	HEBRON - NORTH HEBRON 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	139.9092	HEBRON - NORTH HEBRON 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86865	139.8966	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86158	139.7231	FAIRBURY - HARBINE 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	138.6542	HEBRON - NORTH HEBRON 115KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86186	137.9642	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86166	137.8959	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86181	137.757	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86161	137.6888	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86937	137.0202	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86184	136.2964	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86171	136.224	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86161	135.0757	FAIRBURY - HARBINE 115KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86166	135.0586	FAIRBURY - HARBINE 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86937	134.6077	CARLTON JUNCTION - GENEVA 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86223	133.7197	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84445	133.6986	BEATRICE - HARBINE 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86051	133.6515	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83624	133.3156	GEN587363 1-G16-055-GEN10.6900
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83960	132.965	KNOB HILL - STEELE CITY 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86865	131.8178	CARLTON JUNCTION - GENEVA 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84469	131.7695	GENEVA - MCCOOL 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86171	131.7265	FAIRBURY - HARBINE 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83369	131.4803	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86051	131.209	FAIRBURY - HARBINE 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83624	130.9844	GEN641089 2-ENERGY CENTER 2
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83802	130.9633	CRETE - FRIEND 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83700	130.9381	P12:115:WERE:MARS-SSEN_115::
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83700	130.9352	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83700	130.9212	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83700	130.8968	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86183	130.5382	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83932	129.767	KNOB HILL - STEELE CITY 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86190	129.7102	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86191	129.7074	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86177	129.63	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86177	129.6247	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86363	128.7028	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86187	128.6436	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83587	128.4246	GEN587363 1-G16-055-GEN10.6900
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83433	127.9915	AXTELL - SWEETWATER 345KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83624	127.9586	BASE CASE
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84408	127.8661	BEATRICE - HARBINE 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86887	127.7384	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83946	127.2832	KNOB HILL - STEELE CITY 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86908	127.2357	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86924	127.1444	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84423	127.1053	BEATRICE - HARBINE 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86187	127.0068	FAIRBURY - HARBINE 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83587	126.819	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83587	126.8056	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83679	126.7017	CLIFTON - CONCORDIA 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83679	126.7017	CLIFTON - CONCORDIA 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83587	126.5544	GEN641089 2-ENERGY CENTER 2
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83597	126.1699	GEN587363 1-G16-055-GEN10.6900
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84437	126.15	BEATRICE - HARBINE 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83662	126.1225	P12:115:WERE:MARS-SSEN_115::
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83587	126.1219	GEN659118 1-LARAMIE RIVER UNIT1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83662	126.12	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83662	126.0512	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83932	126.003	HARBINE - STEELE CITY 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83662	125.9613	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83334	125.859	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83545	125.5664	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83545	125.5664	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83277	125.5071	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86177	125.2946	FAIRBURY - HARBINE 115KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86177	125.2657	FAIRBURY - HARBINE 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86182	125.1576	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86887	125.0092	CARLTON JUNCTION - GENEVA 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83951	124.6716	KNOB HILL - STEELE CITY 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83452	124.4714	AXTELL - SWEETWATER 345KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83278	124.4664	GENEVA - SUTTON 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83346	124.4185	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83608	124.3746	GEN587363 1-G16-055-GEN10.6900
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83776	124.363	CRETE - FRIEND 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83624	124.2995	GEN640555 W-S.FLATS.GENW0.6900
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83619	124.2686	GEN587363 1-G16-055-GEN10.6900
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83597	124.1852	GEN641089 2-ENERGY CENTER 2
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83958	123.8748	KNOB HILL - STEELE CITY 115KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86924	123.8101	CARLTON JUNCTION - GENEVA 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83675	123.7392	P12:115:WERE:MARS-SSEN_115::
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83675	123.7328	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86908	123.7159	CARLTON JUNCTION - GENEVA 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83675	123.6947	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83278	123.6845	ENERGY CENTER - SUTTON 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83675	123.6345	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83597	123.6115	GEN659118 1-LARAMIE RIVER UNIT1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.87167	123.5319	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83587	123.224	BASE CASE
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83460	123.098	AXTELL - SWEETWATER 345KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83455	122.9008	AXTELL - SWEETWATER 345KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83356	122.4921	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86910	122.4326	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83365	122.357	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83786	122.3553	CRETE - FRIEND 115KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83797	122.3073	CRETE - FRIEND 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83608	122.2055	GEN641089 2-ENERGY CENTER 2
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83685	122.07	P12:115:WERE:MARS-SSEN_115::
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86906	122.068	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83685	122.0644	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83685	122.0326	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83685	121.9823	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83608	121.9585	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83619	121.9565	GEN641089 2-ENERGY CENTER 2
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83619	121.9124	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83695	121.9012	P12:115:WERE:MARS-SSEN_115::
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83695	121.8952	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83695	121.8611	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86186	121.8406	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83608	121.8346	GEN659118 1-LARAMIE RIVER UNIT1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83695	121.8076	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83608	121.681	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86181	121.649	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83619	121.594	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83608	121.5882	GEN587353 1-G16-050-GEN10.6900
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83619	121.5645	GEN659118 1-LARAMIE RIVER UNIT1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83619	121.5558	GEN587353 1-G16-050-GEN10.6900
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83277	121.3657	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.87167	121.1669	CARLTON JUNCTION - GENEVA 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83541	120.8925	MINGO - SETAB 345KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83541	120.8925	MINGO - SETAB 345KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84633	120.7972	BEATRICE - HARBINE 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83597	120.776	BASE CASE
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83334	120.7472	G16-055-TAP 115.00 - HILDRETH 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83772	120.4167	GEN587363 1-G16-055-GEN10.6900
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84001	120.2072	KNOB HILL - STEELE CITY 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86184	120.0736	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83488	120.0382	GRAND ISLAND - MCCOOL 345KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83587	119.7364	GEN640012 1-HEBRON CT
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83587	119.408	GEN640555 W-S.FLATS.GENW0.6900
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83507	119.1959	MINGO - RED WILLOW 345KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83507	119.1959	MINGO - RED WILLOW 345KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83608	119.081	BASE CASE
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83619	119.0761	BASE CASE
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83982	119.0242	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83982	119.0242	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83230	119.0148	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82296	118.9957	G15088_T 345.00 - PAULINE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83503	118.8333	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84636	118.7412	GENEVA - MCCOOL 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	118.4803	GEN587363 1-G16-055-GEN10.6900
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83542	118.4313	MINGO - SETAB 345KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83542	118.4313	MINGO - SETAB 345KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83237	118.4036	ENERGY CENTER - SUTTON 115KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83963	118.3833	KNOB HILL - STEELE CITY 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83772	118.1656	GEN641089 2-ENERGY CENTER 2
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83938	118.1598	CRETE - FRIEND 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83458	118.1158	AXTELL - SWEETWATER 345KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83963	118.0716	KNOB HILL - STEELE CITY 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83624	118.0059	GEN563212 1-G15087_3 0.6900
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83841	117.904	P12:115:WERE:MARS-SSEN_115::
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83841	117.9011	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83841	117.8873	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84426	117.8744	BEATRICE - HARBINE 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83841	117.8633	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86223	117.8374	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83613	117.6705	GEN587363 1-G16-055-GEN10.6900
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84423	117.4812	BEATRICE - HARBINE 115KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83461	117.2189	AXTELL - SWEETWATER 345KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	117.1157	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83597	117.1001	GEN640555 W-S.FLATS.GENW0.6900
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82260	117.0558	G15088_T 345.00 - PAULINE 345KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83231	116.8888	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	116.8358	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83253	116.6058	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83541	116.5346	MINGO - RED WILLOW 345KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83541	116.5346	MINGO - RED WILLOW 345KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83501	116.4891	MINGO - RED WILLOW 345KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83501	116.4891	MINGO - RED WILLOW 345KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	116.4528	GEN641089 2-ENERGY CENTER 2
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83613	116.4213	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83604	116.417	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83247	116.3551	GENEVA - SUTTON 115KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83613	116.1387	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	116.1194	GEN659118 1-LARAMIE RIVER UNIT1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83707	116.1085	CLIFTON - CONCORDIA 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83707	116.1085	CLIFTON - CONCORDIA 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83361	116.0678	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84820	115.9531	BEATRICE - HARBINE 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83690	115.9163	P12:115:WERE:MARS-SSEN_115::
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83690	115.9066	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83793	115.9026	CRETE - FRIEND 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83690	115.8508	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83517	115.7979	MINGO - RED WILLOW 345KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83517	115.7979	MINGO - RED WILLOW 345KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	115.7879	GEN587353 1-G16-050-GEN10.6900
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83690	115.7646	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83613	115.6758	GEN641089 2-ENERGY CENTER 2
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83247	115.6097	ENERGY CENTER - SUTTON 115KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83613	115.5178	GEN659118 1-LARAMIE RIVER UNIT1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83361	115.4823	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83608	115.4115	GEN640555 W-S.FLATS.GENW0.6900
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83619	115.4105	GEN640555 W-S.FLATS.GENW0.6900
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.87419	115.2476	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83791	115.1892	CRETE - FRIEND 115KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83271	115.145	GENEVA - SUTTON 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83772	115.1365	BASE CASE
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83613	114.9336	GEN587353 1-G16-050-GEN10.6900
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83258	114.857	GENEVA - SUTTON 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83441	114.7687	GRAND ISLAND - MCCOOL 345KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84224	114.7645	KNOB HILL - STEELE CITY 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83230	114.4388	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83271	114.1425	ENERGY CENTER - SUTTON 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84001	113.9542	GEN587363 1-G16-055-GEN10.6900
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83258	113.8337	ENERGY CENTER - SUTTON 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	113.3351	BASE CASE
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83587	113.0872	GEN563212 1-G15087_3 0.6900
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83269	112.841	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83231	112.6155	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86363	112.5372	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.87419	112.5362	CARLTON JUNCTION - GENEVA 115KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83613	112.4932	BASE CASE
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78322	112.3678	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78322	112.3678	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83253	112.3452	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83722	112.3055	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84148	112.1979	CRETE - FRIEND 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83657	112.03	AXTELL - SWEETWATER 345KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84001	111.6687	GEN641089 2-ENERGY CENTER 2
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83456	111.568	GENEVA - SUTTON 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83772	111.467	GEN640555 W-S.FLATS.GENW0.6900
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84001	111.3681	GEN659118 1-LARAMIE RIVER UNIT1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84062	111.2955	P12:115:WERE:MARS-SSEN_115::
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84062	111.2891	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78374	111.261	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78374	111.261	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84062	111.2515	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84062	111.1921	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84001	111.0536	GEN587353 1-G16-050-GEN10.6900
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83361	111.0244	G16-055-TAP 115.00 - HILDRETH 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83267	110.8694	GENEVA - SUTTON 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83456	110.7946	ENERGY CENTER - SUTTON 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83597	110.749	GEN563212 1-G15087_3 0.6900
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.6515	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.6505	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.5038	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.5036	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.4888	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.3882	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.3804	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83258	110.3693	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.3678	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.3606	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83534	110.32	MINGO - RED WILLOW 345KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83534	110.32	MINGO - RED WILLOW 345KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83446	110.2654	GRAND ISLAND - MCCOOL 345KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.2416	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82242	109.6093	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	109.5798	GEN640555 W-S.FLATS.GENW0.6900
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83265	109.5451	GENEVA - SUTTON 115KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83613	109.524	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83250	109.4121	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83608	109.1102	GEN563212 1-G15087_3 0.6900
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83619	109.0495	GEN563212 1-G15087_3 0.6900
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83520	108.937	MINGO - RED WILLOW 345KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83520	108.937	MINGO - RED WILLOW 345KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83613	108.7846	GEN640555 W-S.FLATS.GENW0.6900
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83466	108.6758	GRAND ISLAND - MCCOOL 345KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84012	108.641	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84012	108.641	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84001	108.6182	BASE CASE
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83480	108.5747	GRAND ISLAND - MCCOOL 345KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84010	108.4634	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83267	107.6874	ENERGY CENTER - SUTTON 115KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82291	107.5092	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82296	107.2289	G15088_T 345.00 - MOORE 345KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82256	107.2156	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83719	106.517	GRAND ISLAND - MCCOOL 345KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83265	106.3041	ENERGY CENTER - SUTTON 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83258	105.9151	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83867	105.9048	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78357	105.8921	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78357	105.8921	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84054	105.4351	MINGO - RED WILLOW 345KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84054	105.4351	MINGO - RED WILLOW 345KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82291	105.3894	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82511	105.3447	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83772	105.1835	GEN563212 1-G15087_3 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83250	105.1215	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84001	104.9079	GEN640555 W-S.FLATS.GENW0.6900
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78348	104.6296	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78348	104.6296	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83744	104.3785	GENEVA - SUTTON 115KV CKT 1
0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82260	104.3412	G15088_T 345.00 - MOORE 345KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78333	104.1928	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78333	104.1928	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83472	103.9437	GRAND ISLAND - MCCOOL 345KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82272	103.8471	G15088_T 345.00 - PAULINE 345KV CKT 1
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83744	103.6341	ENERGY CENTER - SUTTON 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	103.6323	GUIDE ROCK - SUPERIOR 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78348	103.5691	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78348	103.5691	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	103.4972	GUIDE ROCK - SUPERIOR 115KV CKT 1
0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	103.2041	GEN563212 1-G15087_3 0.6900
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83469	102.8205	GRAND ISLAND - MCCOOL 345KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83613	102.533	GEN563212 1-G15087_3 0.6900
0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83867	101.6144	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78349	100.9073	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78349	100.9073	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	99.6	HEBRON - SUPERIOR 115KV CKT 1
0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	99.6	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	99.5	HEBRON - SUPERIOR 115KV CKT 1
0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	99.5	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78615	99.4	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78615	99.4	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_064	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99.0	99.0	0.06355	119.9905	KNOB HILL - STEELE CITY 115KV CKT 1
2	17G	G16_064	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99.0	99.0	0.06381	109.5038	KNOB HILL - STEELE CITY 115KV CKT 1
2	16WP	G16_064	TO->FROM	CRETE - FRIEND 115KV CKT 1	137.0	137.0	0.03219	106.4927	MCCOOL - MOORE 345KV CKT 1
2	17G	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.40799	120.5572	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.41339	120.4038	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.07769	116.8913	MCCOOL - MOORE 345KV CKT 1
2	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.08346	112.834	G15088_T 345.00 - MOORE 345KV CKT 1
2	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.40759	112.7871	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	17SP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.41354	111.8623	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.07978	105.0472	CRETE - FRIEND 115KV CKT 1
2	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.07564	104.4105	GEN640555 W-S.FLATS.GENW0.6900
2	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.08346	103.1936	G15088_T 345.00 - PAULINE 345KV CKT 1
2	17G	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.07827	102.0796	MCCOOL - MOORE 345KV CKT 1
2	17G	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.08402	100.2942	G15088_T 345.00 - MOORE 345KV CKT 1
2	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.10606	99	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.10606	99	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
2	17G	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.40232	113.589	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	16WP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.41273	110.9366	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	16WP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.07220	110.4486	MCCOOL - MOORE 345KV CKT 1
2	16WP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.40210	106.4255	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	16WP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.07796	106.398	G15088_T 345.00 - MOORE 345KV CKT 1
2	17SP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.41310	101.8266	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	17SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	175.1946	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	16WP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	175.1706	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	17G	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.5183	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	16WP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	109.5299	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	16WP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	166.7747	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	17SP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	161.3135	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	17G	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	151.2962	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	16WP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	102.0477	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	16WP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120.0	120.0	1.00000	152.7167	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	17SP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120.0	120.0	1.00000	142.6613	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	17G	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120.0	120.0	1.00000	138.9353	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	16WP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	162.143	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	17SP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	151.6853	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	17G	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	147.274	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	16WP	G16_064	-	Non-Converged Contingency	0.0	0.0	0.08408	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17G	G16_064	-	Non-Converged Contingency	120.0	120.0	0.83600	-	PAULINE - ROSEMONT 115.00 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5768	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5765	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5494	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5444	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5134	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5122	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	163.0872	GUIDE ROCK - SUPERIOR 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	161.4356	GUIDE ROCK - SUPERIOR 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	159.415	HEBRON - SUPERIOR 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	159.4062	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.2832	GUIDE ROCK - SUPERIOR 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.2272	HEBRON - SUPERIOR 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.2225	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	154.2559	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	154.2556	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	152.8109	HEBRON - NORTH HEBRON 115KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	149.3944	HEBRON - SUPERIOR 115KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	149.3897	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	148.7994	GUIDE ROCK - SUPERIOR 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	148.4985	HEBRON - NORTH HEBRON 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	145.1194	HEBRON - SUPERIOR 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	145.1107	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86185	141.2763	FAIRBURY - G15087_T 115.00 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86161	141.2148	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	140.2607	HEBRON - NORTH HEBRON 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86161	139.7144	FAIRBURY - HARBINE 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	138.55	HEBRON - NORTH HEBRON 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86184	137.907	FAIRBURY - G15087_T 115.00 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86164	137.8389	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86164	135.2269	FAIRBURY - HARBINE 115KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86192	129.6634	FAIRBURY - G15087_T 115.00 115KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86178	129.4552	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86330	128.5797	FAIRBURY - G15087_T 115.00 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86154	128.5206	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84410	127.8581	BEATRICE - HARBINE 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86890	127.7108	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86911	127.3447	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83949	127.261	KNOB HILL - STEELE CITY 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84426	127.246	BEATRICE - HARBINE 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86154	126.8822	FAIRBURY - HARBINE 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83600	126.1603	GEN587363 1-G16-055-GEN10.6900
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86185	125.1516	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86178	125.079	FAIRBURY - HARBINE 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86890	124.9981	CARLTON JUNCTION - GENEVA 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83954	124.8298	KNOB HILL - STEELE CITY 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83611	124.5279	GEN587363 1-G16-055-GEN10.6900
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83451	124.4758	AXTELL - SWEETWATER 345KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83348	124.4053	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83779	124.3465	CRETE - FRIEND 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83600	124.1882	GEN641089 2-ENERGY CENTER 2
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86911	123.817	CARLTON JUNCTION - GENEVA 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83678	123.7208	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83678	123.6827	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83678	123.6215	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83600	123.4186	GEN659118 1-LARAMIE RIVER UNIT1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83454	123.0114	AXTELL - SWEETWATER 345KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83358	122.6507	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83789	122.5093	CRETE - FRIEND 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83611	122.371	GEN641089 2-ENERGY CENTER 2
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83688	122.2233	P12:115:WERE:MARS-SSEN_115::
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83688	122.2177	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83688	122.1858	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83688	122.1355	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86907	122.1235	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83611	121.9076	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83611	121.803	GEN659118 1-LARAMIE RIVER UNIT1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86184	121.8002	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83611	121.7152	GEN587353 1-G16-050-GEN10.6900
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83611	121.6129	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83600	120.7662	BASE CASE
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83611	119.2316	BASE CASE
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83964	118.3584	KNOB HILL - STEELE CITY 115KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83614	117.6529	GEN587363 1-G16-055-GEN10.6900
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84424	117.4591	BEATRICE - HARBINE 115KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83459	117.2544	AXTELL - SWEETWATER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83600	117.0967	GEN640555 W-S.FLATS.GENW0.6900
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83516	116.9992	MINGO - RED WILLOW 345KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83516	116.9992	MINGO - RED WILLOW 345KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83235	116.881	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83257	116.7819	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83251	116.3469	GENEVA - SUTTON 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83532	116.3368	MINGO - RED WILLOW 345KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83532	116.3368	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83614	116.1277	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84791	115.851	BEATRICE - HARBINE 115KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83614	115.814	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83614	115.661	GEN641089 2-ENERGY CENTER 2
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83251	115.602	ENERGY CENTER - SUTTON 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83611	115.5682	GEN640555 W-S.FLATS.GENW0.6900
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83361	115.4913	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83614	115.3022	GEN659118 1-LARAMIE RIVER UNIT1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.87399	115.2121	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83792	115.165	CRETE - FRIEND 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83262	115.0344	GENEVA - SUTTON 115KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83692	114.8973	P12:115:WERE:MARS-SSEN_115::
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84188	114.6419	KNOB HILL - STEELE CITY 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83262	114.0153	ENERGY CENTER - SUTTON 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83968	113.8449	GEN587363 1-G16-055-GEN10.6900
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83235	112.6325	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83257	112.5339	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.87399	112.4892	CARLTON JUNCTION - GENEVA 115KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83614	112.4672	BASE CASE
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86330	112.415	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83692	112.2284	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84115	112.113	CRETE - FRIEND 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83634	112.0084	AXTELL - SWEETWATER 345KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83968	111.5739	GEN641089 2-ENERGY CENTER 2
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84030	111.1861	P12:115:WERE:MARS-SSEN_115::
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84030	111.1798	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84030	111.1421	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83968	111.0844	GEN659118 1-LARAMIE RIVER UNIT1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84030	111.0828	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83968	110.924	GEN587353 1-G16-050-GEN10.6900
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83600	110.7459	GEN563212 1-G15087_3 0.6900
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.6672	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.666	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.3869	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83448	110.2023	GRAND ISLAND - MCCOOL 345KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82262	109.7297	G15088_T 345.00 - PAULINE 345KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83267	109.528	GENEVA - SUTTON 115KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83252	109.4038	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83532	109.2878	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83532	109.2878	MINGO - RED WILLOW 345KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83611	109.2682	GEN563212 1-G15087_3 0.6900
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83468	108.7848	GRAND ISLAND - MCCOOL 345KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83614	108.7695	GEN640555 W-S.FLATS.GENW0.6900
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83968	108.5045	BASE CASE
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84011	108.4788	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82276	107.6212	G15088_T 345.00 - PAULINE 345KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83267	106.2988	ENERGY CENTER - SUTTON 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83833	105.7862	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84007	105.6748	MINGO - RED WILLOW 345KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84007	105.6748	MINGO - RED WILLOW 345KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83252	105.1523	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83968	104.8032	GEN640555 W-S.FLATS.GENW0.6900
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78347	104.6972	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78347	104.6972	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83706	104.2487	GENEVA - SUTTON 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78332	104.1786	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78332	104.1786	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82289	103.9201	G15088_T 345.00 - PAULINE 345KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	103.6519	GUIDE ROCK - SUPERIOR 115KV CKT 1
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83706	103.5056	ENERGY CENTER - SUTTON 115KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83471	102.8608	GRAND ISLAND - MCCOOL 345KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83614	102.512	GEN563212 1-G15087_3 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83833	101.5222	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78347	100.9353	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78347	100.9353	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	99.6	HEBRON - SUPERIOR 115KV CKT 1
2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	99.6	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
3	16WP	G16_064	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99.0	99.0	0.06355	120.1667	KNOB HILL - STEELE CITY 115KV CKT 1
3	17G	G16_064	TO->FROM	BEATRICE - HARBINE 115KV CKT 1	99.0	99.0	0.06382	109.7831	KNOB HILL - STEELE CITY 115KV CKT 1
3	16WP	G16_064	TO->FROM	CRETE - FRIEND 115KV CKT 1	137.0	137.0	0.03220	106.8067	MCCOOL - MOORE 345KV CKT 1
3	20WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.41322	121.0747	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	17G	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.40800	120.7433	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.41339	120.5913	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20L	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.41010	119.5286	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.07769	117.1481	MCCOOL - MOORE 345KV CKT 1
3	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.08346	113.0602	G15088_T 345.00 - MOORE 345KV CKT 1
3	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.40759	112.9296	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	17SP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.41354	112.0975	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.41043	109.0936	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20SP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.41348	107.1133	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.08294	106.6719	MCCOOL - MOORE 345KV CKT 1
3	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.07978	105.2853	CRETE - FRIEND 115KV CKT 1
3	20WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.08819	104.7261	G15088_T 345.00 - MOORE 345KV CKT 1
3	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.07564	104.6016	GEN640555 W-S.FLATS.GENW0.6900
3	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.08346	103.3677	G15088_T 345.00 - PAULINE 345KV CKT 1
3	17G	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.07827	102.5185	MCCOOL - MOORE 345KV CKT 1
3	17G	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.08402	100.6253	G15088_T 345.00 - MOORE 345KV CKT 1
3	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.10606	99.2	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.41407	99.1	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99.0	99.0	0.07947	99	CRETE - SHELDON 115KV CKT 1
3	17G	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.40233	113.789	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20L	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.40457	112.8698	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20WP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.41259	111.2561	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	16WP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.41273	111.1191	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	16WP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.07220	110.7049	MCCOOL - MOORE 345KV CKT 1
3	16WP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.07796	106.625	G15088_T 345.00 - MOORE 345KV CKT 1
3	16WP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.40210	106.5665	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	17SP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99.0	99.0	0.41309	102.0368	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20WP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	175.4662	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	17SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	175.1849	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	16WP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	175.163	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	173.6242	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	25SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	172.2767	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20L	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	158.5193	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	17G	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.5111	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	17SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	109.6369	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	25SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	109.5396	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20WP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	109.5357	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	16WP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	109.5287	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	109.5217	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20WP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	167.1111	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	16WP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	166.7679	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	17SP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	161.3126	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20SP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	160.3432	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	25SP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	158.9945	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20L	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	154.8079	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	17G	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	151.2804	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20WP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	102.1102	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	16WP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	102.0479	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20WP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120.0	120.0	1.00000	153.1231	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	16WP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120.0	120.0	1.00000	152.7104	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20L	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120.0	120.0	1.00000	148.5265	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	17SP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120.0	120.0	1.00000	142.6502	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20SP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120.0	120.0	1.00000	141.8272	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	25SP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120.0	120.0	1.00000	140.1959	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	17G	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120.0	120.0	1.00000	138.9303	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20WP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	162.5231	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	16WP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	162.1367	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	17SP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	151.6805	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20L	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	151.5611	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20SP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	150.7303	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	25SP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	148.9814	PAULINE - ROSEMONT 115.00 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17G	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120.0	120.0	1.00000	147.2587	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20L	G16_064	-	Non-Converged Contingency	120.0	120.0	0.83625	-	PAULINE - ROSEMONT 115.00 115KV CKT 1
3	20SP	G16_064	-	Non-Converged Contingency	1792.0	1792.0	0.05625	-	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	25SP	G16_064	-	Non-Converged Contingency	956.09	1051.7	0.06973	-	GEN525561 1-TOLK GEN #1 24 KV
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5921	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5886	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.581	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5782	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5713	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5643	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.563	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5604	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5597	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.554	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.549	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5356	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5331	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	168.5226	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	165.3943	GUIDE ROCK - SUPERIOR 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	163.0967	GUIDE ROCK - SUPERIOR 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	162.5221	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	162.5212	HEBRON - SUPERIOR 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	161.4372	GUIDE ROCK - SUPERIOR 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	161.4182	GUIDE ROCK - SUPERIOR 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	159.4253	HEBRON - SUPERIOR 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	159.4179	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	158.7673	HEBRON - NORTH HEBRON 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.5211	GUIDE ROCK - SUPERIOR 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.4042	HEBRON - SUPERIOR 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.3991	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.292	GUIDE ROCK - SUPERIOR 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.2319	HEBRON - SUPERIOR 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.2274	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	157.1511	GUIDE ROCK - SUPERIOR 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	154.4812	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	154.4809	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	154.2589	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	154.2581	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	152.8192	HEBRON - NORTH HEBRON 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	151.3257	GUIDE ROCK - SUPERIOR 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	149.6891	HEBRON - SUPERIOR 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	149.6869	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	149.4042	HEBRON - SUPERIOR 115KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	149.4014	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	149.0832	HEBRON - SUPERIOR 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	149.0811	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	148.8026	GUIDE ROCK - SUPERIOR 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	148.7973	HEBRON - NORTH HEBRON 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	148.5037	HEBRON - NORTH HEBRON 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	148.4615	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	148.4604	HEBRON - SUPERIOR 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86184	146.3991	FAIRBURY - G15087_T 115.00 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86164	146.3313	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	145.1288	HEBRON - SUPERIOR 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	145.1202	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	144.7241	HEBRON - NORTH HEBRON 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86164	143.9159	FAIRBURY - HARBINE 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86185	141.0579	FAIRBURY - G15087_T 115.00 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86161	140.9973	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	140.6506	HEBRON - NORTH HEBRON 115KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	140.2668	HEBRON - NORTH HEBRON 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	139.9155	HEBRON - NORTH HEBRON 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86866	139.6233	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86161	139.5868	FAIRBURY - HARBINE 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	138.5528	HEBRON - NORTH HEBRON 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86186	137.8448	FAIRBURY - G15087_T 115.00 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86185	137.7866	FAIRBURY - G15087_T 115.00 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86166	137.7762	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86164	137.7176	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86937	136.9139	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86185	136.1532	FAIRBURY - G15087_T 115.00 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86172	136.0807	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86164	135.106	FAIRBURY - HARBINE 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86166	134.9388	FAIRBURY - HARBINE 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86937	134.4965	CARLTON JUNCTION - GENEVA 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86223	133.6673	FAIRBURY - G15087_T 115.00 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84446	133.6247	BEATRICE - HARBINE 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86051	133.5991	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83625	133.2164	GEN587363 1-G16-055-GEN10.6900
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83960	132.8486	KNOB HILL - STEELE CITY 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84469	131.6642	GENEVA - MCCOOL 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86172	131.5853	FAIRBURY - HARBINE 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86866	131.5472	CARLTON JUNCTION - GENEVA 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83370	131.3887	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86051	131.1574	FAIRBURY - HARBINE 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83625	130.8876	GEN641089 2-ENERGY CENTER 2
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83803	130.8718	CRETE - FRIEND 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83700	130.8394	P12:115:WERE:MARS-SSEN_115::
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83700	130.8365	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83700	130.8225	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83700	130.7981	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86184	130.4795	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86190	129.5745	FAIRBURY - G15087_T 115.00 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83932	129.5207	KNOB HILL - STEELE CITY 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86177	129.4886	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86192	129.3931	FAIRBURY - G15087_T 115.00 115KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86178	129.3086	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86329	128.4703	FAIRBURY - G15087_T 115.00 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86154	128.4134	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83588	128.1903	GEN587363 1-G16-055-GEN10.6900
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83625	127.8571	BASE CASE
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83433	127.8453	AXTELL - SWEETWATER 345KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84411	127.7044	BEATRICE - HARBINE 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86890	127.4687	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86911	127.1316	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84426	127.0967	BEATRICE - HARBINE 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83950	127.0396	KNOB HILL - STEELE CITY 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86925	126.927	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86154	126.7745	FAIRBURY - HARBINE 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83588	126.6247	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83588	126.5974	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83680	126.4558	CLIFTON - CONCORDIA 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83680	126.4558	CLIFTON - CONCORDIA 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83588	126.3182	GEN641089 2-ENERGY CENTER 2
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83588	126.0208	GEN659118 1-LARAMIE RIVER UNIT1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84438	126.0051	BEATRICE - HARBINE 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83662	125.8874	P12:115:WERE:MARS-SSEN_115::
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83662	125.8849	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83662	125.8161	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83932	125.7575	HARBINE - STEELE CITY 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83662	125.7262	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83334	125.6375	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83546	125.4486	MINGO - RED WILLOW 345KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83546	125.4486	MINGO - RED WILLOW 345KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83277	125.4031	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86177	125.1609	FAIRBURY - HARBINE 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86185	125.0226	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86178	124.9394	FAIRBURY - HARBINE 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86890	124.7567	CARLTON JUNCTION - GENEVA 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83955	124.6239	KNOB HILL - STEELE CITY 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83451	124.3609	AXTELL - SWEETWATER 345KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83278	124.3429	GENEVA - SUTTON 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83612	124.3398	GEN587363 1-G16-055-GEN10.6900
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83349	124.2119	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83625	124.1913	GEN640555 W-S.FLATS.GENW0.6900
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83779	124.1569	CRETE - FRIEND 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83620	124.0749	GEN587363 1-G16-055-GEN10.6900
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83959	123.6733	KNOB HILL - STEELE CITY 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86911	123.6054	CARLTON JUNCTION - GENEVA 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86925	123.5927	CARLTON JUNCTION - GENEVA 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83278	123.5616	ENERGY CENTER - SUTTON 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83678	123.5156	P12:115:WERE:MARS-SSEN_115::
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83678	123.5091	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83678	123.4711	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.87167	123.4355	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83678	123.4109	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83588	122.9871	BASE CASE
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83460	122.9731	AXTELL - SWEETWATER 345KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83454	122.8852	AXTELL - SWEETWATER 345KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83358	122.453	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83789	122.3331	CRETE - FRIEND 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86911	122.2399	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83612	122.1837	GEN641089 2-ENERGY CENTER 2
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83366	122.1754	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83797	122.1317	CRETE - FRIEND 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83689	122.0261	P12:115:WERE:MARS-SSEN_115::
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83689	122.0206	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83689	121.9888	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83689	121.9384	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86908	121.8587	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83620	121.762	GEN641089 2-ENERGY CENTER 2
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83620	121.7336	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83612	121.7315	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86186	121.7204	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83612	121.7202	GEN659118 1-LARAMIE RIVER UNIT1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83696	121.7082	P12:115:WERE:MARS-SSEN_115::
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83696	121.7023	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86185	121.6797	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83696	121.6681	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83696	121.6147	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83612	121.5289	GEN587353 1-G16-050-GEN10.6900
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83620	121.4792	GEN659118 1-LARAMIE RIVER UNIT1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83612	121.4344	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83620	121.4182	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83620	121.3612	GEN587353 1-G16-050-GEN10.6900
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83277	121.2546	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.87167	121.0716	CARLTON JUNCTION - GENEVA 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84633	120.7319	BEATRICE - HARBINE 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83542	120.6445	MINGO - SETAB 345KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83542	120.6445	MINGO - SETAB 345KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83601	120.5498	BASE CASE
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83334	120.5254	G16-055-TAP 115.00 - HILDRETH 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83772	120.3325	GEN587363 1-G16-055-GEN10.6900
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84001	120.1166	KNOB HILL - STEELE CITY 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86185	119.932	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83489	119.8895	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83588	119.5	GEN640012 1-HEBRON CT
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83588	119.1725	GEN640555 W-S.FLATS.GENW0.6900
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83612	119.0406	BASE CASE
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83508	118.9268	MINGO - RED WILLOW 345KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83508	118.9268	MINGO - RED WILLOW 345KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83620	118.8815	BASE CASE
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82297	118.8262	G15088_T 345.00 - PAULINE 345KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83983	118.7788	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83983	118.7788	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83231	118.759	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83503	118.7546	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84636	118.6379	GENEVA - MCCOOL 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	118.2564	GEN587363 1-G16-055-GEN10.6900
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83238	118.1203	ENERGY CENTER - SUTTON 115KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83965	118.1014	KNOB HILL - STEELE CITY 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83772	118.0829	GEN641089 2-ENERGY CENTER 2
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83938	118.0801	CRETE - FRIEND 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83458	117.9743	AXTELL - SWEETWATER 345KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83625	117.9058	GEN563212 1-G15087_3 0.6900
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83964	117.8389	KNOB HILL - STEELE CITY 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83841	117.8174	P12:115:WERE:MARS-SSEN_115::
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83841	117.8145	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83841	117.8007	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86223	117.786	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83841	117.7767	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84426	117.711	BEATRICE - HARBINE 115KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	117.4241	GEN587363 1-G16-055-GEN10.6900
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84424	117.2884	BEATRICE - HARBINE 115KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83460	117.1034	AXTELL - SWEETWATER 345KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	116.9117	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83516	116.7922	MINGO - RED WILLOW 345KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83516	116.7922	MINGO - RED WILLOW 345KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83236	116.6897	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82261	116.6446	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	116.6421	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83258	116.5682	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83620	116.4697	GRAND ISLAND - SWEETWATER 345KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83541	116.3116	MINGO - RED WILLOW 345KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83541	116.3116	MINGO - RED WILLOW 345KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	116.2304	GEN641089 2-ENERGY CENTER 2
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83532	116.1066	MINGO - RED WILLOW 345KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83532	116.1066	MINGO - RED WILLOW 345KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83251	116.0879	GENEVA - SUTTON 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	116.0209	GEN659118 1-LARAMIE RIVER UNIT1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	115.9261	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83708	115.8821	CLIFTON - CONCORDIA 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83708	115.8821	CLIFTON - CONCORDIA 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83361	115.8596	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84791	115.7173	BEATRICE - HARBINE 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83793	115.7016	CRETE - FRIEND 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83690	115.6949	P12:115:WERE:MARS-SSEN_115::
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83690	115.6853	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83690	115.6295	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	115.6219	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	115.5645	GEN587353 1-G16-050-GEN10.6900
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83690	115.5434	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	115.4309	GEN641089 2-ENERGY CENTER 2
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83612	115.3786	GEN640555 W-S.FLATS.GENW0.6900
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83251	115.3436	ENERGY CENTER - SUTTON 115KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83361	115.2716	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83620	115.2171	GEN640555 W-S.FLATS.GENW0.6900
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	115.2079	GEN659118 1-LARAMIE RIVER UNIT1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83772	115.0498	BASE CASE
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.87399	115.0086	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83793	114.9538	CRETE - FRIEND 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83272	114.9136	GENEVA - SUTTON 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83263	114.7875	GENEVA - SUTTON 115KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83692	114.6662	P12:115:WERE:MARS-SSEN_115::
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84188	114.4539	KNOB HILL - STEELE CITY 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83442	114.4293	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83231	114.2174	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83272	113.9108	ENERGY CENTER - SUTTON 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83263	113.7775	ENERGY CENTER - SUTTON 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83967	113.6725	GEN587363 1-G16-055-GEN10.6900
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	113.1112	BASE CASE
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83588	112.8522	GEN563212 1-G15087_3 0.6900
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83270	112.6275	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83236	112.4409	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83258	112.3134	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.86329	112.3067	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.87399	112.2982	CARLTON JUNCTION - GENEVA 115KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	112.2346	BASE CASE
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78323	112.1336	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78323	112.1336	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83692	112.0565	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84115	111.949	CRETE - FRIEND 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83634	111.8876	AXTELL - SWEETWATER 345KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83455	111.4611	GENEVA - SUTTON 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83967	111.4011	GEN641089 2-ENERGY CENTER 2
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83772	111.3809	GEN640555 W-S.FLATS.GENW0.6900
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78374	111.1699	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78374	111.1699	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83967	111.0175	GEN659118 1-LARAMIE RIVER UNIT1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84030	111.0075	P12:115:WERE:MARS-SSEN_115::

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84030	111.0011	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84030	110.9634	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CK
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84030	110.9041	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83361	110.8147	G16-055-TAP 115.00 - HILDRETH 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83967	110.7626	GEN587353 1-G16-050-GEN10.6900
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83455	110.6878	ENERGY CENTER - SUTTON 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.6729	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83267	110.6002	GENEVA - SUTTON 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.5181	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.5084	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.3748	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	110.3663	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83258	110.1292	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83535	110.0657	MINGO - RED WILLOW 345KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83535	110.0657	MINGO - RED WILLOW 345KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83449	109.9184	GRAND ISLAND - MCCOOL 345KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83613	109.4222	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82263	109.4087	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	109.3585	GEN640555 W-S.FLATS.GENW0.6900
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83268	109.2485	GENEVA - SUTTON 115KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83253	109.16	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83612	109.0775	GEN563212 1-G15087_3 0.6900
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83533	109.0067	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83533	109.0067	MINGO - RED WILLOW 345KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83620	108.8559	GEN563212 1-G15087_3 0.6900
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	108.5202	GEN640555 W-S.FLATS.GENW0.6900
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83469	108.4741	GRAND ISLAND - MCCOOL 345KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84012	108.41	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83967	108.3316	BASE CASE
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83481	108.299	GRAND ISLAND - MCCOOL 345KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84012	108.1882	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84012	108.1882	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83267	107.4207	ENERGY CENTER - SUTTON 115KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82278	107.2747	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82292	107.1939	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82297	107.0754	G15088_T 345.00 - MOORE 345KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83719	106.3858	GRAND ISLAND - MCCOOL 345KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83268	106.0188	ENERGY CENTER - SUTTON 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78357	105.7147	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78357	105.7147	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83258	105.6708	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83833	105.5931	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84007	105.4757	MINGO - RED WILLOW 345KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.84007	105.4757	MINGO - RED WILLOW 345KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82510	105.1931	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83772	105.0976	GEN563212 1-G15087_3 0.6900
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82292	105.0021	G15088_T 345.00 - PAULINE 345KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83253	104.7632	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83967	104.6314	GEN640555 W-S.FLATS.GENW0.6900
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78348	104.5009	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78348	104.5009	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83706	104.029	GENEVA - SUTTON 115KV CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78332	103.9838	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78332	103.9838	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82261	103.9523	G15088_T 345.00 - MOORE 345KV CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	103.6591	GUIDE ROCK - SUPERIOR 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83473	103.6316	GRAND ISLAND - MCCOOL 345KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.82290	103.5252	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	103.5169	GUIDE ROCK - SUPERIOR 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78348	103.3485	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78348	103.3485	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83706	103.2857	ENERGY CENTER - SUTTON 115KV CKT 1
3	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	102.9973	GEN563212 1-G15087_3 0.6900
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83471	102.5254	GRAND ISLAND - MCCOOL 345KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83615	102.2834	GEN563212 1-G15087_3 0.6900
3	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.83833	101.3238	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78347	100.7099	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78347	100.7099	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	99.6	HEBRON - SUPERIOR 115KV CKT 1
3	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	1.00000	99.5	HEBRON - SUPERIOR 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78614	99.4	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120.0	120.0	0.78614	99.4	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_065	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.14850	112.4929	BASE CASE
0	17SP	G16_065	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.14850	112.4918	BASE CASE
0	25SP	G16_065	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.14575	107.2478	BASE CASE
0	20SP	G16_065	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.14536	102.072	BASE CASE
0	17SP	G16_065	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.10768	103.5196	BASE CASE
0	17SP	G16_065	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.10768	103.5186	BASE CASE
0	17SP	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11890	109.7316	BASE CASE
0	17SP	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11890	109.7313	BASE CASE
0	25SP	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11682	107.1967	BASE CASE
0	17SP	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11890	105.7454	BASE CASE
0	17SP	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11890	105.7451	BASE CASE
0	17G	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11579	104.5522	BASE CASE
0	25SP	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11682	103.7454	BASE CASE
0	20SP	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11664	103.5593	BASE CASE
0	17G	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11579	101.2968	BASE CASE
0	20SP	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11664	100.5691	BASE CASE
0	16WP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.35315	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	16WP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.25306	-	2810X2
0	16WP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.25306	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	16WP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.21435	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	16WP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12653	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	16WP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12653	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	16WP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12653	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	16WP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.12653	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	16WP	G16_065	-	Non-Converged Contingency	478.0	526.0	0.11772	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	16WP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.11772	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	16WP	G16_065	-	Non-Converged Contingency	797.0	797.0	0.11772	-	BROADLAND - HURON 230KV CKT 1
0	16WP	G16_065	-	Non-Converged Contingency	400.0	400.0	0.11772	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10718	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	16WP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.10718	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	16WP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10512	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	16WP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10512	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.49368	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.46314	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.42527	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.34736	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.34736	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.25701	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.25701	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.24684	-	2810X2
0	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.24684	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.23360	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.23360	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.21263	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	17G	G16_065	-	Non-Converged Contingency	319.0	385.0	0.14703	-	BISON - HETINGER 230KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	400.0	400.0	0.14703	-	BISON - MAURINE 230KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	720.0	792.0	0.12851	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	17G	G16_065	-	Non-Converged Contingency	720.0	792.0	0.12851	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12342	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	17G	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12342	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12342	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.12342	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17G	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11680	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11680	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	17G	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11680	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11680	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.11579	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	17G	G16_065	-	Non-Converged Contingency	478.0	526.0	0.11579	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.11579	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	17G	G16_065	-	Non-Converged Contingency	732.0	732.0	0.11579	-	BROADLAND - HURON 230KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	400.0	400.0	0.11579	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_065	-	Non-Converged Contingency	400.0	400.0	0.11579	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10632	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.10632	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	17G	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10567	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10567	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	705.0	705.0	0.09875	-	CENTER - JAMESTOWN 345KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	705.0	705.0	0.09840	-	BUFFALO - JAMESTOWN 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_065	-	Non-Converged Contingency	720.0	792.0	0.09532	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.09370	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.09370	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	1793.0	1793.0	0.08979	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08790	-	FORBES - ROSEAU 500KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	1732.1	1905.3	0.08790	-	RIEL - ROSEAU 500KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08790	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08790	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	319.0	341.0	0.07627	-	NUNDRWD - WAYSIDE 230KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	1206.0	1336.0	0.04903	-	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	17G	G16_065	-	Non-Converged Contingency	1206.0	1336.0	0.04903	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	335.0	429.4	0.04869	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	409.0	450.0	0.04012	-	FORMAN - OAKES 230KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	319.0	351.0	0.03978	-	ELLENDALE - OAKES 230KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	319.0	351.0	0.03978	-	ELLENDALE - OAKES 230KV CKT 1
0	17G	G16_065	-	Non-Converged Contingency	409.0	450.0	0.03933	-	FORMAN - HANKINSON 230KV CKT 1
0	20L	G16_065	-	Non-Converged Contingency	0.0	0.0	0.39072	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	20SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.46655	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	20SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.42394	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	20SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.36662	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	20SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.34991	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.34991	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	20SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.25143	-	2810X2
0	20SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.25143	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.24441	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	20SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.24441	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	20SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.21197	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12572	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12572	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12572	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.12221	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	20SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.12221	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.12221	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.12221	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	20SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.12221	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	20SP	G16_065	-	Non-Converged Contingency	478.0	526.0	0.11664	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.11664	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	20SP	G16_065	-	Non-Converged Contingency	732.0	732.0	0.11664	-	BROADLAND - HURON 230KV CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	400.0	400.0	0.11664	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	400.0	400.0	0.11664	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10599	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.10599	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	20SP	G16_065	-	Non-Converged Contingency	705.0	705.0	0.09860	-	CENTER - JAMESTOWN 345KV CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	705.0	705.0	0.09769	-	BUFFALO - JAMESTOWN 345KV CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.09699	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.09699	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.09142	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.09142	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08531	-	FORBES - ROSEAU 500KV CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	1732.1	1905.3	0.08531	-	RIEL - ROSEAU 500KV CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08531	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08531	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	20SP	G16_065	-	Non-Converged Contingency	1206.0	1336.0	0.04826	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
0	25SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.50247	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	25SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.46728	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.42634	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	25SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.37443	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	25SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.35046	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	25SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.35046	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	25SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.25123	-	2810X2
0	25SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.25123	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	25SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.24962	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	25SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.24962	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	25SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.21317	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	25SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12562	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	25SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12562	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	25SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12562	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	25SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.12562	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.12481	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	25SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.12481	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.12481	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	25SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.12481	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	25SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.12481	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	25SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.11682	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	25SP	G16_065	-	Non-Converged Contingency	478.0	526.0	0.11682	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	25SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.11682	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	25SP	G16_065	-	Non-Converged Contingency	732.0	732.0	0.11682	-	BROADLAND - HURON 230KV CKT 1
0	25SP	G16_065	-	Non-Converged Contingency	400.0	400.0	0.11682	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_065	-	Non-Converged Contingency	400.0	400.0	0.11682	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10659	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	25SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.10659	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	25SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.09773	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	25SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.09773	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	25SP	G16_065	-	Non-Converged Contingency	720.0	792.0	0.09508	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	25SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.09210	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	25SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.09210	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	25SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08579	-	FORBES - ROSEAU 500KV CKT 1
0	25SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08579	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	25SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08579	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	25SP	G16_065	-	Non-Converged Contingency	1800.0	1980.0	0.05221	-	488489510526345.00 - BSSOUTH3 345.00 345KV CKT 1
0	20SP	G16_065	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.11581	102.7748	BASE CASE
0	17SP	G16_065	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.13138	102.6278	BASE CASE
0	17SP	G16_065	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.13138	102.6265	BASE CASE
0	17SP	G16_065	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.13138	104.4933	BASE CASE
0	17SP	G16_065	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.13138	104.4921	BASE CASE
2	17SP	G16_065	FROM->TO	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	478.0	526.0	0.11907	100.6065	BASE CASE
2	17SP	G16_065	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.14830	115.4161	BASE CASE
2	17SP	G16_065	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.10776	100.5291	BASE CASE
2	17SP	G16_065	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.10776	105.6474	BASE CASE
2	17SP	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11907	110.0846	BASE CASE
2	17SP	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11907	106.0432	BASE CASE
2	17G	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11597	103.9446	BASE CASE
2	17G	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11597	100.9216	BASE CASE
2	16WP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.35363	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	16WP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.25312	-	2810X2
2	16WP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.25312	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	16WP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.21456	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	16WP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12656	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	16WP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12656	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	16WP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12656	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	16WP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.12656	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	16WP	G16_065	-	Non-Converged Contingency	478.0	526.0	0.11788	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	16WP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.11788	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	16WP	G16_065	-	Non-Converged Contingency	797.0	797.0	0.11788	-	BROADLAND - HURON 230KV CKT 1
2	16WP	G16_065	-	Non-Converged Contingency	400.0	400.0	0.11788	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10728	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	16WP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.10728	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	16WP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10521	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	16WP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10521	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.49407	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.46389	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
2	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.42557	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
2	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.34791	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.34791	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
2	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.25708	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
2	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.25708	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.24704	-	2810X2
2	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.24704	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.23356	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
2	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.21279	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	17G	G16_065	-	Non-Converged Contingency	720.0	792.0	0.12854	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	17G	G16_065	-	Non-Converged Contingency	720.0	792.0	0.12854	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12352	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	17G	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12352	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12352	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.12352	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17G	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11678	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11678	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11678	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
2	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.11597	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_065	-	Non-Converged Contingency	478.0	526.0	0.11597	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.11597	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	17G	G16_065	-	Non-Converged Contingency	732.0	732.0	0.11597	-	BROADLAND - HURON 230KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	400.0	400.0	0.11597	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_065	-	Non-Converged Contingency	400.0	400.0	0.11597	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10639	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.10639	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	17G	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10572	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10572	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	705.0	705.0	0.09875	-	CENTER - JAMESTOWN 345KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	705.0	705.0	0.09840	-	BUFFALO - JAMESTOWN 345KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	720.0	792.0	0.09532	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.09362	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.09362	-	CHISAGO COUNTY - FORBES 500KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	1793.0	1793.0	0.08977	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08782	-	FORBES - ROSEAU 500KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	1732.1	1905.3	0.08782	-	RIEL - ROSEAU 500KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08782	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08782	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	1206.0	1336.0	0.04906	-	CENTER - CNTSHNT3 345.00 345KV CKT Z1
2	17G	G16_065	-	Non-Converged Contingency	1206.0	1336.0	0.04906	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	335.0	429.4	0.04861	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	409.0	450.0	0.04011	-	FORMAN - OAKES 230KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	319.0	351.0	0.03977	-	ELLENDALE - OAKES 230KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	319.0	351.0	0.03977	-	ELLENDALE - OAKES 230KV CKT 1
2	17G	G16_065	-	Non-Converged Contingency	409.0	450.0	0.03932	-	FORMAN - HANKINSON 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.50938	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.47626	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.43771	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.35720	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.35720	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.35611	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.26298	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.26298	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.25469	-	2810X2
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.25469	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.23741	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.23741	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.22380	-	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.21886	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.21886	-	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.16817	-	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.16817	-	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
2	17SP	G16_065	-	Non-Converged Contingency	460.0	460.0	0.15717	-	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	215.0	236.0	0.14830	-	BISON - HETINGER 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	384.0	384.0	0.14830	-	BISON - MAURINE 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	239.0	299.0	0.13498	-	BOWMAN - HETINGER 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	239.0	299.0	0.13498	-	BOWMAN - RHAME 4 230.00 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	720.0	792.0	0.13149	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	17SP	G16_065	-	Non-Converged Contingency	720.0	792.0	0.13149	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.12757	-	P13:230-345:NPPD:STEGALL3:KV3A
2	17SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12735	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	17SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12735	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12735	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.12735	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.11907	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
2	17SP	G16_065	-	Non-Converged Contingency	478.0	526.0	0.11907	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.11907	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	17SP	G16_065	-	Non-Converged Contingency	732.0	732.0	0.11907	-	BROADLAND - HURON 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	400.0	400.0	0.11907	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	400.0	400.0	0.11907	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.11884	-	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
2	17SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11870	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
2	17SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11870	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11870	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
2	17SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11870	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11870	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11870	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11870	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.11211	-	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_065	-	Non-Converged Contingency	320.0	342.0	0.11190	-	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	320.0	342.0	0.11190	-	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
2	17SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10943	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10943	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.10943	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.10943	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
2	17SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10776	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.10776	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	720.0	792.0	0.10280	-	SPLIT ROCK - WHITE 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	720.0	792.0	0.10280	-	SPLIT ROCK - WHITE 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	705.0	705.0	0.10024	-	CENTER - JAMESTOWN 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	705.0	705.0	0.09987	-	BUFFALO - JAMESTOWN 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	720.0	792.0	0.09675	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.09675	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	17SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.09525	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.09525	-	CHISAGO COUNTY - FORBES 500KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	1073.0	1195.0	0.09315	-	GEN542951 5-HAWTHORN UNIT #5
2	17SP	G16_065	-	Non-Converged Contingency	1073.0	1195.0	0.09315	-	GEN542955 1-LACYGNE UNIT #1
2	17SP	G16_065	-	Non-Converged Contingency	1073.0	1195.0	0.09315	-	GEN542956 2-LACYGNE UNIT #2
2	17SP	G16_065	-	Non-Converged Contingency	1793.0	1793.0	0.09286	-	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	956.1	956.1	0.09201	-	ADAMS - MITCHLCO3 345.00 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	1793.0	1793.0	0.09113	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	1793.0	1793.0	0.09113	-	GEN620315 1-BIG STONE GEN
2	17SP	G16_065	-	Non-Converged Contingency	1793.0	1793.0	0.09113	-	GEN657964 1-ASH2GEN9 0.5750
2	17SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08915	-	FORBES - ROSEAU 500KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	1732.1	1905.3	0.08915	-	GEN600000 1-SHERBURNECNTY G1
2	17SP	G16_065	-	Non-Converged Contingency	1732.1	1905.3	0.08915	-	GEN600001 2-SHERBURNE CNTY G2
2	17SP	G16_065	-	Non-Converged Contingency	1732.1	1905.3	0.08915	-	GEN600002 3-SHERBURNE CNTY G3
2	17SP	G16_065	-	Non-Converged Contingency	1732.1	1905.3	0.08915	-	GEN600003 1-PRAIRIE ISLAND G1
2	17SP	G16_065	-	Non-Converged Contingency	1732.1	1905.3	0.08915	-	GEN600004 2-PRAIRIE ISLAND G2
2	17SP	G16_065	-	Non-Converged Contingency	1732.1	1905.3	0.08915	-	GEN600005 1-MONTICELLO
2	17SP	G16_065	-	Non-Converged Contingency	1732.1	1905.3	0.08915	-	GEN600006 1-AS KING
2	17SP	G16_065	-	Non-Converged Contingency	1732.1	1905.3	0.08915	-	RIEL - ROSEAU 500KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08915	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08915	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	717.0	717.0	0.08801	-	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
2	17SP	G16_065	-	Non-Converged Contingency	1792.7	1792.7	0.08720	-	MONTICELLO - WAITE PARK 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	1099.0	1195.0	0.08254	-	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	17SP	G16_065	-	Non-Converged Contingency	1099.0	1195.0	0.08254	-	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	17SP	G16_065	-	Non-Converged Contingency	1099.0	1195.0	0.08254	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_065	-	Non-Converged Contingency	400.0	444.0	0.07995	-	CENTER - SQUARE BUTTE 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	319.0	341.0	0.07811	-	NUNDRWD - WAYSIDE 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	320.0	352.0	0.07429	-	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	1378.0	1515.4	0.07356	-	HELENA - SHEAS LK3 345.00 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	1173.6	1195.0	0.07251	-	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	478.0	598.0	0.07021	-	CENTER - COYOTE 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	400.0	480.0	0.06379	-	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	864.0	864.0	0.06182	-	HIGHLND 3 345.00 - RAUN 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	364.0	364.0	0.05942	-	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
2	17SP	G16_065	-	Non-Converged Contingency	364.0	364.0	0.05942	-	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.05899	-	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.05899	-	P12:230:UMZW:# 158 #: MH IN ND.
2	17SP	G16_065	-	Non-Converged Contingency	956.0	956.0	0.05837	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	210.0	210.0	0.05623	-	BISMARK - L3 HAWDON 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	210.0	210.0	0.05623	-	GLENHAM - L3 HAWDON 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	240.0	260.0	0.05606	-	GLENHAM - WHITLOK 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	240.0	260.0	0.05606	-	OAHE - SULLEY BUTTE 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	240.0	260.0	0.05606	-	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
2	17SP	G16_065	-	Non-Converged Contingency	240.0	260.0	0.05606	-	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	1299.0	1299.0	0.05587	-	GEN514806 1-SOONER UNIT 2
2	17SP	G16_065	-	Non-Converged Contingency	1299.0	1299.0	0.05587	-	GEN515223 1-MUSKOGEE 4G
2	17SP	G16_065	-	Non-Converged Contingency	1299.0	1299.0	0.05587	-	GEN515225 1-MUSKOGEE 5G
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.05470	-	P12:230:UMZB:# 171 #: WB IN ND.
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.05470	-	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
2	17SP	G16_065	-	Non-Converged Contingency	800.0	1084.0	0.05128	-	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	1206.0	1336.0	0.04967	-	CENTER - CNTSHNT3 345.00 345KV CKT Z1
2	17SP	G16_065	-	Non-Converged Contingency	1206.0	1336.0	0.04967	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	335.0	429.4	0.04940	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	335.0	429.4	0.04940	-	J290_SUB 230.00 - RUGBY 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	956.0	956.0	0.04896	-	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_065	-	Non-Converged Contingency	1195.1	1195.1	0.04860	-	AS KING - CHISAGO COUNTY 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	956.0	1052.0	0.04838	-	SIDNEY - STEGALL 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	956.0	956.0	0.04837	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	956.0	956.0	0.04837	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.04821	-	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
2	17SP	G16_065	-	Non-Converged Contingency	342.0	342.0	0.04530	-	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	342.0	342.0	0.04530	-	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	320.0	320.0	0.04406	-	FT RANDAL - FT THOMPSON 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	320.0	320.0	0.04406	-	FT RANDAL - FT THOMPSON 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	318.7	318.7	0.04324	-	FT RANDAL - LAKE PLATT 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	352.0	352.0	0.04324	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	352.0	352.0	0.04324	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	409.0	450.0	0.04031	-	FORMAN - OAKES 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	319.0	351.0	0.03994	-	ELLENDALE - OAKES 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	319.0	351.0	0.03994	-	ELLENDALE - OAKES 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	672.0	773.0	0.03985	-	CENTER (C1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	672.0	773.0	0.03985	-	CENTER (C2) 345/230/13.8KV TRANSFORMER CKT 2
2	17SP	G16_065	-	Non-Converged Contingency	409.0	450.0	0.03951	-	FORMAN - HANKINSON 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	318.0	350.0	0.03794	-	BISMARK - JAMES TOWN 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	318.0	350.0	0.03789	-	BISMARK - WEBER 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	318.0	350.0	0.03789	-	JAMES TOWN - WEBER 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	336.0	386.0	0.03779	-	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
2	17SP	G16_065	-	Non-Converged Contingency	318.0	350.0	0.03761	-	FARGO - JAMES TOWN 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	1072.0	1195.0	0.03738	-	GEN300003 1-THOMAS HILL UNIT 3
2	17SP	G16_065	-	Non-Converged Contingency	318.0	350.0	0.03679	-	FARGO - JAMES TOWN 230KV CKT 2
2	17SP	G16_065	-	Non-Converged Contingency	637.0	641.0	0.03657	-	CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	100.0	125.0	0.03640	-	MAURINE 115KV SWITCHED SHUNT
2	17SP	G16_065	-	Non-Converged Contingency	430.2	430.2	0.03638	-	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	430.2	430.2	0.03638	-	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	320.0	320.0	0.03616	-	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	368.0	368.0	0.03616	-	KELLY - MEADOWGROVE4230.00 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	159.3	159.3	0.03562	-	LOGAN - MALLARD 115KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	159.3	159.3	0.03562	-	LOGAN - MALLARD 115KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.03499	-	P12:115:UMZW:# 153 #: MA-NL-ELC IN SD. NEWELL IS A TAP WITH NON-FAULT INTERUPTING DEVICES
2	17SP	G16_065	-	Non-Converged Contingency	400.0	400.0	0.03463	-	DRAYTON - PRAIRIE 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	641.0	641.0	0.03387	-	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	288.0	288.0	0.03379	-	KARLSTAD - WINGER 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.03345	-	P13:115-230:TSGT:SIDNEY-KV1A
2	17SP	G16_065	-	Non-Converged Contingency	400.0	400.0	0.03336	-	PRAIRIE - WINGER 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	672.0	772.0	0.03292	-	PRAIRIE3 345.00 (P2) 345/230/13.8KV TRANSFORMER CKT 2
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.03249	-	P13:230-345:NPPD:SIDNEY 3:KV2A
2	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.03248	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
2	17SP	G16_065	-	Non-Converged Contingency	280.0	280.0	0.03220	-	AUDUBON - SHEYNNE 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	1173.6	1195.1	0.03184	-	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	320.0	352.0	0.03173	-	MOOREHEAD - MORRIS 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	390.0	429.0	0.03133	-	BIG STONE - BROWNS VALLEY 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	296.0	325.0	0.03133	-	BROWNS VALLEY - HANKINSON 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	318.0	318.0	0.03077	-	GARRISON - JAMES TOWN 230KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	1195.1	1195.1	0.02988	-	NOBLES - SPLIT ROCK 345KV CKT 1
2	17SP	G16_065	-	Non-Converged Contingency	320.0	352.0	0.02950	-	FARGO - MOOREHEAD 230KV CKT 1
2	17SP	G16_065	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.13149	105.756	BASE CASE
2	17SP	G16_065	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.13149	107.8342	BASE CASE
3	17SP	G16_065	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.14713	109.8074	BASE CASE
3	25SP	G16_065	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.14472	103.7294	BASE CASE
3	17SP	G16_065	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.22970	102.5639	BELFIELD - CHARLIE CREEK 345KV CKT 1
3	17SP	G16_065	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.12131	108.3898	BASE CASE
3	17SP	G16_065	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.12131	113.8693	BASE CASE
3	17SP	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11506	106.0622	BASE CASE
3	17SP	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11506	102.75	BASE CASE
3	25SP	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11298	102.0308	BASE CASE
3	25SP	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11298	99.2	BASE CASE
3	16WP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.11847	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	16WP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.11847	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.33624	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.23934	-	2810X2
3	17G	G16_065	-	Non-Converged Contingency	717.0	789.0	0.11967	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17G	G16_065	-	Non-Converged Contingency	717.0	789.0	0.11967	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.11967	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17G	G16_065	-	Non-Converged Contingency	717.0	789.0	0.11888	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17G	G16_065	-	Non-Converged Contingency	717.0	789.0	0.11888	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17G	G16_065	-	Non-Converged Contingency	478.0	526.0	0.11208	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17G	G16_065	-	Non-Converged Contingency	0.0	0.0	0.11208	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17G	G16_065	-	Non-Converged Contingency	732.0	732.0	0.11208	-	BROADLAND - HURON 230KV CKT 1
3	17G	G16_065	-	Non-Converged Contingency	400.0	400.0	0.11208	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17G	G16_065	-	Non-Converged Contingency	319.0	351.0	0.03939	-	ELLENDALE - OAKES 230KV CKT 1
3	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.35426	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.34518	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.27646	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.25961	-	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.24674	-	2810X2
3	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.24674	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.23617	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
3	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.23617	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	17SP	G16_065	-	Non-Converged Contingency	215.0	236.0	0.14713	-	BISON - HETINGER 230KV CKT 1
3	17SP	G16_065	-	Non-Converged Contingency	384.0	384.0	0.14713	-	BISON - MAURINE 230KV CKT 1
3	17SP	G16_065	-	Non-Converged Contingency	720.0	792.0	0.13823	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	17SP	G16_065	-	Non-Converged Contingency	720.0	792.0	0.13823	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12980	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.12980	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	17SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12337	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12337	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12337	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.12337	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12131	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12131	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11809	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11809	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	17SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11809	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
3	17SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11809	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11809	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11809	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.11809	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.11506	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	17SP	G16_065	-	Non-Converged Contingency	478.0	526.0	0.11506	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.11506	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17SP	G16_065	-	Non-Converged Contingency	732.0	732.0	0.11506	-	BROADLAND - HURON 230KV CKT 1
3	17SP	G16_065	-	Non-Converged Contingency	400.0	400.0	0.11506	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_065	-	Non-Converged Contingency	319.0	341.0	0.07778	-	NUNDRWD - WAYSIDE 230KV CKT 1
3	17SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.06485	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	17SP	G16_065	-	Non-Converged Contingency	319.0	351.0	0.03956	-	ELLENDALE - OAKES 230KV CKT 1
3	20SP	G16_065	-	Non-Converged Contingency	720.0	720.0	0.12142	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	20SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.11025	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.11025	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20SP	G16_065	-	Non-Converged Contingency	705.0	705.0	0.09565	-	BUFFALO - JAMESTOWN 345KV CKT 1
3	20SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08381	-	FORBES - ROSEAU 500KV CKT 1
3	20SP	G16_065	-	Non-Converged Contingency	1732.1	1905.3	0.08381	-	RIEL - ROSEAU 500KV CKT 1
3	20SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08381	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
3	20SP	G16_065	-	Non-Converged Contingency	1732.1	2165.1	0.08381	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
3	25SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.24368	-	2810X2
3	25SP	G16_065	-	Non-Converged Contingency	0.0	0.0	0.24368	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	25SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12184	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	25SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12184	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	25SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.12184	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	25SP	G16_065	-	Non-Converged Contingency	478.0	526.0	0.11298	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	25SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.11107	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	25SP	G16_065	-	Non-Converged Contingency	717.0	789.0	0.11107	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20SP	G16_065	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.11875	104.9586	BASE CASE
3	25SP	G16_065	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.11996	101.2003	BASE CASE
3	17SP	G16_065	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.13823	106.4247	BASE CASE
3	17SP	G16_065	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.13823	107.899	BASE CASE
0	17SP	G16_066	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.14850	112.4929	BASE CASE
0	17SP	G16_066	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.14850	112.4918	BASE CASE
0	25SP	G16_066	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.14575	107.2478	BASE CASE
0	20SP	G16_066	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.14536	102.072	BASE CASE
0	17SP	G16_066	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.10768	103.5196	BASE CASE
0	17SP	G16_066	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.10768	103.5186	BASE CASE
0	17SP	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11890	109.7316	BASE CASE
0	17SP	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11890	109.7313	BASE CASE
0	25SP	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11682	107.1967	BASE CASE
0	17SP	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11890	105.7454	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11890	105.7451	BASE CASE
0	17G	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11579	104.5522	BASE CASE
0	25SP	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11682	103.7454	BASE CASE
0	20SP	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11664	103.5593	BASE CASE
0	17G	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11579	101.2968	BASE CASE
0	20SP	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11664	100.5691	BASE CASE
0	16WP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.35315	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	16WP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.25306	-	2810X2
0	16WP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.25306	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	16WP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.21435	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	16WP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12653	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	16WP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12653	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	16WP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12653	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	16WP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.12653	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	16WP	G16_066	-	Non-Converged Contingency	478.0	526.0	0.11772	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	16WP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.11772	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	16WP	G16_066	-	Non-Converged Contingency	797.0	797.0	0.11772	-	BROADLAND - HURON 230KV CKT 1
0	16WP	G16_066	-	Non-Converged Contingency	400.0	400.0	0.11772	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10718	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	16WP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.10718	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	16WP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10512	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	16WP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10512	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.49368	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.46314	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.42527	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.34736	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.34736	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.25701	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.25701	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.24684	-	2810X2
0	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.24684	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.23360	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.23360	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.21263	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	17G	G16_066	-	Non-Converged Contingency	319.0	385.0	0.14703	-	BISON - HETINGER 230KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	400.0	400.0	0.14703	-	BISON - MAURINE 230KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	720.0	792.0	0.12851	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	17G	G16_066	-	Non-Converged Contingency	720.0	792.0	0.12851	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12342	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	17G	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12342	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12342	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.12342	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17G	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11680	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11680	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	17G	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11680	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11680	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.11579	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	17G	G16_066	-	Non-Converged Contingency	478.0	526.0	0.11579	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.11579	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	17G	G16_066	-	Non-Converged Contingency	732.0	732.0	0.11579	-	BROADLAND - HURON 230KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	400.0	400.0	0.11579	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_066	-	Non-Converged Contingency	400.0	400.0	0.11579	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17G	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10632	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.10632	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	17G	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10567	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10567	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	705.0	705.0	0.09875	-	CENTER - JAMESTOWN 345KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	705.0	705.0	0.09840	-	BUFFALO - JAMESTOWN 345KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	720.0	792.0	0.09532	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.09370	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.09370	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	1793.0	1793.0	0.08979	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08790	-	FORBES - ROSEAU 500KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	1732.1	1905.3	0.08790	-	RIEL - ROSEAU 500KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08790	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08790	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	319.0	341.0	0.07627	-	NUNDRWD - WAYSIDE 230KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	1206.0	1336.0	0.04903	-	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	17G	G16_066	-	Non-Converged Contingency	1206.0	1336.0	0.04903	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	335.0	429.4	0.04869	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_066	-	Non-Converged Contingency	409.0	450.0	0.04012	-	FORMAN - OAKES 230KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	319.0	351.0	0.03978	-	ELLENDALE - OAKES 230KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	319.0	351.0	0.03978	-	ELLENDALE - OAKES 230KV CKT 1
0	17G	G16_066	-	Non-Converged Contingency	409.0	450.0	0.03933	-	FORMAN - HANKINSON 230KV CKT 1
0	20L	G16_066	-	Non-Converged Contingency	0.0	0.0	0.39072	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	20SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.46655	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	20SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.42394	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	20SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.36662	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	20SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.34991	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.34991	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	20SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.25143	-	2810X2
0	20SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.25143	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.24441	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	20SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.24441	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	20SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.21197	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12572	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12572	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12572	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.12221	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	20SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.12221	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.12221	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.12221	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	20SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.12221	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	20SP	G16_066	-	Non-Converged Contingency	478.0	526.0	0.11664	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.11664	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	20SP	G16_066	-	Non-Converged Contingency	732.0	732.0	0.11664	-	BROADLAND - HURON 230KV CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	400.0	400.0	0.11664	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	400.0	400.0	0.11664	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10599	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.10599	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	20SP	G16_066	-	Non-Converged Contingency	705.0	705.0	0.09860	-	CENTER - JAMESTOWN 345KV CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	705.0	705.0	0.09769	-	BUFFALO - JAMESTOWN 345KV CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.09699	-	G09_001IST 345.00 - GROTON 345KV CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.09699	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.09142	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.09142	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08531	-	FORBES - ROSEAU 500KV CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	1732.1	1905.3	0.08531	-	RIEL - ROSEAU 500KV CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08531	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08531	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	20SP	G16_066	-	Non-Converged Contingency	1206.0	1336.0	0.04826	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
0	25SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.50247	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	25SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.46728	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.42634	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
0	25SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.37443	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	25SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.35046	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	25SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.35046	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	25SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.25123	-	2810X2
0	25SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.25123	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	25SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.24962	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	25SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.24962	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	25SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.21317	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	25SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12562	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	25SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12562	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	25SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12562	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	25SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.12562	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.12481	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	25SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.12481	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	25SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.12481	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	25SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.12481	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	25SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.12481	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	25SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.11682	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	25SP	G16_066	-	Non-Converged Contingency	478.0	526.0	0.11682	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	25SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.11682	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	25SP	G16_066	-	Non-Converged Contingency	732.0	732.0	0.11682	-	BROADLAND - HURON 230KV CKT 1
0	25SP	G16_066	-	Non-Converged Contingency	400.0	400.0	0.11682	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_066	-	Non-Converged Contingency	400.0	400.0	0.11682	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10659	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	25SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.10659	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	25SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.09773	-	G09_001IST 345.00 - GROTON 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.09773	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	25SP	G16_066	-	Non-Converged Contingency	720.0	792.0	0.09508	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	25SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.09210	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	25SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.09210	-	CHISAGO COUNTY - FORBES 500KV CKT 1
0	25SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08579	-	FORBES - ROSEAU 500KV CKT 1
0	25SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08579	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	25SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08579	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
0	25SP	G16_066	-	Non-Converged Contingency	1800.0	1980.0	0.05221	-	488489510526345.00 - BSSOUTH3 345.00 345KV CKT 1
0	20SP	G16_066	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.11581	102.7748	BASE CASE
0	17SP	G16_066	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.13138	102.6278	BASE CASE
0	17SP	G16_066	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.13138	102.6265	BASE CASE
0	17SP	G16_066	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.13138	104.4933	BASE CASE
0	17SP	G16_066	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.13138	104.4921	BASE CASE
2	17SP	G16_066	FROM->TO	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1	478.0	526.0	0.11907	100.6065	BASE CASE
2	17SP	G16_066	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.14830	115.4161	BASE CASE
2	17SP	G16_066	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.10776	100.5291	BASE CASE
2	17SP	G16_066	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.10776	105.6474	BASE CASE
2	17SP	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11907	110.0846	BASE CASE
2	17SP	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11907	106.0432	BASE CASE
2	17G	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11597	103.9446	BASE CASE
2	17G	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11597	100.9216	BASE CASE
2	16WP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.35363	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	16WP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.25312	-	2810X2
2	16WP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.25312	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	16WP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.21456	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	16WP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12656	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	16WP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12656	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	16WP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12656	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	16WP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.12656	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	16WP	G16_066	-	Non-Converged Contingency	478.0	526.0	0.11788	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	16WP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.11788	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	16WP	G16_066	-	Non-Converged Contingency	797.0	797.0	0.11788	-	BROADLAND - HURON 230KV CKT 1
2	16WP	G16_066	-	Non-Converged Contingency	400.0	400.0	0.11788	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10728	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	16WP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.10728	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	16WP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10521	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	16WP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10521	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.49407	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.46389	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
2	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.42557	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
2	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.34791	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.34791	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
2	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.25708	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
2	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.25708	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.24704	-	2810X2
2	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.24704	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.23356	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
2	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.21279	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	17G	G16_066	-	Non-Converged Contingency	720.0	792.0	0.12854	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	17G	G16_066	-	Non-Converged Contingency	720.0	792.0	0.12854	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12352	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	17G	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12352	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12352	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.12352	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17G	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11678	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11678	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11678	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
2	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.11597	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
2	17G	G16_066	-	Non-Converged Contingency	478.0	526.0	0.11597	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.11597	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	17G	G16_066	-	Non-Converged Contingency	732.0	732.0	0.11597	-	BROADLAND - HURON 230KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	400.0	400.0	0.11597	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_066	-	Non-Converged Contingency	400.0	400.0	0.11597	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17G	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10639	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.10639	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	17G	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10572	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10572	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	705.0	705.0	0.09875	-	CENTER - JAMESTOWN 345KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	705.0	705.0	0.09840	-	BUFFALO - JAMESTOWN 345KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	720.0	792.0	0.09532	-	BISON 3 345.00 - BUFFALO 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.09362	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.09362	-	CHISAGO COUNTY - FORBES 500KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	1793.0	1793.0	0.08977	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08782	-	FORBES - ROSEAU 500KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	1732.1	1905.3	0.08782	-	RIEL - ROSEAU 500KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08782	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08782	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	1206.0	1336.0	0.04906	-	CENTER - CNTSHNT3 345.00 345KV CKT Z1
2	17G	G16_066	-	Non-Converged Contingency	1206.0	1336.0	0.04906	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	335.0	429.4	0.04861	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	409.0	450.0	0.04011	-	FORMAN - OAKES 230KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	319.0	351.0	0.03977	-	ELLENDALE - OAKES 230KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	319.0	351.0	0.03977	-	ELLENDALE - OAKES 230KV CKT 1
2	17G	G16_066	-	Non-Converged Contingency	409.0	450.0	0.03932	-	FORMAN - HANKINSON 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.50938	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.47626	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.43771	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.35720	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.35720	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.35611	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.26298	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.26298	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.25469	-	2810X2
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.25469	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.23741	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.23741	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.22380	-	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.21886	-	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.21886	-	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.16817	-	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.16817	-	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
2	17SP	G16_066	-	Non-Converged Contingency	460.0	460.0	0.15717	-	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	215.0	236.0	0.14830	-	BISON - HETINGER 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	384.0	384.0	0.14830	-	BISON - MAURINE 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	239.0	299.0	0.13498	-	BOWMAN - HETINGER 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	239.0	299.0	0.13498	-	BOWMAN - RHAME 4 230.00 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	720.0	792.0	0.13149	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	17SP	G16_066	-	Non-Converged Contingency	720.0	792.0	0.13149	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.12757	-	P13:230-345:NPPD:STEGALL3:KV3A
2	17SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12735	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
2	17SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12735	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12735	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.12735	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.11907	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
2	17SP	G16_066	-	Non-Converged Contingency	478.0	526.0	0.11907	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.11907	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
2	17SP	G16_066	-	Non-Converged Contingency	732.0	732.0	0.11907	-	BROADLAND - HURON 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	400.0	400.0	0.11907	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	400.0	400.0	0.11907	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.11884	-	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
2	17SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11870	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
2	17SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11870	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11870	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
2	17SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11870	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11870	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11870	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11870	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.11211	-	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
2	17SP	G16_066	-	Non-Converged Contingency	320.0	342.0	0.11190	-	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	320.0	342.0	0.11190	-	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
2	17SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10943	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10943	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.10943	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.10943	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
2	17SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10776	-	G09_001IST 345.00 - GROTON 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.10776	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	720.0	792.0	0.10280	-	SPLIT ROCK - WHITE 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	720.0	792.0	0.10280	-	SPLIT ROCK - WHITE 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	705.0	705.0	0.10024	-	CENTER - JAMESTOWN 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	705.0	705.0	0.09987	-	BUFFALO - JAMESTOWN 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_066	-	Non-Converged Contingency	720.0	792.0	0.09675	-	BISON 3 345.00 - BUFFALO 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.09675	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	17SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.09525	-	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.09525	-	CHISAGO COUNTY - FORBES 500KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	1073.0	1195.0	0.09315	-	GEN542951 5-HAWTHORN UNIT #5
2	17SP	G16_066	-	Non-Converged Contingency	1073.0	1195.0	0.09315	-	GEN542955 1-LACYGNE UNIT #1
2	17SP	G16_066	-	Non-Converged Contingency	1073.0	1195.0	0.09315	-	GEN542956 2-LACYGNE UNIT #2
2	17SP	G16_066	-	Non-Converged Contingency	1793.0	1793.0	0.09286	-	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	956.1	956.1	0.09201	-	ADAMS - MITCHLCO3 345.00 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	1793.0	1793.0	0.09113	-	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	1793.0	1793.0	0.09113	-	GEN620315 1-BIG STONE GEN
2	17SP	G16_066	-	Non-Converged Contingency	1793.0	1793.0	0.09113	-	GEN657964 1-ASH2GEN9 0.5750
2	17SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08915	-	FORBES - ROSEAU 500KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	1732.1	1905.3	0.08915	-	GEN600000 1-SHERBURNECNTY G1
2	17SP	G16_066	-	Non-Converged Contingency	1732.1	1905.3	0.08915	-	GEN600001 2-SHERBURNE CNTY G2
2	17SP	G16_066	-	Non-Converged Contingency	1732.1	1905.3	0.08915	-	GEN600002 3-SHERBURNE CNTY G3
2	17SP	G16_066	-	Non-Converged Contingency	1732.1	1905.3	0.08915	-	GEN600003 1-PRAIRIE ISLAND G1
2	17SP	G16_066	-	Non-Converged Contingency	1732.1	1905.3	0.08915	-	GEN600004 2-PRAIRIE ISLAND G2
2	17SP	G16_066	-	Non-Converged Contingency	1732.1	1905.3	0.08915	-	GEN600005 1-MONTICELLO
2	17SP	G16_066	-	Non-Converged Contingency	1732.1	1905.3	0.08915	-	GEN600006 1-AS KING
2	17SP	G16_066	-	Non-Converged Contingency	1732.1	1905.3	0.08915	-	RIEL - ROSEAU 500KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08915	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08915	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	717.0	717.0	0.08801	-	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
2	17SP	G16_066	-	Non-Converged Contingency	1792.7	1792.7	0.08720	-	MONTICELLO - WAITE PARK 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	1099.0	1195.0	0.08254	-	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	17SP	G16_066	-	Non-Converged Contingency	1099.0	1195.0	0.08254	-	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	17SP	G16_066	-	Non-Converged Contingency	1099.0	1195.0	0.08254	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_066	-	Non-Converged Contingency	400.0	444.0	0.07995	-	CENTER - SQUARE BUTTE 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	319.0	341.0	0.07811	-	NUNDRWD - WAYSIDE 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	320.0	352.0	0.07429	-	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	1378.0	1515.4	0.07356	-	HELENA - SHEAS LK3 345.00 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	1173.6	1195.0	0.07251	-	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	478.0	598.0	0.07021	-	CENTER - COYOTE 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	400.0	480.0	0.06379	-	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	864.0	864.0	0.06182	-	HIGHLND 3 345.00 - RAUN 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	364.0	364.0	0.05942	-	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
2	17SP	G16_066	-	Non-Converged Contingency	364.0	364.0	0.05942	-	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.05899	-	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.05899	-	P12:230:UMZW:# 158 #: MH IN ND.
2	17SP	G16_066	-	Non-Converged Contingency	956.0	956.0	0.05837	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	210.0	210.0	0.05623	-	BISMARK - L3 HAWDON 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	210.0	210.0	0.05623	-	GLENHAM - L3 HAWDON 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	240.0	260.0	0.05606	-	GLENHAM - WHITLOK 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	240.0	260.0	0.05606	-	OAHE - SULLEY BUTTE 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	240.0	260.0	0.05606	-	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
2	17SP	G16_066	-	Non-Converged Contingency	240.0	260.0	0.05606	-	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	1299.0	1299.0	0.05587	-	GEN514806 1-SOONER UNIT 2
2	17SP	G16_066	-	Non-Converged Contingency	1299.0	1299.0	0.05587	-	GEN515223 1-MUSKOGEE 4G
2	17SP	G16_066	-	Non-Converged Contingency	1299.0	1299.0	0.05587	-	GEN515225 1-MUSKOGEE 5G
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.05470	-	P12:230:UMZB:# 171 #: WB IN ND.
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.05470	-	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
2	17SP	G16_066	-	Non-Converged Contingency	800.0	1084.0	0.05128	-	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	1206.0	1336.0	0.04967	-	CENTER - CNTSHNT3 345.00 345KV CKT Z1
2	17SP	G16_066	-	Non-Converged Contingency	1206.0	1336.0	0.04967	-	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	335.0	429.4	0.04940	-	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	335.0	429.4	0.04940	-	J290_SUB 230.00 - RUGBY 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	956.0	956.0	0.04896	-	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	1195.1	1195.1	0.04860	-	AS KING - CHISAGO COUNTY 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	956.0	1052.0	0.04838	-	SIDNEY - STEGALL 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	956.0	956.0	0.04837	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	956.0	956.0	0.04837	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.04821	-	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
2	17SP	G16_066	-	Non-Converged Contingency	342.0	342.0	0.04530	-	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	342.0	342.0	0.04530	-	FARGO - SHEYNNE 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	320.0	320.0	0.04406	-	FT RANDAL - FT THOMPSON 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	320.0	320.0	0.04406	-	FT RANDAL - FT THOMPSON 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	318.7	318.7	0.04324	-	FT RANDAL - LAKE PLATT 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	352.0	352.0	0.04324	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	352.0	352.0	0.04324	-	FT THOMPSON - LAKE PLATT 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_066	-	Non-Converged Contingency	409.0	450.0	0.04031	-	FORMAN - OAKES 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	319.0	351.0	0.03994	-	ELLENDALE - OAKES 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	319.0	351.0	0.03994	-	ELLENDALE - OAKES 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	672.0	773.0	0.03985	-	CENTER (C1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	672.0	773.0	0.03985	-	CENTER (C2) 345/230/13.8KV TRANSFORMER CKT 2
2	17SP	G16_066	-	Non-Converged Contingency	409.0	450.0	0.03951	-	FORMAN - HANKINSON 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	318.0	350.0	0.03794	-	BISMARK - JAMES TOWN 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	318.0	350.0	0.03789	-	BISMARK - WEBER 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	318.0	350.0	0.03789	-	JAMES TOWN - WEBER 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	336.0	386.0	0.03779	-	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
2	17SP	G16_066	-	Non-Converged Contingency	318.0	350.0	0.03761	-	FARGO - JAMES TOWN 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	1072.0	1195.0	0.03738	-	GEN300003 1-THOMAS HILL UNIT 3
2	17SP	G16_066	-	Non-Converged Contingency	318.0	350.0	0.03679	-	FARGO - JAMES TOWN 230KV CKT 2
2	17SP	G16_066	-	Non-Converged Contingency	637.0	641.0	0.03657	-	CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	100.0	125.0	0.03640	-	MAURINE 115KV SWITCHED SHUNT
2	17SP	G16_066	-	Non-Converged Contingency	430.2	430.2	0.03638	-	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	430.2	430.2	0.03638	-	LELAND OLDS - STANTON 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	320.0	320.0	0.03616	-	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	368.0	368.0	0.03616	-	KELLY - MEADOWGROVE4230.00 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	159.3	159.3	0.03562	-	LOGAN - MALLARD 115KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	159.3	159.3	0.03562	-	LOGAN - MALLARD 115KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.03499	-	P12:115:UMZW:# 153 #: MA-NL-ELC IN SD. NEWELL IS A TAP WITH NON-FAULT INTERUPTING DEVICES
2	17SP	G16_066	-	Non-Converged Contingency	400.0	400.0	0.03463	-	DRAYTON - PRAIRIE 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	641.0	641.0	0.03387	-	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	288.0	288.0	0.03379	-	KARLSTAD - WINGER 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.03345	-	P13:115-230:TSGT:SIDNEY-KV1A
2	17SP	G16_066	-	Non-Converged Contingency	400.0	400.0	0.03336	-	PRAIRIE - WINGER 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	672.0	772.0	0.03292	-	PRAIRIE3 345.00 (P2) 345/230/13.8KV TRANSFORMER CKT 2
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.03249	-	P13:230-345:NPPD:SIDNEY 3:KV2A
2	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.03248	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
2	17SP	G16_066	-	Non-Converged Contingency	280.0	280.0	0.03220	-	AUDUBON - SHEYNNE 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	1173.6	1195.1	0.03184	-	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	320.0	352.0	0.03173	-	MOOREHEAD - MORRIS 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	390.0	429.0	0.03133	-	BIG STONE - BROWNS VALLEY 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	296.0	325.0	0.03133	-	BROWNS VALLEY - HANKINSON 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	318.0	318.0	0.03077	-	GARRISON - JAMES TOWN 230KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	1195.1	1195.1	0.02988	-	NOBLES - SPLIT ROCK 345KV CKT 1
2	17SP	G16_066	-	Non-Converged Contingency	320.0	352.0	0.02950	-	FARGO - MOOREHEAD 230KV CKT 1
2	17SP	G16_066	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.13149	105.756	BASE CASE
2	17SP	G16_066	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.13149	107.8342	BASE CASE
3	17SP	G16_066	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.14713	109.8074	BASE CASE
3	25SP	G16_066	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.14472	103.7294	BASE CASE
3	17SP	G16_066	TO->FROM	BISON - HETINGER 230KV CKT 1	215.0	236.0	0.22970	102.5639	BELFIELD - CHARLIE CREEK 345KV CKT 1
3	17SP	G16_066	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717.0	789.0	0.12131	108.3898	BASE CASE
3	17SP	G16_066	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717.0	789.0	0.12131	113.8693	BASE CASE
3	17SP	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11506	106.0622	BASE CASE
3	17SP	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11506	102.75	BASE CASE
3	25SP	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11298	102.0308	BASE CASE
3	25SP	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400.0	400.0	0.11298	99.2	BASE CASE
3	16WP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.11847	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	16WP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.11847	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.33624	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.23934	-	2810X2
3	17G	G16_066	-	Non-Converged Contingency	717.0	789.0	0.11967	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17G	G16_066	-	Non-Converged Contingency	717.0	789.0	0.11967	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.11967	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17G	G16_066	-	Non-Converged Contingency	717.0	789.0	0.11888	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17G	G16_066	-	Non-Converged Contingency	717.0	789.0	0.11888	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17G	G16_066	-	Non-Converged Contingency	478.0	526.0	0.11208	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17G	G16_066	-	Non-Converged Contingency	0.0	0.0	0.11208	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17G	G16_066	-	Non-Converged Contingency	732.0	732.0	0.11208	-	BROADLAND - HURON 230KV CKT 1
3	17G	G16_066	-	Non-Converged Contingency	400.0	400.0	0.11208	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17G	G16_066	-	Non-Converged Contingency	319.0	351.0	0.03939	-	ELLENDALE - OAKES 230KV CKT 1
3	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.35426	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
3	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.34518	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.27646	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.25961	-	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.24674	-	2810X2
3	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.24674	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.23617	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.23617	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	17SP	G16_066	-	Non-Converged Contingency	215.0	236.0	0.14713	-	BISON - HETINGER 230KV CKT 1
3	17SP	G16_066	-	Non-Converged Contingency	384.0	384.0	0.14713	-	BISON - MAURINE 230KV CKT 1
3	17SP	G16_066	-	Non-Converged Contingency	720.0	792.0	0.13823	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	17SP	G16_066	-	Non-Converged Contingency	720.0	792.0	0.13823	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12980	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.12980	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	17SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12337	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	17SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12337	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	17SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12337	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.12337	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12131	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12131	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	17SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11809	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
3	17SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11809	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	17SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11809	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
3	17SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11809	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11809	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11809	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.11809	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
3	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.11506	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	17SP	G16_066	-	Non-Converged Contingency	478.0	526.0	0.11506	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.11506	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	17SP	G16_066	-	Non-Converged Contingency	732.0	732.0	0.11506	-	BROADLAND - HURON 230KV CKT 1
3	17SP	G16_066	-	Non-Converged Contingency	400.0	400.0	0.11506	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_066	-	Non-Converged Contingency	319.0	341.0	0.07778	-	NUNDRWD - WAYSIDE 230KV CKT 1
3	17SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.06485	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	17SP	G16_066	-	Non-Converged Contingency	319.0	351.0	0.03956	-	ELLENDALE - OAKES 230KV CKT 1
3	20SP	G16_066	-	Non-Converged Contingency	720.0	720.0	0.12142	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
3	20SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.11025	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.11025	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20SP	G16_066	-	Non-Converged Contingency	705.0	705.0	0.09565	-	BUFFALO - JAMESTOWN 345KV CKT 1
3	20SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08381	-	FORBES - ROSEAU 500KV CKT 1
3	20SP	G16_066	-	Non-Converged Contingency	1732.1	1905.3	0.08381	-	RIEL - ROSEAU 500KV CKT 1
3	20SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08381	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
3	20SP	G16_066	-	Non-Converged Contingency	1732.1	2165.1	0.08381	-	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
3	25SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.24368	-	2810X2
3	25SP	G16_066	-	Non-Converged Contingency	0.0	0.0	0.24368	-	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	25SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12184	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	25SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12184	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	25SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.12184	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	25SP	G16_066	-	Non-Converged Contingency	478.0	526.0	0.11298	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	25SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.11107	-	G09_001IST 345.00 - GROTON 345KV CKT 1
3	25SP	G16_066	-	Non-Converged Contingency	717.0	789.0	0.11107	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20SP	G16_066	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.11875	104.9586	BASE CASE
3	25SP	G16_066	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720.0	792.0	0.11996	101.2003	BASE CASE
3	17SP	G16_066	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720.0	792.0	0.13823	106.4247	BASE CASE
3	17SP	G16_066	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720.0	792.0	0.13823	107.899	BASE CASE
0	20L	G16_068	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766.0	923.0	0.03228	106.3795	BASE CASE
0	20L	G16_068	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766.0	923.0	0.03778	106.1701	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G16_068	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766.0	923.0	0.03778	101.3097	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.03833	135.4459	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.03833	135.4459	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04839	118.7442	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04839	118.7442	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20SP	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04673	111.6105	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20SP	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04673	111.1326	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17SP	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04667	109.8022	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17SP	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04667	109.8022	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_068	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135.0	1195.0	0.08965	103.411	BASE CASE
0	20L	G16_068	FROM->TO	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	395.0	494.0	0.03833	108.5664	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_068	FROM->TO	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	395.0	494.0	0.03833	108.5664	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_068	FROM->TO	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	395.0	494.0	0.03833	103.7807	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_068	FROM->TO	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	395.0	494.0	0.03833	103.7807	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03340	109.6733	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03806	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03806	109.188	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03768	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03768	107.9349	PITTSBURG - SEMINOLE 345KV CKT 1
0	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03359	107.0835	CIMARRON - MINCO 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04067	104.4987	BASE CASE
0	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03340	104.4902	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05346	104.3491	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05313	103.6936	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04037	103.443	BASE CASE
0	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03359	102.1688	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04067	101.4903	GEN587433 1-G16-063-GEN10.6900
0	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04037	100.7184	GEN587433 1-G16-063-GEN10.6900
0	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03989	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03989	100.1901	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04067	99.9	GEN509416 1-TURK GENERATION
0	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04593	99.8	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04593	99.5	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04593	99.3	917X
0	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04268	99.3	P12:138:WFEC:MSL03
0	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04554	99.3	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04037	99.3	GEN509403 1-PIRKEY GENERATION
0	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04037	99.1	GEN509416 1-TURK GENERATION
0	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04067	99	GEN501801 1-DOLET HILLS UNIT1
0	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04554	99	G15066_T 345.00 - SOONER 345KV CKT 1
0	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38594	123.7516	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.43003	119.0208	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37916	118.7605	SOONER - SPRING CREEK 345KV CKT 1
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37916	118.5964	NORTHWEST - SPRING CREEK 345KV CKT 1
0	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38650	118.1324	SOONER - SPRING CREEK 345KV CKT 1
0	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.43022	116.9985	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38196	115.0782	SOONER - SPRING CREEK 345KV CKT 1
0	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38196	114.9124	NORTHWEST - SPRING CREEK 345KV CKT 1
0	17SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38276	114.7557	NORTHWEST - SPRING CREEK 345KV CKT 1
0	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37954	112.9039	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37260	112.8507	SOONER - SPRING CREEK 345KV CKT 1
0	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37260	112.6347	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39088	112.1032	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.43410	111.768	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38512	110.5395	SOONER - SPRING CREEK 345KV CKT 1
0	20WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38512	110.3508	NORTHWEST - SPRING CREEK 345KV CKT 1
0	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39287	109.7706	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38325	109.2805	SOONER - SPRING CREEK 345KV CKT 1
0	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39485	108.5758	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37954	108.4974	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39088	108.1729	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37954	107.1362	917X
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39088	106.5924	917X
0	20SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38692	106.4705	NORTHWEST - SPRING CREEK 345KV CKT 1
0	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39287	105.9213	G15066_T 345.00 - SOONER 345KV CKT 1
0	20WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39397	105.91	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38241	105.779	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38241	105.779	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37352	105.494	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37352	105.494	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39257	104.9021	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39485	104.8826	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39287	104.3285	917X
0	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.40157	103.5312	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38451	103.4644	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38451	103.4644	CLEVELAND - TULSA NORTH 345KV CKT 1
0	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39485	103.3523	917X
0	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38645	102.5918	CLEVELAND - TULSA NORTH 345KV CKT 1
0	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38645	102.5918	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37319	102.4061	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
0	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39032	102.3205	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39397	102.1003	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.53566	101.9002	G16-061-TAP 345.00 - SOONER 345KV CKT 1
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.36862	101.5219	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.41188	101.2831	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
0	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.44056	101.1682	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	17SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39257	101.157	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.43003	101.0177	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	20SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38746	101.0041	SOONER - SPRING CREEK 345KV CKT 1
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.35319	100.9301	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37785	100.9212	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.53593	100.837	G16-061-TAP 345.00 - SOONER 345KV CKT 1
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.36862	100.8326	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.36935	100.6685	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37479	100.3261	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37498	100.2721	P12:138:OKGE:3TERM2
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.40793	99.8	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37058	99.8	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.36862	99.7	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.36835	99.6	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	17SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39257	99.5	917X
0	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37580	99.4	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
0	20WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38571	99.4	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.36977	99.3	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
0	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37543	99.2	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.43022	99.1	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.36470	99.1	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.40065	99	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	25SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38594	123.214	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.43003	117.1692	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	16WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37916	116.9068	SOONER - SPRING CREEK 345KV CKT 1
0	16WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37916	116.7031	NORTHWEST - SPRING CREEK 345KV CKT 1
0	25SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38650	116.3018	SOONER - SPRING CREEK 345KV CKT 1
0	17G	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.43022	114.6874	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17G	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38196	112.3679	SOONER - SPRING CREEK 345KV CKT 1
0	17G	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38196	112.1626	NORTHWEST - SPRING CREEK 345KV CKT 1
0	17SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38276	112.0701	NORTHWEST - SPRING CREEK 345KV CKT 1
0	20L	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37260	109.685	SOONER - SPRING CREEK 345KV CKT 1
0	20L	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37260	109.4128	NORTHWEST - SPRING CREEK 345KV CKT 1
0	20L	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37954	109.231	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.39088	108.5072	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.43410	108.4155	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38512	106.7791	SOONER - SPRING CREEK 345KV CKT 1
0	20WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38512	106.5426	NORTHWEST - SPRING CREEK 345KV CKT 1
0	17G	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.39287	105.6554	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38325	105.3269	SOONER - SPRING CREEK 345KV CKT 1
0	25SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.39485	104.3514	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37954	104.0684	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.39088	103.698	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37954	102.3509	917X
0	20SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38692	101.8605	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.39088	101.7539	917X
0	17G	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.39287	100.941	G15066_T 345.00 - SOONER 345KV CKT 1
0	20WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.39397	100.9191	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38241	100.7225	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38241	100.7225	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.36555	100.7076	GEN562992 1-G15063_3 0.6900
0	20L	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37352	100.3618	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37352	100.3618	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.39257	99.8	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	25SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.39485	99.8	G15066_T 345.00 - SOONER 345KV CKT 1
0	25SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37026	99.3	GEN562992 1-G15063_3 0.6900
0	17G	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.39287	99	917X
0	16WP	G16_068	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.06712	110.913	BASE CASE
0	20L	G16_068	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.04772	110.0936	BASE CASE
0	20WP	G16_068	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.06787	109.1163	BASE CASE
0	17G	G16_068	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.06123	108.6019	BASE CASE
0	17G	G16_068	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.03288	106.8306	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.03288	103.5861	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.03209	100.5398	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.03288	100.2714	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.03209	99.8	917X
0	17G	G16_068	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.03209	99.4	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.05223	134.7675	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.05726	131.9177	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.05223	128.0021	G15063_T 345.00 - WOODRING 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.05726	124.9324	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03086	121.6704	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03137	121.4986	BASE CASE
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02968	121.3588	MORISNT4 138.00 - STILLWATER 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03005	121.2515	P12:138:OKGE:3TERM2
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03086	119.6365	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03086	119.3015	917X
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03352	118.2331	P12:138:OKGE:3TERM1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03336	118.1259	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03336	117.9575	HENESSEY - WAUKOMIS 138KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03336	117.7695	DOVER SW - HENESSEY 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03296	117.4181	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03326	117.1805	P12:138:OKGE:3TERM2
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02997	116.1429	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02997	116.1429	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03382	115.8398	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02975	115.4443	SOONER - SPRING CREEK 345KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02975	115.3819	NORTHWEST - SPRING CREEK 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03643	115.2978	P12:138:OKGE:3TERM1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03627	115.1247	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03407	115.0557	ARCADIA - NORTHWEST 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03627	114.7563	HENESSEY - WAUKOMIS 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03627	114.3381	DOVER SW - HENESSEY 138KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03301	114.0992	OTTER - WARREN VALLEY 138KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03264	113.9408	CRESENT - TWIN LAKES 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03382	113.9149	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03264	113.7581	COTTONWOOD CREEK - CRESENT 138KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03301	113.5308	COW CREEK - WARREN VALLEY 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03382	113.5226	917X
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03451	113.4957	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03203	113.0345	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03203	112.8782	MCELROY - UNVRSTY4 138.00 138KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03109	112.624	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.04019	112.6043	G16-061-TAP 345.00 - SOONER 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03291	112.5738	NORTHWEST - SPRING CREEK 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03291	112.5695	SOONER - SPRING CREEK 345KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02984	112.516	COW CREEK - MORRISON 138KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02984	112.4972	MORISNT4 138.00 - MORRISON 138KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03037	112.3177	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03203	112.3045	KINZE - MCELROY 138KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02980	112.2252	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03025	111.4617	DOVER - DOVER SW 138KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03025	111.3884	DOVER - TWIN LAKES 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03269	111.0971	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03269	111.0971	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03219	111.0708	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03485	109.4197	OTTER - WARREN VALLEY 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03150	109.1704	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03530	109.0616	CRESENT - TWIN LAKES 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03485	108.8138	COW CREEK - WARREN VALLEY 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03530	108.6703	COTTONWOOD CREEK - CRESENT 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03232	108.6264	COW CREEK - MORRISON 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03150	108.5958	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03232	108.5836	MORISNT4 138.00 - MORRISON 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03168	108.4286	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03348	108.3901	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03247	108.3626	CIMARRON - DRAPER LAKE 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03451	108.21	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03150	108.1347	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03183	108.079	OSAGE - WEBB CITY TAP 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03183	108.07	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03231	107.8919	WAUKOMIS TAP - WOODRING 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03168	107.808	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03141	107.8067	MORISNT4 138.00 - SOONER 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03183	107.7248	FAIRFAX TAP - SHIDLER 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03183	107.7248	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03275	107.7234	DOVER - DOVER SW 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03138	107.6992	P12:069:OKGE:3TERM4
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03663	107.6822	ARCADIA - NORTHWEST 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.04218	107.6203	G16-061-TAP 345.00 - SOONER 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03275	107.6091	DOVER - TWIN LAKES 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03134	107.5519	P12:138:WFEC:MSL15
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03231	107.5276	FAIRMONT TAP - WOODRING 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03099	107.395	ARCADIA (ARCADIA4) 345/138/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03170	107.3293	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03170	105.4295	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03143	104.8489	ARCADIA - KAMO MEMORIAL 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03137	104.7159	GEN562691 1-G15_015_3 0.6900
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03388	104.6859	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.04218	104.6765	G16-061-TAP 345.00 - WOODRING 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03090	104.5389	FITZGERALD CREEK - KINZE 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03137	104.5239	GEN587413 1-G16-061-GEN10.6900
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03137	104.43	GEN514806 1-SOONER UNIT 2
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03092	104.2476	ARCADIA - SEMINOLE 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03090	104.231	FITZGERALD CREEK - PINE ST 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03134	104.1363	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03134	104.1363	REDBUD - RIVERSIDE STATION 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03137	104.0517	GEN562429 1-G13-029 0.6900
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03137	104.0393	GEN587493 1-G16-072-GEN10.6900
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03090	103.7079	COTTONWOOD CREEK - PINE ST 138KV CKT 1
0	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03301	103.4935	OTTER - WOODRING 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03054	103.4326	KETCH - KETCH TAP 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03137	103.3735	GEN587463 1-G16-068-GEN10.6900
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03137	103.2803	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03137	103.2033	GEN514805 1-SOONER UNIT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03388	102.8665	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03137	102.6886	GEN514643 1-BRKWND11 0.6900
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02992	101.2617	P12:138:OKGE:3TERM11
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02973	100.6021	KETCH TAP - MITCHSB4 138.00 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02973	99.6	MITCHSB4 138.00 - SHDWLKE4 138.00 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02973	99.6	SHDWLKE4 138.00 - WHITESB4 138.00 138KV CKT 1
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03137	99.1	GEN562611 1-G14_064_3 0.6900
0	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03485	99	OTTER - WOODRING 138KV CKT 1
0	20L	G16_068	-	Non-Converged Contingency	1141.0	1195.0	0.04772	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	20L	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.03753	132.1456	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.03753	132.1456	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17G	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04749	113.9495	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17G	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04749	113.9495	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20SP	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04590	106.6256	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20SP	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04590	106.6256	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17SP	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04584	105.2587	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17SP	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305.0	371.0	0.04584	105.2587	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_068	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135.0	1195.0	0.08888	99.2	BASE CASE
2	20L	G16_068	FROM->TO	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	395.0	494.0	0.03753	106.1313	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_068	FROM->TO	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	395.0	494.0	0.03753	106.1313	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_068	FROM->TO	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	395.0	494.0	0.03753	101.5497	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_068	FROM->TO	CLEVELAND (CLVAUTO1) 345/138/13.8KV TRANSFORMER CKT 1	395.0	494.0	0.03753	101.5497	CLEVELAND - TULSA NORTH 345KV CKT 1
2	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03306	108.5819	CIMARRON - MINCO 345KV CKT 1
2	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03773	108.105	PITTSBURG - SEMINOLE 345KV CKT 1
2	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03773	108.105	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03735	106.8612	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03735	106.8612	PITTSBURG - SEMINOLE 345KV CKT 1
2	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03328	106.0543	CIMARRON - MINCO 345KV CKT 1
2	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04037	103.4819	BASE CASE
2	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03306	103.4272	GRACEMONT - MINCO 345KV CKT 1
2	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05308	103.2535	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.05276	102.6507	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04008	102.4414	BASE CASE
2	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03328	101.1829	GRACEMONT - MINCO 345KV CKT 1
2	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04037	100.5895	GEN587433 1-G16-063-GEN10.6900
2	20WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04008	99.8	GEN587433 1-G16-063-GEN10.6900
2	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03959	99.3	PITTSBURG - VALLIANT 345KV CKT 1
2	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.03959	99.3	PITTSBURG - VALLIANT 345KV CKT 1
2	16WP	G16_068	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.04037	99	GEN509416 1-TURK GENERATION
2	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38615	123.2091	NORTHWEST - SPRING CREEK 345KV CKT 1
2	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.43006	118.4276	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38672	117.5858	SOONER - SPRING CREEK 345KV CKT 1
2	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37898	116.905	SOONER - SPRING CREEK 345KV CKT 1
2	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37898	116.7859	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.43025	116.4877	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	17SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38321	113.9556	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38177	113.3565	SOONER - SPRING CREEK 345KV CKT 1
2	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38177	113.2334	NORTHWEST - SPRING CREEK 345KV CKT 1
2	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37214	113.0234	SOONER - SPRING CREEK 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37214	112.8311	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.43440	111.7706	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37874	111.4816	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39010	109.3181	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38496	108.617	SOONER - SPRING CREEK 345KV CKT 1
2	17SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38371	108.4735	SOONER - SPRING CREEK 345KV CKT 1
2	20WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38496	108.4559	NORTHWEST - SPRING CREEK 345KV CKT 1
2	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37874	107.513	G15066_T 345.00 - SOONER 345KV CKT 1
2	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39445	107.2082	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39208	107.1239	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37874	106.0003	917X
2	20SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38727	105.8567	NORTHWEST - SPRING CREEK 345KV CKT 1
2	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39010	105.5738	G15066_T 345.00 - SOONER 345KV CKT 1
2	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37286	104.76	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37286	104.76	CLEVELAND - TULSA NORTH 345KV CKT 1
2	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39010	103.8843	917X
2	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39445	103.6524	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39208	103.4835	G15066_T 345.00 - SOONER 345KV CKT 1
2	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38183	103.419	CLEVELAND - TULSA NORTH 345KV CKT 1
2	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38183	103.419	CLEVELAND - TULSA NORTH 345KV CKT 1
2	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.40178	103.4019	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	17SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39236	103.2004	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39324	103.1724	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39010	102.6399	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39445	102.0716	917X
2	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39208	101.7959	917X
2	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.53515	101.4962	G16-061-TAP 345.00 - SOONER 345KV CKT 1
2	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38622	101.4788	CLEVELAND - TULSA NORTH 345KV CKT 1
2	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38622	101.4788	CLEVELAND - TULSA NORTH 345KV CKT 1
2	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.44075	101.3494	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
2	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38393	101.2597	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38393	101.2597	CLEVELAND - TULSA NORTH 345KV CKT 1
2	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37302	100.8016	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
2	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.41202	100.6755	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
2	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.43006	100.5125	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
2	20SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38781	100.3989	SOONER - SPRING CREEK 345KV CKT 1
2	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37800	100.3345	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
2	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37512	99.7	P12:138:OKGE:3TERM2
2	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.37492	99.7	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	17SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39236	99.6	G15066_T 345.00 - SOONER 345KV CKT 1
2	20WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39324	99.4	G15066_T 345.00 - SOONER 345KV CKT 1
2	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.36938	99.3	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
2	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.35307	99.2	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.36916	99.1	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.53561	99	G16-061-TAP 345.00 - SOONER 345KV CKT 1
2	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.36938	99	P12:138:OKGE:3TERM2
2	25SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38615	122.5437	NORTHWEST - SPRING CREEK 345KV CKT 1
2	16WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.43006	116.4463	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	25SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38672	115.6235	SOONER - SPRING CREEK 345KV CKT 1
2	16WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37898	114.6217	SOONER - SPRING CREEK 345KV CKT 1
2	16WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37898	114.4738	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.43025	114.0625	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	17SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38321	111.0813	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38177	110.2462	SOONER - SPRING CREEK 345KV CKT 1
2	17G	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38177	110.0937	NORTHWEST - SPRING CREEK 345KV CKT 1
2	20L	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37214	109.9038	SOONER - SPRING CREEK 345KV CKT 1
2	20L	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37214	109.663	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.43440	108.4173	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	20L	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37874	107.8095	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	16WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.39010	105.1032	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38496	104.4066	SOONER - SPRING CREEK 345KV CKT 1
2	17SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38371	104.3258	SOONER - SPRING CREEK 345KV CKT 1
2	20WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38496	104.2057	NORTHWEST - SPRING CREEK 345KV CKT 1
2	20L	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37874	102.9603	G15066_T 345.00 - SOONER 345KV CKT 1
2	25SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.39445	102.6653	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.39208	102.4118	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38727	101.1001	NORTHWEST - SPRING CREEK 345KV CKT 1
2	20L	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37874	101.0863	917X
2	16WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.39010	100.5125	G15066_T 345.00 - SOONER 345KV CKT 1
2	20L	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37286	99.5	CLEVELAND - TULSA NORTH 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20L	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.37286	99.5	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.05208	134.4804	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.05709	130.4408	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.05208	127.7541	G15063_T 345.00 - WOODRING 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.05709	123.4955	G15063_T 345.00 - WOODRING 345KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02958	121.0198	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02995	120.908	P12:138:OKGE:3TERM2
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03071	120.801	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03128	120.4181	BASE CASE
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03071	118.8529	G15066_T 345.00 - SOONER 345KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03071	118.4742	917X
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03343	118.0289	P12:138:OKGE:3TERM1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03327	117.9264	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03327	117.7579	HENESSEY - WAUKOMIS 138KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03327	117.5699	DOVER SW - HENESSEY 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03285	116.2249	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03315	115.9865	P12:138:OKGE:3TERM2
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02984	115.516	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02984	115.516	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02966	115.2833	SOONER - SPRING CREEK 345KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02966	115.221	NORTHWEST - SPRING CREEK 345KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03396	114.7311	ARCADIA - NORTHWEST 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03633	114.2718	P12:138:OKGE:3TERM1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03364	114.1946	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03617	114.0958	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03292	113.8136	OTTER - WARREN VALLEY 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03617	113.7274	HENESSEY - WAUKOMIS 138KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03254	113.6614	CRESENT - TWIN LAKES 138KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03254	113.4788	COTTONWOOD CREEK - CRESENT 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03617	113.3095	DOVER SW - HENESSEY 138KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03292	113.2455	COW CREEK - WARREN VALLEY 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03447	112.912	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03100	112.3563	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03364	112.3238	G15066_T 345.00 - SOONER 345KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02975	112.2715	COW CREEK - MORRISON 138KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02975	112.2532	MORISNT4 138.00 - MORRISON 138KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.04008	112.2365	G16-061-TAP 345.00 - SOONER 345KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03031	112.2056	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02971	111.9821	CIMARRON - DRAPER LAKE 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03193	111.9719	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03364	111.9014	917X
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03193	111.8159	MCELROY - UNVRSTY4 138.00 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03282	111.5372	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03282	111.5333	SOONER - SPRING CREEK 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03193	111.2425	KINZE - MCELROY 138KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03017	111.2264	DOVER - DOVER SW 138KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03017	111.1531	DOVER - TWIN LAKES 138KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03215	111.0214	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02976	110.7529	WAUKOMIS TAP - WOODRING 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03254	109.7297	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03254	109.7297	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03475	108.3973	OTTER - WARREN VALLEY 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03520	107.935	CRESENT - TWIN LAKES 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03475	107.7918	COW CREEK - WARREN VALLEY 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03222	107.6209	COW CREEK - MORRISON 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03447	107.6161	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03222	107.5782	MORISNT4 138.00 - MORRISON 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03520	107.5439	COTTONWOOD CREEK - CRESENT 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03338	107.3677	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03237	107.3586	CIMARRON - DRAPER LAKE 345KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03166	107.1964	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03173	107.013	OSAGE - WEBB CITY TAP 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03173	107.0069	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03222	106.946	WAUKOMIS TAP - WOODRING 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03132	106.8284	MORISNT4 138.00 - SOONER 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03129	106.7726	P12:069:OKGE:3TERM4
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03266	106.7146	DOVER - DOVER SW 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03150	106.7088	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03173	106.6638	FAIRFAX TAP - SHIDLER 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03173	106.6637	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03125	106.6051	P12:138:WFEC:MSL15
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03266	106.6004	DOVER - TWIN LAKES 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03222	106.5869	FAIRMONT TAP - WOODRING 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03090	106.4622	ARCADIA (ARCADIA4) 345/138/13.8KV TRANSFORMER CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03166	105.2835	HUNTERS7 345.00 - WOODRING 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03134	103.9095	ARCADIA - KAMO MEMORIAL 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03128	103.776	GEN562691 1-G15_015_3 0.6900
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03083	103.7492	FITZGERALD CREEK - KINZE 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.04206	103.6078	G16-061-TAP 345.00 - WOODRING 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03128	103.5822	GEN587413 1-G16-061-GEN10.6900
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03128	103.4667	GEN514806 1-SOONER UNIT 2
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03083	103.4413	FITZGERALD CREEK - PINE ST 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03127	103.3324	REDBUD - RIVERSIDE STATION 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03127	103.3324	REDBUD - RIVERSIDE STATION 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03083	103.3121	ARCADIA - SEMINOLE 345KV CKT 1
2	20L	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03292	103.2124	OTTER - WOODRING 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03128	103.1175	GEN562429 1-G13-029 0.6900
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03128	103.1054	GEN587493 1-G16-072-GEN10.6900
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03083	102.9184	COTTONWOOD CREEK - PINE ST 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03128	102.8348	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03045	102.5137	KETCH - KETCH TAP 138KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03128	102.4332	GEN587463 1-G16-068-GEN10.6900
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03128	102.2611	GEN514805 1-SOONER UNIT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03383	102.1139	HUNTERS7 345.00 - WOODRING 345KV CKT 1
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.03128	101.7431	GEN514643 1-BRKWND11 0.6900
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02983	100.3033	P12:138:OKGE:3TERM11
2	17G	G16_068	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194.0	222.0	0.02964	99.7	KETCH TAP - MITCHSB4 138.00 138KV CKT 1
0	17SP	G16_069	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06290	111.2423	BASE CASE
0	20SP	G16_069	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.05982	106.965	BASE CASE
0	17G	G16_069	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06381	104.3555	BASE CASE
0	20WP	G16_069	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06152	100.6452	BASE CASE
0	16WP	G16_069	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24237	117.2755	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_069	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21483	113.9417	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_069	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24237	112.5386	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G16_069	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.23822	107.9528	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	17SP	G16_069	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.23822	103.4902	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28523	197.2146	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.28523	189.9362	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29959	115.1329	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.29959	114.7364	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.29684	213.0015	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	25SP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.30882	134.0852	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_069	FROM->TO	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1	96.0	96.0	0.04692	101.0437	BASE CASE
0	20SP	G16_069	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.11889	117.8449	BASE CASE
0	17SP	G16_069	TO->FROM	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1	318.7	350.6	0.11904	113.6626	BASE CASE
0	20L	G16_069	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.09434	117.1249	BASE CASE
0	20WP	G16_069	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11723	109.9811	BASE CASE
0	16WP	G16_069	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12631	108.8041	BASE CASE
0	17G	G16_069	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12415	107.5286	BASE CASE
0	20L	G16_069	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.09434	131.0896	BASE CASE
0	20WP	G16_069	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11723	123.9661	BASE CASE
0	16WP	G16_069	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12631	122.9494	BASE CASE
0	17G	G16_069	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12415	120.973	BASE CASE
0	17SP	G16_069	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12545	106.8776	BASE CASE
0	20SP	G16_069	TO->FROM	G15039_T 230.00 - PLANT X STATION 230KV CKT 1	318.7	350.6	0.11889	101.2007	BASE CASE
0	16WP	G16_069	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24237	106.6944	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20WP	G16_069	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.21483	103.5122	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_069	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24237	102.1214	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	17SP	G16_069	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.05145	104.9056	BASE CASE
0	20SP	G16_069	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.05007	103.3041	BASE CASE
0	17G	G16_069	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04047	102.2178	BASE CASE
0	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04169	101.5058	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04169	101.485	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04169	101.1423	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04169	101.1117	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05077	124.4658	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05115	112.9438	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05115	112.9438	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05115	112.9086	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05115	112.9086	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	112.5354	GEN526331 1-JONES GEN #1 22 KV
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	112.3468	GEN526332 1-JONES GEN #2 21 KV
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05486	111.3346	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05486	111.3053	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05069	107.3472	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	107	GEN527884 1-CUNNINGHAM GEN #4 22 KV
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	106.0884	GEN563142 1-G15079_3 0.5500
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	106.0884	GEN563151 1-G15080_2 0.5500
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05069	106.0791	P12:115:SPS:V15.1.TUCO.INDANA
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05069	106.0442	INDIANA SUB - STANTON SUB 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05323	106.0084	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05323	105.974	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04711	105.4304	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04236	105.2063	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04711	105.1732	P12:345:SPS:J14.1.EDDY.XRDS
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04236	105.1386	TOLK STATION EAST - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05115	105.0982	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05115	105.0934	HOCKLEY COUNTY INTERCHANGE - LAMB COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05024	105.0723	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05024	104.9891	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	104.8526	GEN527883 1-CUNNINGHAM GEN #3 22 KV
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05070	104.7091	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04662	104.6771	P12:345:SPS:J15.1.XRDS.TOLK
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05070	104.6596	P12:230:SPS:K37.1.TOLK.LAMB
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	104.4479	TUCO INTERCHANGE 230/13.0KV TRANSFORMER CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05028	104.442	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05061	104.1602	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05070	104.149	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05061	104.1458	FLOYD COUNTY INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05070	104.0778	LAMB COUNTY INTERCHANGE (WH ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05069	103.9914	INDIANA SUB - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05028	103.9739	KRESS_RURAL3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05047	103.9293	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05047	103.8823	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04711	103.6702	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04711	103.6636	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05155	103.5765	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05155	103.5559	BLANCO 3115.00 - CROSBY COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	103.5169	GEN563132 1-G15078_3 0.3570
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05060	103.4535	LUBBOCK SOUTH INTERCHANGE - SOUTH PLAINS REC-WOODROW INTERCHANGE 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	103.4314	GEN587113 1-G16-015-GEN10.4180
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	103.3789	GEN563102 1-G15075_3 0.5500
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05086	103.2873	G13_027T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05323	103.1846	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05028	103.1627	P12:115:SPS:W54.1.KISER.KRESS
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05323	103.1541	MURPHY SUB - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05028	103.0555	KISER 3115.00 - N_PLAINVEW 3115.00 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05069	103.0022	CARLISLE INTERCHANGE - SOUTH PLAINS REC-ERSKINE 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05078	102.9892	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05069	102.9593	P12:115:SPS:V62.1.CRLSLE.INDANA
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	102.8077	GEN562812 1-G15040_3 0.3570
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04729	102.7303	NEWHART 230 - PLANT X STATION 230KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04907	102.7134	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04907	102.6722	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05078	102.6695	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	102.6062	GEN526678 1-CIRRUS_WND 10.6900
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04838	102.5983	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05258	102.2565	LUBBOCK POWER & LIGHT-MILWAUKEE - LUBBOCK POWER & LIGHT-VICKSBURG 69KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05086	102.2379	G13_027T 230.00 - TOLK STATION WEST 230KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04849	102.2143	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04932	102.0607	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05155	101.9931	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05155	101.9797	BLANCO 3115.00 - FLOYD COUNTY INTERCHANGE 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	101.5877	GEN525845 1-ELK_2 1 18.000
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05024	101.5349	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05024	101.5158	SWISHER COUNTY INTERCHANGE (LIKE HTCHLND) 230/115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05060	101.1826	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05060	101.0304	GRASSLAND INTERCHANGE - JONES STATION 230KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	100.5597	BASE CASE
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	100.5354	BASE CASE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05437	100.5005	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05437	100.4984	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05097	100.1483	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	100.1357	GEN562270 1-G12-020-2 0.6900
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05323	100.0549	SOUTH PLAINS REC-QUAKER - South Plains REC-Frankford Sub 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05033	99.8	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05091	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05091	99.6	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05066	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05323	99.5	ALLEN SUB - SOUTH PLAINS REC-QUAKER 115KV CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	99.3	GEN562762 1-G15033_3 0.6900
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05030	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05030	99.3	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05030	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05030	99.3	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05084	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05084	99.2	LUBBOCK SOUTH INTERCHANGE (SIEM 0124301) 230/115/13.2KV TRANSFORMER CKT 2
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05056	99.2	P12:115:SPS:V56.1.COCHRAN.SUNDWN
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	99.2	GEN300024 1-1CHOTST6 16.000
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	99.2	GEN300031 1-CHOUTEAU CTG 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05323	99.1	P12:115:SPS:T83.1.SP-FKFD.ALLEN
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	99.1	GEN300001 1-THOMAS HILL UNIT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	99.1	GEN300017 1-1G2GPDEL 18.000
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	99.1	GEN511938 1-OEC STEAM # 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	99.1	GEN511941 1-OEC STEAM # 2
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	99.1	GEN562517 1-G14_021_S2 0.6900
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	99.1	GEN562691 1-G15_015_3 0.6900
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	99.1	GEN645041 1-CASS COUNTY 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05087	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05087	99	SUNDOWN INTERCHANGE (WH XDS70381) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	99	GEN300016 1-1G1GPDEL 18.000
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	99	GEN549893 2-SOUTHWEST 2
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	99	GEN562023 1-G11_020_3 0.6900
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	99	GEN562026 1-G11_019_3 0.6900
0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05043	99	GEN659407 1-ANTELPHILLSW0.6900
0	17SP	G16_069	TO->FROM	LAWTON EASTSIDE - OKLAUNION 345KV CKT 1	1011.0	1176.0	0.20510	101.3643	BASE CASE
0	16WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.21678	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.19564	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	1022.0	1124.0	0.19019	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	1022.0	1124.0	0.19019	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.18445	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.18165	-	CIMARRON - MINCO 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.18165	-	GRACEMONT - MINCO 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	1330.0	1940.0	0.17746	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	1330.0	1940.0	0.17746	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	987.2	1082.8	0.17549	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.13695	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.13695	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	16WP	G16_069	-	Non-Converged Contingency	987.16	1082.77	0.13676	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	956.09	1051.7	0.13676	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.10619	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.10619	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	1420.0	1775.0	0.10204	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	1420.0	1775.0	0.10204	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	1420.0	1775.0	0.10204	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	439.0	439.0	0.06772	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	450.0	450.0	0.06772	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_069	-	Non-Converged Contingency	439.0	439.0	0.04953	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17G	G16_069	-	Non-Converged Contingency	0.0	0.0	0.07256	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	17G	G16_069	-	Non-Converged Contingency	0.0	0.0	0.05716	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	17G	G16_069	-	Non-Converged Contingency	0.0	0.0	0.03610	-	P12:138:AEPW:REDROCKRD4:WTH_JCT4
0	17G	G16_069	-	Non-Converged Contingency	0.0	0.0	0.03530	-	P12:138:WFEC-AEPW:WASHITA4:CLINTJC4
0	17G	G16_069	-	Non-Converged Contingency	0.0	0.0	0.03362	-	P12:138:AEPW:HOB-JCT4:ELKCTY-4
0	17G	G16_069	-	Non-Converged Contingency	0.0	0.0	0.03185	-	P12:138:AEPW:WTHWF4:WTH_SE4
0	17SP	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.22976	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G16_069	-	Non-Converged Contingency	956.0	1042.0	0.20510	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17SP	G16_069	-	Non-Converged Contingency	956.0	1042.0	0.20510	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17SP	G16_069	-	Non-Converged Contingency	956.1	1051.7	0.17245	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	17SP	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.16527	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.16254	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.16254	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	17SP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.15981	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	G16_069	-	Non-Converged Contingency	1330.0	1940.0	0.15703	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17SP	G16_069	-	Non-Converged Contingency	1330.0	1940.0	0.15703	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17SP	G16_069	-	Non-Converged Contingency	478.0	502.0	0.14660	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G16_069	-	Non-Converged Contingency	956.09	1051.7	0.14469	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G16_069	-	Non-Converged Contingency	956.09	1051.7	0.12229	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	G16_069	-	Non-Converged Contingency	318.7	350.6	0.11904	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	17SP	G16_069	-	Non-Converged Contingency	318.7	350.6	0.11904	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	17SP	G16_069	-	Non-Converged Contingency	478.0	502.0	0.10855	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G16_069	-	Non-Converged Contingency	1420.0	1775.0	0.09557	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_069	-	Non-Converged Contingency	353.0	353.0	0.06011	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17SP	G16_069	-	Non-Converged Contingency	318.7	350.57	0.05145	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	0.0	0.0	0.49874	-	P12:345:SPS:J15.1.XRDS.TOLK
0	20L	G16_069	-	Non-Converged Contingency	717.0	926.0	0.26292	-	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	0.0	0.0	0.25636	-	P12:345:SPS:J15.1.XRDS.TOLK
0	20L	G16_069	-	Non-Converged Contingency	0.0	0.0	0.19658	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.19445	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.16029	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.15673	-	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1022.0	1124.0	0.14970	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1022.0	1124.0	0.14970	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1022.0	1124.0	0.14970	-	OKLAUNION 345KV SWITCHED SHUNT
0	20L	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.14499	-	CIMARRON - MINCO 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.14499	-	GRACEMONT - MINCO 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.14420	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.14420	-	GEN509403 1-PIRKEY GENERATION
0	20L	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.14420	-	GEN509416 1-TURK GENERATION
0	20L	G16_069	-	Non-Converged Contingency	956.1	1051.7	0.13860	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	956.1	1051.7	0.13860	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1584.0	2098.0	0.12658	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1584.0	2098.0	0.12658	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.11448	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.11448	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
0	20L	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.11448	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.11448	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20L	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.11448	-	BORDER 7345.00 345KV SWITCHED SHUNT
0	20L	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.11001	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	956.09	1051.7	0.10425	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	956.09	1051.7	0.10425	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	717.0	789.0	0.09434	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	717.0	789.0	0.09434	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	717.0	789.0	0.09434	-	GEN515040 1-SEMINOLE 1G
0	20L	G16_069	-	Non-Converged Contingency	956.09	1051.7	0.09234	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	956.09	1051.7	0.09234	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	956.09	1051.7	0.09234	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	956.09	1051.7	0.09234	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	0.0	0.0	0.08995	-	P12:138:WFEC:MSL03
0	20L	G16_069	-	Non-Converged Contingency	478.0	502.0	0.08557	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	478.0	502.0	0.08557	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	478.0	502.0	0.08557	-	BUSHLAND INTERCHANGE 230KV SWITCHED SHUNT
0	20L	G16_069	-	Non-Converged Contingency	0.0	0.0	0.08047	-	P12:230:AEPW:ELKCITY6:SWEETWT6
0	20L	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.07872	-	ARCADIA - NORTHWEST 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.07588	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.07553	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.07553	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	318.7	350.57	0.07387	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	318.7	350.57	0.07387	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1561.0	1793.0	0.06683	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1561.0	1793.0	0.06683	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1561.0	1793.0	0.06683	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_069	-	Non-Converged Contingency	1561.0	1793.0	0.06683	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_069	-	Non-Converged Contingency	478.0	502.0	0.06603	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	318.7	350.6	0.06521	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	318.7	350.6	0.06521	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1192.0	1192.0	0.06494	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	956.0	956.0	0.06494	-	G15063_T 345.00 - WOODRING 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	0.0	0.0	0.06285	-	P12:230:AEPW-SPS:SWEETWT6:WHEELER 6
0	20L	G16_069	-	Non-Converged Contingency	478.0	502.0	0.06090	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1420.0	1775.0	0.06082	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20L	G16_069	-	Non-Converged Contingency	1420.0	1775.0	0.06082	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G16_069	-	Non-Converged Contingency	1420.0	1775.0	0.06082	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1420.0	1775.0	0.06082	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_069	-	Non-Converged Contingency	1420.0	1775.0	0.06082	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1420.0	1775.0	0.06082	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
0	20L	G16_069	-	Non-Converged Contingency	497.0	547.0	0.05971	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.05717	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.05717	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
0	20L	G16_069	-	Non-Converged Contingency	1793.0	1793.0	0.05717	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1716.0	1793.0	0.05717	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	G16_069	-	Non-Converged Contingency	1793.0	1793.0	0.05717	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1716.0	1793.0	0.05717	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20L	G16_069	-	Non-Converged Contingency	1793.0	1793.0	0.05717	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1716.0	1793.0	0.05717	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_069	-	Non-Converged Contingency	0.0	0.0	0.05563	-	P12:138:AEPW-OGE:WTH_JCT4:JENSEN4
0	20L	G16_069	-	Non-Converged Contingency	560.0	560.0	0.05528	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_069	-	Non-Converged Contingency	560.0	560.0	0.05528	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1532.0	1793.0	0.05194	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1532.0	1793.0	0.05194	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	20L	G16_069	-	Non-Converged Contingency	1532.0	1793.0	0.05194	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20L	G16_069	-	Non-Converged Contingency	0.0	0.0	0.05147	-	P12:115:SPS:T14.1.MADDOX.WBENDR
0	20L	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.04993	-	CIMARRON - DRAPER LAKE 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	785.0	785.0	0.04992	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	785.0	785.0	0.04992	-	MINGO - RED WILLOW 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	762.5	762.5	0.04907	-	MINGO - SETAB 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	762.5	762.5	0.04907	-	MINGO - SETAB 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	439.0	439.0	0.04904	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	450.0	450.0	0.04904	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_069	-	Non-Converged Contingency	450.0	450.0	0.04904	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20L	G16_069	-	Non-Converged Contingency	717.1	717.1	0.04832	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	717.1	717.1	0.04832	-	HOLCOMB - SETAB 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	0.0	0.0	0.04553	-	P12:138:AEPW:S.W.S.-4:L.E.S.-4
0	20L	G16_069	-	Non-Converged Contingency	0.0	0.0	0.04279	-	P12:138:WFEC:MSL14
0	20L	G16_069	-	Non-Converged Contingency	501.95	501.95	0.04213	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	501.95	501.95	0.04213	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	0.0	0.0	0.04202	-	917X
0	20L	G16_069	-	Non-Converged Contingency	1504.0	1792.0	0.04175	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1504.0	1792.0	0.04175	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1505.0	1793.0	0.04124	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1505.0	1793.0	0.04124	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1505.0	1793.0	0.04124	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	726.6	726.6	0.04039	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	726.6	726.6	0.04039	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1413.0	1517.0	0.04039	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1413.0	1517.0	0.04039	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	956.0	956.0	0.03888	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	318.7	350.57	0.03726	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	318.7	350.57	0.03726	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1141.0	1195.0	0.03444	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1141.0	1195.0	0.03444	-	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	1141.0	1195.0	0.03444	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	560.0	644.0	0.03443	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_069	-	Non-Converged Contingency	560.0	644.0	0.03443	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
0	20L	G16_069	-	Non-Converged Contingency	560.0	644.0	0.03443	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G16_069	-	Non-Converged Contingency	560.0	644.0	0.03443	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
0	20L	G16_069	-	Non-Converged Contingency	421.0	439.0	0.03142	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	348.58	381.24	0.03142	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
0	20L	G16_069	-	Non-Converged Contingency	500.0	723.0	0.03142	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
0	20SP	G16_069	-	Non-Converged Contingency	956.0	1042.0	0.20059	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20SP	G16_069	-	Non-Converged Contingency	956.0	1042.0	0.20059	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20SP	G16_069	-	Non-Converged Contingency	956.1	1051.7	0.17206	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20SP	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.16237	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20SP	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.16237	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.20750	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.18962	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	1022.0	1124.0	0.17679	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	1022.0	1124.0	0.17679	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.17094	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	987.2	1082.8	0.17032	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.15932	-	CIMARRON - MINCO 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.15932	-	GRACEMONT - MINCO 345KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	1584.0	2098.0	0.15501	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	1584.0	2098.0	0.15501	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	987.16	1082.77	0.13203	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.13130	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.13130	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
0	20WP	G16_069	-	Non-Converged Contingency	956.09	1051.7	0.11744	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	987.16	1082.77	0.11744	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	717.0	789.0	0.11723	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.09795	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.09795	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	560.0	560.0	0.07359	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	439.0	439.0	0.06152	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	450.0	450.0	0.06152	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	329.05	360.92	0.04674	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	421.0	439.0	0.04558	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	20WP	G16_069	-	Non-Converged Contingency	329.05	360.92	0.03980	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	25SP	G16_069	-	Non-Converged Contingency	0.0	0.0	0.05056	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
0	25SP	G16_069	-	Non-Converged Contingency	343.79	343.79	0.05043	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
0	25SP	G16_069	-	Non-Converged Contingency	0.0	0.0	0.03758	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
0	25SP	G16_069	-	Non-Converged Contingency	0.0	0.0	0.03314	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
0	25SP	G16_069	-	Non-Converged Contingency	0.0	0.0	0.03292	-	P12:115:LCEC:W56.1.HOBBG.LE-LVN
0	17SP	G16_069	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	442.0	752.0	0.27327	104.8655	PLANT X STATION - TOLK STATION WEST 230KV CKT 1
0	17SP	G16_069	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	442.0	752.0	0.27327	104.8655	PLANT X STATION - TOLK STATION WEST 230KV CKT 1
0	17SP	G16_069	TO->FROM	PLANT X STATION - TOLK STATION EAST 230KV CKT 2	442.0	752.0	0.15605	100.8893	BASE CASE
0	17SP	G16_069	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	442.0	752.0	0.27345	104.8655	PLANT X STATION - TOLK STATION EAST 230KV CKT 2
0	17SP	G16_069	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	442.0	752.0	0.27345	104.8655	PLANT X STATION - TOLK STATION EAST 230KV CKT 2
0	17SP	G16_069	TO->FROM	PLANT X STATION - TOLK STATION WEST 230KV CKT 1	442.0	752.0	0.15673	100.8893	BASE CASE
0	20WP	G16_069	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20979	123.8739	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	20WP	G16_069	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20979	118.8321	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	16WP	G16_069	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22837	106.255	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
0	16WP	G16_069	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22837	102.8429	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	17SP	G16_069	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06646	113.9867	BASE CASE
2	20SP	G16_069	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	353.0	353.0	0.06319	110.7777	BASE CASE
2	17G	G16_069	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06381	104.3556	BASE CASE
2	20WP	G16_069	FROM->TO	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1	439.0	439.0	0.06154	99.1	BASE CASE
2	17SP	G16_069	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.29995	103.9462	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20SP	G16_069	TO->FROM	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1	1195.0	1195.0	0.29532	99.6	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_069	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24241	117.0258	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G16_069	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21493	112.9654	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G16_069	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.24241	112.441	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	20WP	G16_069	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.21493	108.3696	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17SP	G16_069	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.23727	108.1247	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17SP	G16_069	TO->FROM	CIMARRON - MINCO 345KV CKT 1	1195.0	1195.0	0.23727	103.6738	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	16WP	G16_069	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.13864	102.4471	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	16WP	G16_069	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.13864	101.7764	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
2	20WP	G16_069	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.11727	109.7093	BASE CASE
2	16WP	G16_069	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12633	108.7418	BASE CASE
2	17G	G16_069	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717.0	789.0	0.12415	107.5286	BASE CASE
2	20WP	G16_069	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.11727	123.7856	BASE CASE
2	16WP	G16_069	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12633	122.9306	BASE CASE
2	17G	G16_069	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12415	120.973	BASE CASE
2	17SP	G16_069	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717.0	789.0	0.12261	105.8511	BASE CASE
2	16WP	G16_069	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24241	106.376	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	20WP	G16_069	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.21493	102.3425	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	16WP	G16_069	FROM->TO	GRACEMONT - MINCO 345KV CKT 1	1195.0	1195.0	0.24241	101.9464	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_069	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.04047	102.2178	BASE CASE
2	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04105	101.9147	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04105	101.9147	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04105	101.3466	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04105	101.3465	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06771	125.3293	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06771	125.3293	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05959	121.2944	GEN526333 1-JONES GEN #3 21 KV
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05959	120.8816	GEN526334 1-JONES_4 116.500
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06264	114.0091	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06141	107.098	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06141	107.098	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06172	104.5606	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06172	104.5481	P12:230:LPL:K39.1.CRLSLE.LP-MLWK

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06172	104.5174	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06172	104.5174	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05959	103.4092	GEN587373 1-G16-056-GEN10.6900
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06082	103.2676	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06082	103.2676	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06082	103.2676	TUCO INTERCHANGE (ENRCO 136402) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06082	103.2676	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06459	103.1516	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06459	103.1516	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04603	102.5939	P12:345:SPS:J15.1.XRDS.TOLK
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05959	102.3409	GEN526331 1-JONES GEN #1 22 KV
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05959	102.3328	GEN526332 1-JONES GEN #2 21 KV
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06448	100.5338	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04908	99.7	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04908	99.7	P12:345:SPS:J14.1.EDDY.XRDS
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04908	99.6	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04908	99.6	EDDY COUNTY INTERCHANGE (ABB AEM30711) 345/230/13.2KV TRANSFORMER CKT 1
2	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06031	99.2	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.21682	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.19567	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	1022.0	1124.0	0.19022	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	1022.0	1124.0	0.19022	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.18449	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.18169	-	CIMARRON - MINCO 345KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.18169	-	GRACEMONT - MINCO 345KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	1330.0	1940.0	0.17748	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	1330.0	1940.0	0.17748	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	987.2	1082.8	0.17552	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.13698	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.13698	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	16WP	G16_069	-	Non-Converged Contingency	987.16	1082.77	0.13679	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	956.09	1051.7	0.13679	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.10621	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.10621	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	1420.0	1775.0	0.10206	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	439.0	439.0	0.06773	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	16WP	G16_069	-	Non-Converged Contingency	450.0	450.0	0.06773	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_069	-	Non-Converged Contingency	717.0	926.0	0.28760	-	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.21038	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.18890	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.18890	-	GEN509403 1-PIRKEY GENERATION
2	17G	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.18890	-	GEN509404 1-WELSH #1
2	17G	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.18890	-	GEN509406 1-WELSH #3
2	17G	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.18890	-	GEN509416 1-TURK GENERATION
2	17G	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.18890	-	GEN511848 1-SOUTHWESTERN STATION #3
2	17G	G16_069	-	Non-Converged Contingency	1022.0	1124.0	0.18223	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1022.0	1124.0	0.18223	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.17551	-	CIMARRON - MINCO 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.17551	-	GRACEMONT - MINCO 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.17481	-	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.17285	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1330.0	1940.0	0.17115	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1330.0	1940.0	0.17115	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	956.1	1051.7	0.16504	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.15843	-	HOBBS - YOAKUM_345 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	560.0	644.0	0.15843	-	HOBBS (HUPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.13048	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.13048	-	BORDER 7345.00 - CHSHLMWEST 345.00 345KV CKT 2
2	17G	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.13048	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.13048	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	17G	G16_069	-	Non-Converged Contingency	956.09	1051.7	0.12563	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	956.09	1051.7	0.12563	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	717.0	789.0	0.12415	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	717.0	789.0	0.12415	-	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1420.0	1775.0	0.10142	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1420.0	1775.0	0.10142	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1420.0	1775.0	0.10142	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.10078	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.10078	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	478.0	502.0	0.09263	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_069	-	Non-Converged Contingency	1561.0	1793.0	0.09009	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1561.0	1793.0	0.09009	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.08865	-	ARCADIA - NORTHWEST 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	478.05	547.36	0.08357	-	NEWHART 230 - PLANT X STATION 230KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	318.7	350.57	0.08085	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	560.0	560.0	0.07576	-	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1532.0	1793.0	0.07306	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1532.0	1793.0	0.07306	-	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
2	17G	G16_069	-	Non-Converged Contingency	1532.0	1793.0	0.07306	-	G1524G1525 345.00 - WICHITA 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1532.0	1793.0	0.07306	-	G1524G1525 345.00 - WICHITA 345KV CKT 2
2	17G	G16_069	-	Non-Converged Contingency	1532.0	1793.0	0.07306	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.07224	-	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.07036	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.07036	-	BVRCNTY7 345.00 - OPTIMA 345.00 345KV CKT 2
2	17G	G16_069	-	Non-Converged Contingency	1793.0	1793.0	0.07036	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1716.0	1793.0	0.07036	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	G16_069	-	Non-Converged Contingency	1793.0	1793.0	0.07036	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1716.0	1793.0	0.07036	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G16_069	-	Non-Converged Contingency	1793.0	1793.0	0.07036	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1716.0	1793.0	0.07036	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.07036	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.07036	-	Hitchland Interchange - OPTIMA 345.00 345KV CKT 2
2	17G	G16_069	-	Non-Converged Contingency	478.0	502.0	0.06951	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	318.7	350.6	0.06946	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	318.7	350.6	0.06946	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.06508	-	CIMARRON - DRAPER LAKE 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	878.0	956.0	0.06420	-	BENTON - WICHITA 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	439.0	439.0	0.06381	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	450.0	450.0	0.06381	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_069	-	Non-Converged Contingency	414.0	414.0	0.06278	-	AMOCO SWITCHING STATION - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1793.0	1793.0	0.06178	-	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1793.0	1793.0	0.06178	-	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	318.7	350.57	0.05990	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	717.1	717.1	0.05846	-	HOLCOMB - SETAB 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	497.0	547.0	0.05804	-	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	762.5	762.5	0.05721	-	MINGO - SETAB 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	785.0	785.0	0.05668	-	MINGO - RED WILLOW 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1192.0	1192.0	0.05622	-	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	956.0	956.0	0.05622	-	G15063_T 345.00 - WOODRING 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.05608	-	GEN520947 1-HUGO1
2	17G	G16_069	-	Non-Converged Contingency	560.0	644.0	0.05418	-	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G16_069	-	Non-Converged Contingency	1039.0	1195.0	0.05411	-	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.05323	-	JOHNSON COUNTY - SUNNYSIDE 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	726.6	726.6	0.05305	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1413.0	1517.0	0.05305	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	501.95	501.95	0.05240	-	HITCHLAND INTERCHANGE - MOORE COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1505.0	1793.0	0.05058	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1505.0	1793.0	0.05058	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1505.0	1793.0	0.05058	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1035.0	1035.0	0.04744	-	G14_001T 345.00 - WICHITA 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1504.0	1792.0	0.04739	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1504.0	1792.0	0.04739	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	560.0	644.0	0.04713	-	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1141.0	1195.0	0.04694	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1141.0	1195.0	0.04694	-	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	439.0	439.0	0.04607	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	502.0	502.0	0.04607	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	500.0	723.0	0.04607	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	318.7	350.57	0.04538	-	MOORE COUNTY INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	318.7	350.57	0.04047	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	560.0	644.0	0.03983	-	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_069	-	Non-Converged Contingency	560.0	644.0	0.03983	-	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
2	17G	G16_069	-	Non-Converged Contingency	502.0	502.0	0.03933	-	GRAPEVINE INTERCHANGE - STATELINE INTERCHANGE 230KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	1022.0	1143.0	0.03789	-	PITTSBURG - VALLIANT 345KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	96.0	96.0	0.03681	-	CURRY COUNTY INTERCHANGE - DEAF SMITH REC-#20 115KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	560.0	560.0	0.03574	-	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1
2	17G	G16_069	-	Non-Converged Contingency	343.79	343.79	0.03336	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	17G	G16_069	-	Non-Converged Contingency	717.0	789.0	0.03018	-	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
2	17SP	G16_069	-	Non-Converged Contingency	956.0	1042.0	0.18587	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.20759	-	POTTER COUNTY INTERCHANGE - TOLK STATION 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20WP	G16_069	-	Non-Converged Contingency	1792.0	1792.0	0.18972	-	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	20WP	G16_069	-	Non-Converged Contingency	1022.0	1124.0	0.17686	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
2	20WP	G16_069	-	Non-Converged Contingency	1022.0	1124.0	0.17686	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
2	20WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.17100	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
2	20WP	G16_069	-	Non-Converged Contingency	987.2	1082.8	0.17040	-	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.15941	-	GRACEMONT - MINCO 345KV CKT 1
2	20WP	G16_069	-	Non-Converged Contingency	1584.0	2098.0	0.15506	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
2	20WP	G16_069	-	Non-Converged Contingency	1584.0	2098.0	0.15506	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
2	20WP	G16_069	-	Non-Converged Contingency	987.16	1082.77	0.13211	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	20WP	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.13136	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
2	20WP	G16_069	-	Non-Converged Contingency	1792.0	1972.0	0.13136	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
2	20WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.09800	-	CHSHLMWEST 345.00 - GRAPEVINE 345.00 345KV CKT 1
2	20WP	G16_069	-	Non-Converged Contingency	1195.0	1195.0	0.09800	-	GRAPEVINE 345.00 - POTTER COUNTY INTERCHANGE 345KV CKT 1
2	20WP	G16_069	-	Non-Converged Contingency	439.0	439.0	0.06154	-	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
2	20WP	G16_069	-	Non-Converged Contingency	450.0	450.0	0.06154	-	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
2	25SP	G16_069	-	Non-Converged Contingency	343.79	343.79	0.05959	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
2	25SP	G16_069	-	Non-Converged Contingency	0.0	0.0	0.05076	-	P12:230:LPL:K26.1.JONES.LP-HOLLY
2	25SP	G16_069	-	Non-Converged Contingency	0.0	0.0	0.03782	-	P12:230:LPL:K57.1.LP-WADS.LUBBE
2	25SP	G16_069	-	Non-Converged Contingency	0.0	0.0	0.03286	-	P12:LPL:SPS:K64.1.LP-SE.LUBBS
2	20WP	G16_069	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20996	122.2742	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	20WP	G16_069	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20996	117.8115	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	16WP	G16_069	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22844	105.19	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
2	16WP	G16_069	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22844	102.0601	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
3	17G	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20049	219.0037	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20049	218.7841	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20720	206.7258	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20720	206.6	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21346	198.5451	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21346	197.214	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20937	191.0186	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20937	188.8782	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21232	182.2433	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21232	180.1336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22463	128.2336	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22463	124.1314	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17G	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.19669	205.8094	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	17SP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.20745	182.1676	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20SP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.21269	170.544	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	20WP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.20759	165.6022	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.20994	158.3084	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	25SP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.22245	130.4315	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
3	16WP	G16_069	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.13876	102.99	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	16WP	G16_069	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.13876	102.3933	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
3	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04104	101.8453	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04104	101.8453	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04104	101.2109	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04104	101.2109	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_069	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03580	113.6961	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G16_069	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03580	113.6922	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06708	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06708	125.3466	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05915	119.248	GEN526333 1-JONES GEN #3 21 KV
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05915	118.8723	GEN526334 1-JONES_4 116.500
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06209	114.4952	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05907	112.8126	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05907	112.8111	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05177	111.8354	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06112	106.8773	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06112	106.8773	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04417	105.5745	P12:345:SPS:J02.1.TOLK.EDDY
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06128	103.9995	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06128	103.984	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06128	103.976	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06128	103.976	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05915	103.6041	GEN587373 1-G16-056-GEN10.6900
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06032	103.2394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06032	103.2394	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06032	103.2394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06032	103.2394	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06415	103.2214	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06415	103.2214	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04515	102.9873	P12:345:SPS:J15.1.XRDS.TOLK
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05915	102.4114	GEN526331 1-JONES GEN #1 22 KV
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05915	102.4061	GEN526332 1-JONES GEN #2 21 KV
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06397	100.2458	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05986	99.6	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06177	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06177	99	CARLISLE INTERCHANGE - MURPHY SUB 115KV CKT 1
3	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04857	99	P12:345:SPS:J14.1.EDDY.XRDS
3	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03580	150.821	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03580	150.8177	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	118.3664	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	118.3017	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	118.2885	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	101.1875	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
3	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	101.1522	P12:230:LPL:K57.1.LP-WADS.LUBBE
3	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	101.1506	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03580	99	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
3	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03580	99	P12:LPL:SPS:K64.1.LP-SE.LUBBS
3	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.02992	110.7208	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
3	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.02992	110.6974	P12:230:LPL:K26.1.JONES.LP-HOLLY
3	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.02992	110.6461	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.02992	110.6461	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
3	17G	G16_069	-	Non-Converged Contingency	3975.0	4570.0	0.35911	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	20L	G16_069	-	Non-Converged Contingency	3975.0	4570.0	0.30741	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
3	20WP	G16_069	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21234	104.0129	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
3	20WP	G16_069	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21234	103.0789	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
4	17G	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20009	219.2477	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20009	218.9034	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20666	206.5319	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20666	206.4431	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21302	198.537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21302	197.0767	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20891	191.0175	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20891	188.7404	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21179	181.83	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21179	179.8003	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22406	128.3207	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22406	124.1778	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17G	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.19662	205.5105	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	17SP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.20736	182.0402	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20SP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.21259	170.4128	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	20WP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.20748	165.4035	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.20986	158.2063	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	25SP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.22234	130.4862	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
4	16WP	G16_069	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.13876	103.0572	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	16WP	G16_069	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.13876	102.4534	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
4	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04104	101.8409	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04104	101.8409	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04104	101.2037	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04104	101.2037	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_069	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03580	113.6646	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G16_069	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03580	113.6599	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06708	125.0569	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06708	125.0569	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05915	119.0612	GEN526333 1-JONES GEN #3 21 KV
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05915	118.6856	GEN526334 1-JONES_4 116.500
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06210	114.2489	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05907	112.5996	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05907	112.5946	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05178	111.5567	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06112	106.7476	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06112	106.7476	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04417	105.4545	P12:345:SPS:J02.1.TOLK.EDDY
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06129	103.8244	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06129	103.8052	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06129	103.7969	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06129	103.7969	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05915	103.416	GEN587373 1-G16-056-GEN10.6900
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06415	103.2672	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06415	103.2672	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06032	103.0315	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06032	103.0315	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06032	103.0315	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06032	103.0315	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04515	102.755	P12:345:SPS:J15.1.XRDS.TOLK
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05915	102.1709	GEN526331 1-JONES GEN #1 22 KV
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05915	102.1659	GEN526332 1-JONES GEN #2 21 KV
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06398	100	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
4	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05987	99.4	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
4	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03580	150.9857	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03580	150.9823	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	118.304	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	118.2713	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	118.2581	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	101.1568	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
4	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	101.1421	P12:230:LPL:K57.1.LP-WADS.LUBBE
4	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	101.1405	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03580	99.3	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
4	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03580	99.3	P12:LPL:SPS:K64.1.LP-SE.LUBBS
4	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.02992	110.6999	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
4	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.02992	110.6899	P12:230:LPL:K26.1.JONES.LP-HOLLY
4	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.02992	110.6243	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.02992	110.6243	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
4	17G	G16_069	-	Non-Converged Contingency	3975.0	4570.0	0.35466	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	20L	G16_069	-	Non-Converged Contingency	3975.0	4570.0	0.30304	-	CRAWFISH765 765.00 - SEMINOLE765 765.00 765KV CKT 1
4	20WP	G16_069	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21300	104.2517	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
4	20WP	G16_069	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21300	103.3603	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
5	17G	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.19765	217.7095	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.19765	216.9825	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20429	204.8525	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20429	204.7326	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21041	196.7495	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21041	195.2293	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20644	189.7734	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20644	187.2532	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20937	180.5705	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.20937	178.2726	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22150	127.7475	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.22150	123.5792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17G	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.19586	204.5119	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	17SP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.20657	181.3291	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20SP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.21180	169.7873	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	20WP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.20671	164.743	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552.0	608.0	0.20906	157.4925	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	25SP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497.0	547.0	0.22151	130.3275	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
5	16WP	G16_069	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.13876	103.0311	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	16WP	G16_069	FROM->TO	EDDY_NORTH 6230.00 (WAUK WT01134) 230/115/13.2KV TRANSFORMER CKT 2	273.8	311.0	0.13876	102.4344	EDDY COUNTY INTERCHANGE - EDDY_NORTH 6230.00 230KV CKT @1
5	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04104	101.8387	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04104	101.8387	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04104	101.202	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04104	101.202	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G16_069	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03580	113.6714	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G16_069	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03580	113.6673	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06705	124.8975	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06705	124.8975	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05913	118.9383	GEN526333 1-JONES GEN #3 21 KV
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05913	118.5628	GEN526334 1-JONES_4 116.500
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06207	114.1042	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05905	112.5331	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05905	112.531	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05175	111.409	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06110	106.6731	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06110	106.6731	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04414	105.3409	P12:345:SPS:J02.1.TOLK.EDDY
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06127	103.707	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06127	103.6946	P12:230:LPL:K39.1.CRLSLE.LP-MLWK
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06127	103.6865	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06127	103.6865	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05913	103.2876	GEN587373 1-G16-056-GEN10.6900
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06413	103.1458	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06413	103.1458	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06030	102.9044	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06030	102.9044	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06030	102.9044	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06030	102.9044	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.04510	102.6383	P12:345:SPS:J15.1.XRDS.TOLK
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05913	102.0561	GEN526331 1-JONES GEN #1 22 KV
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05913	102.051	GEN526332 1-JONES GEN #2 21 KV
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06395	99.9	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
5	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05984	99.3	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
5	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03580	150.9628	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03580	150.9601	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	118.3008	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	118.268	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	118.2549	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	101.1553	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
5	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	101.1406	P12:230:LPL:K57.1.LP-WADS.LUBBE
5	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03424	101.139	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03580	99.2	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
5	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03580	99.2	P12:LPL:SPS:K64.1.LP-SE.LUBBS
5	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.02992	110.6972	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
5	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.02992	110.6738	P12:230:LPL:K26.1.JONES.LP-HOLLY
5	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.02992	110.6217	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
5	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.02992	110.6217	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
5	20WP	G16_069	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21325	104.2778	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
5	20WP	G16_069	FROM->TO	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1	560.0	560.0	0.21325	103.3863	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
6	25SP	G16_069	FROM->TO	HOBBS INTERCHANGE (ME C0482951) 230/115/13.2KV TRANSFORMER CKT 1	150.0	150.0	0.04239	99.5	HOBBS INTERCHANGE (WAUK WT01135) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G16_069	FROM->TO	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1	319.0	351.0	0.03580	113.5161	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06629	124.2902	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
6	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05861	118.5502	GEN526333 1-JONES GEN #3 21 KV
6	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05861	118.1772	GEN526334 1-JONES_4 116.500
6	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06140	113.6007	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
6	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05853	111.9176	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05140	110.107	CRAWFISH_DR 345.00 - YOAKUM_345 345.00 345KV CKT 1
6	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06078	106.564	PLANT X STATION - SUNDOWN INTERCHANGE 230KV CKT 1
6	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06075	103.2173	LUBBOCK POWER & LIGHT-MILWAUKEE (M-E C0681251) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06075	103.216	CARLISLE INTERCHANGE - LUBBOCK POWER & LIGHT-MILWAUKEE 230KV CKT 1
6	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05861	102.8608	GEN587373 1-G16-056-GEN10.6900
6	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06358	102.7727	LUBBOCK EAST INTERCHANGE - TUCO INTERCHANGE 115KV CKT 1
6	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05974	102.4925	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
6	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05974	102.4925	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
6	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05861	101.6462	GEN526331 1-JONES GEN #1 22 KV
6	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05861	101.6414	GEN526332 1-JONES GEN #2 21 KV
6	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06324	99.4	YOAKUM_345 345.00 (YOAKUM_T3) 345/230/13.2KV TRANSFORMER CKT 1
6	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03580	151.3756	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03423	118.1734	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03423	118.1275	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03423	101.1279	LUBBOCK EAST INTERCHANGE - LUBBOCK POWER & LIGHT-WADSWORTH 230KV CKT 1
6	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03423	101.1113	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1
6	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.03580	100.0897	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
6	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.02991	110.6217	JONES STATION - LUBBOCK POWER & LIGHT-HOLLY PLANT 230KV CKT 1
6	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-WADSWORTH (SHIH T101038) 230/69/13.5KV TRANSFORMER CKT 1	224.0	224.0	0.02991	110.5253	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1
0	17G	G16_070	FROM->TO	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1	318.7	350.57	0.10365	99.6	BASE CASE
0	20L	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	101.689	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	20L	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	101.689	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	17G	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	101.1133	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	17G	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	101.1133	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	17SP	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	100.1866	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	17SP	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	100.1866	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	25SP	G16_070	TO->FROM	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.03742	122.1957	BASE CASE
0	17G	G16_070	FROM->TO	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1	956.09	1051.7	0.17831	99.2	BASE CASE
0	20WP	G16_070	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.28360	105.2154	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20L	G16_070	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.27450	103.7367	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_070	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.28692	100.2952	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	20WP	G16_070	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.28360	105.2154	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	20L	G16_070	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.27450	103.7367	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	16WP	G16_070	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.28692	100.2952	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	17G	G16_070	FROM->TO	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.10365	107.7528	BASE CASE
0	20WP	G16_070	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.28503	123.1957	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20SP	G16_070	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.28892	108.1483	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	17SP	G16_070	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.27945	104.3861	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20WP	G16_070	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.28503	123.1957	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20SP	G16_070	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.28892	108.1483	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	17SP	G16_070	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.27945	104.3861	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20WP	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.28790	126.6254	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20L	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.27866	124.6416	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	16WP	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.29115	121.7059	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20SP	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.29183	111.3855	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17SP	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.28224	107.6482	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	20WP	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.28790	126.6254	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20L	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.27866	124.6416	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.29115	121.7059	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	20SP	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.29183	111.3855	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17SP	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.28224	107.6482	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_070	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.10158	106.8373	BASE CASE
0	20WP	G16_070	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	329.05	360.92	0.10096	101.3958	BASE CASE
0	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25230	110.2717	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25230	110.2717	CHERRY1 - HARRINGTON STATION 230KV CKT 1
0	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.31893	101.7385	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.31893	101.7385	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.6911	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	17SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.6911	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	17G	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.534	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	17G	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.534	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	20L	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.3494	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	20L	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.3494	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	25SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.2054	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	25SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.2054	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	20SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	107.412	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	20SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	107.412	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	25SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	160.0	1.00000	104.945	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	25SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	160.0	1.00000	104.945	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	20SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	160.0	1.00000	103.9547	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	20SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	160.0	1.00000	103.9547	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	16WP	G16_070	-	Non-Converged Contingency	987.16	1082.77	0.18951	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.18951	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_070	-	Non-Converged Contingency	1793.0	1793.0	0.15425	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	16WP	G16_070	-	Non-Converged Contingency	1716.0	1793.0	0.15425	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	16WP	G16_070	-	Non-Converged Contingency	1420.0	1775.0	0.13008	-	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_070	-	Non-Converged Contingency	1420.0	1775.0	0.13008	-	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_070	-	Non-Converged Contingency	1420.0	1775.0	0.13008	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.17831	-	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.17831	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	439.0	439.0	0.15756	-	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	502.0	502.0	0.15756	-	STATELINE INTERCHANGE - STLN-DEMARC6 230KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	500.0	723.0	0.15756	-	STLN-DEMARC6 - SWEETWATER 230KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	1793.0	1793.0	0.15033	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	1716.0	1793.0	0.15033	-	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
0	17G	G16_070	-	Non-Converged Contingency	1793.0	1793.0	0.15033	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	1716.0	1793.0	0.15033	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	17G	G16_070	-	Non-Converged Contingency	1793.0	1793.0	0.15033	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	1716.0	1793.0	0.15033	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G16_070	-	Non-Converged Contingency	1330.0	1940.0	0.14657	-	CHISHOLM7 345.00 - G16-037-TAP 345.00 345KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	1330.0	1940.0	0.14657	-	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	1420.0	1775.0	0.12931	-	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	1420.0	1775.0	0.12931	-	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	1420.0	1775.0	0.12931	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	1022.0	1124.0	0.10811	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	1022.0	1124.0	0.10811	-	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	318.7	350.57	0.10365	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	318.7	350.57	0.10365	-	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	318.7	350.57	0.10158	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	1561.0	1793.0	0.09282	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_070	-	Non-Converged Contingency	1561.0	1793.0	0.09282	-	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
0	17G	G16_070	-	Non-Converged Contingency	726.6	726.6	0.08677	-	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	1413.0	1517.0	0.08677	-	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	717.1	717.1	0.07382	-	HOLCOMB - SETAB 345KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	762.5	762.5	0.07161	-	MINGO - SETAB 345KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	478.0	502.0	0.07087	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	478.0	502.0	0.06811	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	17G	G16_070	-	Non-Converged Contingency	1195.0	1195.0	0.05158	-	CHISHOLM7 345.00 - CHSHLMWEST 345.00 345KV CKT 1
0	17SP	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.20176	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.17019	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_070	-	Non-Converged Contingency	0.0	0.0	0.32733	-	P12:345:SPS:J07.1.FINN.HITCH
0	20L	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.17359	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.17359	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.15374	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.15374	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20L	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.15374	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.15374	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20L	G16_070	-	Non-Converged Contingency	1793.0	1793.0	0.14788	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
0	20L	G16_070	-	Non-Converged Contingency	1716.0	1793.0	0.14788	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
0	20SP	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.19020	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_070	-	Non-Converged Contingency	987.16	1082.77	0.18759	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	20WP	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.16676	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20WP	G16_070	-	Non-Converged Contingency	987.16	1082.77	0.16676	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.19300	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.17140	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	25SP	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.17140	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_070	-	Non-Converged Contingency	497.0	547.0	0.11396	-	CRAWFISH_DR2230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_070	-	Non-Converged Contingency	318.7	350.57	0.10405	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
0	25SP	G16_070	-	Non-Converged Contingency	478.0	502.0	0.10192	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
0	25SP	G16_070	-	Non-Converged Contingency	478.0	502.0	0.06853	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_070	-	Non-Converged Contingency	318.7	350.6	0.06694	-	DEAF SMITH COUNTY INTERCHANGE - G15039_T 230.00 230KV CKT 1
0	25SP	G16_070	-	Non-Converged Contingency	318.7	350.6	0.06694	-	G15039_T 230.00 - PLANT X STATION 230KV CKT 1
0	25SP	G16_070	-	Non-Converged Contingency	478.0	502.0	0.06591	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_070	-	Non-Converged Contingency	318.7	350.57	0.03742	-	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1
0	25SP	G16_070	FROM->TO	PANTEX NORTH SUB - PANTEX SOUTH SUB 115KV CKT 1	160.0	160.0	1.00000	104.4843	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	25SP	G16_070	FROM->TO	PANTEX NORTH SUB - PANTEX SOUTH SUB 115KV CKT 1	160.0	160.0	1.00000	104.4843	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	20SP	G16_070	FROM->TO	PANTEX NORTH SUB - PANTEX SOUTH SUB 115KV CKT 1	160.0	160.0	1.00000	103.5091	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	20SP	G16_070	FROM->TO	PANTEX NORTH SUB - PANTEX SOUTH SUB 115KV CKT 1	160.0	160.0	1.00000	103.5091	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
0	17G	G16_070	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.34602	116.9587	BASE CASE
0	25SP	G16_070	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.33750	115.2466	BASE CASE
2	17G	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	101.2888	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
2	17G	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	101.2888	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
2	17SP	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	100.1987	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
2	17SP	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	100.1987	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
2	17G	G16_070	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.28092	102.7205	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2
2	17G	G16_070	FROM->TO	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.28092	102.7205	G11-14T 345.00 - G16-001-TAP 345.00 345KV CKT 1
2	17G	G16_070	FROM->TO	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.10201	103.4967	BASE CASE
2	17G	G16_070	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.28235	120.3583	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	16WP	G16_070	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.28935	114.6083	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17SP	G16_070	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.28778	106.8903	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
2	17G	G16_070	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.28235	120.3583	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	16WP	G16_070	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.28935	114.6083	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17SP	G16_070	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.28778	106.8903	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
2	17G	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.28521	123.543	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	16WP	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.29228	117.8517	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17SP	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.29070	110.1187	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
2	17G	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.28521	123.543	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	16WP	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.29228	117.8517	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17SP	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.29070	110.1187	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
2	17G	G16_070	TO->FROM	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1	318.7	350.57	0.09991	100.4226	BASE CASE
2	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25449	115.6744	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25449	115.6744	CHERRY1 - HARRINGTON STATION 230KV CKT 1
2	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.32145	108.6309	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.32145	108.6309	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
2	17SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.684	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
2	17SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.684	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
2	17G	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.6414	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
2	17G	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.6414	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
2	16WP	G16_070	-	Non-Converged Contingency	987.2	1082.8	0.19605	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	16WP	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.16249	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_070	-	Non-Converged Contingency	987.2	1082.8	0.16249	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.18442	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.15235	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
2	17G	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.15235	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
2	17SP	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.19799	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
2	17G	G16_070	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.33881	112.9939	BASE CASE
3	20L	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	101.7505	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	20L	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	101.7505	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	17G	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	101.351	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	17SP	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	100.2253	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	17SP	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	100.2253	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	25SP	G16_070	TO->FROM	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.03552	115.3097	BASE CASE
3	20WP	G16_070	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.25650	100.96	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
3	20L	G16_070	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793.0	1793.0	0.24635	99	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
3	20WP	G16_070	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.25650	100.96	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
3	20L	G16_070	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716.0	1793.0	0.24635	99	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
3	20WP	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.25984	104.4778	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	20L	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.24956	102.4888	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	17G	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793.0	1793.0	0.25679	102.1788	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
3	20WP	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.25984	104.4778	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	20L	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.24956	102.4888	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	17G	G16_070	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716.0	1793.0	0.25679	102.1788	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
3	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25761	127.3081	CHERRY1 - HARRINGTON STATION 230KV CKT 1
3	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.32488	122.6167	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
3	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.20368	100.3746	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
3	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.21592	99.7	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
3	17SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.6727	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	17SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.6727	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	17G	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.6487	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	20L	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.291	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	20L	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.291	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	25SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	107.6249	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	25SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	107.6249	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	20SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	107.383	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	20SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	107.383	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	25SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	160.0	1.00000	104.3685	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	25SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	160.0	1.00000	104.3685	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	20SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	160.0	1.00000	103.9195	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	20SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	160.0	1.00000	103.9195	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	16WP	G16_070	-	Non-Converged Contingency	987.2	1082.8	0.19074	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_070	-	Non-Converged Contingency	0.0	0.0	0.31772	-	P12:345:SPS:J07.1.FINN.HITCH
3	20L	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.16847	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.16847	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.14926	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.14926	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	20L	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.14926	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20L	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.14926	-	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	20WP	G16_070	-	Non-Converged Contingency	987.16	1082.77	0.18253	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_070	FROM->TO	PANTEX NORTH SUB - PANTEX SOUTH SUB 115KV CKT 1	160.0	160.0	1.00000	103.917	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	25SP	G16_070	FROM->TO	PANTEX NORTH SUB - PANTEX SOUTH SUB 115KV CKT 1	160.0	160.0	1.00000	103.917	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	20SP	G16_070	FROM->TO	PANTEX NORTH SUB - PANTEX SOUTH SUB 115KV CKT 1	160.0	160.0	1.00000	103.4751	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	20SP	G16_070	FROM->TO	PANTEX NORTH SUB - PANTEX SOUTH SUB 115KV CKT 1	160.0	160.0	1.00000	103.4751	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
3	25SP	G16_070	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.32961	109.7172	BASE CASE
3	17G	G16_070	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.33060	104.9495	BASE CASE
4	20L	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	101.7858	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	20L	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	101.7858	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	17G	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	101.3547	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	17SP	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	100.2383	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	17SP	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120.0	154.0	1.00000	100.2383	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	25SP	G16_070	TO->FROM	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.03376	113.9114	BASE CASE
4	17G	G16_070	TO->FROM	CHERRY1 - HARRINGTON STATION 230KV CKT 1	478.0	502.0	0.25896	99	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.26008	131.0206	CHERRY1 - HARRINGTON STATION 230KV CKT 1
4	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.32771	127.188	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
4	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.20485	102.1805	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
4	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.21696	100.9379	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
4	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.20485	99.9	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
4	17SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.669	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	17SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.669	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	17G	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.627	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	20L	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.2792	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
4	20L	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	108.2792	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	25SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	107.5115	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	25SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	107.5115	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	20SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	107.3727	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	20SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120.0	154.0	1.00000	107.3727	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	25SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	160.0	1.00000	104.2561	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	25SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	160.0	1.00000	104.2561	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	20SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	160.0	1.00000	103.9064	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	20SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	160.0	1.00000	103.9064	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	25SP	G16_070	FROM->TO	PANTEX NORTH SUB - PANTEX SOUTH SUB 115KV CKT 1	160.0	160.0	1.00000	103.8064	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	25SP	G16_070	FROM->TO	PANTEX NORTH SUB - PANTEX SOUTH SUB 115KV CKT 1	160.0	160.0	1.00000	103.8064	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	20SP	G16_070	FROM->TO	PANTEX NORTH SUB - PANTEX SOUTH SUB 115KV CKT 1	160.0	160.0	1.00000	103.4625	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	20SP	G16_070	FROM->TO	PANTEX NORTH SUB - PANTEX SOUTH SUB 115KV CKT 1	160.0	160.0	1.00000	103.4625	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
4	25SP	G16_070	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.32218	108.6242	BASE CASE
4	17G	G16_070	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.32346	102.851	BASE CASE
5	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.26008	131.0206	CHERRY1 - HARRINGTON STATION 230KV CKT 1
5	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.32771	127.188	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
5	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.20485	102.1805	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
5	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.21696	100.9379	CHISHOLM6 230.00 - SWEETWATER 230KV CKT 1
5	17G	G16_070	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.20485	99.9	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
5	17G	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	159.0	168.0	1.00000	99.6	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
5	17SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	159.0	168.0	1.00000	99.6	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
5	17SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	159.0	168.0	1.00000	99.6	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
5	20L	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	159.0	168.0	1.00000	99.3	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
5	20L	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	159.0	168.0	1.00000	99.3	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
5	20L	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	168.0	1.00000	101.4401	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
5	20L	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	168.0	1.00000	101.4401	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
5	17G	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	168.0	1.00000	100.6653	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
5	17SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	168.0	1.00000	100.0828	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
5	17SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	168.0	1.00000	100.0828	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
5	25SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	168.0	1.00000	99.3	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
5	25SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	168.0	1.00000	99.3	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
5	20SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	168.0	1.00000	99	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
5	20SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159.0	168.0	1.00000	99	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
5	25SP	G16_070	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.32218	108.6241	BASE CASE
5	17G	G16_070	FROM->TO	SPSNORTH_STX	1160.0	1160.0	0.32346	102.851	BASE CASE
0	20L	G16_071	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766.0	923.0	0.05937	106.3795	BASE CASE
0	20L	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106.0	130.0	1.00000	184.2206	BASE CASE
0	17G	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106.0	130.0	1.00000	183.532	BASE CASE
0	17SP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106.0	130.0	1.00000	183.4118	BASE CASE
0	20SP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106.0	130.0	1.00000	182.2263	BASE CASE
0	16WP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106.0	130.0	1.00000	182.0945	BASE CASE
0	25SP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106.0	130.0	1.00000	181.9627	BASE CASE
0	20WP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106.0	130.0	1.00000	180.8561	BASE CASE
0	20L	G16_071	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135.0	1195.0	0.06655	103.411	BASE CASE
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69387	167.3426	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69387	165.481	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69387	163.7168	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69387	160.3957	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69350	157.4272	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69350	155.9306	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69294	154.2499	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69350	153.5384	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69294	152.6867	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69350	150.9634	P12:138:OKGE:3TERM7
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69350	150.9404	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25795	150.3185	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69294	149.7643	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25645	148.8439	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25305	146.8072	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69294	146.4665	P12:138:OKGE:3TERM7
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69294	146.4526	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25151	146.3132	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.35310	143.5596	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43630	143.5185	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43630	142.8707	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43630	141.78	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43647	141.2346	P12:138:OKGE:3TERM7
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25884	140.873	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43630	140.6467	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25400	140.5469	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.35237	138.9921	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25639	137.5963	SUMNER 4 - TIMBJCT4 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25750	137.3807	SUMNER 4 - TIMBJCT4 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25305	136.2617	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25151	135.7241	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27854	135.5873	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27854	135.2565	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28642	134.5028	TIMBER JUNCTION - UDALL 69KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27751	134.3345	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	134.1722	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27751	134.0358	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27712	133.9128	P12:069:WERE:BELL-CRSW_69::
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28642	133.5433	RICHLAND - UDALL 69KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.35310	133.1283	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28517	132.8925	TIMBER JUNCTION - UDALL 69KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25639	132.8204	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25750	132.6828	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28517	132.6395	P12:069:WERE:TIMJ-WEAV_69::
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27712	132.3401	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27854	132.2728	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28642	132.2375	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43681	131.9636	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25820	131.804	SUMNER 4 - TIMBJCT4 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28517	131.6327	RICHLAND - UDALL 69KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28338	131.166	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25400	130.7204	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28642	130.6596	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43681	130.5	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28517	130.2769	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27854	129.8276	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25468	129.6024	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43681	129.4196	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43614	129.2502	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28216	129.1795	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28338	129.1335	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25949	128.9435	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25795	128.9012	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25949	128.8864	OSAGE - WEBB CITY TAP 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27712	128.8353	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25505	128.7863	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28517	128.4528	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27854	128.4462	BELL - PECK 69KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25645	128.4049	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25469	128.1513	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25469	128.1513	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43614	127.995	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25435	127.935	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25949	127.8494	FAIRFAX TAP - SHIDLER 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25949	127.8492	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25468	127.6473	G15063_T 345.00 - WOODRING 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28705	127.6067	TIMBER JUNCTION - UDALL 69KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25833	127.4632	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26758	127.4177	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25833	127.4041	OSAGE - WEBB CITY TAP 138KV CKT 1
0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43611	127.3901	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27902	127.3644	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25397	127.3271	P12:138:OKGE:3TERM2
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28216	127.3056	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25358	127.2866	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27712	127.2581	BELL - PECK 69KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25391	127.2573	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28705	127.2459	P12:069:WERE:TIMJ-WEAV_69::
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27712	127.1246	P12:069:WERE:BELL-MURR_69::
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25820	127.0381	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27854	126.8816	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25435	126.7782	917X
0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43681	126.7556	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26618	126.6232	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25435	126.5349	G15066_T 345.00 - SOONER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25833	126.4594	FAIRFAX TAP - SHIDLER 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25833	126.4591	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25353	126.3882	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25353	126.3882	CLEVELAND - TULSA NORTH 345KV CKT 1
0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43611	126.2214	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.24818	126.1689	EL PASO - ROSE HILL 138KV CKT 1
0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43614	126.0911	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25151	126.0751	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25529	126.0578	SHIDLER - WEST PAWHUSKA 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25320	126.0129	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25529	126.0009	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25529	125.825	DOMES - PAWHUSKA TAP 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25529	125.7696	P12:138:AEPW:MOUNDRD4:SHIDLER4
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25516	125.7653	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25305	125.7027	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25529	125.6675	DOMES - MOUND ROAD 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28705	125.6451	RICHLAND - UDALL 69KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25320	125.6405	917X
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27712	125.5287	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25358	125.4547	G15063_T 345.00 - WOODRING 345KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25320	125.3712	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.24707	125.3139	EL PASO - ROSE HILL 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27956	125.2908	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25430	125.2264	MORISNT4 138.00 - SOONER 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25424	125.1503	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	125.1492	GEN542955 1-LACYGNE UNIT #1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25424	125.1365	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27902	125.1359	P12:069:WERE:BELL-CRSW_69::
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25412	125.1099	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	125.0809	GEN542962 2-IATAN UNIT #2
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25412	125.0549	MCELROY - UNVRSTY4 138.00 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	124.9549	GEN562902 1-G15052_3 0.6900
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25413	124.9261	SHIDLER - WEST PAWHUSKA 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25412	124.9023	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	124.8996	GEN635024 4-WALTER SCOTT UNIT 4
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25413	124.8854	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27956	124.8637	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25412	124.8571	KINZE - MCELROY 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	124.7967	GEN542956 2-LACYGNE UNIT #2
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	124.7554	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	124.7545	GEN542957 1-IATAN UNIT #1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	124.751	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	124.7508	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25412	124.714	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25387	124.6749	SOONER - SPRING CREEK 345KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25413	124.6072	DOMES - PAWHUSKA TAP 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	124.6059	GEN532720 1-CANEYWF1 0.6900
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25387	124.599	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	124.5834	GEN635023 3-WALTER SCOTT UNIT 3
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25413	124.4899	P12:138:AEPW:MOUNDRD4:SHIDLER4
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25413	124.4855	DOMES - MOUND ROAD 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25343	124.4528	DELAWARE - NORTHEAST STATION 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25343	124.4528	DELAWARE - NORTHEAST STATION 345KV CKT 1
0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43611	124.322	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25404	124.1347	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25311	123.9343	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25316	123.8486	MORISNT4 138.00 - SOONER 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25311	123.8101	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43626	123.7656	P12:138:OKGE:3TERM7
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28705	123.6532	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25298	123.621	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25298	123.5716	MCELROY - UNVRSTY4 138.00 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25299	123.5494	P12:138:WFEC:MSL15
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25299	123.5394	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.24210	123.5286	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43614	123.4048	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25298	123.3905	KINZE - MCELROY 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25298	123.3575	P12:138:OKGE:3TERM47
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25299	123.3482	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25225	123.2333	P12:069:WERE:ARKA-CRSW_69::

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27902	123.1663	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25225	123.159	P12:069:WERE:ARKA-OAK_69::
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	122.8438	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	122.5788	BASE CASE
0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43623	122.1767	P12:138:OKGE:3TERM7
0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43611	121.8373	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28410	121.6728	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26007	121.2573	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25242	121.2466	BASE CASE
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25574	121.2391	P12:138:OKGE:3TERM2
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26007	121.2074	OSAGE - WEBB CITY TAP 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25567	121.1577	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25531	121.1288	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28705	121.0697	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27902	121.0005	BELL - PECK 69KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27902	120.8184	P12:069:WERE:BELL-MURR_69::
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25342	120.6319	LACYGNE - STILWELL 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25884	120.5868	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25315	120.5634	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26403	120.4662	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25400	120.4661	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25362	120.4659	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	120.4193	GEN336821 1-GRAND GULF UNIT
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	120.3725	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	120.3351	GEN562882 1-G15047_3 0.6900
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26403	120.2991	DMNCRKT4 - MILLER 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26424	120.2216	WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26403	120.1809	MILLER - SOONER 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26007	120.1655	FAIRFAX TAP - SHIDLER 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26007	120.1653	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25526	120.1386	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25526	120.1386	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	120.1294	GEN514806 1-SOONER UNIT 2
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25321	120.0487	BLACKBERRY - NEOSHO 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25493	120.0243	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	120.0089	GEN587493 1-G16-072-GEN10.6900
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	120.0027	GEN562429 1-G13-029 0.6900
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26078	120.0013	OSAGE - SOONER PUMP TAP 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26078	119.9248	SOONER - SOONER PUMP TAP 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25274	119.8712	BOEING - STEARMAN 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	119.6109	GEN301382 1-1OSAGEWINDG10.6900
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25232	119.4046	LACYGNE - STILWELL 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	119.3998	GEN515483 1-BLKWLWD1 0.6900
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25204	119.3903	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25531	119.3645	G15063_T 345.00 - WOODRING 345KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25162	119.3586	BOEING - CANAL 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	119.2585	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28410	119.2139	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	119.1788	GEN563032 1-G15067_3 0.4180
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25493	118.9804	917X
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	118.955	GEN562611 1-G14_064_3 0.6900
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.24891	118.9274	EL PASO - ROSE HILL 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25209	118.7919	BLACKBERRY - NEOSHO 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25493	118.7897	G15066_T 345.00 - SOONER 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27902	118.4885	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25162	118.4307	BOEING - STEARMAN 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25588	118.3584	SHIDLER - WEST PAWHUSKA 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26301	118.3482	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25588	118.2974	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26301	118.201	DMNCRKT4 - MILLER 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	118.1657	GEN532722 1-EVANS ENERGY CENTER UNIT 2
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26301	118.0885	MILLER - SOONER 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25588	117.9534	DOMES - PAWHUSKA TAP 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25242	117.942	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25974	117.9174	OSAGE - SOONER PUMP TAP 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25155	117.9004	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25974	117.8462	SOONER - SOONER PUMP TAP 138KV CKT 1
0	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25031	117.8108	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25125	117.808	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25588	117.7911	P12:138:AEPW:MOUNDRD4:SHIDLER4

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25588	117.7652	DOMES - MOUND ROAD 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25576	117.6792	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26299	117.6684	WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25398	117.614	P12:069:WERE:ARKA-CRSW_69::
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	117.6138	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	117.6034	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	117.603	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25492	117.5115	MORISNT4 138.00 - SOONER 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25125	117.4988	59TH ST - EL PASO 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25484	117.4764	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25281	117.4322	BENTON - WICHITA 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	117.4199	GEN542955 1-LACYGNE UNIT #1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25484	117.3551	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	117.3468	GEN542962 2-IATAN UNIT #2
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25474	117.2269	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25474	117.161	MCELROY - UNVRSTY4 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25450	117.1596	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.29695	117.0989	CHIKASKIA - KILDARE4 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25473	117.0687	P12:138:WFEC:MSL15
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	117.0577	GEN542956 2-LACYGNE UNIT #2
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25432	117.0565	GRDA1 - GREC TAP5 345.00 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25473	117.0356	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25398	117.0046	P12:069:WERE:ARKA-OAK_69::
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	116.9738	GEN562902 1-G15052_3 0.6900
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25368	116.9539	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	116.9409	GEN542957 1-IATAN UNIT #1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25361	116.9239	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25474	116.8735	KINZE - MCELROY 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25361	116.8735	45TH ST4 138.00 - COWSKIN 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25473	116.8448	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25361	116.8348	P12:138:WERE:COWS-GECT_138::
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25474	116.7964	P12:138:OKGE:3TERM47
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	116.7859	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	116.7701	GEN635024 4-WALTER SCOTT UNIT 4
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25521	116.753	BUTLER COUNTY NO. 10 BENTON - WEAVER 69KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25411	116.7399	DELAWARE - NORTHEAST STATION 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25411	116.7399	DELAWARE - NORTHEAST STATION 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26849	116.7381	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25521	116.7081	P12:069:WERE:MOBI-WEAV_69::
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25450	116.6777	SOONER - SPRING CREEK 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	116.6688	GEN532720 1-CANEYWF1 0.6900
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25368	116.6483	HOOVER NORTH - LAKERIDGE 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25306	116.5917	ROSE HILL (ROSE TX-3) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25045	116.5823	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25306	116.5793	ROSE HILL (ROSE TX-5) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25015	116.3187	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25015	115.9713	59TH ST - EL PASO 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25015	115.93	P12:138:WERE:ELPA-MURR_138::
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.29574	115.7869	CHIKASKIA - KILDARE4 138KV CKT 1
0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.24380	115.5657	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28338	115.4951	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28338	115.4877	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26046	115.3817	P13:069-138:WERE:WEAV_TX-2::
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	114.8745	GEN514805 1-SOONER UNIT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	114.7127	BASE CASE
0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.24352	114.7062	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25354	114.6995	GEN562691 1-G15_015_3 0.6900
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25155	114.6426	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27357	113.8794	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28216	113.6364	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28216	113.6288	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25045	113.3778	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25200	113.1657	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25330	112.954	BOEING - CANAL 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	112.8186	GEN335831 1-RIVERBEND UNIT#1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	112.7995	P12:138:AEPW:CORNVIL4:DUNCAN-4
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	112.7584	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	112.7285	GEN587463 1-G16-068-GEN10.6900
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	112.694	GEN562992 1-G15063_3 0.6900
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	112.6261	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25384	112.5994	BLACKBERRY - NEOSHO 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	112.5894	GEN336153 1-WATERFORD UNIT#3
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25488	112.5411	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25296	112.4883	EL PASO - SIXTY-FOURTH (64TH) 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	112.4881	GEN562882 1-G15047_3 0.6900
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25097	112.3778	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	112.2556	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	112.2158	GEN562429 1-G13-029 0.6900
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	112.2124	GEN587493 1-G16-072-GEN10.6900
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	112.2089	GEN336821 1-GRAND GULF UNIT
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	112.143	GEN533561 1-CITY OF WINFIELD
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25166	112.1003	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27236	112.009	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25330	111.9915	BOEING - STEARMAN 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	111.9272	GEN514806 1-SOONER UNIT 2
0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25428	111.8796	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	111.7606	GEN301382 1-1OSAGEWINDG10.6900
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25166	111.5941	59TH ST - EL PASO 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25166	111.5548	P12:138:WERE:ELPA-MURR_138::
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	111.5274	GEN515483 1-BLKWLWD1 0.6900
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25155	111.5065	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	111.4568	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26455	111.4155	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	111.3248	GEN563032 1-G15067_3 0.4180
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26455	111.1638	DMNCRKT4 - MILLER 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	111.1156	GEN562611 1-G14_064_3 0.6900
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25200	111.0215	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26455	111.0076	MILLER - SOONER 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26132	110.922	OSAGE - SOONER PUMP TAP 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26132	110.811	SOONER - SOONER PUMP TAP 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25226	110.8071	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19653	110.7832	TIMBER JUNCTION - UDALL 69KV CKT 1
0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.24355	110.487	KILDARE4 - WHITE EAGLE 138KV CKT 1
0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19653	110.3699	P12:069:WERE:TIMJ-WEAV_69::
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25045	110.2389	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19653	109.9801	RICHLAND - UDALL 69KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26479	109.6159	WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25097	109.5091	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.29761	109.3619	CHIKASKIA - KILDARE4 138KV CKT 1
0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25438	109.217	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25200	108.687	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19653	108.5522	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25265	107.9722	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19655	107.9345	TIMBER JUNCTION - UDALL 69KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25226	107.6369	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19596	107.5978	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19655	107.5966	RICHLAND - UDALL 69KV CKT 1
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25097	107.2367	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	106.9026	GEN562691 1-G15_015_3 0.6900
0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25151	106.8026	RANCHRD7 345.00 - SOONER 345KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26228	106.6838	P13:069-138:WERE:WEAV_TX-2::
0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19653	106.6654	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19655	106.6295	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19591	106.6133	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19656	106.1384	TIMBER JUNCTION - UDALL 69KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	106.1051	GEN514805 1-SOONER UNIT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28410	106.0508	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28410	106.0428	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25265	105.8914	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25305	105.8459	RANCHRD7 345.00 - SOONER 345KV CKT 1
0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19656	105.7222	P12:069:WERE:TIMJ-WEAV_69::
0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19596	105.5336	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19655	105.4734	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25435	105.4452	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19656	105.3176	RICHLAND - UDALL 69KV CKT 1
0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19591	104.6471	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25226	104.4982	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.17495	104.3098	BASE CASE
0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19656	103.8305	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25265	103.7781	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19598	103.7499	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27428	102.6811	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.17816	102.4367	BASE CASE
0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19656	101.8648	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19598	101.83	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.20106	101.1113	CHIKASKIA - KILDARE4 138KV CKT 1
0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.17814	100.9731	BASE CASE
0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.20456	100	CHIKASKIA - KILDARE4 138KV CKT 1
0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25400	99	RANCHRD7 345.00 - SOONER 345KV CKT 1
0	16WP	G16_071	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.09154	110.913	BASE CASE
0	20L	G16_071	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.06837	110.0936	BASE CASE
0	20WP	G16_071	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.08852	109.1163	BASE CASE
0	17G	G16_071	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.08564	108.6019	BASE CASE
0	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194.0	222.0	0.40205	121.0178	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194.0	222.0	0.38833	103.9828	RANCHRD7 345.00 - SOONER 345KV CKT 1
0	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194.0	222.0	0.40205	103.3278	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
0	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194.0	222.0	0.46526	102.5459	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
0	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194.0	222.0	0.50128	100.1307	P12:138:WERE:CRSW-SUMN_138::
0	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194.0	222.0	0.50128	100.1046	CRESWELL - OXFORD 138KV CKT 1
0	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194.0	222.0	0.50128	99.8	OXFORD - SUMNER 4 138KV CKT 1
0	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194.0	222.0	0.46526	99.7	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
0	17SP	G16_071	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.03671	107.8981	BASE CASE
0	17G	G16_071	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.03532	103.3015	BASE CASE
0	20L	G16_071	-	Non-Converged Contingency	1141.0	1195.0	0.06837	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G16_071	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06979	105.1799	BASE CASE
0	20L	G16_071	TO->FROM	OSAGE - WHITE EAGLE 138KV CKT 1	191.0	191.0	0.22008	103.407	CONTINENTAL EMPIRE - WHITE EAGLE 138KV CKT 1
2	20L	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106.0	130.0	1.00000	183.9446	BASE CASE
2	17G	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106.0	130.0	1.00000	183.3753	BASE CASE
2	17SP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106.0	130.0	1.00000	183.2135	BASE CASE
2	20SP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106.0	130.0	1.00000	182.0572	BASE CASE
2	16WP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106.0	130.0	1.00000	181.9962	BASE CASE
2	25SP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106.0	130.0	1.00000	181.8634	BASE CASE
2	20WP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106.0	130.0	1.00000	180.6457	BASE CASE
2	20L	G16_071	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135.0	1195.0	0.06457	99.2	BASE CASE
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69389	167.456	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69389	165.595	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69389	163.8263	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69389	160.5404	P12:138:OKGE:3TERM7
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69389	160.5139	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69352	157.2806	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69352	155.7885	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25818	154.5392	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69295	154.1672	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69352	153.4024	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25669	152.8648	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69295	152.6045	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25341	151.2902	G15052_T 345.00 - ROSE HILL 345KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69352	151.002	P12:138:OKGE:3TERM7
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69352	150.9807	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25188	150.6868	G15052_T 345.00 - ROSE HILL 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69295	149.6217	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69295	146.3156	P12:138:OKGE:3TERM7
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.69295	146.3035	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.35334	145.9314	KILDARE4 - WHITE EAGLE 138KV CKT 1
2	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43648	143.5434	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25894	143.1581	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43648	142.8987	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25422	142.4171	G15052_T 345.00 - ROSE HILL 345KV CKT 1
2	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43648	141.8063	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
2	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43665	141.2569	P12:138:OKGE:3TERM7
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25341	141.2029	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25663	141.1886	SUMNER 4 - TIMBJCT4 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.35261	141.168	KILDARE4 - WHITE EAGLE 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25774	141.0051	SUMNER 4 - TIMBJCT4 138KV CKT 1
2	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43648	140.6826	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25188	140.4024	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27878	139.5088	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27878	139.1787	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27878	139.0026	P12:069:WERE:BELL-CRSW_69::
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28667	138.5697	TIMBER JUNCTION - UDALL 69KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28667	138.3441	P12:069:WERE:TIMJ-WEAV_69::
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27775	138.1741	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27775	137.8761	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27736	137.7429	P12:069:WERE:BELL-CRSW_69::
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28667	137.5832	RICHLAND - UDALL 69KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28543	136.7659	TIMBER JUNCTION - UDALL 69KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28543	136.5192	P12:069:WERE:TIMJ-WEAV_69::
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25774	136.4257	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28667	136.2806	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27878	136.2021	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27736	136.187	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	135.8974	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28543	135.5116	RICHLAND - UDALL 69KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28361	134.8887	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28667	134.71	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28543	134.1595	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.35328	134.1318	KILDARE4 - WHITE EAGLE 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27878	133.7334	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25834	133.6873	SUMNER 4 - TIMBJCT4 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25818	133.5164	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25494	133.3501	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43699	133.0502	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25422	132.9283	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25669	132.9044	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28361	132.8702	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28239	132.7542	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27736	132.6044	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25535	132.4601	P12:138:OKGE:3TERM2
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25529	132.4045	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25973	132.3671	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27878	132.3524	BELL - PECK 69KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28543	132.3431	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25973	132.311	OSAGE - WEBB CITY TAP 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27878	132.2286	P12:069:WERE:BELL-MURR_69::
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25464	131.9065	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25496	131.89	CLEVELAND - TULSA NORTH 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25496	131.89	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43699	131.5886	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25494	131.5044	G15063_T 345.00 - WOODRING 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25973	131.27	FAIRFAX TAP - SHIDLER 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25973	131.2697	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26781	131.1576	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27736	131.105	BELL - PECK 69KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25188	131.0775	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25341	130.9969	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27736	130.9761	P12:069:WERE:BELL-MURR_69::
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28239	130.9622	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25421	130.8061	P12:138:OKGE:3TERM2
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27878	130.7945	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25383	130.7679	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25415	130.7379	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25857	130.7238	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25464	130.7227	917X
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25857	130.6687	OSAGE - WEBB CITY TAP 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25381	130.6461	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25381	130.6461	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43699	130.6032	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25464	130.4156	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26640	130.1957	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25349	129.8613	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25857	129.6425	FAIRFAX TAP - SHIDLER 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25857	129.6422	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25383	129.6359	G15063_T 345.00 - WOODRING 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28720	129.6273	TIMBER JUNCTION - UDALL 69KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25553	129.5867	SHIDLER - WEST PAWHUSKA 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.24840	129.5723	EL PASO - ROSE HILL 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25553	129.5302	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27915	129.4328	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27736	129.373	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25539	129.3522	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25349	129.3506	917X
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25553	129.3183	DOMES - PAWHUSKA TAP 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28720	129.2672	P12:069:WERE:TIMJ-WEAV_69::
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25553	129.2535	P12:138:AEPW:MOUNDRD4:SHIDLER4
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25553	129.1593	DOMES - MOUND ROAD 138KV CKT 1
2	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43630	129.1439	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25349	129.0467	G15066_T 345.00 - SOONER 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25834	128.9316	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25454	128.8458	MORISNT4 138.00 - SOONER 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25447	128.8458	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	128.7852	GEN542962 2-IATAN UNIT #2
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25447	128.767	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25435	128.7379	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	128.7118	GEN542955 1-LACYGNE UNIT #1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25435	128.6831	MCELROY - UNVRSTY4 138.00 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.24729	128.6505	EL PASO - ROSE HILL 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25436	128.5447	P12:138:WFEC:MSL15
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25436	128.5087	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25435	128.485	KINZE - MCELROY 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25435	128.4743	P12:138:OKGE:3TERM47
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	128.4678	GEN562902 1-G15052_3 0.6900
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	128.4302	GEN635024 4-WALTER SCOTT UNIT 4
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25412	128.4068	SOONER - SPRING CREEK 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	128.3801	GEN542956 2-LACYGNE UNIT #2
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	128.3485	GEN542957 1-IATAN UNIT #1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25436	128.3203	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	128.3159	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	128.3136	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	128.3134	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43712	128.2938	P12:138:OKGE:3TERM7
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25437	128.2813	SHIDLER - WEST PAWHUSKA 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25361	128.2502	P12:069:WERE:ARKA-OAK_69::
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25437	128.2397	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	128.2026	GEN532720 1-CANEYWF1 0.6900
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25437	127.963	DOMES - PAWHUSKA TAP 138KV CKT 1
2	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43630	127.8822	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43699	127.8576	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25437	127.8449	DOMES - MOUND ROAD 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25437	127.8345	P12:138:AEPW:MOUNDRD4:SHIDLER4
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28720	127.6688	RICHLAND - UDALL 69KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25428	127.573	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25335	127.4011	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27971	127.3424	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43628	127.3271	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25340	127.2887	MORISNT4 138.00 - SOONER 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25335	127.2764	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27915	127.1887	P12:069:WERE:BELL-CRSW_69::
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25322	127.0743	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25323	127.0275	P12:138:WFEC:MSL15
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25322	127.0243	MCELROY - UNVRSTY4 138.00 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25323	126.9954	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27971	126.9161	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25322	126.8439	KINZE - MCELROY 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25322	126.821	P12:138:OKGE:3TERM47
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25159	126.8143	BENTON - WICHITA 345KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25323	126.804	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25248	126.6907	P12:069:WERE:ARKA-CRSW_69::
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25248	126.6102	P12:069:WERE:ARKA-OAK_69::
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	126.1996	BASE CASE
2	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43628	126.1592	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
2	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43630	125.9794	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	125.7346	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28720	125.6804	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27915	125.2454	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25265	124.7078	BASE CASE
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25340	124.4025	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
2	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43628	124.2582	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25386	124.2396	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26449	124.1937	WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	124.128	GEN336821 1-GRAND GULF UNIT

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	124.0903	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26427	124.0333	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
2	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.24234	124.0183	KILDARE4 - WHITE EAGLE 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25225	123.9815	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	123.9523	GEN562882 1-G15047_3 0.6900
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26427	123.8662	DMNCRKT4 - MILLER 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26427	123.748	MILLER - SOONER 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	123.7007	GEN514806 1-SOONER UNIT 2
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28424	123.7004	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
2	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43642	123.6803	P12:138:OKGE:3TERM7
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	123.5822	GEN587493 1-G16-072-GEN10.6900
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	123.576	GEN562429 1-G13-029 0.6900
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25297	123.5716	BOEING - STEARMAN 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26102	123.5411	OSAGE - SOONER PUMP TAP 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26102	123.465	SOONER - SOONER PUMP TAP 138KV CKT 1
2	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43630	123.3311	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25894	123.2499	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	123.2224	GEN301382 1-1OSAGEWINDG10.6900
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25589	123.1049	P12:138:OKGE:3TERM2
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28720	123.101	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27915	123.0852	BELL - PECK 69KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25548	123.0561	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25583	123.0231	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	123.0049	GEN515483 1-BLKWLWD1 0.6900
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25230	122.9998	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25422	122.9696	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27915	122.9042	P12:069:WERE:BELL-MURR_69::
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26023	122.889	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	122.8601	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26023	122.8413	OSAGE - WEBB CITY TAP 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25186	122.8325	BOEING - CANAL 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	122.8019	GEN563032 1-G15067_3 0.4180
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25335	122.7452	BLACKBERRY - NEOSHO 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	122.5762	GEN562611 1-G14_064_3 0.6900
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25116	122.4789	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25349	122.4727	NEOSHO - WOLF CREEK 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25303	122.4078	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25513	122.2897	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25545	122.1622	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25545	122.1622	CLEVELAND - TULSA NORTH 345KV CKT 1
2	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43640	122.1395	P12:138:OKGE:3TERM7
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26195	121.9618	P13:069-138:WERE:WEAV_TX-2::
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25186	121.9354	BOEING - STEARMAN 138KV CKT 1
2	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.43628	121.8111	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26023	121.7947	FAIRFAX TAP - SHIDLER 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26023	121.7944	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26325	121.6933	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25150	121.6011	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26325	121.541	DMNCRKT4 - MILLER 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26325	121.4282	MILLER - SOONER 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25265	121.4095	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25225	121.3015	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25150	121.3008	59TH ST - EL PASO 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25998	121.281	OSAGE - SOONER PUMP TAP 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25150	121.2632	P12:138:WERE:ELPA-MURR_138::
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25513	121.2494	917X
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28424	121.2478	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25998	121.209	SOONER - SOONER PUMP TAP 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25548	121.2058	G15063_T 345.00 - WOODRING 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25303	121.1653	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25197	121.0604	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25235	121.0555	NEOSHO - WOLF CREEK 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25513	120.9413	G15066_T 345.00 - SOONER 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.24904	120.8207	EL PASO - ROSE HILL 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.29718	120.7313	CHIKASKIA - KILDARE4 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27915	120.5795	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25603	120.1078	SHIDLER - WEST PAWHUSKA 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25603	120.0464	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	119.9558	GEN532722 1-EVANS ENERGY CENTER UNIT 2
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25040	119.9054	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25116	119.8411	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25197	119.8405	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25303	119.8177	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25603	119.6979	DOMES - PAWHUSKA TAP 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25040	119.5598	59TH ST - EL PASO 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25603	119.535	P12:138:AEPW:MOUNDRD4:SHIDLER4
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25040	119.5208	P12:138:WERE:ELPA-MURR_138::
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25591	119.5188	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25603	119.5084	DOMES - MOUND ROAD 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25412	119.4554	P12:069:WERE:ARKA-CRSW_69::
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	119.4057	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	119.3973	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	119.397	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25507	119.3732	MORISNT4 138.00 - SOONER 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25499	119.3206	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28361	119.274	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28361	119.2667	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.29597	119.2593	CHIKASKIA - KILDARE4 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26072	119.231	P13:069-138:WERE:WEAV_TX-2::
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25499	119.1989	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	119.1891	GEN542962 2-IATAN UNIT #2
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	119.188	GEN542955 1-LACYGNE UNIT #1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25488	119.1061	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
2	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25053	119.0287	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25488	119.0263	MCELROY - UNVRSTY4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25465	119.0131	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25308	118.981	BENTON - WICHITA 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25487	118.9228	P12:138:WFEC:MSL15
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25447	118.91	GRDA1 - GREC TAP5 345.00 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25487	118.8798	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25412	118.8484	P12:069:WERE:ARKA-OAK_69::
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	118.8426	GEN542956 2-LACYGNE UNIT #2
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25382	118.791	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	118.779	GEN542957 1-IATAN UNIT #1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25376	118.7651	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	118.7645	GEN562902 1-G15052_3 0.6900
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25488	118.7384	KINZE - MCELROY 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25225	118.7207	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25376	118.7173	45TH ST4 138.00 - COWSKIN 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25487	118.6893	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25489	118.6807	P12:138:OKGE:3TERM47
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25376	118.6727	P12:138:WERE:COWS-GECT_138::
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25197	118.614	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25536	118.5783	BUTLER COUNTY NO. 10 BENTON - WEAVER 69KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26862	118.5402	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25536	118.5331	P12:069:WERE:MOBI-WEAV_69::
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	118.5245	GEN532720 1-CANEYWF1 0.6900
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	118.444	GEN514805 1-SOONER UNIT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25378	118.305	GEN562691 1-G15_015_3 0.6900
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.24404	117.9715	KILDARE4 - WHITE EAGLE 138KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27379	117.7971	RENFROW7 345.00 (BANK 1) 345/138/13.8KV TRANSFORMER CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28239	117.2569	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28239	117.2495	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25116	117.2349	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	116.5609	BASE CASE
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27259	115.7424	RENFROW7 345.00 (BANK 1) 345/138/13.8KV TRANSFORMER CKT 1
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25449	115.3012	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
2	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.24372	115.2633	KILDARE4 - WHITE EAGLE 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25345	114.7352	BOEING - CANAL 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	114.6504	P12:138:AEPW:CORNVIL4:DUNCAN-4
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25284	114.6141	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	114.5738	GEN562992 1-G15063_3 0.6900
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	114.5725	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	114.5256	GEN336153 1-WATERFORD UNIT#3
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25502	114.4336	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	114.3729	GEN562882 1-G15047_3 0.6900
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25311	114.33	EL PASO - SIXTY-FOURTH (64TH) 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	114.2195	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	114.1674	GEN336821 1-GRAND GULF UNIT
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	114.0808	GEN533561 1-CITY OF WINFIELD

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	114.0627	GEN562429 1-G13-029 0.6900
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	114.0589	GEN587493 1-G16-072-GEN10.6900
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	113.8084	GEN514806 1-SOONER UNIT 2
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25345	113.7808	BOEING - STEARMAN 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25182	113.7511	59TH ST - GILL ENERGY CENTER SOUTH 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	113.6298	GEN301382 1-1OSAGEWINDG10.6900
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25390	113.4944	BLACKBERRY - NEOSHO 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	113.3747	GEN515483 1-BLKWLWD1 0.6900
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	113.306	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25182	113.2399	59TH ST - EL PASO 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	113.2147	GEN563032 1-G15067_3 0.4180
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25357	113.2079	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26471	113.2004	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25182	113.1981	P12:138:WERE:ELPA-MURR_138::
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	113.0015	GEN562611 1-G14_064_3 0.6900
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26471	112.9486	DMNCRKT4 - MILLER 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25403	112.9248	NEOSHO - WOLF CREEK 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26471	112.7863	MILLER - SOONER 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26147	112.7108	OSAGE - SOONER PUMP TAP 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26147	112.6009	SOONER - SOONER PUMP TAP 138KV CKT 1
2	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25188	112.5456	RANCHRD7 345.00 - SOONER 345KV CKT 1
2	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25341	112.2598	RANCHRD7 345.00 - SOONER 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25357	112.0553	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25284	112.0058	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
2	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19668	111.957	TIMBER JUNCTION - UDALL 69KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26495	111.6254	WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19677	111.5908	TIMBER JUNCTION - UDALL 69KV CKT 1
2	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19668	111.5478	P12:069:WERE:TIMJ-WEAV_69::
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19677	111.3401	P12:069:WERE:TIMJ-WEAV_69::
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.29775	111.3152	CHIKASKIA - KILDARE4 138KV CKT 1
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19677	111.2534	RICHLAND - UDALL 69KV CKT 1
2	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19668	111.1556	RICHLAND - UDALL 69KV CKT 1
2	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.24376	111.0088	KILDARE4 - WHITE EAGLE 138KV CKT 1
2	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25451	110.8596	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25357	110.8144	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19677	110.2885	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19611	110.041	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
2	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19668	109.7304	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25284	109.4017	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19677	109.1344	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
2	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19609	108.8128	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.26244	108.8053	P13:069-138:WERE:WEAV_TX-2::
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	108.7715	GEN562691 1-G15_015_3 0.6900
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28424	108.1214	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.28424	108.1138	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19611	108.0603	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25429	107.9647	GEN514805 1-SOONER UNIT 1
2	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19668	107.8475	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
2	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19674	107.2641	TIMBER JUNCTION - UDALL 69KV CKT 1
2	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25451	107.0193	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
2	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19674	106.8273	P12:069:WERE:TIMJ-WEAV_69::
2	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19609	106.7488	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
2	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19674	106.4206	RICHLAND - UDALL 69KV CKT 1
2	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.17517	105.1972	BASE CASE
2	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19674	104.9393	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
2	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19614	104.8884	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.27440	104.8234	RENFROW7 345.00 (BANK 1) 345/138/13.8KV TRANSFORMER CKT 1
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.17835	104.299	BASE CASE
2	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.17831	103.5367	BASE CASE
2	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19674	102.986	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
2	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19614	102.9758	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
2	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.25422	102.2856	RANCHRD7 345.00 - SOONER 345KV CKT 1
2	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.20126	102.0548	CHIKASKIA - KILDARE4 138KV CKT 1
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.20473	101.4438	CHIKASKIA - KILDARE4 138KV CKT 1
2	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.20470	101.1948	CHIKASKIA - KILDARE4 138KV CKT 1
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19611	100.0889	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
2	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.19611	100.0846	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
2	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160.0	160.0	0.17836	99.1	BASE CASE
2	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194.0	222.0	0.40146	118.4852	HUNTERS7 345.00 - WOODRING 345KV CKT 1
2	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194.0	222.0	0.46499	101.451	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194.0	222.0	0.40146	101.0642	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
2	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194.0	222.0	0.38783	100.7574	RANCHRD7 345.00 - SOONER 345KV CKT 1
2	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194.0	222.0	0.50115	99.2	CRESWELL - OXFORD 138KV CKT 1
2	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194.0	222.0	0.50115	99.2	P12:138:WERE:CRSW-SUMN_138::
2	17SP	G16_071	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.03660	106.6183	BASE CASE
2	17G	G16_071	TO->FROM	KINZE - MCELROY 138KV CKT 1	194.0	222.0	0.03514	101.2779	BASE CASE
2	20L	G16_071	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152.0	180.0	0.06948	100.6082	BASE CASE
2	20L	G16_071	TO->FROM	OSAGE - WHITE EAGLE 138KV CKT 1	191.0	191.0	0.21982	101.5354	CONTINENTAL EMPIRE - WHITE EAGLE 138KV CKT 1
0	20L	G16_072	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766.0	923.0	0.05276	106.3795	BASE CASE
0	20L	G16_072	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135.0	1195.0	0.06302	103.411	BASE CASE
0	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25583	123.7516	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38683	119.0208	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26021	118.7605	SOONER - SPRING CREEK 345KV CKT 1
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26021	118.5964	NORTHWEST - SPRING CREEK 345KV CKT 1
0	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25640	118.1324	SOONER - SPRING CREEK 345KV CKT 1
0	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38703	116.9985	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26301	115.0782	SOONER - SPRING CREEK 345KV CKT 1
0	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26301	114.9124	NORTHWEST - SPRING CREEK 345KV CKT 1
0	17SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26371	114.7557	NORTHWEST - SPRING CREEK 345KV CKT 1
0	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24428	112.9039	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24258	112.8507	SOONER - SPRING CREEK 345KV CKT 1
0	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24258	112.6347	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26610	112.1032	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39090	111.768	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25510	110.5395	SOONER - SPRING CREEK 345KV CKT 1
0	20WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25510	110.3508	NORTHWEST - SPRING CREEK 345KV CKT 1
0	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26811	109.7706	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26420	109.2805	SOONER - SPRING CREEK 345KV CKT 1
0	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25950	108.5758	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24428	108.4974	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26610	108.1729	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24428	107.1362	917X
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26610	106.5924	917X
0	20SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25690	106.4705	NORTHWEST - SPRING CREEK 345KV CKT 1
0	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26811	105.9213	G15066_T 345.00 - SOONER 345KV CKT 1
0	20WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25870	105.91	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25949	105.779	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25949	105.779	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24017	105.494	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24017	105.494	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26772	104.9021	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25950	104.8826	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26811	104.3285	917X
0	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30758	103.5312	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26159	103.4644	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26159	103.4644	CLEVELAND - TULSA NORTH 345KV CKT 1
0	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25950	103.3523	917X
0	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25301	102.5918	CLEVELAND - TULSA NORTH 345KV CKT 1
0	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25301	102.5918	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25206	102.4061	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
0	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29638	102.3205	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25870	102.1003	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.33786	101.9002	G16-061-TAP 345.00 - SOONER 345KV CKT 1
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24943	101.5219	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25980	101.2831	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
0	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39578	101.1682	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	17SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26772	101.157	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38683	101.0177	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	20SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25744	101.0041	SOONER - SPRING CREEK 345KV CKT 1
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24256	100.9301	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24613	100.9212	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.35081	100.837	G16-061-TAP 345.00 - SOONER 345KV CKT 1
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24943	100.8326	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24958	100.6685	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24458	100.3261	MORISNT4 138.00 - STILLWATER 138KV CKT 1
0	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24468	100.2721	P12:138:OKGE:3TERM2
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26689	99.8	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24671	99.8	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24943	99.7	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24985	99.6	CANEYRV7 345.00 - NEOSHO 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26772	99.5	917X
0	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25468	99.4	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
0	20WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25236	99.4	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.23814	99.3	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
0	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24076	99.2	G15052_T 345.00 - ROSE HILL 345KV CKT 1
0	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38703	99.1	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
0	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.23526	99.1	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	20WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30671	99	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	25SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25583	123.214	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38683	117.1692	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	16WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26021	116.9068	SOONER - SPRING CREEK 345KV CKT 1
0	16WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26021	116.7031	NORTHWEST - SPRING CREEK 345KV CKT 1
0	25SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25640	116.3018	SOONER - SPRING CREEK 345KV CKT 1
0	17G	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38703	114.6874	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17G	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26301	112.3679	SOONER - SPRING CREEK 345KV CKT 1
0	17G	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26301	112.1626	NORTHWEST - SPRING CREEK 345KV CKT 1
0	17SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26371	112.0701	NORTHWEST - SPRING CREEK 345KV CKT 1
0	20L	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.24258	109.685	SOONER - SPRING CREEK 345KV CKT 1
0	20L	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.24258	109.4128	NORTHWEST - SPRING CREEK 345KV CKT 1
0	20L	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.24428	109.231	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26610	108.5072	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.39090	108.4155	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25510	106.7791	SOONER - SPRING CREEK 345KV CKT 1
0	20WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25510	106.5426	NORTHWEST - SPRING CREEK 345KV CKT 1
0	17G	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26811	105.6554	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26420	105.3269	SOONER - SPRING CREEK 345KV CKT 1
0	25SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25950	104.3514	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.24428	104.0684	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26610	103.698	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.24428	102.3509	917X
0	20SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25690	101.8605	NORTHWEST - SPRING CREEK 345KV CKT 1
0	16WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26610	101.7539	917X
0	17G	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26811	100.941	G15066_T 345.00 - SOONER 345KV CKT 1
0	20WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25870	100.9191	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25949	100.7225	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25949	100.7225	CLEVELAND - TULSA NORTH 345KV CKT 1
0	16WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.24585	100.7076	GEN562992 1-G15063_3 0.6900
0	20L	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.24017	100.3618	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.24017	100.3618	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26772	99.8	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	25SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25950	99.8	G15066_T 345.00 - SOONER 345KV CKT 1
0	25SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.24012	99.3	GEN562992 1-G15063_3 0.6900
0	17G	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26811	99	917X
0	16WP	G16_072	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.07839	110.913	BASE CASE
0	20L	G16_072	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.06069	110.0936	BASE CASE
0	20WP	G16_072	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.08084	109.1163	BASE CASE
0	17G	G16_072	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.07249	108.6019	BASE CASE
0	16WP	G16_072	FROM->TO	HUNTERS7 345.00 - WOODRING 345KV CKT 1	1195.0	1195.0	0.80877	100.563	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	17G	G16_072	FROM->TO	HUNTERS7 345.00 - WOODRING 345KV CKT 1	1195.0	1195.0	0.80936	99.3	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20L	G16_072	-	Non-Converged Contingency	1141.0	1195.0	0.06069	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	25SP	G16_072	TO->FROM	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179.0	179.0	0.03306	104.5504	BASE CASE
0	16WP	G16_072	FROM->TO	VIOLA 7 345.00 - WICHITA 345KV CKT 1	1076.0	1076.0	0.74507	110.7477	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	17G	G16_072	FROM->TO	VIOLA 7 345.00 - WICHITA 345KV CKT 1	1076.0	1076.0	0.74279	110.4579	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	17SP	G16_072	FROM->TO	VIOLA 7 345.00 - WICHITA 345KV CKT 1	1076.0	1076.0	0.74719	106.8132	HUNTERS7 345.00 - WOODRING 345KV CKT 1
0	20SP	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448.0	492.8	0.25363	114.9802	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20SP	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448.0	492.8	0.25363	114.0017	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20WP	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448.0	492.8	0.25092	108.3054	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20WP	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448.0	492.8	0.25092	106.6179	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	25SP	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448.0	492.8	0.25386	106.2961	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	25SP	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448.0	492.8	0.25386	105.6275	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	20L	G16_072	FROM->TO	CLEVELAND - TULSA NORTH 345KV CKT 1	1135.0	1195.0	0.06099	99.2	BASE CASE
2	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25561	123.2091	NORTHWEST - SPRING CREEK 345KV CKT 1
2	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38685	118.4276	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25618	117.5858	SOONER - SPRING CREEK 345KV CKT 1
2	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25956	116.905	SOONER - SPRING CREEK 345KV CKT 1
2	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25956	116.7859	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38704	116.4877	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	17SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26369	113.9556	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26236	113.3565	SOONER - SPRING CREEK 345KV CKT 1
2	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26236	113.2334	NORTHWEST - SPRING CREEK 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24168	113.0234	SOONER - SPRING CREEK 345KV CKT 1
2	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24168	112.8311	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39119	111.7706	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24295	111.4816	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26481	109.3181	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25449	108.617	SOONER - SPRING CREEK 345KV CKT 1
2	17SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26419	108.4735	SOONER - SPRING CREEK 345KV CKT 1
2	20WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25449	108.4559	NORTHWEST - SPRING CREEK 345KV CKT 1
2	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24295	107.513	G15066_T 345.00 - SOONER 345KV CKT 1
2	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25858	107.2082	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26679	107.1239	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24295	106.0003	917X
2	20SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25681	105.8567	NORTHWEST - SPRING CREEK 345KV CKT 1
2	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26481	105.5738	G15066_T 345.00 - SOONER 345KV CKT 1
2	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.23903	104.76	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.23903	104.76	CLEVELAND - TULSA NORTH 345KV CKT 1
2	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26481	103.8843	917X
2	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25858	103.6524	G15066_T 345.00 - SOONER 345KV CKT 1
2	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26679	103.4835	G15066_T 345.00 - SOONER 345KV CKT 1
2	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25841	103.419	CLEVELAND - TULSA NORTH 345KV CKT 1
2	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25841	103.419	CLEVELAND - TULSA NORTH 345KV CKT 1
2	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.30763	103.4019	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	17SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26699	103.2004	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25746	103.1724	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.29602	102.6399	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25858	102.0716	917X
2	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26679	101.7959	917X
2	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.33687	101.4962	G16-061-TAP 345.00 - SOONER 345KV CKT 1
2	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25230	101.4788	CLEVELAND - TULSA NORTH 345KV CKT 1
2	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25230	101.4788	CLEVELAND - TULSA NORTH 345KV CKT 1
2	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.39596	101.3494	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
2	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26051	101.2597	CLEVELAND - TULSA NORTH 345KV CKT 1
2	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26051	101.2597	CLEVELAND - TULSA NORTH 345KV CKT 1
2	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25147	100.8016	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
2	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25953	100.6755	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
2	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.38685	100.5125	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
2	20SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25735	100.3989	SOONER - SPRING CREEK 345KV CKT 1
2	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24588	100.3345	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
2	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24440	99.7	P12:138:OKGE:3TERM2
2	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24430	99.7	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	17SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.26699	99.6	G15066_T 345.00 - SOONER 345KV CKT 1
2	20WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.25746	99.4	G15066_T 345.00 - SOONER 345KV CKT 1
2	20L	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.23735	99.3	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1
2	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24192	99.2	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
2	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24896	99.1	MORISNT4 138.00 - STILLWATER 138KV CKT 1
2	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.35002	99	G16-061-TAP 345.00 - SOONER 345KV CKT 1
2	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192.0	1192.0	0.24909	99	P12:138:OKGE:3TERM2
2	25SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25561	122.5437	NORTHWEST - SPRING CREEK 345KV CKT 1
2	16WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38685	116.4463	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	25SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25618	115.6235	SOONER - SPRING CREEK 345KV CKT 1
2	16WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25956	114.6217	SOONER - SPRING CREEK 345KV CKT 1
2	16WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25956	114.4738	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.38704	114.0625	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	17SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26369	111.0813	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17G	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26236	110.2462	SOONER - SPRING CREEK 345KV CKT 1
2	17G	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26236	110.0937	NORTHWEST - SPRING CREEK 345KV CKT 1
2	20L	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.24168	109.9038	SOONER - SPRING CREEK 345KV CKT 1
2	20L	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.24168	109.663	NORTHWEST - SPRING CREEK 345KV CKT 1
2	17SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.39119	108.4173	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	20L	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.24295	107.8095	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	16WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26481	105.1032	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25449	104.4066	SOONER - SPRING CREEK 345KV CKT 1
2	17SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26419	104.3258	SOONER - SPRING CREEK 345KV CKT 1
2	20WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25449	104.2057	NORTHWEST - SPRING CREEK 345KV CKT 1
2	20L	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.24295	102.9603	G15066_T 345.00 - SOONER 345KV CKT 1
2	25SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25858	102.6653	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	17G	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26679	102.4118	CLEVELAND - G15066_T 345.00 345KV CKT 1
2	20SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.25681	101.1001	NORTHWEST - SPRING CREEK 345KV CKT 1
2	20L	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.24295	101.0863	917X
2	16WP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.26481	100.5125	G15066_T 345.00 - SOONER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	20L	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.23903	99.5	CLEVELAND - TULSA NORTH 345KV CKT 1
2	20L	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956.0	956.0	0.23903	99.5	CLEVELAND - TULSA NORTH 345KV CKT 1
2	16WP	G16_072	FROM->TO	HUNTERS7 345.00 - WOODRING 345KV CKT 1	1195.0	1195.0	0.80878	100.2485	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	17G	G16_072	FROM->TO	HUNTERS7 345.00 - WOODRING 345KV CKT 1	1195.0	1195.0	0.80937	99	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	25SP	G16_072	TO->FROM	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179.0	179.0	0.03304	104.1299	BASE CASE
2	16WP	G16_072	FROM->TO	VIOLA 7 345.00 - WICHITA 345KV CKT 1	1076.0	1076.0	0.74596	111.6285	HUNTERS7 345.00 - WOODRING 345KV CKT 1
2	17G	G16_072	FROM->TO	VIOLA 7 345.00 - WICHITA 345KV CKT 1	1076.0	1076.0	0.74368	111.5793	HUNTERS7 345.00 - WOODRING 345KV CKT 1
2	17SP	G16_072	FROM->TO	VIOLA 7 345.00 - WICHITA 345KV CKT 1	1076.0	1076.0	0.74782	107.7481	HUNTERS7 345.00 - WOODRING 345KV CKT 1
2	20SP	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448.0	492.8	0.25370	117.2664	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	20SP	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448.0	492.8	0.25370	116.251	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	20WP	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448.0	492.8	0.25127	112.1269	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	20WP	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448.0	492.8	0.25127	110.3727	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	25SP	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448.0	492.8	0.25400	108.4665	VIOLA 7 345.00 - WICHITA 345KV CKT 1
2	25SP	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448.0	492.8	0.25400	107.7797	VIOLA 7 345.00 - WICHITA 345KV CKT 1
0	20L	G16_073	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766.0	923.0	0.07796	106.3795	BASE CASE
0	20L	G16_073	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766.0	923.0	0.09498	106.1701	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20L	G16_073	FROM->TO	CANEYRV7 345.00 - NEOSHO 345KV CKT 1	766.0	923.0	0.09498	101.3097	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	16WP	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.09447	110.913	BASE CASE
0	20L	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.07332	110.0936	BASE CASE
0	20WP	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.09348	109.1163	BASE CASE
0	20L	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.14941	108.8839	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.08856	108.6019	BASE CASE
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.14097	106.8306	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	20L	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.14941	105.534	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.14097	103.5861	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.17417	102.6501	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.12567	102.2566	GEN542955 1-LACYGNE UNIT #1
0	20L	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.14941	102.2004	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	20L	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.18325	101.9938	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
0	20L	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.13710	101.9057	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.12567	101.2871	GEN542956 2-LACYGNE UNIT #2
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.09103	101.2193	BENTON - WOLF CREEK 345KV CKT 1
0	20L	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.13710	101.088	917X
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.11208	100.8896	SWISSVALE - WEST GARDNER 345KV CKT 1
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.09923	100.6877	ROSE HILL - WOLF CREEK 345KV CKT 1
0	20L	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.11896	100.6862	SWISSVALE - WEST GARDNER 345KV CKT 1
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.12875	100.5398	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	20L	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.13710	100.5108	G15066_T 345.00 - SOONER 345KV CKT 1
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.14097	100.2714	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.11156	100.1453	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.17417	100	G14_001T 345.00 - WICHITA 345KV CKT 1
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.13435	99.9	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.15649	99.8	RENO COUNTY - WICHITA 345KV CKT 1
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.12875	99.8	917X
0	20L	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.13670	99.6	RANCHRD7 345.00 - SOONER 345KV CKT 1
0	20L	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.14443	99.5	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.12875	99.4	G15066_T 345.00 - SOONER 345KV CKT 1
0	20L	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.18325	99.3	G14_001T 345.00 - WICHITA 345KV CKT 1
0	20L	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.13631	99.2	CLEVELAND - TULSA NORTH 345KV CKT 1
0	20L	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.13631	99.2	CLEVELAND - TULSA NORTH 345KV CKT 1
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.12567	99.1	BASE CASE
0	17G	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.11236	99	HOYT - STRANGER CREEK 345KV CKT 1
0	20L	G16_073	-	Non-Converged Contingency	1141.0	1195.0	0.07332	-	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.05027	132.1507	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.05027	127.8769	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
0	25SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.04701	114.7031	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
0	20SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.04708	113.6278	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
0	25SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.04701	110.9382	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
0	20SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.04708	110.159	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.06861	106.2349	BENTON - WICHITA 345KV CKT 1
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.06861	103.6589	BENTON - WICHITA 345KV CKT 1
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.05345	140.8884	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.05345	136.5168	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
0	25SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.05022	122.5159	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.07898	122.279	BENTON - WICHITA 345KV CKT 1
0	20SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.05029	121.3994	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.07898	119.3224	BENTON - WICHITA 345KV CKT 1
0	25SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.05022	118.8797	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
0	20SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.05029	118.0473	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
0	20SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.07159	102.8246	BENTON - WICHITA 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03551	100.867	BASE CASE
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03551	100.867	BASE CASE
0	20SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.07159	100.6352	BENTON - WICHITA 345KV CKT 1
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03682	100.3949	P12:138:WERE:CLWA-MKEC_138F::
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03682	100.3922	P12:138:MKEC:HARPER-CLEARWATER::
0	16WP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.04947	100.1767	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03293	100.1301	BENTON - CHISHOLM 138KV CKT 1
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03597	100.1201	BENTON (BENT TX-1) 345/138/13.8KV TRANSFORMER CKT 1
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03682	99.8	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03058	99.8	MOUNDRIDGE (MOUN TX-2) 138/115/7.2KV TRANSFORMER CKT 1
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03682	99.7	P12:138:WERE:MURR-MKEC_138P::
0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03593	99.6	BENTON (BENT TX-2) 345/138/13.8KV TRANSFORMER CKT 1
2	20L	G16_073	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141.0	1195.0	0.13393	106.612	NEOSHO - WOLF CREEK 345KV CKT 1
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.05036	133.2095	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.05036	128.724	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
2	25SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.04705	114.8152	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
2	20SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.04713	114.1509	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
2	25SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.04705	111.0099	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
2	20SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.04713	110.4381	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.06860	109.2579	BENTON - WICHITA 345KV CKT 1
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.06860	106.5537	BENTON - WICHITA 345KV CKT 1
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.05355	141.582	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.05355	137.3316	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.07896	125.7588	BENTON - WICHITA 345KV CKT 1
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.07896	122.6547	BENTON - WICHITA 345KV CKT 1
2	25SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.05027	122.647	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
2	20SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.05034	121.958	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
2	25SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.05027	118.9658	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
2	20SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.05034	118.359	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
2	20SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.07159	105.3868	BENTON - WICHITA 345KV CKT 1
2	20SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.07159	103.0499	BENTON - WICHITA 345KV CKT 1
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03558	101.3872	BASE CASE
2	16WP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.04960	101.2084	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03690	100.9563	P12:138:WERE:CLWA-MKEC_138F::
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03690	100.9528	P12:138:MKEC:HARPER-CLEARWATER::
2	25SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.07189	100.8215	BENTON - WICHITA 345KV CKT 1
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03065	100.6633	MOUNDRIDGE (MOUN TX-2) 138/115/7.2KV TRANSFORMER CKT 1
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03602	100.55	BENTON (BENT TX-1) 345/138/13.8KV TRANSFORMER CKT 1
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03297	100.471	BENTON - CHISHOLM 138KV CKT 1
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03690	100.4208	P12:138:WERE:MURR-MKEC_138P::
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03690	100.41	CLEARWATER - GILL ENERGY CENTER WEST 138KV CKT 1
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03598	100	BENTON (BENT TX-2) 345/138/13.8KV TRANSFORMER CKT 1
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03508	99.6	MOUNDRIDGE - RENO COUNTY 115KV CKT 1
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03558	99.4	BASE CASE
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03690	99	P12:138:MKEC:HARPER-CLEARWATER::
2	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400.0	430.0	0.03690	99	P12:138:WERE:CLWA-MKEC_138F::
0	16WP	G16_075	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.34367	110.161	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.34367	106.7158	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.34377	110.1857	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250.0	313.0	0.34377	106.7465	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34348	148.2605	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.32995	147.6879	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34205	146.8195	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34366	146.8139	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34448	146.3126	LETCHER - SIOUX FALLS 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34587	146.2364	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34481	146.1829	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34637	145.6013	MINGO - RED WILLOW 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34238	145.5204	RAUN - SIOUX CITY 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34393	145.5141	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34375	145.4359	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34521	145.2676	FT THOMPSON - LETCHER 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34228	145.2413	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	145.1716	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	145.0032	GEN640009 1-COOPER NUCLEAR STATION
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	144.8756	GEN336153 1-WATERFORD UNIT#3
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34018	144.6951	HOSKINS - SHELL CREEK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34439	144.6686	HANLON - SIOUX FALLS 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	144.6391	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34362	144.6371	RASMUSN - UTICA JCT 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	144.6264	GEN335831 1-RIVERBEND UNIT#1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34344	144.4488	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34427	144.4336	FT RANDAL - UTICA JCT 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	144.4139	GEN563222 1-G15088_3 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	144.3886	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34532	144.3588	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34344	144.2794	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34272	144.2176	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	144.1982	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	144.0429	GEN645012 2-NEBRASKA CITY 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34358	144.0415	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34307	144.0361	SIDNEY - STEGALL 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34398	144.0338	CLEARWATER - ONEILL 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	144.0145	GEN645011 1-NEBRASKA CITY 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34372	143.9652	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34418	143.94	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.9386	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.9382	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.9342	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.9245	GEN337653 1-WHITE BLUFF UNIT #2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.8674	GEN501801 1-DOLET HILLS UNIT1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.8546	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.85	GEN338143 1-INDEPENDENCE UNIT #1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.836	AINSWORTH - VALENTINE 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33895	143.831	HOSKINS - SHELL CREEK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34149	143.8267	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34258	143.8221	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34613	143.8055	STAPLETON - THEDFORD 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34372	143.7948	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34313	143.7658	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34398	143.7291	CLEARWATER - NELIGH 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	143.7097	GEN563222 1-G15088_3 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34329	143.7039	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34463	143.7028	HURON - WATERTOWN 230KV CKT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.6969	GEN641089 2-ENERGY CENTER 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.6814	GEN335206 1-NELSON UNIT 6
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.6809	GEN336251 1-NINEMILE POINT UNIT#4
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	143.6711	CALLAWAY - MAXWELL 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	143.6668	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.6573	GEN336831 1-BAXTER WILSON SES
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.6429	GEN501813 1-RODEMACHER UNIT 3
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.6418	GEN587353 1-G16-050-GEN10.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34248	143.6374	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34304	143.6292	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34304	143.6291	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34545	143.6288	AINSWORTH - BASSETT 7115.00 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.6189	GEN344897 4-1LAB G4 20.000
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.6165	GEN344894 1-1LAB G1 20.000
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.6164	GEN344895 2-1LAB G2 20.000
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.6163	GEN344896 3-1LAB G3 20.000
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.615	GEN337041 1-GERALD ANDRUS
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34173	143.614	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.608	GEN542962 2-IATAN UNIT #2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.6065	GEN336252 1-NINEMILE POINT UNIT#5
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34353	143.599	GAVINS POINT - HARTINGTON 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34411	143.596	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34463	143.5951	CARPENTER - HURON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.5896	GEN336191 1-LITTLE GYPSY UNIT#3
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.5804	GEN501812 1-RODEMACHER UNIT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34440	143.5646	OAHE - PHILIP TAP 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34463	143.5534	CARPENTER - WATERTOWN 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34402	143.5317	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34402	143.5316	FT THOMPSON - WESSINGTON 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34304	143.5262	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.5216	GEN345671 2-1RUSH G2 18.000
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34338	143.519	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.5155	GEN345670 1-1RUSH G1 18.000
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34381	143.4987	FT RANDAL - SPENCER 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34173	143.4986	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34304	143.4902	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34545	143.4866	BASSETT 7115.00 - STUART 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34304	143.4836	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34411	143.4667	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.4615	GEN338388 1-1PLUM PT U1 23.000
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34381	143.4542	ONEILL - SPENCER 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34411	143.4497	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34939	143.4303	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34462	143.4293	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34545	143.4133	ATKINSON - STUART 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34536	143.4018	MINGO - SETAB 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34435	143.4	WINNER - WITTEN 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.3928	GEN335204 1-NELSON UNIT 4
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.3871	GEN336464 1-MICHOUD UNIT #3
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34483	143.3701	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.3676	GEN334440 1-SABINE UNIT 4
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.3517	GEN334441 1-SABINE UNIT 5
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34373	143.3381	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34443	143.3335	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.3208	GEN336801 1-BAXTER WILSON UNIT #1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	143.311	GEN337653 1-WHITE BLUFF UNIT #2
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	143.2981	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34353	143.2759	BELDEN - HARTINGTON 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	143.2748	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	143.2722	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34373	143.2644	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34365	143.2643	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34373	143.2642	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.2567	GEN335614 1-WILLOW GLENN UNIT#4
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34219	143.2516	PAHOJA - SIOUX FALLS 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	143.2427	GEN335206 1-NELSON UNIT 6
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.2128	GEN334433 1-SABINE UNIT 3
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34616	143.2029	STAPLETON - THEDFORD 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34398	143.1668	HURON WEST PARK - MITCHELL NW 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.1521	GEN336222 1-LITTLE GYPSY UNIT#2
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34356	143.151	BELDEN - HARTINGTON 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.1375	GEN587363 1-G16-055-GEN10.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34373	143.1357	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34639	143.123	AINSWORTH - AINSWORTH 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34481	143.0809	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.0708	GEN587443 1-G16-064-GEN10.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34326	143.0615	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.0416	GEN336151 1-WATERFORD UNIT#1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	143.0416	GEN336152 1-WATERFORD UNIT#2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34435	143.0293	GREGORY - WINNER 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34221	143.0064	GRIMES - LEHIGH 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34421	142.9926	JEFFREY - NORTH PLATTE 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	142.991	GEN303007 1-1BC2 U2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34545	142.9784	ATKINSON - EMMET 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34443	142.9775	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	142.9613	GEN303006 1-1BC2 U1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34613	142.9604	MAXWELL - STAPLETON 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34329	142.9543	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.9498	GEN563222 1-G15088_3 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34433	142.9449	FT RANDAL - WHITE SWAN 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34436	142.9382	TYNDALL - WHITE SWAN 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	142.9211	GEN334441 1-SABINE UNIT 5
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	142.9174	GEN641089 2-ENERGY CENTER 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	142.9142	GEN303008 1-1BC2 U3
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34433	142.9103	TYNDALL - WHITE SWAN 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34415	142.9095	MT VERN - STORLA 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34421	142.9094	GRANITE FALLS - WILLMAR 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34329	142.9092	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34373	142.9068	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	142.8985	GEN336170 1-GULF OXY U4
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34271	142.895	CLEARWATER - ONEILL 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34401	142.8927	BISMARK - WEBER 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	142.8789	GEN501812 1-RODEMACHER UNIT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	142.8784	GEN501811 1-RODEMACHER UNIT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34412	142.8751	GRAND FORKS - PICKERT 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	142.8618	BROKEN BOW - CALLAWAY 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34942	142.8596	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.8547	GEN501801 1-DOLET HILLS UNIT1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34416	142.8341	MARTIN - SHANNON 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34438	142.8262	GREGORY - WINNER 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.35726	142.8224	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.35722	142.8167	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	142.8137	GEN587353 1-G16-050-GEN10.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34271	142.7968	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34286	142.773	MENNO JCT - UTICA 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34421	142.7652	GRANT - MITCHELL 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34401	142.7561	JAMES TOWN - WEBER 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34271	142.7504	CLEARWATER - NELIGH 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34363	142.7408	BLOOMFIELD - GAVINS POINT 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34274	142.7318	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34427	142.7255	AXTELL - SWEETWATER 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34418	142.7179	MT VERN - STORLA 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34219	142.6875	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34444	142.6642	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	142.6439	GEN334433 1-SABINE UNIT 3
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34283	142.6269	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34283	142.6268	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34350	142.6087	LELAND OLDS - STANTON 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	142.5814	JEFFREY - NORTH PLATTE 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34316	142.5778	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34416	142.5581	MENNO JCT - TRIPP JCT 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.5507	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.5327	GEN336252 1-NINEMILE POINT UNIT#5
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.486	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.4855	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.4833	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34549	142.4793	ATKINSON - EMMET 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.4733	GEN501813 1-RODEMACHER UNIT 3
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34245	142.456	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34444	142.4519	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.4512	GEN645012 2-NEBRASKA CITY 2
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34419	142.4491	MARTIN - SHANNON 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34245	142.4437	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34366	142.4211	BLOOMFIELD - GAVINS POINT 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.4011	GEN344897 4-1LAB G4 20.000
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.3958	GEN344894 1-1LAB G1 20.000
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.3952	GEN344896 3-1LAB G3 20.000
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34363	142.3431	KELLY - SHELL CREEK 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34282	142.3426	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.3339	GEN336831 1-BAXTER WILSON SES
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34274	142.3175	JAMES TOWN - WEBER 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34286	142.3121	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34363	142.3084	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34212	142.308	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34212	142.3079	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.3068	GEN336251 1-NINEMILE POINT UNIT#4
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.2961	GEN344895 2-1LAB G2 20.000
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	142.2897	GEN336191 1-LITTLE GYPSY UNIT#3
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34187	142.2795	COLUMEAST - SHELL CREEK 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.2754	GEN587353 1-G16-050-GEN10.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.2743	GEN645011 1-NEBRASKA CITY 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.2742	GEN345670 1-1RUSH G1 18.000
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.2737	GEN345671 2-1RUSH G2 18.000
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.2527	GEN337041 1-GERALD ANDRUS
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.2485	GEN641089 2-ENERGY CENTER 2
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34424	142.2476	GRANT - MITCHELL 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34525	142.2395	FT THOMPSON - LETCHER 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34411	142.2313	CHADRON - DUNLAP 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.2278	GEN335206 1-NELSON UNIT 6
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34221	142.2194	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34221	142.2193	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34274	142.1954	BISMARK - WEBER 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34283	142.1883	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34483	142.146	STAPLETON - THEDFORD 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.1358	GEN501812 1-RODEMACHER UNIT 2
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34372	142.1292	G15088_T 345.00 - PAULINE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34366	142.1288	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34446	142.1212	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.1196	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34286	142.114	PRAIRIE - RAMSEY 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34283	142.104	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34283	142.1039	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.1022	GEN334440 1-SABINE UNIT 4
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34369	142.0452	G15088_T 345.00 - MOORE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34369	142.0155	G15088_T 345.00 - PAULINE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	141.9984	GEN335614 1-WILLOW GLENN UNIT#4
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	141.9419	BASE CASE
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	141.9397	GEN336801 1-BAXTER WILSON UNIT #1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34381	141.9285	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34270	141.9212	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.9	GEN336191 1-LITTLE GYPSY UNIT#3
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34823	141.8661	NF
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.8583	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	141.8491	GEN587363 1-G16-055-GEN10.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34616	141.8395	MAXWELL - STAPLETON 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34498	141.8392	HOLCOMB - SETAB 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34423	141.8296	HANKINSON - WAHPETON 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.8291	GEN338388 1-1PLUM PT U1 23.000
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34282	141.8106	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34321	141.81	CALLAWAY - MAXWELL 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	141.7668	GEN587443 1-G16-064-GEN10.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.7378	GEN335614 1-WILLOW GLENN UNIT#4
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34229	141.7372	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.7326	GEN336801 1-BAXTER WILSON UNIT #1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.732	GEN336464 1-MICHOUD UNIT #3
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.7296	GEN334441 1-SABINE UNIT 5
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.7105	GEN335204 1-NELSON UNIT 4
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34325	141.7085	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34271	141.6987	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34282	141.6951	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34245	141.6933	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34258	141.6515	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.6385	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34305	141.6257	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34305	141.6256	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.6209	ANSON 115/17.5KV TRANSFORMER CKT 4
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34316	141.6171	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34316	141.617	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34360	141.6149	LOUP CITY - ST LIBORY 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34412	141.6006	AINSWORTH - STUART 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34205	141.5967	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34460	141.5945	BROKEN BOW - CALLAWAY 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.5866	GEN587363 1-G16-055-GEN10.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34295	141.5695	BURR - CANBY 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34242	141.5592	GAVINS POINT - HARTINGTON 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34275	141.5555	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34384	141.5404	CRETE - FRIEND 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.5223	GEN587443 1-G16-064-GEN10.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34387	141.5191	AURORA - GRAND ISLAND 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34282	141.5188	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34205	141.5167	FIELD SOUTH - WILMARTH 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34267	141.5166	EAGLE - MARTIN 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.5097	GEN334433 1-SABINE UNIT 3
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34260	141.5006	ARNOLD - HAZLETON 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34246	141.4919	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.4843	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.4838	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34392	141.4733	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34277	141.467	AUDUBON - HUBBARD 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34205	141.4627	FIELD NORTH - FIELD SOUTH 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34312	141.441	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.4375	GEN336222 1-LITTLE GYPSY UNIT#2
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34299	141.4338	FT RANDAL - WHITE SWAN 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34312	141.419	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34312	141.419	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34346	141.4173	HAZLETON - MITCHLCO3 345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34294	141.4172	JEFFREY - NORTH PLATTE 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.4136	GEN303007 1-1BC2 U2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34381	141.409	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.4072	GEN303006 1-1BC2 U1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34286	141.4065	MT VERN - STORLA 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34381	141.4059	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34541	141.4036	AINSWORTH - AINSWORTH 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34361	141.3972	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34299	141.3857	TYNDALL - WHITE SWAN 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34277	141.3817	7PALM TAP 345.00 - SUB T 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34637	141.3517	MINGO - RED WILLOW 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34267	141.3508	EAGLE - PHILIP 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34287	141.3493	ELM CREEK - MONTICELLO 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.349	GEN336152 1-WATERFORD UNIT#2
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.3484	GEN336151 1-WATERFORD UNIT#1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34288	141.3475	GENOA 161 - SENECA 161 161KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.3405	GEN336170 1-GULF OXY U4
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34483	141.3397	MAXWELL - STAPLETON 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.3392	GEN303008 1-1BC2 U3
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34380	141.3323	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34277	141.3301	PALXFRASBTHI
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34412	141.328	ATKINSON - STUART 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34250	141.3187	HIGHLND 3 345.00 - LAKEFIELD 3 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34278	141.3151	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34283	141.2968	MN VALLEY TAP - PANTHER 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34210	141.2617	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.2605	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34283	141.2379	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34380	141.2359	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33610	141.2355	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34295	141.2324	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34295	141.231	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34293	141.2284	MARTIN - SHANNON 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34245	141.224	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.1921	GEN636641 1-LOUISA UNIT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.1907	GEN501811 1-RODEMACHER UNIT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34283	141.1569	CHADRON - DUNLAP 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34244	141.1476	NELIGH - PETERSBRG.N7115.00 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34389	141.1359	AS KING - EAU CLAIRE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34242	141.1241	BELDEN - HARTINGTON 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34302	141.1128	AXTELL - SWEETWATER 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34641	141.089	MINGO - RED WILLOW 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34330	141.0878	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34396	141.0873	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.0731	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34238	141.068	RAUN - SIOUX CITY 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34412	141.0642	ATKINSON - EMMET 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34321	141.0341	BROKEN BOW - CALLAWAY 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	141.0258	GEN652345 W-G07_023IS_2 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34414	141.0156	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34375	141.0012	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.9993	GEN615021 1-GRE-ER 14G 16.000
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34152	140.9754	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.9653	GEN615052 1-CAMBRIDGE GENERATING STATION
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34238	140.9567	KELLY - SHELL CREEK 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34233	140.9385	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34238	140.9352	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34238	140.9352	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.9202	GEN652414 4-FT PECK
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.9202	GEN652415 5-FT PECK
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.9143	GEN587583 1-J432-GEN1 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34234	140.9119	103RD & ROKEBY - MOORE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34414	140.8987	COOPER - FAIRPORT 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.8672	GEN600067 9-HIGH BRIDGE
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34380	140.86	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34429	140.8484	G16-055-TAP 115.00 - HILDRETH 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.8284	GEN659272 2-GROTON 2G13.800
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.8059	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.771	GEN659273 2-GROTON SYNC COND
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.771	GEN659294 1-WILTONCOL9

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34276	140.7506	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.7501	GEN659274 1-GROTON
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.7395	GEN659162 4-RED WLCK
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.7395	GEN659163 5-BLACK WDCK
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.7372	GEN659192 6-LYNN
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	140.7058	BASE CASE
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.7001	GEN660016 1-B_H WIND 0.7000
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.6025	GEN659291 1-FT MP COLLECTOR
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34346	140.5992	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.5926	GEN662101 1-WESSINGTON190.5750
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34392	140.5666	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34337	140.5632	GRIMES - LEHIGH 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.5448	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.5418	GEN652545 7-BIG BEND
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34505	140.5333	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34244	140.5128	G15088_T 345.00 - MOORE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.5091	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34384	140.4724	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34384	140.471	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.4521	GEN659270 1-WEST SW
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34201	140.4442	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34201	140.4442	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33491	140.4404	COLUMWEST - KELLY 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34387	140.4394	CRETE - FRIEND 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34388	140.4311	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.4101	GEN562872 1-G15046_3 0.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34111	140.4099	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34486	140.4085	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34348	140.3933	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34390	140.3931	AURORA - GRAND ISLAND 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34257	140.3797	COOPER - MOORE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34396	140.3751	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34355	140.3717	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34262	140.3617	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.3388	GEN615015 1-GRE-SPRITWDG13.200
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.3333	GEN 11104 1-J262_GEN 0.6000
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.3333	GEN 11108 1-J263_GEN 0.6000
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34318	140.3297	GRAND ISLAND - HASTINGS 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34363	140.3202	LOUP CITY - ST LIBORY 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34132	140.3019	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	140.301	BASE CASE
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	140.2993	2560-BRDLAND-LNX3345.00
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	140.2993	2561-BRDLAND-LNX3345.00
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	140.2993	BASE CASE
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34412	140.2951	COOPER - ST JOE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34175	140.2739	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34628	140.2717	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34237	140.2597	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34309	140.2575	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34400	140.2542	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34329	140.2395	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33613	140.2196	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34409	140.1796	FORMAN - HANKINSON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34360	140.1653	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34414	140.1621	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34244	140.162	G15088_T 345.00 - PAULINE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34484	140.1618	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.1557	GEN910006 1-G12_012IS_3 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.151	GEN587623 1-J493-GEN1 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34414	140.1501	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.1349	GEN587593 1-J460-GEN1 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34628	140.1333	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34298	140.1326	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34298	140.1313	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34212	140.1181	SUB 3454 - WAGENER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34619	140.1026	GLENHAM - L3 HAWDON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34628	140.099	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.0765	GEN 10648 1-G830_GEN 0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34418	140.0708	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34628	140.0676	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34532	140.0593	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34414	140.0414	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.0308	GEN563232 1-G15089_3 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	140.0303	GEN587053 1-G16-007-GEN10.6500
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34381	140.0248	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34381	140.0248	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34628	140.0148	GLENHAM - WHITLOK 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34175	140.0111	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34410	139.973	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.9284	GEN652544 5-BIG BEND
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34394	139.9281	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34398	139.9094	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.8886	GEN652543 3-BIG BEND
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.8878	GEN652542 1-BIG BEND
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34508	139.8866	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34259	139.8496	CRETE - FRIEND 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34262	139.8479	AURORA - GRAND ISLAND 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34236	139.8442	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34256	139.8324	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34256	139.8323	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34545	139.8296	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34255	139.8295	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34255	139.8294	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34369	139.8237	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34408	139.8232	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34229	139.8217	LOUP CITY - ST LIBORY 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34267	139.8046	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34401	139.7967	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.7746	GEN659010 4-G07_027IS_2 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.7582	GEN659194 1-NDPRAIRWND1W0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.7564	GEN659366 3-WILTON 3 W0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.7501	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.7484	GEN652460 4-GARRISON
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.7464	GEN652461 5-GARRISON
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.744	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34568	139.7419	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34418	139.7246	COOPER - FAIRPORT 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34418	139.717	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.692	GEN652457 1-GARRISON
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.692	GEN652458 2-GARRISON
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.692	GEN652459 3-GARRISON
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34462	139.6898	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34338	139.6884	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34418	139.6663	FORMAN - OAKES 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34408	139.6611	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34394	139.6577	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34170	139.6547	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34170	139.6546	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34170	139.6534	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34170	139.6532	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34463	139.6092	HURON - WATERTOWN 230KV CKT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34229	139.5988	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.5805	GEN659403 1-NDSUNFLWR W0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34393	139.5586	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34412	139.5566	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	139.5533	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34406	139.5475	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34406	139.5475	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34463	139.5405	CARPENTER - WATERTOWN 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34408	139.5027	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34410	139.4865	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34410	139.4775	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	139.4664	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.4648	GEN659353 1-DEERCREK CTG18.000
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34370	139.4572	BYRON - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	139.4509	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34412	139.4466	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.4295	GEN659354 1-DEERCREK STG18.000
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34084	139.4261	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34084	139.4261	SUB 3454 - WAGENER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	139.4204	GEN659273 2-GROTON SYNC COND
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	139.4204	GEN659294 1-WILTONCOL9
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.4188	GEN652906 1-G09_006IS_3 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34404	139.4093	AUDUBON - SHEYNNE 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34416	139.4025	COOPER - ST JOE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	139.3979	GEN659274 1-GROTON
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	139.3902	GEN659162 4-RED WLCK
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	139.3902	GEN659163 5-BLACK WDCK
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	139.3889	GEN659192 6-LYNN
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34109	139.3832	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34109	139.3831	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33491	139.3812	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34443	139.3713	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.3627	GEN660001 2-ABERDEEN SIEBRECHT
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.362	GEN600050 1-FEP
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.357	GEN659290 1-EDGECOL
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.3556	GEN 11123 1-G736-GEN1 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.3478	GEN 11133 1-J442-GEN1 0.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34269	139.3419	BONDURANT - MONTEZUMA 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	139.3328	GEN660016 1-B_H WIND 0.7000
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34418	139.3287	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34421	139.3253	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34421	139.3253	P12:115:UMZB:# 119 #: IN NE.
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34372	139.3169	P13:230-345:NPPD:STEGALL3:KV3A
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.3116	GEN652345 W-G07_023IS_2 0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34418	139.3085	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34412	139.3021	HENNING - INMANN 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.302	GEN659411 1-CAMPBLCNTY W0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.2947	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.2876	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34295	139.2839	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.2827	GEN587583 1-J432-GEN1 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34444	139.2757	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34444	139.2756	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34444	139.2676	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34536	139.2543	MINGO - SETAB 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34290	139.2523	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.2482	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.236	GEN600063 1-COLVILLE GEN 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.236	GEN600064 2-COLVILLE GEN 2
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.231	GEN600043 7-BLUE LAKE5
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.231	GEN600044 8-BLUE LAKE6
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.2286	GEN600006 1-AS KING
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34408	139.2267	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34416	139.2157	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34394	139.2098	CENTER - COYOTE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34370	139.2089	BYRON - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	139.2063	GEN659291 1-FT MP COLLECTOR
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34271	139.2034	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.1927	GEN600014 4-BLACK DOG GEN 4
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.1907	GEN652410 3-FT PECK
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.1884	EMERY 161/18.0KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.1806	GEN600011 5-BLACK DOG GEN 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.1784	GEN652907 1-G09_007IS_3 0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34630	139.1779	GLENHAM - WHITLOK 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	139.1773	GEN662101 1-WESSINGTON190.5750
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.1729	GEN600065 7-HIGH BRIDGE
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.1729	GEN600066 8-HIGH BRIDGE
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34409	139.1682	MN VALLEY TAP - PANTHER 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34289	139.1679	COOPER - FAIRPORT 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34289	139.1679	COOPER - FAIRPORT 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34250	139.1676	DRAYTON - LETELLIER 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34426	139.1643	HANKINSON - WAHPETON 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.163	GEN600071 10-RIVER SIDE
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.1626	GEN600070 9-RIVER SIDE
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	139.1482	GEN659270 1-WEST SW
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.1435	GEN600007 7-RIVERSIDE GEN 7
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34399	139.1202	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34413	139.115	BALTA - RAMSEY 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34501	139.1146	BISMARK - L3 HAWDON 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34350	139.1143	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	139.1135	GEN562872 1-G15046_3 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34401	139.1068	KARLSTAD - WINGER 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.0996	GEN659296 2-SDPRAIRWND1W0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34630	139.0952	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34405	139.0844	AUDUBON - HUBBARD 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.0831	GEN600017 C-LS POWER CT
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.0789	GEN652414 4-FT PECK
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.0789	GEN652415 5-FT PECK
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34448	139.0729	P12:230:UMZW:# 166 #: PL IN SD. TAP
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34448	139.0729	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34396	139.0706	FARGO - SHEYNNE 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34621	139.0574	GLENHAM - L3 HAWDON 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34285	139.0524	STMDSJFAFACO
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.051	SHEYENNE SVC - SHEYNNE 115KV CKT Z
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34285	139.0422	COPSTJCPFRSJ
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34285	139.0422	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.0388	GEN659272 2-GROTON 2G13.800
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	139.0362	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34630	139.0344	OAHE - SULLEY BUTTE 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34412	139.0111	PRAIRIE - RAMSEY 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34404	138.9973	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34406	138.9939	PRAIRIE - WINGER 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.9929	GEN615021 1-GRE-ER 14G 16.000
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34630	138.9857	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34395	138.9787	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.9784	GEN660016 1-B_H WIND 0.7000
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34411	138.9657	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34630	138.9649	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34413	138.9589	BUFFALO RIDGE - YANKEE 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34346	138.9455	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.9436	GEN659274 1-GROTON
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.9358	GEN 11104 1-J262_GEN 0.6000
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.9358	GEN 11108 1-J263_GEN 0.6000
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34110	138.9275	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34110	138.9272	103RD & ROKEBY - MOORE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34336	138.9238	HIGHLND 3 345.00 - RAUN 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34443	138.9176	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.9169	BURR - CANBY 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34411	138.9117	MCLEOD - PANTHER 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.9074	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34435	138.9028	P12:115:UMZW:# 172 #: WI IN SD.
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.9006	GEN615052 1-CAMBRIDGE GENERATING STATION
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34418	138.8978	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.8949	GEN652557 4-OAHE
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.8948	GEN652556 2-OAHE
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.8948	GEN652558 6-OAHE
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.8905	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.8879	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.8806	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34414	138.8654	ELM CREEK - MONTICELLO 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.861	GEN910006 1-G12_012IS_3 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34396	138.8471	ARNOLD - HAZLETON 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.8434	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34408	138.8434	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34351	138.841	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.8165	GEN659273 2-GROTON SYNC COND
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.8165	GEN659294 1-WILTONCOL9
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.8071	GEN652559 1-OAHE
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.8019	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.7775	GEN587053 1-G16-007-GEN10.6500
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.7733	GEN587623 1-J493-GEN1 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.7709	GEN659110 1-LELAND OLDS UNIT1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.7651	GEN 10648 1-G830_GEN 0.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.7638	GEN662101 1-WESSINGTON190.5750
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34135	138.7391	COOPER - MOORE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.7342	GEN659291 1-FT MP COLLECTOR
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.7289	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.7201	GEN600067 9-HIGH BRIDGE
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.7188	GEN659192 6-LYNN

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.7183	GEN659162 4-RED WLCK
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.7183	GEN659163 5-BLACK WDCK
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.7154	GEN652545 7-BIG BEND
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34383	138.7008	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.6909	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.6856	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.6796	GEN563232 1-G15089_3 0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34353	138.6792	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.6407	GEN615010 1-STANTON4
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.6207	GEN659141 1-K10215A
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.59	GEN652544 5-BIG BEND
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.578	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.5778	GEN652543 3-BIG BEND
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.5773	GEN652542 1-BIG BEND
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.551	GEN652173 1-G09_001IS_2 0.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.4867	GEN563232 1-G15089_3 0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.4527	GEN659010 4-G07_027IS_2 0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.4466	GEN659194 1-NDPRAIRWND1W0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.4423	GEN659366 3-WILTON 3 W0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.4343	GEN652461 5-GARRISON
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.4333	GEN652460 4-GARRISON
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.4255	GEN659270 1-WEST SW
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34288	138.4205	COOPER - ST JOE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.4194	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.4	GEN600005 1-MONTICELLO
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.3795	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34411	138.3719	BLAIR - GRANITE FALLS 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.3697	GEN652457 1-GARRISON
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.3697	GEN652458 2-GARRISON
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.3697	GEN652459 3-GARRISON
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.3675	GEN562872 1-G15046_3 0.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.3498	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.3498	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34351	138.3407	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34290	138.3312	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34290	138.3308	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.315	GEN615015 1-GRE-SPRITWDG13.200
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.3091	GEN 11104 1-J262_GEN 0.6000
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.3091	GEN 11108 1-J263_GEN 0.6000
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.302	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.2712	GEN587623 1-J493-GEN1 0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.2609	GEN659403 1-NDSUNFLWR W0.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.245	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.208	GEN659407 1-ANTELPHILLSW0.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34290	138.1982	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.1847	GEN652906 1-G09_006IS_3 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.1828	GEN587653 1-J526-GEN1 0.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.1644	CENTER 230/22.0KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34363	138.163	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.16	LADISH 115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.124	GEN910006 1-G12_012IS_3 0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.0794	GEN652559 1-OAHE
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34392	138.0731	AS KING - EAU CLAIRE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	138.0677	BASE CASE
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.0241	GEN659411 1-CAMPBLCNTY W0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.0235	GEN600004 2-PRAIRIE ISLAND G2
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	138.0155	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34325	138.0096	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34340	137.9882	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34241	137.9826	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34333	137.9691	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	137.9467	GEN587633 1-J510-GEN1 18.000
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.946	GEN587053 1-G16-007-GEN10.6500
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	137.9409	GEN652907 1-G09_007IS_3 0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	137.9341	GEN 11123 1-G736-GEN1 0.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34111	137.931	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	137.927	GEN 11133 1-J442-GEN1 0.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.8726	GEN 10648 1-G830_GEN 0.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.8564	GEN652543 3-BIG BEND
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.8548	GEN652542 1-BIG BEND

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.8499	GEN652906 1-G09_006IS_3 0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34353	137.8479	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	137.8413	GEN659296 2-SDPRAIRWND1W0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34395	137.8338	NOBLES - SPLIT ROCK 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34358	137.7665	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	137.6847	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34426	137.6585	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34505	137.6549	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34505	137.649	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34413	137.6275	FORMAN - HANKINSON 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34539	137.6233	MINGO - SETAB 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.5979	GEN652907 1-G09_007IS_3 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	137.5893	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	137.5799	GEN652556 2-OAHE
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	137.5799	GEN652557 4-OAHE
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	137.5799	GEN652558 6-OAHE
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	137.5645	GEN600006 1-AS KING
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34391	137.5566	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.5504	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.5473	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	137.5277	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.4772	GEN659194 1-NDPRAIRWND1W0.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.4563	GEN659010 4-G07_027IS_2 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34381	137.4538	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34381	137.4504	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.4443	GEN652460 4-GARRISON
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.4443	GEN652461 5-GARRISON
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.4438	GEN659366 3-WILTON 3 W0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	137.4202	GEN659110 1-LELAND OLDS UNIT1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	137.416	GEN659118 1-LARAMIE RIVER UNIT1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34385	137.4155	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34385	137.4155	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34536	137.3949	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34295	137.3642	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34295	137.3627	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34365	137.362	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34570	137.3578	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.3539	GEN652457 1-GARRISON
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.3539	GEN652458 2-GARRISON
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.3539	GEN652459 3-GARRISON
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	137.3509	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34413	137.3444	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	137.3276	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	137.3264	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34210	137.2944	SUB 3454 - WAGENER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	137.2814	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	137.2814	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	137.2596	GEN659141 1-K10215A
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	137.2525	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34411	137.2484	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34549	137.2447	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	137.2349	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34501	137.2328	GLENHAM - L3 HAWDON 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.2158	GEN659403 1-NDSUNFLWR W0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34421	137.2102	FORMAN - OAKES 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34421	137.2079	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34405	137.197	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34400	137.1961	BONDURANT - MONTEZUMA 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34414	137.1557	COOPER - FAIRPORT 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34401	137.1496	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34510	137.1451	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.1352	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34373	137.118	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	137.1032	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34411	137.0871	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	137.05	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34465	137.0433	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34233	137.0238	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34510	137.0023	GLENHAM - WHITLOK 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34466	136.963	HURON - WATERTOWN 230KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34396	136.9568	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.9456	GEN659296 2-SDPRAIRWND1W0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34397	136.9402	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.9233	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	136.9164	GEN659407 1-ANTELPHILLSW0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34234	136.9147	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34413	136.9081	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34415	136.9059	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34510	136.896	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34411	136.8932	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34466	136.8928	CARPENTER - WATERTOWN 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34413	136.8914	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34409	136.8875	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34409	136.8875	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.8831	GEN652559 1-OAHE
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34341	136.8551	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	136.8537	SHEYENNE SVC - SHEYNNE 115KV CKT Z
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34416	136.8145	BALTA - RAMSEY 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34408	136.808	AUDUBON - SHEYNNE 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	136.7929	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.783	GEN600004 2-PRAIRIE ISLAND G2
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34415	136.7793	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.7775	GEN659411 1-CAMPBLCNTY W0.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.7772	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	136.7701	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	136.7689	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	136.7629	GEN587653 1-J526-GEN1 0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34397	136.7577	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34424	136.7493	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34424	136.7493	P12:115:UMZB:# 119 #: IN NE.
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.7414	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34510	136.7287	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34510	136.7049	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34339	136.6992	HIGHLND 3 345.00 - RAUN 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	136.6922	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.6763	GEN652556 2-OAHE
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.6763	GEN652557 4-OAHE
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.6763	GEN652558 6-OAHE
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34510	136.6749	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34510	136.6749	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34415	136.6497	HENNING - INMANN 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34397	136.6478	CENTER - COYOTE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34447	136.619	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34447	136.6189	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34447	136.6116	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34415	136.6075	PRAIRIE - RAMSEY 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.5954	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34412	136.5854	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34374	136.5712	BYRON - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34412	136.5553	MN VALLEY TAP - PANTHER 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34411	136.541	PRAIRIE - WINGER 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	136.5217	GEN587633 1-J510-GEN1 18.000
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34419	136.4912	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34628	136.4895	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34628	136.4895	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34399	136.4608	FARGO - SHEYNNE 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34408	136.4511	AUDUBON - HUBBARD 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34498	136.4319	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34404	136.3904	KARLSTAD - WINGER 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34402	136.382	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34375	136.3801	BYRON - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	136.38	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.3764	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34447	136.3741	P12:230:UMZW:# 166 #: PL IN SD. TAP
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34447	136.3741	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	136.3628	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	136.3608	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	136.3584	BURR - CANBY 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	136.343	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34411	136.3416	BALTA - MCHENRY 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.3392	GEN600006 1-AS KING
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34375	136.3227	P13:230-345:NPPD:STEGALL3:KV3A
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34416	136.3211	BUFFALO RIDGE - YANKEE 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	136.3039	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34446	136.3029	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34415	136.2757	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	136.2669	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34414	136.2633	MCLEOD - PANTHER 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34438	136.256	P12:115:UMZW:# 172 #: WI IN SD.
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.2146	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34411	136.1914	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.1683	GEN659110 1-LELAND OLDS UNIT1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34332	136.165	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	136.0773	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	136.0503	GEN659111 2-LELAND OLDS UNIT2
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.0315	GEN659141 1-K10215A
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	136.0005	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	135.9495	GEN615010 1-STANTON4
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.8788	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	135.8491	STANTON 230/18.0KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	135.6497	STANTON 230/18.0KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	135.6284	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	135.6284	GEN659107 2-ANTELOPE VALLEY UNIT2
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	135.6093	GEN600005 1-MONTICELLO
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	135.5843	GEN659118 1-LARAMIE RIVER UNIT1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	135.546	GEN657749 1-YOUNG 1 GENERATOR
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34366	135.5207	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34416	135.4796	SUB 3455 - SUB 3740 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	135.4284	BASE CASE
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	135.4233	GEN659407 1-ANTELPHILLSW0.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	135.3304	GEN659118 1-LARAMIE RIVER UNIT1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34403	135.2487	SUB 3456 - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36119	135.1299	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	135.0173	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34570	134.9562	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36119	134.9398	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	134.9236	GEN587033 1-G16-004-GEN10.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	134.8829	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	134.8503	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34384	134.8167	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	134.8166	GEN600000 1-SHERBURNECNTY G1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	134.8153	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34384	134.8133	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	134.7873	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34345	134.7863	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34298	134.7098	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34298	134.7083	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34418	134.6724	COOPER - FAIRPORT 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34339	134.6678	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	134.6455	GEN659125 1-COVEY
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	134.634	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34403	134.5855	BONDURANT - MONTEZUMA 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	134.5572	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34413	134.5392	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34212	134.4879	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34237	134.4788	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	134.4647	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	134.4634	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	134.4154	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34236	134.3591	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36118	134.323	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	134.1617	GEN659103 1-ANTELOPE VALLEY UNIT1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	134.1617	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	134.0951	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	134.0911	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	134.037	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34630	134.0122	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34630	134.0122	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	133.7868	GEN600001 2-SHERBURNE CNTY G2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	133.6944	GEN615001 1-COAL CREEK

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	133.6861	GEN600002 3-SHERBURNE CNTY G3
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	133.6245	GEN615002 2-COAL CREEK
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	133.5334	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	133.4142	GEN661015 1-COYOTE
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	133.3773	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	133.3764	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	133.3372	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	133.1919	STANTON 230/18.0KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	133.1781	GEN620315 1-BIG STONE GEN
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46831	133.1186	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	133.0961	GEN587133 1-G16-017-GEN10.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	133.046	GEN659125 1-COVEY
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	133.0135	GEN657748 1-YOUNG 2 GENERATOR
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	132.9015	GEN659111 2-LELAND OLDS UNIT2
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.32334	132.9013	MCCOOL - MOORE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36045	132.5499	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36045	132.4665	2810X2
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	132.4455	GEN659103 1-ANTELOPE VALLEY UNIT1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	132.4455	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	132.2478	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	132.1947	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	132.094	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	131.804	GEN587133 1-G16-017-GEN10.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	131.7494	GEN587293 1-G16-044-GEN10.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	131.4751	GEN659125 1-COVEY
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	131.4024	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36045	130.9403	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	130.5751	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46534	130.5344	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	130.4916	GEN615001 1-COAL CREEK
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	130.3859	GEN615002 2-COAL CREEK
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	130.1203	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	129.9771	GEN587133 1-G16-017-GEN10.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47180	129.5249	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	129.4228	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	129.3537	GEN562714 1-G15_023_4 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	129.3537	GEN562715 1-G15_023_5 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47200	128.6487	STORLA - WESSINGTON 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36118	128.4342	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	127.9477	GEN562714 1-G15_023_4 0.6900
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	127.9477	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.31895	127.9377	GRAND ISLAND - MCCOOL 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46763	127.6069	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46763	127.4418	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46763	127.4249	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46763	127.4249	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47062	127.3375	HANLON - STORLA 230KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	127.1043	GEN562714 1-G15_023_4 0.6900
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	127.1043	GEN562715 1-G15_023_5 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47188	126.648	FT THOMPSON - LETCHER 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47188	126.648	FT THOMPSON - LETCHER 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46656	125.9588	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46656	125.9588	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46701	125.6308	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46701	125.4581	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46701	125.4569	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46833	125.2095	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46688	125.0696	SPLIT ROCK - WHITE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46688	125.0696	SPLIT ROCK - WHITE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47189	125.0065	FT RANDAL - FT THOMPSON 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47189	125.0065	FT RANDAL - FT THOMPSON 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47183	124.9424	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47183	124.9424	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46729	124.8525	G09_001IST 345.00 - GROTON 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46818	124.731	CENTER - JAMESTOWN 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47055	124.7231	LETCHER - SIOUX FALLS 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.45638	124.7016	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46897	124.6819	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46534	124.6716	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46859	124.647	BISON 3 345.00 - BUFFALO 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47183	124.6018	FT RANDAL - LAKE PLATT 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46748	124.4888	NUNDRWD - WAYSIDE 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46446	124.4338	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46446	124.4304	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46909	124.4097	AS KING - EAU CLAIRE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46446	124.3917	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46917	124.2424	FT RANDAL - SIOUX CITY 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.48992	124.1641	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.48987	124.1552	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	124.1491	GEN635024 4-WALTER SCOTT UNIT 4
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46833	124.128	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	123.9492	GEN652353 2-GR PRAIRIEG 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46655	123.7616	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46655	123.7616	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.42239	123.7465	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	123.7202	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46655	123.7017	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	123.6993	GEN635023 3-WALTER SCOTT UNIT 3
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	123.6621	GEN344225 1-1CAL G1 25.000
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46655	123.6381	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46897	123.5886	RASMUSN - UTICA JCT 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47019	123.5862	HANLON - SIOUX FALLS 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	123.5503	GEN336153 1-WATERFORD UNIT#3
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46858	123.5349	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46899	123.5212	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46915	123.4877	ELLENDALE - OAKES 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46915	123.4877	ELLENDALE - OAKES 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46881	123.4439	GRIMES - LEHIGH 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46860	123.3823	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46915	123.3795	FORMAN - OAKES 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	123.3744	GEN641089 2-ENERGY CENTER 2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46897	123.3437	RASMUSN - SIOUX CITY 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46909	123.3163	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46828	123.2896	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	123.2565	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	123.2512	GEN335831 1-RIVERBEND UNIT#1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	123.2135	GEN336821 1-GRAND GULF UNIT
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	123.1832	GEN337653 1-WHITE BLUFF UNIT #2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46876	123.172	PAHOJA - SIOUX FALLS 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46918	123.1303	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46933	123.0352	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46860	123.021	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34425	123.0102	GEN652353 2-GR PRAIRIEG 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46918	122.9985	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46915	122.9938	FORMAN - HANKINSON 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.9674	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46589	122.9526	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46679	122.9287	SIDNEY - STEGALL 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.9108	GEN587353 1-G16-050-GEN10.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47200	122.9039	FT THOMPSON - WESSINGTON 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47200	122.9039	FT THOMPSON - WESSINGTON 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47041	122.8967	CARPENTER - HURON 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46933	122.8554	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46864	122.8118	CHISAGO COUNTY - FORBES 500KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.8009	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47041	122.786	HURON - WATERTOWN 230KV CKT 2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47041	122.786	HURON - WATERTOWN 230KV CKT 2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46876	122.774	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46864	122.7398	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.7347	GEN501801 1-DOLET HILLS UNIT1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46920	122.7165	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.7101	GEN563222 1-G15088_3 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47041	122.7019	CARPENTER - WATERTOWN 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47041	122.7019	CARPENTER - WATERTOWN 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46876	122.7012	BYRON - NORTH ROCHESTER 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46746	122.6835	RAUN - SIOUX CITY 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46746	122.6835	RAUN - SIOUX CITY 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46543	122.6552	HOSKINS - SHELL CREEK 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46920	122.6517	MISSION - ST FRANCIS 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.6365	GEN337652 1-WHITE BLUFF UNIT #1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46973	122.6242	FT RANDAL - UTICA JCT 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.58	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46956	122.5601	HANKINSON - WAHPETON 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.547	GEN338146 1-INDEPENDENCE UNIT #2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.5438	GEN338143 1-INDEPENDENCE UNIT #1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46920	122.5414	HARMONY - ST FRANCIS 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46863	122.5163	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46863	122.5163	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46920	122.4559	HARMONY - VALENTINE 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46839	122.4487	COLUMEAST - SHELL CREEK 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46877	122.4392	BYRON - PLEASANT VALLEY 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46893	122.4123	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46893	122.4123	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46917	122.3803	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.3662	GEN501813 1-RODEMACHER UNIT 3
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46917	122.3638	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46893	122.363	FT RANDAL - SPENCER 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46941	122.3525	BLAIR - GRANITE FALLS 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46941	122.3525	BLAIR - GRANITE FALLS 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46925	122.2731	CENTER - COYOTE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47381	122.2457	FT THOMPSON - HURON 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47381	122.2457	FT THOMPSON - HURON 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47381	122.2457	FT THOMPSON - HURON 230KV CKT 2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47381	122.2457	FT THOMPSON - HURON 230KV CKT 2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46893	122.2437	ONEILL - SPENCER 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.2231	GEN335206 1-NELSON UNIT 6
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46703	122.1546	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46926	122.1362	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46876	122.1252	GAVINS POINT - HARTINGTON 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46920	122.1077	AINSWORTH - VALENTINE 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.1064	GEN501812 1-RODEMACHER UNIT 2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.1062	GEN344897 4-1LAB G4 20.000
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.1039	GEN344894 1-1LAB G1 20.000
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.1037	GEN344896 3-1LAB G3 20.000
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46933	122.0833	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46916	122.0763	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.071	GEN344895 2-1LAB G2 20.000
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.0675	GEN642067 1-PLATTE
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.0629	GEN587363 1-G16-055-GEN10.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46916	122.0612	CLEARWATER - ONEILL 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46826	122.0409	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.0296	GEN345670 1-1RUSH G1 18.000
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	122.0294	GEN345671 2-1RUSH G2 18.000
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46833	122.0276	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46896	122.0248	GARRISON - JAMES TOWN 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46957	122.0207	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46916	122.0001	CLEARWATER - NELIGH 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46937	121.9909	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46826	121.9784	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46826	121.9782	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.9769	GEN336252 1-NINEMILE POINT UNIT#5
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.9368	GEN336831 1-BAXTER WILSON SES
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.9299	GEN587443 1-G16-064-GEN10.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46937	121.9088	DENISON - SIOUX CITY 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46923	121.887	FARGO - JAMES TOWN 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46826	121.8785	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.8731	GEN337041 1-GERALD ANDRUS
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46959	121.8678	MENNO JCT - TRIPP JCT 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46924	121.8621	FARGO - JAMES TOWN 230KV CKT 2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46952	121.8617	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46952	121.8617	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46935	121.8447	AUDUBON - SHEYNNE 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46930	121.8382	BISMARK - JAMES TOWN 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.8342	GEN334440 1-SABINE UNIT 4
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46930	121.8091	JAMES TOWN - WEBER 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46878	121.8052	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46930	121.7981	BISMARK - WEBER 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46878	121.7961	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46878	121.7956	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.7944	GEN336251 1-NINEMILE POINT UNIT#4

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46942	121.7932	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.7844	P13:115-230:NPPD:NUCOR-3
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.7824	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46959	121.7682	MENNO JCT - UTICA 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46947	121.7665	NOBLES - SPLIT ROCK 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46952	121.76	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46952	121.76	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46932	121.7584	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46876	121.7384	BELDEN - HARTINGTON 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46946	121.7364	BALTA - RAMSEY 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46942	121.7216	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.7212	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.7206	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46959	121.7129	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.7113	P13:230-345:NPPD:NUCOR-1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.6921	GEN303007 1-1BC2 U2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.6919	GEN336191 1-LITTLE GYPSY UNIT#3
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.6894	GEN303006 1-1BC2 U1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.6888	GEN335204 1-NELSON UNIT 4
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46947	121.6845	ELM CREEK - MONTICELLO 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.6796	GEN531447 1-HOLCOMB GENERATOR
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.6734	P13:115-345:NPPD:NUCOR-2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46938	121.6663	BALTA - RUGBY 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46939	121.6633	BALTA - MCHENRY 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46950	121.6578	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46945	121.65	JAMES TOWN - PICKERT 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.6448	GEN336801 1-BAXTER WILSON UNIT #1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46942	121.6419	HENNING - INMANN 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.6376	GEN335614 1-WILLOW GLENN UNIT#4
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.6356	GEN303008 1-1BC2 U3
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.6343	GEN336170 1-GULF OXY U4
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.6269	GEN336464 1-MICHOUD UNIT #3
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.6187	GEN334441 1-SABINE UNIT 5
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46947	121.6157	GENOA 161 - SENECA 161 161KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46945	121.6147	PRAIRIE - RAMSEY 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46913	121.6127	ARNOLD - HAZLETON 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46950	121.6104	NORTH LA CROSSE (10008630_001) 345/161/34.5KV TRANSFORMER CKT 9
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.5912	GEN501811 1-RODEMACHER UNIT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46884	121.5866	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46949	121.5785	COAL CREEK - UNDERWOOD 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46882	121.5593	HELENA - SHEAS LK3 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46944	121.5492	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46826	121.5469	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47041	121.5465	GAVINS POINT - YANKON JCT 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47041	121.5465	GAVINS POINT - YANKON JCT 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46937	121.5393	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46935	121.5358	AUDUBON - HUBBARD 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.5339	GEN334433 1-SABINE UNIT 3
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.5338	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46945	121.5259	MN VALLEY TAP - PANTHER 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.5235	GEN334071 1-LEWIS CREEK 2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.5223	WHITE BLUFF 500/26.0KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.5188	GEN334070 1-LEWIS CREEK 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46942	121.5186	CENTER - SQUARE BUTTE 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46860	121.5163	LELAND OLDS - STANTON 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46860	121.5163	LELAND OLDS - STANTON 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.5138	GEN523972 1-HARRINGTON GEN #2 24 KV
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.5137	GEN523971 1-HARRINGTON GEN #1 24 KV
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46945	121.5134	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46945	121.5134	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46899	121.5126	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.5125	GEN338388 1-1PLUM PT U1 23.000
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46899	121.5081	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46941	121.5046	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46941	121.5046	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.5045	GEN337766 1-TRACTEBEL UNIT S1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.4937	GEN562547 1-G14_039_3 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46959	121.4895	MT VERN - STORLA 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46962	121.4886	GRANT - MITCHELL 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46962	121.4886	GRANT - MITCHELL 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46899	121.483	ALBION - PETERSBURG 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46887	121.4742	AINSWORTH - CALAMUS 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46887	121.4725	P12:115:NPPD:1090:AINSWND7:THEDFRD7:BTB
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.4657	GEN501910 1-ACADIA UNIT ST1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46887	121.4638	CALAMUS - THEDFORD 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46936	121.4636	PALXFRASBTHI
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.4547	GEN523973 1-HARRINGTON GEN #3 24 KV
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.4488	GEN336222 1-LITTLE GYPSY UNIT#2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.442	GEN659118 1-LARAMIE RIVER UNIT1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.441	GEN641086 1-ENERGY CENTER
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46885	121.4366	P13:115-230:TSGT:SIDNEY-KV1A
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.4313	GEN563212 1-G15087_3 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	121.4284	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46967	121.4177	MARTIN - SHANNON 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46941	121.3549	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46811	121.2722	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.9368	BASE CASE
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46904	120.8297	KELLY - SHELL CREEK 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46904	120.825	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46904	120.825	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46957	120.6764	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46813	120.6221	HOSKINS - RAUN 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46813	120.6221	HOSKINS - RAUN 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46953	120.5895	CIRCLE - MULLERGREN 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46953	120.5895	CIRCLE - MULLERGREN 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.5637	GEN635214 4-NEAL UNIT 4
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46956	120.5631	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46956	120.5631	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.5316	GEN300003 1-THOMAS HILL UNIT 3
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46955	120.5254	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46794	120.5057	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46794	120.5057	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46950	120.5017	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46957	120.4925	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46954	120.4837	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46957	120.4826	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46955	120.476	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46938	120.473	MINGO - SETAB 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46938	120.473	MINGO - SETAB 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46956	120.4684	G16-063-TAP 345.00 - HUGO 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46923	120.4666	AURORA - GRAND ISLAND 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46956	120.4659	LYDIA - VALLIANT 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46956	120.4659	LYDIA - VALLIANT 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46971	120.4556	VICTORY HILL (VICTORYHL T1) 230/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46971	120.4556	VICTORY HILL (VICTORYHL T1) 230/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.4404	GEN587153 1-G16-021-GEN10.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46870	120.4371	MOORE - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46870	120.4371	MOORE - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46948	120.4269	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46929	120.4085	FAIRBURY - HARBINE 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46956	120.4038	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.4015	GEN660001 2-ABERDEEN SIEBRECHT
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46843	120.3925	CENTRAL CITY - SILVER CREEK 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46956	120.3924	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.3919	GEN590010 1-ERCOT EQUIVALENCE
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46956	120.3914	917X
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.3854	CLKREACT5 161.00 - CRYSTLK5 161.00 161KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.385	GEN652546 1-FT RANDAL
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.3828	GEN672369 3-MERIDIAN GENERATOR 3 ST
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46945	120.3783	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47093	120.3753	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46929	120.3706	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46956	120.3704	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46929	120.3678	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46956	120.3671	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.3668	GEN590011 2-ERCOT EQUIVALENCE
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46957	120.3563	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.3525	GEN600013 3-BLACK DOG GEN 3
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46953	120.3495	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.3493	GEN652548 5-FT RANDAL

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.3493	GEN652549 7-FT RANDAL
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.3479	GEN620115 1-HRDLKGEN 0.6000
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.3468	GEN620323 2-HOOT LAKE 2 GEN
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46894	120.3424	LOUP CITY - NORTH LOUP 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46959	120.3393	P12:115:UMZW:# 172 #: WI IN SD.
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.3374	GEN652547 3-FT RANDAL
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.3348	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.3249	GEN600125 2-FEP ST G 13.800
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.3201	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46943	120.3188	AXTELL - PAULINE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.3186	GEN563302 1-G15096_3 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46881	120.3102	SEWARD - TAMORA 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.31	GEN300007 1-NEW MADRID UNIT 2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46931	120.3092	BONDURANT - MONTEZUMA 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46921	120.308	CRETE - FRIEND 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.3039	GEN300006 1-NEW MADRID UNIT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.2936	GEN672384 1-CENTENNIAL WINDFARM
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46954	120.2844	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46889	120.2835	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46889	120.2835	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46956	120.2794	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.2774	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46948	120.2718	COPSTJCPFRSJ
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46948	120.2718	STMDSJFAFACO
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46881	120.2702	P12:115:NPPD:1155:YORK 7:SEWARD 7:BTB
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46955	120.2692	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46955	120.2692	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46881	120.2652	TAMORA - YORK 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.2635	GEN657964 1-ASH2GEN9 0.5750
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.2472	GEN600018 S-LS POWER STEAM
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.2316	GEN659290 1-EDGECOL
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.2218	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46922	120.2045	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46866	120.2039	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46866	120.2039	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46859	120.1983	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.1963	GEN652410 3-FT PECK
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46926	120.1928	HILLS - MONTEZUMA 345KV CKT 1
0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	120.1786	GEN652353 2-GR PRAIRIEG 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.1489	GEN672348 2-CORY COGEN GENERATOR 2 GT2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.1488	GEN672347 1-CORY COGEN GENERATOR 1 GT1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46843	120.1428	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46926	120.1409	MINGO - RED WILLOW 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46926	120.1409	MINGO - RED WILLOW 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.1391	GEN672350 1-NIPAWIN GENERATOR 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.1391	GEN672351 2-NIPAWIN GENERATOR 2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.1391	GEN672352 3-NIPAWIN GENERATOR 3
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.137	GEN600012 2-BLACK DOG GEN 2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.1244	GEN652414 4-FT PECK
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.1244	GEN652415 5-FT PECK
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.1213	GEN509403 1-PIRKEY GENERATION
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.1122	GEN652345 W-G07_023IS_2 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.1084	GEN620324 3-HOOT LAKE 3 GEN
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.1079	GEN615032 2-PLEASANT VALLEY
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.1076	GEN657600 1-L1GEN3 9 0.5750
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46933	120.1058	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.0781	LADISH 115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.0553	GEN672349 3-CORY COGEN GENERATOR 3 ST
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.0527	GEN672367 1-MERIDIAN GENERATOR 1 GT1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.0527	GEN672368 2-MERIDIAN GENERATOR 2 GT2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.0525	GEN659353 1-DEERCREK CTG18.000
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46954	120.046	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.0429	GEN672339 16-QE 16G 13.800
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.0429	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46872	120.039	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46872	120.039	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46945	120.0363	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.011	GEN600050 1-FEP
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	120.0025	GEN652558 6-OAHE
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.9876	GEN587583 1-J432-GEN1 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.9745	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.9621	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.9595	GEN659273 2-GROTON SYNC COND
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.9595	GEN659294 1-WILTONCOL9
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46922	119.953	FALLOW 3 345.00 - GRIMES 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.9498	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.9091	GEN600065 7-HIGH BRIDGE
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.9091	GEN600066 8-HIGH BRIDGE
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.9064	GEN672393 2-NBECST2G 13.800
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47260	119.8804	OAHE - SULLEY BUTTE 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46161	119.8613	COLUMWEST - KELLY 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.86	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.8588	GEN659192 6-LYNN
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.8575	GEN659162 4-RED WLCK
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.8575	GEN659163 5-BLACK WDCK
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.8487	GEN657985 1-ASH1GEN9 0.5750
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47248	119.8413	GLENHAM - L3 HAWDON 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46872	119.8344	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46928	119.8262	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.8213	GEN600014 4-BLACK DOG GEN 4
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.8211	GEN600067 9-HIGH BRIDGE
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.8171	GEN600011 5-BLACK DOG GEN 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.816	GEN600071 10-RIVER SIDE
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.8158	GEN600070 9-RIVER SIDE
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.8001	GEN600007 7-RIVERSIDE GEN 7
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.7963	GEN652906 1-G09_006IS_3 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47260	119.7878	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.7826	CENTER 230/22.0KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47260	119.7753	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47260	119.7751	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.7744	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.772	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47260	119.7478	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47260	119.7478	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.7462	GEN660016 1-B_H WIND 0.7000
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.741	GEN600017 C-LS POWER CT
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.7081	GEN681522 3-GENOA 3
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47260	119.6989	GLENHAM - WHITLOK 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.6949	GEN659291 1-FT MP COLLECTOR
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.6853	GEN662101 1-WESSINGTON190.5750
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.6827	GEN615052 1-CAMBRIDGE GENERATING STATION
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.6732	GEN652907 1-G09_007IS_3 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.6472	GEN 11104 1-J262_GEN 0.6000
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.6472	GEN 11108 1-J263_GEN 0.6000
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.6269	GEN562872 1-G15046_3 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.5989	GEN615015 1-GRE-SPRITWDG13.200
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46826	119.5349	AXTELL - SWEETWATER 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.4921	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.4604	GEN910006 1-G12_012IS_3 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.4058	GEN615021 1-GRE-ER 14G 16.000
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.404	GEN587623 1-J493-GEN1 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.3411	GEN 10648 1-G830_GEN 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.3039	GEN672304 4-BOUNDARY DAM GENERATOR 4
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.3038	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.3038	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46744	119.2786	SUB 3454 - WAGENER 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46744	119.2786	SUB 3454 - WAGENER 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.2155	GEN587053 1-G16-007-GEN10.6500
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46771	119.1091	103RD & ROKEBY - MOORE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46771	119.1091	103RD & ROKEBY - MOORE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.078	GEN652461 5-GARRISON
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.0779	GEN652460 4-GARRISON
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.0566	GEN672392 1-NBECGT1G 18.000
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.0515	GEN587593 1-J460-GEN1 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.0176	GEN652457 1-GARRISON
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.0176	GEN652458 2-GARRISON
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	119.0176	GEN652459 3-GARRISON
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46761	118.9924	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	118.9849	GEN659010 4-G07_027IS_2 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	118.9678	GEN659366 3-WILTON 3 W0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	118.9389	GEN659194 1-NDPRAIRWND1W0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46804	118.9204	COOPER - MOORE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	118.9152	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	118.8105	GEN659403 1-NDSUNFLWR W0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34340	118.7085	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	118.7039	GEN681542 6-JP MADGETT
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	118.6533	GEN659110 1-LELAND OLDS UNIT1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46818	118.6038	G15088_T 345.00 - PAULINE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46161	118.5953	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	118.5343	GEN659411 1-CAMPBLCNTY W0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	118.423	GEN563232 1-G15089_3 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	118.3753	GEN659296 2-SDPRAIRWND1W0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	118.3133	GEN652559 1-OAHE
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	118.2483	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	118.2167	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	118.0826	GEN652556 2-OAHE
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	118.0528	GEN652557 5-OAHE
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	117.9889	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	117.912	GEN659453 1-GI1414GEN W0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	117.7775	GEN615010 1-STANTON4
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	117.6806	GEN659141 1-K10215A
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	117.6266	GEN652173 1-G09_001IS_2 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	117.4269	GEN672321 1-SHAND GENERATOR 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	117.3997	GEN600004 2-PRAIRIE ISLAND G2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	117.3938	GEN600003 1-PRAIRIE ISLAND G1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	117.3481	GEN672310 1-POPLAR RIVER GENERATOR 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	117.348	GEN672311 2-POPLAR RIVER GENERATOR 2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	117.3129	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	117.2488	GEN659407 1-ANTELPHILLSW0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	117.0755	GEN600006 1-AS KING
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46818	116.8798	G15088_T 345.00 - MOORE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.49534	116.8491	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.49534	116.8356	2810X2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	116.826	GEN657749 1-YOUNG 1 GENERATOR
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	116.6343	GEN587033 1-G16-004-GEN10.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	116.462	GEN600005 1-MONTICELLO
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34860	116.3404	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	116.2968	GEN659111 2-LELAND OLDS UNIT2
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.49534	116.1664	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	115.9728	GEN579459 1-G16-075-GEN10.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	115.9193	GEN659103 1-ANTELOPE VALLEY UNIT1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	115.9193	GEN659107 2-ANTELOPE VALLEY UNIT2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33270	115.7001	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34480	115.6817	SPLIT ROCK - WHITE 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	115.6677	GEN600000 1-SHERBURNECNTY G1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34879	115.6628	STORLA - WESSINGTON 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34787	115.0245	HANLON - STORLA 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	114.9173	GEN600001 2-SHERBURNE CNTY G2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34468	114.7674	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34468	114.7674	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34648	114.7309	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	114.6611	GEN620315 1-BIG STONE GEN
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34871	114.3935	FT THOMPSON - LETCHER 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34871	114.3935	FT THOMPSON - LETCHER 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	114.3662	GEN600002 3-SHERBURNE CNTY G3
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	114.2595	GEN661015 1-COYOTE
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34530	114.196	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34340	114.1163	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	114.0335	GEN635024 4-WALTER SCOTT UNIT 4
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	113.8311	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34671	113.8039	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34699	113.7459	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	113.6755	GEN657748 1-YOUNG 2 GENERATOR
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34699	113.5815	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	113.5666	GEN635023 3-WALTER SCOTT UNIT 3
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34837	113.4127	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34837	113.4127	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34834	113.375	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34834	113.375	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34488	113.3677	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34488	113.3333	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34488	113.2818	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34593	113.2508	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34786	113.1938	LETCHER - SIOUX FALLS 230KV CKT 1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	113.1834	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	113.1406	GEN336821 1-GRAND GULF UNIT
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34593	113.1391	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34834	113.1364	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34699	113.1126	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34593	113.1048	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34593	113.1048	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	113.0785	GEN640009 1-COOPER NUCLEAR STATION
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	113.0736	GEN587293 1-G16-044-GEN10.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34571	112.8339	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	112.8196	GEN344225 1-1CAL G1 25.000
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	112.8138	GEN659125 1-COVEY
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34571	112.7605	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34571	112.7596	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34684	112.6094	RASMUSN - UTICA JCT 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	112.5702	GEN563222 1-G15088_3 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34530	112.5326	G09_001IST 345.00 - GROTON 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34704	112.4889	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34664	112.4485	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	112.4443	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34684	112.4156	RASMUSN - SIOUX CITY 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	112.4129	GEN336153 1-WATERFORD UNIT#3
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34335	112.381	HOSKINS - SHELL CREEK 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34769	112.3596	HANLON - SIOUX FALLS 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	112.2651	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34558	112.2497	RAUN - SIOUX CITY 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	112.2013	GEN335831 1-RIVERBEND UNIT#1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	112.1588	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34662	112.1035	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34664	112.0991	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	112.0699	GEN641089 2-ENERGY CENTER 2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34567	112.062	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34902	112.0301	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34567	112.0045	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34571	112.0035	NUNDRWD - WAYSIDE 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34631	111.9703	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34657	111.9307	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34657	111.9307	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34567	111.9086	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.8985	GEN587353 1-G16-050-GEN10.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.8819	GEN337653 1-WHITE BLUFF UNIT #2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36136	111.8469	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36132	111.8439	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34720	111.8166	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.816	GEN645012 2-NEBRASKA CITY 2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34720	111.8037	CLEARWATER - ONEILL 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34749	111.8026	FT RANDAL - UTICA JCT 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34951	111.7872	MINGO - RED WILLOW 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34951	111.7872	MINGO - RED WILLOW 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.7636	GEN501801 1-DOLET HILLS UNIT1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.7557	GEN337652 1-WHITE BLUFF UNIT #1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34720	111.7524	CLEARWATER - NELIGH 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.744	GEN645011 1-NEBRASKA CITY 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34879	111.742	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34879	111.742	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.7328	GEN338143 1-INDEPENDENCE UNIT #1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.7328	GEN338146 1-INDEPENDENCE UNIT #2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34725	111.726	BLAIR - GRANITE FALLS 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34725	111.726	BLAIR - GRANITE FALLS 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.7172	GEN542962 2-IATAN UNIT #2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34863	111.7123	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34934	111.6728	STAPLETON - THEDFORD 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.6095	GEN587363 1-G16-055-GEN10.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.5801	GEN501813 1-RODEMACHER UNIT 3
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.5762	GEN587443 1-G16-064-GEN10.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34670	111.5467	GAVINS POINT - HARTINGTON 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34619	111.544	SIDNEY - STEGALL 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.5393	GEN344897 4-1LAB G4 20.000
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.539	GEN344894 1-1LAB G1 20.000
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.5388	GEN344896 3-1LAB G3 20.000
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.51	GEN344895 2-1LAB G2 20.000
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.4993	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.4829	GEN345670 1-1RUSH G1 18.000
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.4828	GEN345671 2-1RUSH G2 18.000
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.4815	GEN335206 1-NELSON UNIT 6
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34795	111.4666	CARPENTER - HURON 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34739	111.447	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34726	111.4397	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34726	111.4397	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34759	111.4368	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34759	111.4368	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34735	111.4222	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.407	GEN336252 1-NINEMILE POINT UNIT#5
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.4006	GEN501812 1-RODEMACHER UNIT 2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34863	111.3852	BASSETT 7115.00 - STUART 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34795	111.3839	HURON - WATERTOWN 230KV CKT 2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34795	111.3839	HURON - WATERTOWN 230KV CKT 2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.3687	GEN336831 1-BAXTER WILSON SES
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34863	111.3668	AINSWORTH - BASSETT 7115.00 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34726	111.3628	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34726	111.3628	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34863	111.3467	ATKINSON - STUART 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.35252	111.3447	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34722	111.3362	DENISON - SIOUX CITY 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.333	GEN337041 1-GERALD ANDRUS
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34795	111.3326	CARPENTER - WATERTOWN 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34795	111.3326	CARPENTER - WATERTOWN 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34690	111.319	GARRISON - JAMES TOWN 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.317	GEN542957 1-IATAN UNIT #1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34759	111.3084	WINNER - WITTEN 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.3	GEN336251 1-NINEMILE POINT UNIT#4
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34863	111.2963	ATKINSON - EMMET 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34735	111.2792	MENNO JCT - TRIPP JCT 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34700	111.2792	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34700	111.2792	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34934	111.2767	MAXWELL - STAPLETON 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.2717	P13:115-230:NPPD:NUCOR-3
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.2702	GEN334440 1-SABINE UNIT 4
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.2486	GEN562547 1-G14_039_3 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34863	111.2473	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34670	111.2419	BELDEN - HARTINGTON 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34711	111.2409	FARGO - JAMES TOWN 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.2377	P13:230-345:NPPD:NUCOR-1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34712	111.223	FARGO - JAMES TOWN 230KV CKT 2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34735	111.2111	MENNO JCT - UTICA 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34717	111.1984	BISMARK - JAMES TOWN 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.1959	GEN336191 1-LITTLE GYPSY UNIT#3
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34700	111.1867	FT RANDAL - SPENCER 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.1856	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34773	111.185	CALLAWAY - MAXWELL 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34717	111.183	JAMES TOWN - WEBER 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34717	111.1753	BISMARK - WEBER 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.1644	GEN335204 1-NELSON UNIT 4
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34735	111.1539	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34726	111.1506	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34759	111.1505	GREGORY - WINNER 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.1495	GEN563212 1-G15087_3 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34759	111.1471	P12:115:UMZW:# 172 #: WI IN SD.
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34546	111.1441	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.1421	GEN336801 1-BAXTER WILSON UNIT #1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.1379	GEN335614 1-WILLOW GLENN UNIT#4
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.132	GEN336464 1-MICHOUD UNIT #3
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.1302	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34700	111.1288	ONEILL - SPENCER 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.1268	GEN334441 1-SABINE UNIT 5
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.1228	GEN303007 1-1BC2 U2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.1193	GEN303006 1-1BC2 U1
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	111.1155	GEN587133 1-G16-017-GEN10.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34681	111.0968	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34695	111.0963	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	111.0924	GEN642067 1-PLATTE
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34737	111.0732	JEFFREY - NORTH PLATTE 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34695	111.0636	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34744	110.764	AXTELL - SWEETWATER 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34569	110.6192	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	110.5896	BASE CASE
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.49534	110.5209	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33931	110.363	COLUMWEST - KELLY 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34679	110.3177	KELLY - SHELL CREEK 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34679	110.3156	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34679	110.3156	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34624	110.1915	P12:115:NPPD:1254:CENCITY7:COLMBUS7:BTB
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34704	110.1731	AURORA - GRAND ISLAND 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34710	110.1688	FAIRBURY - HARBINE 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34698	110.1367	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34698	110.1367	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34686	110.1266	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34710	110.0873	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34624	110.0857	CENTRAL CITY - CLARKS 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34710	110.0658	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	110.0623	GEN652345 W-G07_023IS_2 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	110.0417	GEN672367 1-MERIDIAN GENERATOR 1 GT1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	110.0417	GEN672368 2-MERIDIAN GENERATOR 2 GT2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	110.0273	GEN600046 1-MECST
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	110.0229	GEN652414 4-FT PECK
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	110.0229	GEN652415 5-FT PECK
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34702	110.0165	CRETE - FRIEND 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	110.0149	GEN600047 1-MECCT1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34642	110.0081	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34642	110.0081	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	110.0072	GEN672349 3-CORY COGEN GENERATOR 3 ST
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	110.0032	GEN659353 1-DEERCREK CTG18.000
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	110.0032	GEN659354 1-DEERCREK STG18.000
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9991	GEN672339 16-QE 16G 13.800
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9991	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9649	GEN659272 2-GROTON 2G13.800
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.96	GEN659274 1-GROTON
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.49534	109.9565	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9537	GEN659273 2-GROTON SYNC COND
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9536	GEN659294 1-WILTONCOL9
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9526	GEN672393 2-NBECST2G 13.800
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.49534	109.9433	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9406	GEN587583 1-J432-GEN1 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9356	GEN600065 7-HIGH BRIDGE
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9356	GEN600066 8-HIGH BRIDGE
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9342	GEN600014 4-BLACK DOG GEN 4
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.45038	109.9339	MCCOOL - MOORE 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9275	GEN600011 5-BLACK DOG GEN 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9226	GEN600070 9-RIVER SIDE
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9226	GEN600071 10-RIVER SIDE
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9151	GEN659162 4-RED WLCK
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9151	GEN659163 5-BLACK WDCK
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9148	GEN659192 6-LYNN
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9126	GEN600007 7-RIVERSIDE GEN 7
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.9096	GEN681522 3-GENOA 3
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34656	109.9008	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34656	109.9008	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.893	GEN657985 1-ASH1GEN9 0.5750
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.8879	GEN600017 C-LS POWER CT
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.8635	GEN659270 1-WEST SW
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34624	109.8559	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34659	109.847	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34550	109.8457	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34550	109.8457	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34714	109.8384	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34731	109.8364	COOPER - FAIRPORT 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.822	GEN615052 1-CAMBRIDGE GENERATING STATION
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.8081	GEN660016 1-B_H WIND 0.7000
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34965	109.7943	OAHE - SULLEY BUTTE 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34956	109.7524	GLENHAM - L3 HAWDON 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34686	109.7485	G15088_T 345.00 - MOORE 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.7351	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.7304	GEN659291 1-FT MP COLLECTOR
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.7243	GEN662101 1-WESSINGTON190.5750
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.7221	GEN 11104 1-J262_GEN 0.6000
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.7221	GEN 11108 1-J263_GEN 0.6000
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.7209	GEN562872 1-G15046_3 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34965	109.7186	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34965	109.7183	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34965	109.7183	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34727	109.7003	COPSTJCPFRSJ
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34727	109.7003	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34727	109.7003	STMDSJFAFACO
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34965	109.6903	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34965	109.6903	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.6873	GEN615015 1-GRE-SPRITWDG13.200
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.6648	GEN600067 9-HIGH BRIDGE
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.6614	GEN615021 1-GRE-ER 14G 16.000
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34965	109.6503	GLENHAM - WHITLOK 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.6131	GEN657705 X-DRAYTON
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.5962	GEN587623 1-J493-GEN1 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.5429	GEN910006 1-G12_012IS_3 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.5099	GEN672304 4-BOUNDARY DAM GENERATOR 4
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.5099	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.5098	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.5073	GEN587053 1-G16-007-GEN10.6500
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.4998	GEN 10648 1-G830_GEN 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34729	109.4816	COOPER - ST JOE 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.4675	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34731	109.4353	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34731	109.4264	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.4244	GEN672392 1-NBECGT1G 18.000
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.421	GEN681542 6-JP MADGETT
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.3741	GEN652460 4-GARRISON
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.3741	GEN652461 5-GARRISON
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.339	GEN652457 1-GARRISON
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.339	GEN652458 2-GARRISON
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.339	GEN652459 3-GARRISON
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34526	109.3338	SUB 3454 - WAGENER 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34526	109.3338	SUB 3454 - WAGENER 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.3316	GEN587593 1-J460-GEN1 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34731	109.329	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.3201	GEN659010 4-G07_027IS_2 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.309	GEN659366 3-WILTON 3 W0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.2764	GEN659194 1-NDPRAIRWND1W0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.1805	GEN659403 1-NDSUNFLWR W0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34546	109.1755	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.1319	GEN 11123 1-G736-GEN1 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.129	GEN 11133 1-J442-GEN1 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33931	109.103	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34551	109.0867	103RD & ROKEBY - MOORE 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34551	109.0867	103RD & ROKEBY - MOORE 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.0844	GEN652559 1-OAHE
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	109.0278	GEN652906 1-G09_006IS_3 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.979	GEN563232 1-G15089_3 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.9784	GEN659411 1-CAMPBLCNTY W0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.9629	GEN659110 1-LELAND OLDS UNIT1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.8531	GEN652907 1-G09_007IS_3 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.849	GEN659296 2-SDPRAIRWND1W0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34573	108.7781	COOPER - MOORE 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.624	GEN652556 2-OAHE
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.6233	GEN652558 6-OAHE
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.6037	GEN652557 5-OAHE
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.5711	GEN600004 2-PRAIRIE ISLAND G2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.5676	GEN600003 1-PRAIRIE ISLAND G1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.5427	GEN659453 1-GI1414GEN W0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.4742	GEN615010 1-STANTON4
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.4657	GEN652173 1-G09_001IS_2 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.43	GEN659141 1-K10215A
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.3559	GEN587653 1-J526-GEN1 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.3291	GEN600006 1-AS KING
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.2583	GEN672321 1-SHAND GENERATOR 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.2369	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34739	108.2307	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.2092	GEN672310 1-POPLAR RIVER GENERATOR 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.2092	GEN672311 2-POPLAR RIVER GENERATOR 2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.1815	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.1765	GEN659407 1-ANTELPHILLSW0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	108.1497	GEN587633 1-J510-GEN1 18.000
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	107.8563	GEN657749 1-YOUNG 1 GENERATOR
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	107.8171	GEN620315 1-BIG STONE GEN
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	107.8002	GEN587033 1-G16-004-GEN10.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	107.7937	GEN659118 1-LARAMIE RIVER UNIT1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	107.6602	GEN600005 1-MONTICELLO
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.44645	107.6065	GRAND ISLAND - MCCOOL 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	107.4756	GEN600000 1-SHERBURNECNTY G1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36539	107.4427	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36539	107.4347	2810X2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	107.2502	GEN659111 2-LELAND OLDS UNIT2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	107.2273	GEN579459 1-G16-075-GEN10.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36539	107.2203	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	106.9757	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	106.9757	GEN659107 2-ANTELOPE VALLEY UNIT2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	106.7581	GEN600001 2-SHERBURNE CNTY G2
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	106.6572	GEN600002 3-SHERBURNE CNTY G3
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	106.1523	GEN661015 1-COYOTE
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	105.7716	GEN657748 1-YOUNG 2 GENERATOR
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	105.7215	GEN562714 1-G15_023_4 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	105.7215	GEN562715 1-G15_023_5 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	105.5917	GEN587293 1-G16-044-GEN10.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	105.2784	GEN659125 1-COVEY
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36539	104.8913	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	104.3847	GEN615001 1-COAL CREEK
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	104.3007	GEN615002 2-COAL CREEK
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	104.0204	GEN587133 1-G16-017-GEN10.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36539	102.7733	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36539	102.7055	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36539	102.7039	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.32644	99.8	MCCOOL - MOORE 345KV CKT 1
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	99.7	GEN562714 1-G15_023_4 0.6900
0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34740	99.7	GEN562715 1-G15_023_5 0.6900
0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46958	99.6	GEN652353 2-GR PRAIRIEG 0.6900
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34348	147.1956	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.32995	146.6069	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34205	146.0134	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34366	145.7846	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34448	145.3239	LETCHER - SIOUX FALLS 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34481	145.2023	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34587	145.1902	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34637	144.5417	MINGO - RED WILLOW 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34393	144.5151	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34228	144.4643	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34375	144.4404	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34521	144.2641	FT THOMPSON - LETCHER 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	143.988	GEN640009 1-COOPER NUCLEAR STATION
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	143.9093	GEN336153 1-WATERFORD UNIT#3
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34439	143.6766	HANLON - SIOUX FALLS 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34362	143.6482	RASMUSN - UTICA JCT 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34344	143.4501	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	143.42	GEN563222 1-G15088_3 0.6900
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34532	143.377	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34344	143.307	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33895	143.0881	HOSKINS - SHELL CREEK 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34307	143.0801	SIDNEY - STEGALL 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34398	143.062	CLEARWATER - ONEILL 115KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34358	143.0519	LAKEFIELD 3 - NOBLES 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34258	143.0451	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34372	143.0117	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	142.9616	GEN542951 5-HAWTHORN UNIT #5
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	142.9374	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34304	142.911	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34304	142.9109	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34248	142.9028	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	142.89	AINSWORTH - VALENTINE 115KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34372	142.8336	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34304	142.8192	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34149	142.8052	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34613	142.8024	STAPLETON - THEDFORD 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34304	142.7797	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34304	142.7776	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	142.6884	CALLAWAY - MAXWELL 115KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34545	142.6434	AINSWORTH - BASSETT 7115.00 115KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34173	142.6187	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	142.6036	GEN337653 1-WHITE BLUFF UNIT #2
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	142.5908	GEN337652 1-WHITE BLUFF UNIT #1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	142.5685	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	142.5642	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34173	142.5038	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34545	142.4944	BASSETT 7115.00 - STUART 115KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34939	142.4257	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34545	142.4218	ATKINSON - STUART 115KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34536	142.3828	MINGO - SETAB 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34483	142.375	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34443	142.3322	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34365	142.3182	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34221	142.2869	GRIMES - LEHIGH 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	142.1595	GEN587363 1-G16-055-GEN10.6900
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	142.1497	GEN501801 1-DOLET HILLS UNIT1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	142.1476	GEN335206 1-NELSON UNIT 6
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35726	142.1324	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35722	142.1273	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34481	142.0863	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	142.0739	GEN587443 1-G16-064-GEN10.6900
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34616	142.0712	STAPLETON - THEDFORD 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34286	142.0705	MENNO JCT - UTICA 115KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34421	142.001	JEFFREY - NORTH PLATTE 115KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34545	141.997	ATKINSON - EMMET 115KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34443	141.9873	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34274	141.9774	NOBLES - SPLIT ROCK 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	141.9629	GEN542957 1-IATAN UNIT #1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34613	141.9448	MAXWELL - STAPLETON 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34283	141.9074	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34283	141.9073	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	141.868	BROKEN BOW - CALLAWAY 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.833	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34436	141.8324	TYNDALL - WHITE SWAN 115KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	141.8264	GEN542955 1-LACYGNE UNIT #1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	141.819	GEN334441 1-SABINE UNIT 5
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.804	GEN336252 1-NINEMILE POINT UNIT#5
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	141.782	GEN501812 1-RODEMACHER UNIT 2
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34245	141.7582	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34245	141.7437	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.7422	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.7417	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.7399	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.7333	GEN501813 1-RODEMACHER UNIT 3
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34942	141.7057	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34427	141.6976	AXTELL - SWEETWATER 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.6737	GEN344897 4-1LAB G4 20.000
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.6685	GEN344894 1-1LAB G1 20.000
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.6679	GEN344896 3-1LAB G3 20.000
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34282	141.635	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34418	141.6265	MT VERN - STORLA 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34274	141.6092	JAMES TOWN - WEBER 230KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	141.6014	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34286	141.6011	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.5933	GEN336831 1-BAXTER WILSON SES
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35872	141.5891	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35868	141.5881	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.5661	GEN336251 1-NINEMILE POINT UNIT#4
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.5488	GEN344895 2-1LAB G2 20.000
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	141.5452	GEN334433 1-SABINE UNIT 3
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.5291	GEN345670 1-1RUSH G1 18.000
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.5286	GEN345671 2-1RUSH G2 18.000
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.5165	GEN337041 1-GERALD ANDRUS
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34350	141.5058	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34221	141.5035	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34221	141.5035	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.5007	GEN335206 1-NELSON UNIT 6
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34274	141.4805	BISMARK - WEBER 230KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	141.4696	GEN336222 1-LITTLE GYPSY UNIT#2
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34568	141.4552	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34286	141.3999	PRAIRIE - RAMSEY 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.3975	GEN501812 1-RODEMACHER UNIT 2
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.3821	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34483	141.379	STAPLETON - THEDFORD 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34283	141.3725	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34283	141.3725	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.3599	GEN334440 1-SABINE UNIT 4
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34419	141.3595	MARTIN - SHANNON 115KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34363	141.3548	KELLY - SHELL CREEK 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34363	141.3189	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.306	GEN542962 2-IATAN UNIT #2
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	141.2589	GEN336152 1-WATERFORD UNIT#2
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	141.2588	GEN336151 1-WATERFORD UNIT#1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	141.2336	GEN338388 1-1PLUM PT U1 23.000
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34252	141.1908	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34252	141.1907	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34468	141.1894	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34468	141.1894	FT THOMPSON - OAHE 230KV CKT 2
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	141.1892	GEN336191 1-LITTLE GYPSY UNIT#3
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34270	141.1864	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	141.1701	GEN303007 1-1BC2 U2
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.1613	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	141.1594	GEN303006 1-1BC2 U1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.154	GEN336191 1-LITTLE GYPSY UNIT#3
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34411	141.1416	CHADRON - DUNLAP 115KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34470	141.1178	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34470	141.1178	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34525	141.1147	FT THOMPSON - LETCHER 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34505	141.1098	BROADLAND - HURON 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34505	141.1097	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34823	141.0933	NF
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34282	141.0881	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.0793	GEN338388 1-1PLUM PT U1 23.000
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34505	141.0777	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34505	141.0656	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34321	141.0534	CALLAWAY - MAXWELL 115KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34369	141.0086	G15088_T 345.00 - MOORE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34372	141.0055	G15088_T 345.00 - PAULINE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.9958	GEN335614 1-WILLOW GLENN UNIT#4
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.9863	GEN334441 1-SABINE UNIT 5
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.9854	GEN336801 1-BAXTER WILSON UNIT #1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.9798	GEN336464 1-MICHOUD UNIT #3
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	140.9691	UTICA JCT - VFODNES 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.9669	GEN335204 1-NELSON UNIT 4
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34245	140.9658	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34282	140.9582	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	140.9576	BASE CASE
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.9012	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34305	140.9006	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34305	140.9006	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	140.8922	GEN335614 1-WILLOW GLENN UNIT#4
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34252	140.8914	P13:230-345:NPPD:SIDNEY 3:KV2A
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.8822	ANSON 115/17.5KV TRANSFORMER CKT 4
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34252	140.8816	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34205	140.8737	FIELD NORTH - LKFLDXL3 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34145	140.8684	HOSKINS - RAUN 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34145	140.8684	HOSKINS - RAUN 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34419	140.8646	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34252	140.8637	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34295	140.8429	BURR - CANBY 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34316	140.8361	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34316	140.836	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.8242	GEN587363 1-G16-055-GEN10.6900
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	140.8166	GEN336801 1-BAXTER WILSON UNIT #1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34257	140.8147	OGALLALA - SIDNEY 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34205	140.7988	FIELD SOUTH - WILMARTH 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34267	140.7833	EAGLE - MARTIN 115KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34229	140.7617	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.76	GEN587443 1-G16-064-GEN10.6900
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.7578	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.7574	GEN334433 1-SABINE UNIT 3
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.757	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	140.741	GEN587363 1-G16-055-GEN10.6900
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34277	140.7326	AUDUBON - HUBBARD 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34464	140.7166	MAXWELL - NORTH PLATTE 115KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34409	140.7154	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34312	140.7103	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34325	140.7076	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34616	140.7034	MAXWELL - STAPLETON 115KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34498	140.7011	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34419	140.6889	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34312	140.6864	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34312	140.6864	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34492	140.6853	BISON - HETINGER 230KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	140.6588	GEN587443 1-G16-064-GEN10.6900
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34258	140.6433	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	140.6431	GEN531447 1-HOLCOMB GENERATOR
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34348	140.6319	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34348	140.6319	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34348	140.6297	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34348	140.6297	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34267	140.6222	EAGLE - PHILIP 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.618	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34299	140.5967	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34265	140.596	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34350	140.5824	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34350	140.5824	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34350	140.5824	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34350	140.5824	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34483	140.5669	MAXWELL - STAPLETON 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34406	140.5543	MINGO - SETAB 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34406	140.5542	MINGO - SETAB 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.4827	AINSWORTH WIND 34KV SWITCHED SHUNT
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.4823	GEN642067 1-PLATTE
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34279	140.4693	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34279	140.4693	P12:230:UMZW:# 158 #: MH IN ND.
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34460	140.4687	BROKEN BOW - CALLAWAY 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.4573	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34381	140.4302	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34381	140.4271	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.4241	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34359	140.3896	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34253	140.3192	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34302	140.3186	AXTELL - SWEETWATER 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34289	140.3122	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34438	140.3074	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	140.2982	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	140.2982	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 2
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35877	140.28	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34210	140.2769	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35873	140.2746	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34637	140.2711	MINGO - RED WILLOW 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34361	140.264	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34249	140.2568	ALBION - SPALDING 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33610	140.2475	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34295	140.2465	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34295	140.2451	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34253	140.2408	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34380	140.2166	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34238	140.2058	KELLY - SHELL CREEK 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34238	140.188	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34238	140.188	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34380	140.1205	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.0898	GEN531447 1-HOLCOMB GENERATOR
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34421	140.0734	BROKEN BOW - CROOKED CREEK 115KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34238	140.0623	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34435	139.9716	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.9489	KEARNEY 115KV SWITCHED SHUNT
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34233	139.9485	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34497	139.927	BISON - MAURINE 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34234	139.9197	103RD & ROKEBY - MOORE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	139.8566	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34467	139.854	MAXWELL - NORTH PLATTE 115KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34641	139.8487	MINGO - RED WILLOW 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34152	139.8286	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34380	139.7442	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.7415	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34429	139.7278	G16-055-TAP 115.00 - HILDRETH 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34201	139.708	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34201	139.7079	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34244	139.6997	G15088_T 345.00 - MOORE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34111	139.6714	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33491	139.6695	COLUMWEST - KELLY 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	139.6555	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34276	139.6387	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	139.617	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34345	139.6076	MAXWELL - NORTH PLATTE 115KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	139.5952	BASE CASE
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	139.5775	GEN600045 4-ANSON
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.5535	BASE CASE
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34337	139.5532	GRIMES - LEHIGH 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.5512	1222-AINSWORTH WIND
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.5512	1303-KEARNEY
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.5512	2560-BRDLAND-LNX3345.00
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.5512	2561-BRDLAND-LNX3345.00
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.5512	BASE CASE
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34132	139.5479	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34257	139.402	COOPER - MOORE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34244	139.3905	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34355	139.3659	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34384	139.3645	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34384	139.3633	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34412	139.3206	COOPER - ST JOE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34486	139.2918	FT RANDAL - FT THOMPSON 230KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34262	139.2411	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34414	139.1847	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34414	139.1717	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34176	139.1514	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34237	139.149	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34309	139.1435	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33613	139.1066	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.0956	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34256	139.0829	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34256	139.0829	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34255	139.0801	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34255	139.08	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34414	139.0633	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34532	139.0508	FT THOMPSON - WESSINGTON 230KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34484	139.0452	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34298	139.0166	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34298	139.0154	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34212	139	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34418	138.9638	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34170	138.8998	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34170	138.8995	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34170	138.8984	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34170	138.8981	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34398	138.8967	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34176	138.8928	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34339	138.8203	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34339	138.8203	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34545	138.8068	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34508	138.787	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34568	138.7686	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34236	138.7322	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34084	138.6821	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34084	138.682	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34109	138.6326	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34109	138.6326	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33491	138.627	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34418	138.6161	COOPER - FAIRPORT 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34229	138.6018	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	138.5644	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	138.473	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34443	138.3369	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34421	138.2995	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34421	138.2995	P12:115:UMZB:# 119 #: IN NE.
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34416	138.2975	COOPER - ST JOE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	138.2214	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34418	138.2187	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34536	138.2157	MINGO - SETAB 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34418	138.2032	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34110	138.1909	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34110	138.1906	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	138.1345	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	138.0494	GEN659273 2-GROTON SYNC COND
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	138.0494	GEN659294 1-WILTONCOL9
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34426	138.044	HANKINSON - WAHPETON 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	138.0319	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34135	138.0054	COOPER - MOORE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.9508	GEN659192 6-LYNN
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.9503	GEN659162 4-RED WLCK
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.9503	GEN659163 5-BLACK WDCK
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	137.8981	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34443	137.8955	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34395	137.8641	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34418	137.793	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.779	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34351	137.7278	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.6564	GEN659270 1-WEST SW
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.6144	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.5951	GEN562872 1-G15046_3 0.6900
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.5878	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.5807	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.5806	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34383	137.5792	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.553	GEN615015 1-GRE-SPRITWDG13.200
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34353	137.5523	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.5453	GEN 11104 1-J262_GEN 0.6000
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.5453	GEN 11108 1-J263_GEN 0.6000
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.5135	GEN587623 1-J493-GEN1 0.6900
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.4177	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.3866	CENTER 230/22.0KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.3846	LADISH 115/13.2KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.3498	GEN910006 1-G12_012IS_3 0.6900
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34468	137.3134	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34468	137.3134	FT THOMPSON - OAHE 230KV CKT 2
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34470	137.2752	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34470	137.2752	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34411	137.2514	BLAIR - GRANITE FALLS 230KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34351	137.2242	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34568	137.1774	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.1732	GEN587053 1-G16-007-GEN10.6500
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34111	137.1686	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34363	137.1495	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.0978	GEN 10648 1-G830_GEN 0.6900
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	137.0599	BASE CASE
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34325	136.9872	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34392	136.9577	AS KING - EAU CLAIRE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34241	136.8586	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34340	136.8566	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34333	136.8523	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	136.7714	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	136.7682	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34353	136.7276	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34395	136.7089	NOBLES - SPLIT ROCK 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	136.699	GEN659194 1-NDPRAIRWND1W0.6900
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	136.677	GEN659010 4-G07_027IS_2 0.6900
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34505	136.6738	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34505	136.6671	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	136.6648	GEN652460 4-GARRISON
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	136.6648	GEN652461 5-GARRISON
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	136.6645	GEN659366 3-WILTON 3 W0.6900
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34505	136.6579	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34358	136.6372	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	136.6029	GEN579459 1-G16-075-GEN10.6900
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	136.5715	GEN652457 1-GARRISON
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	136.5715	GEN652458 2-GARRISON
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	136.5715	GEN652459 3-GARRISON
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	136.4949	GEN659118 1-LARAMIE RIVER UNIT1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34501	136.4591	GLENHAM - L3 HAWDON 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34381	136.4459	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34381	136.4424	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34539	136.4401	MINGO - SETAB 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	136.4316	GEN659403 1-NDSUNFLWR W0.6900
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34391	136.4303	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34510	136.3716	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34295	136.3566	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34295	136.3551	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	136.3501	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34210	136.2839	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34570	136.2746	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34536	136.2647	FT THOMPSON - WESSINGTON 230KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34365	136.2361	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34510	136.2261	GLENHAM - WHITLOK 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34414	136.1559	COOPER - FAIRPORT 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34411	136.1235	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34510	136.1137	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34549	136.1015	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34233	136.0173	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	136.0163	GEN600004 2-PRAIRIE ISLAND G2
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34401	136.0155	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	136.0104	GEN600003 1-PRAIRIE ISLAND G1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	135.9902	GEN659411 1-CAMPBLCNTY W0.6900
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34373	135.9892	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	135.9647	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34510	135.9438	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34510	135.9208	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34234	135.9007	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34510	135.893	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34510	135.893	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	135.8128	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34411	135.758	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34424	135.6031	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34424	135.6031	P12:115:UMZB:# 119 #: IN NE.
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	135.5939	GEN652173 1-G09_001IS_2 0.6900
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	135.5652	GEN600006 1-AS KING
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34628	135.4809	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34628	135.4809	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	135.41	GEN659453 1-GI1414GEN W0.6900
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	135.3716	GEN659110 1-LELAND OLDS UNIT1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34498	135.2782	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	135.2521	GEN579459 1-G16-075-GEN10.6900
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	135.2336	GEN659141 1-K10215A

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	135.2019	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34446	135.1578	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	135.1491	GEN615010 1-STANTON4
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	135.0643	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	134.8812	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	134.8493	STANTON 230/18.0KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	134.8324	STANTON 230/18.0KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	134.8284	GEN600005 1-MONTICELLO
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34438	134.8268	P12:345:SPS:J07.1.FINN.HITCH
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34438	134.8116	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	134.7421	GEN657749 1-YOUNG 1 GENERATOR
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34435	134.7399	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	134.7309	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	134.6345	GEN659118 1-LARAMIE RIVER UNIT1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	134.6126	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	134.5438	GEN659118 1-LARAMIE RIVER UNIT1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34472	134.4548	FT THOMPSON - OAHE 230KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34472	134.4548	FT THOMPSON - OAHE 230KV CKT 2
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34474	134.4299	FT THOMPSON - OAHE 230KV CKT 3
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34474	134.4299	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34366	134.3844	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34416	134.3392	SUB 3455 - SUB 3740 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	134.2993	BASE CASE
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34508	134.165	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34508	134.1644	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34508	134.1518	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	134.1356	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36119	134.1255	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	134.105	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	134.0978	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	134.0843	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	134.0741	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	134.0524	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	134.0469	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	134.0307	GEN600000 1-SHERBURNECNTY G1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	134.0219	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	133.9952	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	133.9657	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	133.937	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36119	133.9061	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34570	133.8377	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	133.8177	GEN587293 1-G16-044-GEN10.6900
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	133.8046	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	133.783	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	133.7377	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34384	133.6873	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34384	133.6839	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	133.6118	GEN659125 1-COVEY
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34298	133.5812	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34298	133.5797	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34418	133.5479	COOPER - FAIRPORT 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34413	133.4158	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	133.411	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34212	133.3564	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34237	133.3436	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34236	133.2313	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36118	133.1733	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	133.0146	GEN659103 1-ANTELOPE VALLEY UNIT1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	133.0146	GEN659107 2-ANTELOPE VALLEY UNIT2
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	132.9953	GEN600001 2-SHERBURNE CNTY G2
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	132.8942	GEN600002 3-SHERBURNE CNTY G3
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34630	132.8847	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34630	132.8847	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	132.6673	GEN615001 1-COAL CREEK
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	132.6028	GEN661015 1-COYOTE
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	132.5974	GEN615002 2-COAL CREEK
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	132.3975	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	132.3831	GEN620315 1-BIG STONE GEN
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46831	132.2508	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	132.2268	GEN587293 1-G16-044-GEN10.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	132.2032	GEN657748 1-YOUNG 2 GENERATOR
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	132.0823	GEN587133 1-G16-017-GEN10.6900
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	132.0769	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	132.0523	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	131.8942	GEN659125 1-COVEY
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.32334	131.885	MCCOOL - MOORE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36045	131.7803	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36045	131.6976	Z810X2
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	131.6178	GEN659103 1-ANTELOPE VALLEY UNIT1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	131.6178	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	131.1156	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	131.0706	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	131.0546	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	130.9531	GEN615001 1-COAL CREEK
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	130.9207	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	130.6689	GEN587133 1-G16-017-GEN10.6900
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	130.6439	GEN659125 1-COVEY
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36045	130.1071	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	129.6672	GEN615001 1-COAL CREEK
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46534	129.6642	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	129.5616	GEN615002 2-COAL CREEK
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	129.1731	GEN587133 1-G16-017-GEN10.6900
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	128.9777	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47180	128.6654	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	128.5486	GEN562714 1-G15_023_4 0.6900
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	128.5486	GEN562715 1-G15_023_5 0.6900
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	128.2772	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47200	127.7935	STORLA - WESSINGTON 230KV CKT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36118	127.3141	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	127.0088	GEN562714 1-G15_023_4 0.6900
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	127.0088	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.31895	126.9344	GRAND ISLAND - MCCOOL 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46763	126.761	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46763	126.593	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46763	126.576	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46763	126.576	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	126.5465	GEN562714 1-G15_023_4 0.6900
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	126.5465	GEN562715 1-G15_023_5 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47062	126.477	HANLON - STORLA 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47188	125.7844	FT THOMPSON - LETCHER 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47188	125.7844	FT THOMPSON - LETCHER 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46656	125.0858	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46656	125.0858	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46701	124.8078	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46701	124.6343	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46701	124.633	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46833	124.3584	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46688	124.2278	SPLIT ROCK - WHITE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46688	124.2278	SPLIT ROCK - WHITE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47189	124.1583	FT RANDAL - FT THOMPSON 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47189	124.1583	FT RANDAL - FT THOMPSON 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47183	124.0957	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47183	124.0957	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46729	124.0198	G09_001IST 345.00 - GROTON 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46818	123.8967	CENTER - JAMESTOWN 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47055	123.863	LETCHER - SIOUX FALLS 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46897	123.8312	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46534	123.8154	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46859	123.8072	BISON 3 345.00 - BUFFALO 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.45638	123.7982	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47183	123.7539	FT RANDAL - LAKE PLATT 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46748	123.6443	NUNDRWD - WAYSIDE 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46446	123.588	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46446	123.5848	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46909	123.556	AS KING - EAU CLAIRE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46446	123.5468	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46917	123.3833	FT RANDAL - SIOUX CITY 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.48992	123.339	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.48987	123.33	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	123.2893	GEN635024 4-WALTER SCOTT UNIT 4

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46833	123.2762	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34422	123.0058	GEN652353 2-GR PRAIRIEG 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46655	122.9079	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46655	122.9079	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.42239	122.9058	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	122.869	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46655	122.8485	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	122.8418	GEN635023 3-WALTER SCOTT UNIT 3
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	122.8083	GEN344225 1-1CAL G1 25.000
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46655	122.7865	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46897	122.7343	RASMUSN - UTICA JCT 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47019	122.7335	HANLON - SIOUX FALLS 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	122.6995	GEN336153 1-WATERFORD UNIT#3
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46858	122.6847	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46899	122.6695	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46915	122.6507	ELLENDALE - OAKES 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46915	122.6507	ELLENDALE - OAKES 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46881	122.5854	GRIMES - LEHIGH 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46915	122.5431	FORMAN - OAKES 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46860	122.5386	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	122.5301	GEN641089 2-ENERGY CENTER 2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46897	122.4899	RASMUSN - SIOUX CITY 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46909	122.4723	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46828	122.4468	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	122.4029	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	122.4008	GEN335831 1-RIVERBEND UNIT#1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	122.3635	GEN336821 1-GRAND GULF UNIT
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	122.3332	GEN337653 1-WHITE BLUFF UNIT #2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46876	122.3171	PAHOJA - SIOUX FALLS 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46918	122.2878	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46933	122.1832	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46860	122.1794	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46915	122.1516	FORMAN - HANKINSON 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46918	122.142	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	122.1262	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46589	122.1083	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46679	122.0828	SIDNEY - STEGALL 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	122.0641	GEN587353 1-G16-050-GEN10.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47200	122.0556	FT THOMPSON - WESSINGTON 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47200	122.0556	FT THOMPSON - WESSINGTON 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47041	122.0485	CARPENTER - HURON 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46933	122.0042	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46864	121.9701	CHISAGO COUNTY - FORBES 500KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.9616	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34425	121.9491	GEN652353 2-GR PRAIRIEG 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47041	121.9393	HURON - WATERTOWN 230KV CKT 2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47041	121.9393	HURON - WATERTOWN 230KV CKT 2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46876	121.9209	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46864	121.8974	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.8861	GEN501801 1-DOLET HILLS UNIT1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46920	121.873	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47041	121.8556	CARPENTER - WATERTOWN 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47041	121.8556	CARPENTER - WATERTOWN 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.8552	GEN563222 1-G15088_3 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46876	121.8522	BYRON - NORTH ROCHESTER 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46746	121.8337	RAUN - SIOUX CITY 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46746	121.8337	RAUN - SIOUX CITY 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46920	121.8069	MISSION - ST FRANCIS 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46543	121.7937	HOSKINS - SHELL CREEK 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.7867	GEN337652 1-WHITE BLUFF UNIT #1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46973	121.7725	FT RANDAL - UTICA JCT 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46956	121.7141	HANKINSON - WAHPETON 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.6974	GEN338146 1-INDEPENDENCE UNIT #2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46920	121.6968	HARMONY - ST FRANCIS 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.6942	GEN338143 1-INDEPENDENCE UNIT #1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46863	121.6623	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46863	121.6623	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46920	121.611	HARMONY - VALENTINE 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46839	121.5972	COLUMEAST - SHELL CREEK 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46877	121.5914	BYRON - PLEASANT VALLEY 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46893	121.565	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46893	121.565	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46917	121.5263	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.5174	GEN501813 1-RODEMACHER UNIT 3
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46893	121.5157	FT RANDAL - SPENCER 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46917	121.5068	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46941	121.5062	BLAIR - GRANITE FALLS 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46941	121.5062	BLAIR - GRANITE FALLS 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46925	121.4303	CENTER - COYOTE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47381	121.3977	FT THOMPSON - HURON 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47381	121.3977	FT THOMPSON - HURON 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47381	121.3977	FT THOMPSON - HURON 230KV CKT 2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47381	121.3977	FT THOMPSON - HURON 230KV CKT 2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46893	121.397	ONEILL - SPENCER 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.3737	GEN335206 1-NELSON UNIT 6
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46703	121.3073	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46926	121.2893	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46876	121.2771	GAVINS POINT - HARTINGTON 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46920	121.2631	AINSWORTH - VALENTINE 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.258	GEN344897 4-1LAB G4 20.000
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.2574	GEN501812 1-RODEMACHER UNIT 2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.2557	GEN344894 1-1LAB G1 20.000
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.2555	GEN344896 3-1LAB G3 20.000
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46933	121.2352	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46916	121.2284	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.2222	GEN344895 2-1LAB G2 20.000
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.2219	GEN587363 1-G16-055-GEN10.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.2178	GEN642067 1-PLATTE
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46916	121.2134	CLEARWATER - ONEILL 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46826	121.1953	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46833	121.1838	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46896	121.1821	GARRISON - JAMES TOWN 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.1818	GEN345670 1-1RUSH G1 18.000
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.1816	GEN345671 2-1RUSH G2 18.000
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46957	121.1742	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46916	121.1535	CLEARWATER - NELIGH 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46937	121.1464	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46826	121.1339	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46826	121.1337	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.1283	GEN336252 1-NINEMILE POINT UNIT#5
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.0886	GEN587443 1-G16-064-GEN10.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.0884	GEN336831 1-BAXTER WILSON SES
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46937	121.0575	DENISON - SIOUX CITY 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46923	121.0437	FARGO - JAMES TOWN 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46826	121.0332	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	121.0249	GEN337041 1-GERALD ANDRUS
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46959	121.0227	MENNO JCT - TRIPP JCT 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46924	121.0184	FARGO - JAMES TOWN 230KV CKT 2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46952	121.0142	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46952	121.0142	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46935	121.001	AUDUBON - SHEYNNE 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.9875	GEN334440 1-SABINE UNIT 4
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46930	120.987	BISMARK - JAMES TOWN 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46930	120.966	JAMES TOWN - WEBER 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46878	120.9601	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46878	120.9519	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46878	120.9515	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46942	120.9476	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.9466	GEN336251 1-NINEMILE POINT UNIT#4
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.9358	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.9351	P13:115-230:NPPD:NUCOR-3
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46959	120.9224	MENNO JCT - UTICA 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46947	120.9175	NOBLES - SPLIT ROCK 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46952	120.912	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46952	120.912	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46932	120.9076	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46876	120.8902	BELDEN - HARTINGTON 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.8775	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.8769	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46959	120.8679	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.8628	P13:230-345:NPPD:NUCOR-1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.8447	GEN303007 1-1BC2 U2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.8445	GEN336191 1-LITTLE GYPSY UNIT#3
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.842	GEN303006 1-1BC2 U1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.8415	GEN335204 1-NELSON UNIT 4
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.8358	GEN531447 1-HOLCOMB GENERATOR
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.7976	GEN336801 1-BAXTER WILSON UNIT #1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.7905	GEN335614 1-WILLOW GLENN UNIT#4
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.7884	GEN303008 1-1BC2 U3
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.7871	GEN336170 1-GULF OXY U4
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.7797	GEN336464 1-MICHOUD UNIT #3
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.7725	GEN334441 1-SABINE UNIT 5
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.7447	GEN501811 1-RODEMACHER UNIT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46884	120.7402	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47093	120.7396	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46941	120.6618	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46941	120.6618	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.6068	GEN659118 1-LARAMIE RIVER UNIT1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.5838	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46941	120.5118	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46811	120.4165	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	120.0924	BASE CASE
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46904	119.9815	KELLY - SHELL CREEK 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46904	119.9769	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46904	119.9769	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47093	119.9416	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47093	119.9416	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47093	119.9397	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47093	119.932	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47093	119.9302	BROADLAND - HURON 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47093	119.9301	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47093	119.9301	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.8548	GEN635213 3-NEAL UNIT 3
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46813	119.7751	HOSKINS - RAUN 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46813	119.7751	HOSKINS - RAUN 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.7273	GEN635214 4-NEAL UNIT 4
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46956	119.7172	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46956	119.7172	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.6846	GEN300003 1-THOMAS HILL UNIT 3
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46957	119.645	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46954	119.6379	G15_081T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46957	119.6351	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46938	119.6256	MINGO - SETAB 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46938	119.6256	MINGO - SETAB 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46923	119.6208	AURORA - GRAND ISLAND 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.5988	GEN587153 1-G16-021-GEN10.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46870	119.5923	MOORE - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46870	119.5923	MOORE - NW68TH & HOLDREGE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46948	119.577	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46929	119.5613	FAIRBURY - HARBINE 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46956	119.5592	G15066_T 345.00 - SOONER 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46843	119.5487	CENTRAL CITY - SILVER CREEK 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.5482	GEN590010 1-ERCOT EQUIVALENCE
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46956	119.5476	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46956	119.547	917X
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47093	119.5404	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46945	119.5327	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46956	119.5248	G16-037-TAP 345.00 - GRACEMONT 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.5232	GEN590011 2-ERCOT EQUIVALENCE
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46956	119.5226	CLEVELAND - G15066_T 345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46929	119.5213	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46929	119.5207	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46957	119.5078	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46953	119.5059	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46894	119.4986	LOUP CITY - NORTH LOUP 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46959	119.4968	P12:115:UMZW:# 172 #: WI IN SD.
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46943	119.4721	AXTELL - PAULINE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.4641	GEN300007 1-NEW MADRID UNIT 2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46921	119.4622	CRETE - FRIEND 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.458	GEN300006 1-NEW MADRID UNIT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46889	119.4404	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46889	119.4404	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46954	119.4384	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	119.4358	GEN652353 2-GR PRAIRIEG 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46956	119.4349	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.4344	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46955	119.4254	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46955	119.4254	PITTSBURG - VALLIANT 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.3882	GEN659290 1-EDGECOL
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.3801	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46922	119.363	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46859	119.3554	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46866	119.3535	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46866	119.3535	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.3523	GEN652410 3-FT PECK
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.3055	GEN672347 1-CORY COGEN GENERATOR 1 GT1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.3055	GEN672348 2-CORY COGEN GENERATOR 2 GT2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46843	119.2991	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.2959	GEN672350 1-NIPAWIN GENERATOR 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.2959	GEN672351 2-NIPAWIN GENERATOR 2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.2959	GEN672352 3-NIPAWIN GENERATOR 3
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.295	GEN600012 2-BLACK DOG GEN 2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46926	119.2903	MINGO - RED WILLOW 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46926	119.2903	MINGO - RED WILLOW 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.2804	GEN652414 4-FT PECK
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.2804	GEN652415 5-FT PECK
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.2782	GEN509403 1-PIRKEY GENERATION
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.2698	GEN652345 W-G07_023IS_2 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.2667	GEN620324 3-HOOT LAKE 3 GEN
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.2662	GEN615032 2-PLEASANT VALLEY
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.2641	GEN657600 1-L1GEN3 9 0.5750
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46933	119.264	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.2329	LADISH 115/13.2KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.2159	GEN659353 1-DEERCREK CTG18.000
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.2121	GEN672349 3-CORY COGEN GENERATOR 3 ST
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.2097	GEN672367 1-MERIDIAN GENERATOR 1 GT1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.2097	GEN672368 2-MERIDIAN GENERATOR 2 GT2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.1998	GEN672339 16-QE 16G 13.800
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.1998	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46954	119.1997	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46872	119.1987	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46872	119.1987	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46945	119.1903	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.1694	GEN600050 1-FEP
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.1593	GEN652558 6-OAHE
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.1466	GEN587583 1-J432-GEN1 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.1315	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.1208	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.1156	GEN659273 2-GROTON SYNC COND
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.1156	GEN659294 1-WILTONCOL9
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46922	119.1127	FALLOW 3 345.00 - GRIMES 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.1066	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.0677	GEN600065 7-HIGH BRIDGE
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.0677	GEN600066 8-HIGH BRIDGE
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.0636	GEN672393 2-NBECST2G 13.800
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47260	119.0394	OAHE - SULLEY BUTTE 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.0189	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.015	GEN659192 6-LYNN
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.0138	GEN659162 4-RED WLCK
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.0138	GEN659163 5-BLACK WDCK
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46161	119.0138	COLUMWEST - KELLY 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	119.0059	GEN657985 1-ASH1GEN9 0.5750
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47248	119	GLENHAM - L3 HAWDON 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46872	118.9938	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46928	118.9806	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.9803	GEN600014 4-BLACK DOG GEN 4
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.9799	GEN600067 9-HIGH BRIDGE
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.976	GEN600011 5-BLACK DOG GEN 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.9748	GEN600071 10-RIVER SIDE
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.9746	GEN600070 9-RIVER SIDE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.9589	GEN600007 7-RIVERSIDE GEN 7
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.9559	GEN652906 1-G09_006IS_3 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47260	118.9471	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47260	118.9346	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.9345	CENTER 230/22.0KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47260	118.9344	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.9291	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.9268	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47260	118.9073	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47260	118.9073	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.9061	GEN660016 1-B_H WIND 0.7000
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.9001	GEN600017 C-LS POWER CT
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.8675	GEN681522 3-GENOA 3
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47260	118.8585	GLENHAM - WHITLOK 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.8553	GEN659291 1-FT MP COLLECTOR
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.8469	GEN662101 1-WESSINGTON190.5750
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.8415	GEN615052 1-CAMBRIDGE GENERATING STATION
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.8333	GEN652907 1-G09_007IS_3 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.8038	GEN 11104 1-J262_GEN 0.6000
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.8038	GEN 11108 1-J263_GEN 0.6000
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.7831	GEN562872 1-G15046_3 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.7556	GEN615015 1-GRE-SPRITWDG13.200
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46826	118.6864	AXTELL - SWEETWATER 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.6461	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.6168	GEN910006 1-G12_012IS_3 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.5656	GEN615021 1-GRE-ER 14G 16.000
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.5634	GEN587623 1-J493-GEN1 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.4977	GEN 10648 1-G830_GEN 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.4622	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.4622	GEN672304 4-BOUNDARY DAM GENERATOR 4
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.4622	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46744	118.4374	SUB 3454 - WAGENER 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46744	118.4374	SUB 3454 - WAGENER 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.3732	GEN587053 1-G16-007-GEN10.6500
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46771	118.264	103RD & ROKEBY - MOORE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46771	118.264	103RD & ROKEBY - MOORE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.2345	GEN652461 5-GARRISON
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.2344	GEN652460 4-GARRISON
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.2154	GEN672392 1-NBECGT1G 18.000
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.2139	GEN587593 1-J460-GEN1 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.1742	GEN652457 1-GARRISON
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.1742	GEN652458 2-GARRISON
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.1742	GEN652459 3-GARRISON
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.1417	GEN659010 4-G07_027IS_2 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46761	118.1415	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.1246	GEN659366 3-WILTON 3 W0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.0958	GEN659194 1-NDPRAIRWND1W0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46804	118.0752	COOPER - MOORE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	118.0701	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	117.9674	GEN659403 1-NDSUNFLWR W0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34340	117.8781	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	117.8664	GEN681542 6-JP MADGETT
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	117.81	GEN659110 1-LELAND OLDS UNIT1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46818	117.7547	G15088_T 345.00 - PAULINE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46161	117.7509	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	117.6926	GEN659411 1-CAMPBLCNTY W0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	117.5911	GEN563232 1-G15089_3 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	117.5401	GEN659296 2-SDPRAIRWND1W0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	117.4728	GEN652559 1-OAHE
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	117.4097	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	117.3779	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	117.2422	GEN652556 2-OAHE
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	117.2126	GEN652557 5-OAHE
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	117.151	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	117.0695	GEN659453 1-GI1414GEN W0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	116.9359	GEN615010 1-STANTON4
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	116.8383	GEN659141 1-K10215A
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	116.79	GEN652173 1-G09_001IS_2 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	116.5892	GEN672321 1-SHAND GENERATOR 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	116.5663	GEN600004 2-PRAIRIE ISLAND G2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	116.5604	GEN600003 1-PRAIRIE ISLAND G1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	116.5106	GEN672310 1-POPLAR RIVER GENERATOR 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	116.5105	GEN672311 2-POPLAR RIVER GENERATOR 2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	116.4754	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	116.4056	GEN659407 1-ANTELPHILLSW0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	116.243	GEN600006 1-AS KING
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.49534	116.0332	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.49534	116.0194	Z810X2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46818	116.0113	G15088_T 345.00 - MOORE 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	115.985	GEN657749 1-YOUNG 1 GENERATOR
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	115.7923	GEN587033 1-G16-004-GEN10.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	115.6309	GEN600005 1-MONTICELLO
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34860	115.5231	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	115.4556	GEN659111 2-LELAND OLDS UNIT2
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.49534	115.3077	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	115.1287	GEN579459 1-G16-075-GEN10.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	115.0779	GEN659103 1-ANTELOPE VALLEY UNIT1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	115.0779	GEN659107 2-ANTELOPE VALLEY UNIT2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34480	114.8809	SPLIT ROCK - WHITE 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34879	114.8456	STORLA - WESSINGTON 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	114.8389	GEN600000 1-SHERBURNECNTY G1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33270	114.7503	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34787	114.2011	HANLON - STORLA 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	114.0906	GEN600001 2-SHERBURNE CNTY G2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34468	113.9271	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34468	113.9271	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34648	113.8521	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	113.8356	GEN620315 1-BIG STONE GEN
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34871	113.5681	FT THOMPSON - LETCHER 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34871	113.5681	FT THOMPSON - LETCHER 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	113.5412	GEN600002 3-SHERBURNE CNTY G3
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	113.4207	GEN661015 1-COYOTE
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34530	113.3972	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34340	113.294	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	113.1885	GEN635024 4-WALTER SCOTT UNIT 4
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	113.0067	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34671	112.9494	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34699	112.9279	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	112.8383	GEN657748 1-YOUNG 2 GENERATOR
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34699	112.7637	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	112.7247	GEN635023 3-WALTER SCOTT UNIT 3
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34837	112.599	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34837	112.599	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34834	112.562	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34834	112.562	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34488	112.5457	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34488	112.511	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34488	112.4591	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34593	112.4364	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34786	112.3674	LETCHER - SIOUX FALLS 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	112.3611	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	112.33	GEN336821 1-GRAND GULF UNIT
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34593	112.3223	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34834	112.3217	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34593	112.2879	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34593	112.2879	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34699	112.2848	FT RANDAL - SIOUX CITY 230KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	112.2363	GEN587293 1-G16-044-GEN10.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	112.2172	GEN640009 1-COOPER NUCLEAR STATION
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34571	112.0308	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	111.9999	GEN344225 1-1CAL G1 25.000
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	111.9748	GEN659125 1-COVEY
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34571	111.9567	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34571	111.9556	GROTON - GROTON-LNX3 345.00 345KV CKT Z
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34684	111.7846	RASMUSN - UTICA JCT 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	111.7385	GEN563222 1-G15088_3 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34530	111.7238	G09_001IST 345.00 - GROTON 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34704	111.6459	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	111.6327	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34664	111.6235	PAHOJA - SIOUX FALLS 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	111.6003	GEN336153 1-WATERFORD UNIT#3
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34684	111.5909	RASMUSN - SIOUX CITY 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34335	111.5434	HOSKINS - SHELL CREEK 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34769	111.5382	HANLON - SIOUX FALLS 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	111.4333	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34558	111.4276	RAUN - SIOUX CITY 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	111.388	GEN335831 1-RIVERBEND UNIT#1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	111.3461	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34662	111.2889	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34664	111.2752	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	111.2515	GEN641089 2-ENERGY CENTER 2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34571	111.2063	NUNDRWD - WAYSIDE 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34902	111.1834	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34631	111.1451	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34657	111.1031	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34657	111.1031	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	111.0905	GEN587353 1-G16-050-GEN10.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	111.0676	GEN337653 1-WHITE BLUFF UNIT #2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36136	111.0481	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36132	111.045	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34720	110.9933	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34720	110.9804	CLEARWATER - ONEILL 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34749	110.979	FT RANDAL - UTICA JCT 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.9738	GEN645012 2-NEBRASKA CITY 2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.9505	GEN501801 1-DOLET HILLS UNIT1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.941	GEN337652 1-WHITE BLUFF UNIT #1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34951	110.9386	MINGO - RED WILLOW 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34951	110.9386	MINGO - RED WILLOW 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34720	110.9293	CLEARWATER - NELIGH 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34879	110.9232	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34879	110.9232	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.9173	GEN338146 1-INDEPENDENCE UNIT #2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.9172	GEN338143 1-INDEPENDENCE UNIT #1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34725	110.9085	BLAIR - GRANITE FALLS 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34725	110.9085	BLAIR - GRANITE FALLS 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.9032	GEN645011 1-NEBRASKA CITY 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34863	110.8858	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.8827	GEN542962 2-IATAN UNIT #2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34934	110.8447	STAPLETON - THEDFORD 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.7967	GEN587363 1-G16-055-GEN10.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.7653	GEN501813 1-RODEMACHER UNIT 3
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.7619	GEN587443 1-G16-064-GEN10.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34670	110.7262	GAVINS POINT - HARTINGTON 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.7203	GEN344897 4-1LAB G4 20.000
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.7199	GEN344894 1-1LAB G1 20.000
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.7198	GEN344896 3-1LAB G3 20.000
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.691	GEN344895 2-1LAB G2 20.000
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34656	110.6899	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.6749	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.6664	GEN335206 1-NELSON UNIT 6
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.6643	GEN345670 1-1RUSH G1 18.000
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.6641	GEN345671 2-1RUSH G2 18.000
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34795	110.6482	CARPENTER - HURON 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34739	110.6286	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34726	110.6209	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34726	110.6209	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34735	110.6062	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34759	110.6015	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34759	110.6015	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.5912	GEN336252 1-NINEMILE POINT UNIT#5
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.5852	GEN501812 1-RODEMACHER UNIT 2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34795	110.5665	HURON - WATERTOWN 230KV CKT 2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34795	110.5665	HURON - WATERTOWN 230KV CKT 2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34863	110.5588	BASSETT 7115.00 - STUART 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.5527	GEN336831 1-BAXTER WILSON SES
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34726	110.5435	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34726	110.5435	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34863	110.5417	AINSWORTH - BASSETT 7115.00 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34863	110.5205	ATKINSON - STUART 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.5168	GEN337041 1-GERALD ANDRUS

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35252	110.515	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34795	110.5149	CARPENTER - WATERTOWN 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34795	110.5149	CARPENTER - WATERTOWN 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34722	110.5136	DENISON - SIOUX CITY 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34759	110.491	WINNER - WITTEN 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.4884	GEN542957 1-IATAN UNIT #1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.4839	GEN336251 1-NINEMILE POINT UNIT#4
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34863	110.4704	ATKINSON - EMMET 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34735	110.4622	MENNO JCT - TRIPP JCT 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.4544	GEN334440 1-SABINE UNIT 4
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34934	110.449	MAXWELL - STAPLETON 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.4489	P13:115-230:NPPD:NUCOR-3
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.4258	GEN562547 1-G14_039_3 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34670	110.4222	BELDEN - HARTINGTON 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34863	110.4175	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.4157	P13:230-345:NPPD:NUCOR-1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34773	110.3583	CALLAWAY - MAXWELL 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34851	110.3416	MINGO - SETAB 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34851	110.3416	MINGO - SETAB 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34797	110.3387	AXTELL - PAULINE 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	110.3282	GEN563212 1-G15087_3 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	110.2839	GEN587133 1-G16-017-GEN10.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	109.7714	BASE CASE
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.49534	109.7444	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34679	109.4928	KELLY - SHELL CREEK 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34679	109.491	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34679	109.491	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34686	109.2768	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34624	109.2675	CENTRAL CITY - CLARKS 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34710	109.2672	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34710	109.2458	FAIRBURY - G15087_T 115.00 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34702	109.1962	CRETE - FRIEND 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34642	109.1794	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34642	109.1794	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.49534	109.137	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.49534	109.1234	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.45038	109.0944	MCCOOL - MOORE 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34656	109.0889	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34656	109.0889	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	109.0699	GEN600017 C-LS POWER CT
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	109.0434	GEN659270 1-WEST SW
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34624	109.0368	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34550	109.0324	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34550	109.0324	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34659	109.0321	ATCHSNT3 345.00 - COOPER 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34731	109.0292	COOPER - FAIRPORT 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34714	109.0151	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	109.0041	GEN615052 1-CAMBRIDGE GENERATING STATION
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.9904	GEN660016 1-B_H WIND 0.7000
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34965	108.9776	OAHE - SULLEY BUTTE 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34956	108.9357	GLENHAM - L3 HAWDON 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.9155	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.9129	GEN659291 1-FT MP COLLECTOR
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.9079	GEN662101 1-WESSINGTON190.5750
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.9032	GEN 11104 1-J262_GEN 0.6000
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.9032	GEN 11108 1-J263_GEN 0.6000
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34965	108.9021	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34965	108.9017	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34965	108.9017	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.9003	GEN562872 1-G15046_3 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34727	108.8937	COPSTJCPFRSJ
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34727	108.8937	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34727	108.8937	STMDSJFAFACO
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34965	108.8739	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34965	108.8739	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.8684	GEN615015 1-GRE-SPRITWDG13.200
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34686	108.85	G15088_T 345.00 - MOORE 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.8468	GEN600067 9-HIGH BRIDGE
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.8433	GEN615021 1-GRE-ER 14G 16.000
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34965	108.834	GLENHAM - WHITLOK 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.7943	GEN657705 X-DRAYTON
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.778	GEN587623 1-J493-GEN1 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.7225	GEN910006 1-G12_012IS_3 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.7215	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.692	GEN672304 4-BOUNDARY DAM GENERATOR 4
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.692	GEN672305 5-BOUNDARY DAM GENERATOR 5
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.6919	GEN672303 3-BOUNDARY DAM GENERATOR 3
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.6865	GEN587053 1-G16-007-GEN10.6500
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34729	108.6808	COOPER - ST JOE 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.6802	GEN 10648 1-G830_GEN 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34731	108.6333	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34731	108.6237	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.6065	GEN672392 1-NBECGT1G 18.000
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.6035	GEN681542 6-JP MADGETT
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.5525	GEN652460 4-GARRISON
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.5525	GEN652461 5-GARRISON
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34731	108.5274	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.5173	GEN652457 1-GARRISON
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.5173	GEN652458 2-GARRISON
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.5173	GEN652459 3-GARRISON
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34526	108.517	SUB 3454 - WAGENER 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34526	108.517	SUB 3454 - WAGENER 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.5153	GEN587593 1-J460-GEN1 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.4985	GEN659010 4-G07_027IS_2 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.4874	GEN659366 3-WILTON 3 W0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.4547	GEN659194 1-NDPRAIRWND1W0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.3589	GEN659403 1-NDSUNFLWR W0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34546	108.3464	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.3142	GEN 11123 1-G736-GEN1 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.3113	GEN 11133 1-J442-GEN1 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33931	108.282	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.266	GEN652559 1-OAHE
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34551	108.2641	103RD & ROKEBY - MOORE 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34551	108.2641	103RD & ROKEBY - MOORE 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.2132	GEN652906 1-G09_006IS_3 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.1634	GEN563232 1-G15089_3 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.1583	GEN659411 1-CAMPBLCNTY W0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.1411	GEN659110 1-LELAND OLDS UNIT1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.0387	GEN652907 1-G09_007IS_3 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	108.0334	GEN659296 2-SDPRAIRWND1W0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34573	107.9584	COOPER - MOORE 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.8047	GEN652556 2-OAHE
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.804	GEN652558 6-OAHE
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.7844	GEN652557 5-OAHE
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.7539	GEN600004 2-PRAIRIE ISLAND G2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.7504	GEN600003 1-PRAIRIE ISLAND G1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.7206	GEN659453 1-GI1414GEN W0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.6541	GEN615010 1-STANTON4
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.6443	GEN652173 1-G09_001IS_2 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.6072	GEN659141 1-K10215A
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.5373	GEN587653 1-J526-GEN1 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.5116	GEN600006 1-AS KING
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.4392	GEN672321 1-SHAND GENERATOR 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.4252	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.4187	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.3901	GEN672311 2-POPLAR RIVER GENERATOR 2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.39	GEN672310 1-POPLAR RIVER GENERATOR 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.3623	GEN672306 6-BOUNDARY DAM GENERATOR 6
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.352	GEN659407 1-ANTELPHILLSW0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.331	GEN587633 1-J510-GEN1 18.000
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.0357	GEN659118 1-LARAMIE RIVER UNIT1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107.0355	GEN657749 1-YOUNG 1 GENERATOR
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	107	GEN620315 1-BIG STONE GEN
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	106.9746	GEN587033 1-G16-004-GEN10.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	106.8428	GEN600005 1-MONTICELLO
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.44645	106.773	GRAND ISLAND - MCCOOL 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	106.6581	GEN600000 1-SHERBURNECNTY G1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36539	106.6413	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36539	106.6333	2810X2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	106.4234	GEN659111 2-LELAND OLDS UNIT2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	106.4108	GEN579459 1-G16-075-GEN10.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36539	106.3856	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	106.1481	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	106.1481	GEN659107 2-ANTELOPE VALLEY UNIT2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	105.9403	GEN600001 2-SHERBURNE CNTY G2
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	105.8395	GEN600002 3-SHERBURNE CNTY G3
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	105.3364	GEN661015 1-COYOTE
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	105.0884	GEN562714 1-G15_023_4 0.6900
0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46958	105.0884	GEN562715 1-G15_023_5 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	104.9586	GEN657748 1-YOUNG 2 GENERATOR
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	104.7696	GEN587293 1-G16-044-GEN10.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	104.4597	GEN659125 1-COVEY
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36539	104.0856	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	103.5811	GEN615001 1-COAL CREEK
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	103.4979	GEN615002 2-COAL CREEK
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	103.2135	GEN587133 1-G16-017-GEN10.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36539	101.9966	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36539	101.9127	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36539	101.9111	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	99	GEN562714 1-G15_023_4 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34740	99	GEN562715 1-G15_023_5 0.6900
0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.32644	99	MCCOOL - MOORE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	138.4693	GEN562714 1-G15_023_4 0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	138.4693	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51317	138.1269	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51272	138.1092	LETCHER - SIOUX FALLS 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51033	137.5671	AINSWORTH - VALENTINE 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	137.5324	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	137.4502	GEN562714 1-G15_023_4 0.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	137.4502	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	137.4486	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	137.2067	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	137.0578	GEN336153 1-WATERFORD UNIT#3
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51008	137.0049	RAUN - SIOUX CITY 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	136.9384	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	136.8594	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50881	136.8121	SIDNEY - STEGALL 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51178	136.7795	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51368	136.6475	FT THOMPSON - LETCHER 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	136.6404	GEN335831 1-RIVERBEND UNIT#1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51082	136.6352	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50949	136.4223	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	136.4012	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51082	136.397	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50751	136.3497	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	136.3459	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51085	136.3436	FT RANDAL - SPENCER 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51085	136.3047	ONEILL - SPENCER 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51259	136.0132	HANLON - SIOUX FALLS 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	135.9975	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51163	135.8843	RASMUSN - UTICA JCT 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	135.7865	GEN562714 1-G15_023_4 0.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	135.7865	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51385	135.7269	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	135.7112	GEN501801 1-DOLET HILLS UNIT1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51138	135.6814	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	135.6766	GEN337653 1-WHITE BLUFF UNIT #2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51243	135.6624	FT RANDAL - UTICA JCT 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	135.6324	GEN337653 1-WHITE BLUFF UNIT #2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	135.6156	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51138	135.5409	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51138	135.5232	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51138	135.523	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	135.5113	GEN338146 1-INDEPENDENCE UNIT #2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	135.5109	GEN338143 1-INDEPENDENCE UNIT #1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	135.5005	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	135.4872	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51138	135.4346	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51065	135.4185	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51208	135.4169	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51285	135.4064	OAHE - PHILIP TAP 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50949	135.3956	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51138	135.3923	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51138	135.3798	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50949	135.3475	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51043	135.2766	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	135.27	GEN336251 1-NINEMILE POINT UNIT#4
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	135.2691	GEN501813 1-RODEMACHER UNIT 3
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	135.2494	GEN335206 1-NELSON UNIT 6
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	135.2415	GEN336831 1-BAXTER WILSON SES
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	135.1889	GEN336252 1-NINEMILE POINT UNIT#5
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51208	135.1791	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51208	135.1714	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	135.1549	GEN337041 1-GERALD ANDRUS
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51085	135.1528	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50715	135.1332	HOSKINS - SHELL CREEK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51153	135.1202	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	135.0754	GEN501812 1-RODEMACHER UNIT 2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51085	135.0598	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51085	135.0594	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	134.8813	GEN344897 4-1LAB G4 20.000
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	134.8811	GEN334440 1-SABINE UNIT 4
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	134.8782	GEN344894 1-1LAB G1 20.000
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	134.8782	GEN344895 2-1LAB G2 20.000
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	134.8781	GEN344896 3-1LAB G3 20.000
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51085	134.8685	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	134.8029	GEN587353 1-G16-050-GEN10.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53212	134.7844	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53206	134.7758	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	134.759	GEN345670 1-1RUSH G1 18.000
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	134.7578	GEN345671 2-1RUSH G2 18.000
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50982	134.742	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51292	134.7338	CARPENTER - HURON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51110	134.6981	COLUMEAST - SHELL CREEK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	134.6562	GEN336801 1-BAXTER WILSON UNIT #1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51155	134.6255	GAVINS POINT - HARTINGTON 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	134.6131	GEN335614 1-WILLOW GLENN UNIT#4
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51114	134.5158	MENNO JCT - UTICA 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51133	134.4837	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51287	134.4618	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51319	134.4414	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51085	134.4069	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	134.396	GEN531447 1-HOLCOMB GENERATOR
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50928	134.3446	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51221	134.3423	MARTIN - SHANNON 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51098	134.3326	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50906	134.2813	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51110	134.2736	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51110	134.2734	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50928	134.2106	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51029	134.2038	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	134.1976	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51033	134.1752	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51196	134.0897	CHADRON - DUNLAP 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51317	134.0842	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51110	133.9177	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51099	133.8895	JAMES TOWN - WEBER 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	133.8629	GEN587363 1-G16-055-GEN10.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	133.8168	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51223	133.8074	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	133.803	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	133.8026	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51025	133.785	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51025	133.7849	LELAND OLDS - STANTON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51113	133.7798	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	133.7255	GEN659118 1-LARAMIE RIVER UNIT1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51099	133.7249	BISMARK - WEBER 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51157	133.6617	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	133.651	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51114	133.6487	PRAIRIE - RAMSEY 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	133.6475	GEN587443 1-G16-064-GEN10.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	133.6036	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	133.5984	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51268	133.5331	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53365	133.5197	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53359	133.5184	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51117	133.5084	CLEARWATER - NELIGH 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	133.4082	GEN645011 1-NEBRASKA CITY 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51117	133.4071	CLEARWATER - ONEILL 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	133.3482	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	133.3412	GEN645012 2-NEBRASKA CITY 2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	133.3093	GEN640009 1-COOPER NUCLEAR STATION
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	133.2999	GEN542962 2-IATAN UNIT #2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	133.287	GEN531447 1-HOLCOMB GENERATOR
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51117	133.2794	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51192	133.2384	KELLY - SHELL CREEK 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51268	133.229	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51192	133.2057	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	133.2047	GEN563222 1-G15088_3 0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	133.1915	GEN542957 1-IATAN UNIT #1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51081	133.1538	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51081	133.1537	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51243	133.1318	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	133.0582	GEN542951 5-HAWTHORN UNIT #5
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	133.0536	GEN542955 1-LACYGNE UNIT #1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51139	133.0316	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51139	133.0315	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51242	133.0194	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	132.9958	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	132.9712	ANSON 115/17.5KV TRANSFORMER CKT 4
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51240	132.9709	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51235	132.9639	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51127	132.951	BURR - CANBY 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51613	132.9109	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51089	132.8673	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51046	132.8592	P13:230-345:NPPD:SIDNEY 3:KV2A
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50952	132.8532	HOSKINS - RAUN 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50952	132.8532	HOSKINS - RAUN 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51046	132.849	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51053	132.835	OGALLALA - SIDNEY 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51046	132.8328	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	132.8149	AINSWORTH - BASSETT 7115.00 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	132.7999	ATKINSON - STUART 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51330	132.721	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51330	132.721	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	132.6789	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51369	132.6658	BROADLAND - HURON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51369	132.6657	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	132.6626	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	132.662	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	132.6605	BASE CASE
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	132.6472	BASSETT 7115.00 - STUART 115KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	132.6299	GEN542951 5-HAWTHORN UNIT #5
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51333	132.6292	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51333	132.6292	FT THOMPSON - OAHE 230KV CKT 4
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51369	132.618	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	132.6084	ATKINSON - EMMET 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51369	132.6075	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51180	132.5693	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51234	132.556	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51234	132.556	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51234	132.5489	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51234	132.5489	FT THOMPSON - OAHE 230KV CKT 2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51227	132.5347	CALLAWAY - MAXWELL 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51184	132.4806	STAPLETON - THEDFORD 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	132.4736	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	132.4736	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	132.4736	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	132.4736	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51105	132.4686	COLUMEAST - SHELL CREEK 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51223	132.463	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	132.4587	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51078	132.3916	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51150	132.3751	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51364	132.3737	FT THOMPSON - LETCHER 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51135	132.3547	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	132.3433	GEN587153 1-G16-021-GEN10.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51283	132.3383	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	132.31	HANKINSON - WAHPETON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	132.3045	GEN300002 1-THOMAS HILL UNIT 2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51235	132.2564	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51017	132.2553	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51135	132.2508	HOLCOMB - SETAB 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51082	132.2162	KELLY - SHELL CREEK 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51082	132.2009	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51082	132.2007	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	132.1962	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51199	132.1737	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51214	132.1699	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51137	132.1453	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	132.1181	GEN600045 4-ANSON
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51223	132.1123	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	132.0808	GEN645012 2-NEBRASKA CITY 2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	132.0764	GEN642067 1-PLATTE
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	132.0576	AINSWORTH WIND 34KV SWITCHED SHUNT
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50481	132.0407	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	132.0292	GEN636641 1-LOUISA UNIT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51140	132.0113	AXTELL - PAULINE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	132.0017	GEN542962 2-IATAN UNIT #2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51018	131.9745	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.9667	GEN659118 1-LARAMIE RIVER UNIT1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.9665	GEN645011 1-NEBRASKA CITY 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51214	131.9597	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	131.9295	GEN590010 1-ERCOT EQUIVALENCE
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51133	131.9224	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.8941	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51088	131.885	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	131.8728	GEN590011 2-ERCOT EQUIVALENCE
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51135	131.8661	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.8512	GEN542957 1-IATAN UNIT #1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51127	131.8388	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.8326	GEN542955 1-LACYGNE UNIT #1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50681	131.8302	AINSWORTH - AINSWORTH 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51085	131.8258	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51085	131.8258	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51088	131.7897	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.7864	GEN542955 1-LACYGNE UNIT #1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	131.7585	GEN300003 1-THOMAS HILL UNIT 3
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.758	GEN542951 5-HAWTHORN UNIT #5
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.7203	GEN542957 1-IATAN UNIT #1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.72	GEN640016 1-KINGSLEY HYDRO
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.7131	GEN542956 2-LACYGNE UNIT #2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	131.7116	GEN300007 1-NEW MADRID UNIT 2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	131.7042	GEN300006 1-NEW MADRID UNIT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.6974	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51122	131.6878	GERALD GENTLEMAN STATION (GGS T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51122	131.6877	GERALD GENTLEMAN STATION (GGS T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51131	131.6852	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51088	131.6715	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.6658	GEN587363 1-G16-055-GEN10.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51108	131.6592	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKE
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51122	131.6566	GERALD GENTLEMAN STATION (GGS T2) 345/230/13.8KV TRANSFORMER CKT 2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51122	131.6565	GERALD GENTLEMAN STATION (GGS T2) 345/230/13.8KV TRANSFORMER CKT 2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.6496	KEARNEY 115KV SWITCHED SHUNT
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51048	131.635	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51110	131.6278	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51191	131.5853	AS KING - EAU CLAIRE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.541	GEN542956 2-LACYGNE UNIT #2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	131.5406	GEN659353 1-DEERCREK CTG18.000
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51078	131.5392	MINGO - SETAB 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51177	131.5345	MISSION - WITTEN 115KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51229	131.534	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51043	131.5092	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51043	131.5091	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51108	131.5003	BONESTEEL - GREGORY 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	131.4956	GEN659354 1-DEERCREK STG18.000
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51219	131.4939	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.4936	GEN587443 1-G16-064-GEN10.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.4609	GEN659118 1-LARAMIE RIVER UNIT1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51120	131.4324	COLUMBUS - SILVER CREEK 115KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.3998	GEN642067 1-PLATTE
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.3974	GEN514806 1-SOONER UNIT 2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.3941	GEN514805 1-SOONER UNIT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51200	131.3809	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50371	131.3528	COLUMWEST - KELLY 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51118	131.3493	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.3188	GEN587233 1-G16-037-GEN10.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.3004	BASE CASE
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.2968	1222-AINSWORTH WIND
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.2968	1303-KEARNEY
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.2968	2560-BRDLAND-LNX3345.00
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.2968	2561-BRDLAND-LNX3345.00
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.2968	BASE CASE
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.2787	GEN515042 1-SEMINOLE 3G
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.2596	GEN515040 1-SEMINOLE 1G
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51229	131.2568	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53362	131.2537	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53356	131.2487	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51094	131.245	COOPER - MOORE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.2359	JEFFREY - NORTH PLATTE 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51008	131.2284	RAUN - SIOUX CITY 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50994	131.2184	AINSWORTH - STUART 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50918	131.2162	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.2124	GEN515041 1-SEMINOLE 2G
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.2	GEN509394 1-FLINT CREEK
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51122	131.1955	CALLAWAY - MAXWELL 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51075	131.1897	STAPLETON - THEDFORD 115KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51147	131.1747	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51122	131.1715	ATKINSON - EMMET 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.1713	GEN509416 1-TURK GENERATION
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50994	131.1622	ATKINSON - EMMET 115KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.1588	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.1588	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51230	131.1584	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.1472	GEN512688 2-GRDA1 GSU2 22
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51106	131.1418	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51106	131.1418	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51106	131.1407	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50994	131.1407	ATKINSON - STUART 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51106	131.1406	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.1379	GEN640028 1-COLUMCOGENERATION
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.1343	GEN515226 1-MUSKOGEE 6G
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.1335	GEN515225 1-MUSKOGEE 5G
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.1217	GEN515223 1-MUSKOGEE 4G
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.1068	GEN511840 1-NORTHEASTERN STATION #3
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.1008	GEN513601 1-GRECCTG_1 20.000
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.096	GEN511842 1-RIVERSIDE STATION #1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.0844	GEN511839 1-NORTHEASTERN STATION #2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.0798	GEN640019 1-SHELDON STATION UNIT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.0696	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.0641	GEN511843 1-RIVERSIDE STATION #2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51075	131.0639	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50972	131.0619	G15088_T 345.00 - PAULINE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.0546	GEN509403 1-PIRKEY GENERATION
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.0542	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.0497	GEN541151 3-SIBLEY GENERATING UNIT #3
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.0164	GEN509416 1-TURK GENERATION
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	131.0051	GEN645041 1-CASS COUNTY 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50800	130.9465	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.9431	GOTHENBURG - JEFFREY 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51229	130.9265	BROKEN BOW - CROOKED CREEK 115KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51230	130.9211	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51114	130.912	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.883	GEN645042 2-CASS COUNTY 2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.8716	GEN509403 1-PIRKEY GENERATION
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51028	130.8514	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51028	130.8513	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	130.8483	GEN300002 1-THOMAS HILL UNIT 2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	130.8437	GEN660016 1-B_H WIND 0.7000
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51125	130.8422	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51114	130.8421	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51179	130.8342	STAPLETON - THEDFORD 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	130.8318	GEN659291 1-FT MP COLLECTOR
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51190	130.825	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.8195	GEN645033 3-SARPY COUNTY 3
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51135	130.8078	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.801	GEN509406 1-WELSH #3
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.8008	GEN509404 1-WELSH #1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	130.7916	GEN662101 1-WESSINGTON190.5750
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	130.7883	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.7701	GEN640016 1-KINGSLEY HYDRO
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51190	130.7601	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	130.7543	GEN652545 7-BIG BEND
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	130.7318	GEN587153 1-G16-021-GEN10.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51198	130.7051	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51189	130.7025	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51369	130.698	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51218	130.6902	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51108	130.6818	GREGORY - WINNER 115KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.6509	GEN509398 1-KNOXLEE #5
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51114	130.6482	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51114	130.6481	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51126	130.6429	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.635	GEN509409 1-WILKES #3
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51229	130.632	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51125	130.6049	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51211	130.5979	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51035	130.5952	LOUP CITY - NORTH LOUP 115KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51211	130.5952	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51124	130.5611	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51497	130.5597	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.5555	GEN587153 1-G16-021-GEN10.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51030	130.5493	AXTELL - PAULINE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.5419	BASE CASE
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51228	130.5141	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51108	130.5117	MISSION - WITTEN 115KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.4952	GEN300002 1-THOMAS HILL UNIT 2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50966	130.4933	G15088_T 345.00 - PAULINE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51108	130.4883	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.4876	GEN587093 1-G16-023-GEN10.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.4876	GEN587193 1-G16-029-GEN10.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51108	130.4844	WINNER - WITTEN 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	130.4748	GEN600045 4-ANSON
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51141	130.4628	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51038	130.4502	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51082	130.4443	P13:230-345:NPPD:STEGALL3:KV3A
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50371	130.4387	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51119	130.427	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51190	130.4246	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	130.4174	GEN590010 1-ERCOT EQUIVALENCE
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51497	130.384	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50907	130.3814	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50907	130.3814	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51209	130.3597	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.357	GEN300011 1-ST FRANCIS UNIT 2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51486	130.352	GLENHAM - L3 HAWDON 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.3506	GEN600045 4-ANSON
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51153	130.3463	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.3445	GEN300010 1-ST FRANCIS UNIT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51497	130.3388	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.3353	GEN300015 1-1SGPDEL 18.000
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51314	130.3317	FT RANDAL - FT THOMPSON 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	130.3124	GEN505432 1-SIKESTON
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51497	130.3093	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51135	130.3055	AXTELL - PAULINE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50900	130.2811	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	130.2773	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51126	130.2545	COOPER - ST JOE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51497	130.2439	GLENHAM - WHITLOK 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	130.216	GEN590011 2-ERCOT EQUIVALENCE
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51154	130.2132	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51221	130.1849	FORMAN - HANKINSON 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51132	130.1788	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51120	130.1649	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50475	130.1422	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51119	130.1397	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50927	130.1386	AXTELL - SWEETWATER 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51127	130.135	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	130.1325	GEN300003 1-THOMAS HILL UNIT 3
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51127	130.1272	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51194	130.1133	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51385	130.1034	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51613	130.0934	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51127	130.0892	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51196	130.0664	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51043	130.0643	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51108	130.0559	P12:115:UMZW:# 172 #: WI IN SD.
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	130.0467	GEN300007 1-NEW MADRID UNIT 2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	130.0366	GEN300006 1-NEW MADRID UNIT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51312	130.0308	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50976	130.0276	MINGO - SETAB 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50976	130.0275	MINGO - SETAB 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50954	129.9944	MINGO - RED WILLOW 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51012	129.9453	SUB 3454 - WAGENER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51221	129.9426	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.9264	GEN652544 5-BIG BEND
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50988	129.8874	COOPER - MOORE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50939	129.8846	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50939	129.8842	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	129.8833	GEN300006 1-NEW MADRID UNIT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51207	129.867	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.8578	GEN652543 3-BIG BEND
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.8568	GEN652542 1-BIG BEND
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51017	129.8365	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	129.8076	GEN300003 1-THOMAS HILL UNIT 3
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50922	129.7888	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50731	129.7704	NF
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51218	129.7677	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51108	129.7551	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51028	129.7423	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51169	129.7307	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	129.7	GEN590010 1-ERCOT EQUIVALENCE
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	129.6984	GEN300007 1-NEW MADRID UNIT 2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51091	129.6885	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51194	129.666	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.6354	GEN659010 4-G07_027IS_2 0.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51129	129.6351	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51170	129.6286	MISSION - WITTEN 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.6111	GEN563232 1-G15089_3 0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.6098	GEN659194 1-NDPRAIRWND1W0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.6095	GEN659366 3-WILTON 3 W0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51232	129.6091	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.5948	GEN652460 4-GARRISON
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.5892	GEN652461 5-GARRISON
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.5827	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.5746	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51199	129.5694	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.5659	GEN652907 1-G09_007IS_3 0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51218	129.5652	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51287	129.5616	GAVINS POINT - YANKON JCT 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51232	129.5596	FORMAN - OAKES 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.5189	GEN652458 2-GARRISON
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.5189	GEN652459 3-GARRISON
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.5188	GEN652457 1-GARRISON
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51292	129.5049	HURON - WATERTOWN 230KV CKT 2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50922	129.4851	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	129.4781	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	129.4589	GEN590011 2-ERCOT EQUIVALENCE
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	129.4572	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51301	129.4483	P12:230:UMZW:# 166 #: PL IN SD. TAP
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51301	129.4483	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51133	129.4388	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51198	129.4227	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51224	129.4174	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51292	129.4166	CARPENTER - WATERTOWN 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51216	129.4164	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51216	129.4164	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.3937	GEN659403 1-NDSUNFLWR W0.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51362	129.373	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50862	129.3564	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51221	129.3439	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51175	129.3407	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51194	129.333	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51221	129.3323	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.3175	GEN 11123 1-G736-GEN1 0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.3075	GEN 11133 1-J442-GEN1 0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51168	129.2987	BYRON - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51224	129.278	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51215	129.24	AUDUBON - SHEYNNE 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51124	129.2004	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51224	129.1026	HENNING - INMANN 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51268	129.0778	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51268	129.0777	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.0737	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51268	129.0676	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	129.0432	GEN659411 1-CAMPBLCNTY W0.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50794	129.0288	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51219	129.0124	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51230	129.0098	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50972	129.0098	G15088_T 345.00 - MOORE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51169	128.9697	BYRON - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51237	128.9685	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.9528	GEN652906 1-G09_006IS_3 0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51220	128.9431	MN VALLEY TAP - PANTHER 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.9407	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50826	128.9301	AXTELL - SWEETWATER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	128.9187	GEN600006 1-AS KING
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51204	128.9052	CENTER - COYOTE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51206	128.8955	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51225	128.8689	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51210	128.8434	KARLSTAD - WINGER 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51226	128.8421	BALTA - RAMSEY 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51490	128.8278	GLENHAM - WHITLOK 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51215	128.814	AUDUBON - HUBBARD 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51203	128.8069	FARGO - SHEYNNE 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51154	128.7929	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51211	128.7859	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	128.7667	SHEYENNE SVC - SHEYNNE 115KV CKT Z
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	128.7561	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51490	128.7323	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51224	128.7275	PRAIRIE - RAMSEY 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.727	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.7268	GEN652907 1-G09_007IS_3 0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	128.7267	GEN659296 2-SDPRAIRWND1W0.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.7219	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51223	128.7176	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51196	128.7159	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51218	128.6933	PRAIRIE - WINGER 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51479	128.6869	GLENHAM - L3 HAWDON 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51490	128.6567	OAHE - SULLEY BUTTE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51226	128.6521	BUFFALO RIDGE - YANKEE 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51136	128.6457	LELAND OLDS - STANTON 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	128.6446	GEN662101 1-WESSINGTON190.5750
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51490	128.6008	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51237	128.6004	BURR - CANBY 115KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51490	128.573	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	128.5507	GEN652556 2-OAHE
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	128.5507	GEN652557 4-OAHE
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	128.5507	GEN652558 6-OAHE
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51207	128.5429	P13:115-230:NPPD:WAYSIDE4:T1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	128.5409	HANKINSON - WAHPETON 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.5306	CENTER 230/22.0KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	128.4991	GEN652559 1-OAHE
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	128.4746	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	128.4532	GEN615010 1-STANTON4
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.4197	GEN563232 1-G15089_3 0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51225	128.3989	FRANKS - HUBEN 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50918	128.3922	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.3734	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	128.325	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51193	128.2557	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	128.2324	GEN659110 1-LELAND OLDS UNIT1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	128.2211	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51080	128.1946	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51080	128.1946	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	128.1897	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	128.1785	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.1386	GEN 10648 1-G830_GEN 0.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51136	128.1116	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51175	128.1016	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	128.0542	GEN587053 1-G16-007-GEN10.6500
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51134	128.0537	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	128.046	GEN652545 7-BIG BEND
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	128.0421	GEN659141 1-K10215A
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.9079	GEN652544 5-BIG BEND
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.8756	GEN652543 3-BIG BEND
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.8751	GEN652542 1-BIG BEND
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	127.8254	GEN587653 1-J526-GEN1 0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	127.8	GEN600005 1-MONTICELLO
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	127.745	GEN652173 1-G09_001IS_2 0.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	127.7305	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	127.7264	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	127.7139	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.713	GEN652907 1-G09_007IS_3 0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51330	127.7015	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51330	127.7015	FT THOMPSON - OAHE 230KV CKT 2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.6772	GEN659010 4-G07_027IS_2 0.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.6646	GEN659194 1-NDPRAIRWND1W0.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.6615	GEN659366 3-WILTON 3 W0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51333	127.6482	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51333	127.6482	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.6472	GEN652461 5-GARRISON
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.646	GEN652460 4-GARRISON
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	127.6311	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50862	127.599	G15088_T 345.00 - MOORE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51213	127.5861	BLAIR - GRANITE FALLS 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.5662	GEN652457 1-GARRISON
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.5662	GEN652458 2-GARRISON
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.5662	GEN652459 3-GARRISON
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.5544	GEN563232 1-G15089_3 0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	127.5372	BASE CASE
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	127.5178	GEN587633 1-J510-GEN1 18.000
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51136	127.5094	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51150	127.4788	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.4525	GEN659403 1-NDSUNFLWR W0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	127.449	GEN659407 1-ANTELPHILLSW0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51236	127.4025	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51236	127.4025	P12:115:UMZB:# 119 #: IN NE.
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51185	127.3638	AS KING - EAU CLAIRE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51613	127.3238	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.3177	GEN652559 1-OAHE
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.2731	GEN 11123 1-G736-GEN1 0.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.2652	GEN 11133 1-J442-GEN1 0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	127.2262	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	127.1856	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.1635	GEN659411 1-CAMPBLCNTY W0.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.1373	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51223	127.1308	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	127.1271	GEN600003 1-PRAIRIE ISLAND G1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51121	127.0818	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51112	127.0683	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51003	127.055	RAUN - SIOUX CITY 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51135	127.053	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51134	127.0167	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51199	126.9958	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51137	126.9886	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51192	126.9414	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51223	126.9125	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51369	126.8786	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51369	126.8729	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	126.8675	GEN659296 2-SDPRAIRWND1W0.6900
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51369	126.8601	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51148	126.7545	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51018	126.7528	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51183	126.7326	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	126.6905	GEN587033 1-G16-004-GEN10.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	126.6808	GEN659296 2-SDPRAIRWND1W0.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51216	126.6424	FORMAN - HANKINSON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	126.6395	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	126.6243	GEN652556 2-OAHE
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	126.6243	GEN652557 4-OAHE
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	126.6243	GEN652558 6-OAHE
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	126.5887	EMERY 161/18.0KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	126.575	GEN600006 1-AS KING
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	126.5035	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	126.5035	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51380	126.4618	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	126.3967	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51048	126.3796	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51152	126.3752	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51078	126.3506	MINGO - SETAB 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51215	126.3123	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	126.3004	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	126.2704	GEN659110 1-LELAND OLDS UNIT1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51203	126.2639	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51078	126.2461	P13:230-345:NPPD:STEGALL3:KV3A
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	126.2393	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51213	126.2213	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51226	126.1253	FORMAN - OAKES 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51227	126.1231	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	126.0705	GEN659141 1-K10215A
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51164	126.031	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51213	126.0246	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	125.9552	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51192	125.9472	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51282	125.9313	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	125.9074	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	125.8813	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	125.8797	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51287	125.8783	HURON - WATERTOWN 230KV CKT 2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51193	125.8528	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51286	125.8459	P12:230:UMZW:# 166 #: PL IN SD. TAP
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51286	125.8459	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.49627	125.8427	MCCOOL - MOORE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	125.8379	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51215	125.7967	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51287	125.793	CARPENTER - WATERTOWN 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51219	125.7797	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51215	125.7785	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51211	125.7784	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51211	125.7784	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	125.7456	GEN587653 1-J526-GEN1 0.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	125.6934	SHEYENNE SVC - SHEYNNE 115KV CKT Z
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51209	125.6526	AUDUBON - SHEYNNE 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51221	125.6411	BALTA - RAMSEY 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51219	125.6223	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51194	125.6214	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51127	125.6036	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	125.6032	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	125.6005	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	125.5892	GEN615010 1-STANTON4
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51497	125.5529	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51497	125.5529	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	125.5083	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51219	125.4635	HENNING - INMANN 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51262	125.4508	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51262	125.4508	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51232	125.4422	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51262	125.4418	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	125.4375	GEN587633 1-J510-GEN1 18.000
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51133	125.4314	HIGHLND 3 345.00 - RAUN 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51214	125.4028	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51219	125.3985	PRAIRIE - RAMSEY 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51199	125.3965	CENTER - COYOTE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51165	125.3755	BYRON - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51215	125.3656	MN VALLEY TAP - PANTHER 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51214	125.3131	PRAIRIE - WINGER 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51224	125.294	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	125.2508	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51198	125.2308	FARGO - SHEYNNE 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51210	125.2186	AUDUBON - HUBBARD 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51220	125.2052	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51218	125.1965	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	125.1856	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51200	125.167	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51205	125.1416	KARLSTAD - WINGER 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51165	125.1406	BYRON - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51191	125.1106	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	125.0651	GEN657749 1-YOUNG 1 GENERATOR
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51205	125.0299	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51227	125.0193	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51218	125.0087	MCLEOD - PANTHER 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	124.9933	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50954	124.9614	MINGO - RED WILLOW 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	124.9224	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	124.92	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	124.9109	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	124.9003	GEN600005 1-MONTICELLO
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51202	124.8866	P13:115-230:NPPD:WAYSIDE4:T1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51118	124.8261	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	124.7746	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	124.7502	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	124.7239	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	124.7088	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	124.6426	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	124.6006	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51145	124.3364	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	124.3321	GEN659111 2-LELAND OLDS UNIT2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	124.0807	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	123.9578	BASE CASE
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51325	123.9494	FT THOMPSON - OAHE 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51325	123.9494	FT THOMPSON - OAHE 230KV CKT 2
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51237	123.9374	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51219	123.9258	SUB 3455 - SUB 3740 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51329	123.9137	FT THOMPSON - OAHE 230KV CKT 3
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51329	123.9137	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51231	123.8443	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51231	123.8443	P12:115:UMZB:# 119 #: IN NE.
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	123.8367	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	123.8068	GEN600000 1-SHERBURNECNTY G1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	123.8018	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	123.7728	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	123.7561	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	123.739	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	123.7228	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	123.7228	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51227	123.7216	P12:115:TSGT:GRANTNB7-OGALALA7_2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	123.7179	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	123.6861	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	123.6474	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	123.6232	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51362	123.5823	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51362	123.5813	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51362	123.5673	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51218	123.5465	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	123.4967	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	123.4602	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51132	123.4112	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53648	123.3962	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51194	123.2493	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51136	123.2239	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53648	123.1773	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51133	123.0938	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	123.0227	EMERY 161/18.0KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51012	123.0113	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51043	123.0015	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	122.9871	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	122.9871	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51129	122.9854	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	122.8857	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51194	122.7676	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51604	122.7496	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	122.7111	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51175	122.534	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51175	122.5198	P12:345:SPS:J07.1.FINN.HITCH
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	122.4282	GEN587293 1-G16-044-GEN10.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	122.357	GEN600001 2-SHERBURNE CNTY G2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	122.3496	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	122.3156	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	122.3115	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	122.308	GEN659125 1-COVEY
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.49339	122.2785	GRAND ISLAND - MCCOOL 345KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53636	122.2774	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	122.2426	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51490	122.2398	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51490	122.2398	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	122.2135	GEN600002 3-SHERBURNE CNTY G3
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51072	122.0992	MINGO - SETAB 345KV CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	122.0012	GEN615001 1-COAL CREEK
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	121.9102	GEN615002 2-COAL CREEK
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	121.7969	GEN659103 1-ANTELOPE VALLEY UNIT1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	121.7969	GEN659107 2-ANTELOPE VALLEY UNIT2
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	121.7906	GEN620315 1-BIG STONE GEN
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	121.2524	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	121.2197	STANTON 230/18.0KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53632	120.8461	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	120.8434	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50948	120.7957	MINGO - RED WILLOW 345KV CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53632	120.7408	2810X2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51232	120.5937	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	120.5226	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	120.3244	GEN659125 1-COVEY
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	120.3145	GEN587133 1-G16-017-GEN10.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	120.1893	GEN659103 1-ANTELOPE VALLEY UNIT1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	120.1893	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	120.0709	GEN615001 1-COAL CREEK
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	119.4894	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	119.3232	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	118.988	GEN587293 1-G16-044-GEN10.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	118.7619	GEN659125 1-COVEY

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	118.743	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	118.5887	GEN587133 1-G16-017-GEN10.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53632	118.474	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	118.3159	GEN615001 1-COAL CREEK
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	118.203	GEN615002 2-COAL CREEK
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	117.9513	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	116.9011	GEN587133 1-G16-017-GEN10.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	116.8834	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	115.5183	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53636	114.0285	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	107.3731	GEN652353 2-GR PRAIRIEG 0.6900
0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	106.0136	GEN652353 2-GR PRAIRIEG 0.6900
0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	103.1739	GEN652353 2-GR PRAIRIEG 0.6900
0	20WP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51328	102.9819	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	20WP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51951	101.0481	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	20WP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51976	100.2158	STORLA - WESSINGTON 230KV CKT 1
0	20WP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51467	100	SPLIT ROCK - WHITE 345KV CKT 1
0	20WP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51789	99.5	GEN562714 1-G15_023_4 0.6900
0	20WP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51789	99.5	GEN562715 1-G15_023_5 0.6900
0	20WP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51851	99.2	HANLON - STORLA 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	138.6631	GEN562714 1-G15_023_4 0.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	138.6631	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51317	138.3932	FT RANDAL - LAKE PLATT 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51272	138.3896	LETCHER - SIOUX FALLS 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51033	137.7984	AINSWORTH - VALENTINE 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	137.7812	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	137.7223	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	137.478	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	137.3119	GEN336153 1-WATERFORD UNIT#3
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	137.2915	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51008	137.2669	RAUN - SIOUX CITY 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	137.2372	GEN562714 1-G15_023_4 0.6900
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	137.2372	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51178	137.074	FT RANDAL - SIOUX CITY 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50881	137.0579	SIDNEY - STEGALL 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51368	136.9459	FT THOMPSON - LETCHER 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	136.9001	GEN335831 1-RIVERBEND UNIT#1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51082	136.8718	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	136.6953	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	136.6843	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	136.6648	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50949	136.6636	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51082	136.6372	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51085	136.6225	FT RANDAL - SPENCER 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50751	136.5956	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51085	136.5783	ONEILL - SPENCER 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51259	136.2896	HANLON - SIOUX FALLS 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	136.2545	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51163	136.1729	RASMUSN - UTICA JCT 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	136.1304	GEN562714 1-G15_023_4 0.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	136.1304	GEN562715 1-G15_023_5 0.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51385	136.0065	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51138	135.9768	PAHOJA - SIOUX FALLS 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.9751	GEN501801 1-DOLET HILLS UNIT1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.9415	GEN337653 1-WHITE BLUFF UNIT #2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51243	135.9393	FT RANDAL - UTICA JCT 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51138	135.8285	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.7667	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.7536	GEN338143 1-INDEPENDENCE UNIT #1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51208	135.6649	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50949	135.6553	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51285	135.654	OAHE - PHILIP TAP 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50949	135.6076	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.5355	GEN336251 1-NINEMILE POINT UNIT#4
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.5333	GEN501813 1-RODEMACHER UNIT 3
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51043	135.5279	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.5109	GEN335206 1-NELSON UNIT 6
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.5074	GEN336831 1-BAXTER WILSON SES
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.4571	GEN336252 1-NINEMILE POINT UNIT#5
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	135.4416	GEN337653 1-WHITE BLUFF UNIT #2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51208	135.4393	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	135.4252	GEN337652 1-WHITE BLUFF UNIT #1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51208	135.4237	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.4213	GEN337041 1-GERALD ANDRUS
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51153	135.4137	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51085	135.4133	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.3381	GEN501812 1-RODEMACHER UNIT 2
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	135.3212	GEN338146 1-INDEPENDENCE UNIT #2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51085	135.3207	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51085	135.3203	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	135.3202	GEN338143 1-INDEPENDENCE UNIT #1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51138	135.3158	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51138	135.3157	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51138	135.231	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51065	135.2278	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51138	135.1914	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51138	135.1779	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.1487	GEN334440 1-SABINE UNIT 4
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.1468	GEN344897 4-1LAB G4 20.000
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.1437	GEN344894 1-1LAB G1 20.000
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.1437	GEN344895 2-1LAB G2 20.000
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.1436	GEN344896 3-1LAB G3 20.000
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51085	135.1313	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.0803	GEN587353 1-G16-050-GEN10.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50982	135.0765	GRAND ISLAND - SWEETWATER 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.0257	GEN345670 1-1RUSH G1 18.000
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	135.0244	GEN345671 2-1RUSH G2 18.000
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51292	135.0045	CARPENTER - HURON 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51110	134.98	COLUMEAST - SHELL CREEK 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50715	134.9632	HOSKINS - SHELL CREEK 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	134.9245	GEN336801 1-BAXTER WILSON UNIT #1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51155	134.9013	GAVINS POINT - HARTINGTON 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	134.8826	GEN335614 1-WILLOW GLENN UNIT#4
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51133	134.7692	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51319	134.7384	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51085	134.6731	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	134.6668	GEN531447 1-HOLCOMB GENERATOR
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50928	134.6361	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50906	134.6153	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51221	134.6105	MARTIN - SHANNON 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53212	134.5407	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53206	134.5311	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50928	134.5031	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	134.4705	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51033	134.4347	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51317	134.3826	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51196	134.3594	CHADRON - DUNLAP 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51114	134.3284	MENNO JCT - UTICA 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51098	134.1518	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	134.1434	GEN587363 1-G16-055-GEN10.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	134.0931	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51110	134.0929	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51110	134.0928	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51223	134.0876	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	134.0794	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	134.079	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51029	134.0525	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51113	134.0315	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	133.9906	GEN659118 1-LARAMIE RIVER UNIT1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51157	133.9466	BLOOMFIELD - CREIGHTON 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	133.9207	GEN344897 4-1LAB G4 20.000
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	133.9141	GEN344894 1-1LAB G1 20.000
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	133.9136	GEN344896 3-1LAB G3 20.000
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51268	133.817	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53365	133.7471	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53359	133.746	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51110	133.7382	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51099	133.7034	JAMES TOWN - WEBER 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	133.6892	GEN645011 1-NEBRASKA CITY 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	133.6243	GEN645012 2-NEBRASKA CITY 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	133.6037	GEN640009 1-COOPER NUCLEAR STATION
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51025	133.5948	LELAND OLDS - STANTON 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51025	133.5947	LELAND OLDS - STANTON 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	133.5808	GEN542962 2-IATAN UNIT #2
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51099	133.5392	BISMARK - WEBER 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51192	133.5251	KELLY - SHELL CREEK 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51268	133.5201	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51192	133.4923	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	133.4727	GEN542957 1-IATAN UNIT #1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	133.4668	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51114	133.4621	PRAIRIE - RAMSEY 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51243	133.434	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	133.4181	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	133.3932	ANSON - SPLIT ROCK 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51117	133.3407	CLEARWATER - NELIGH 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	133.34	GEN542951 5-HAWTHORN UNIT #5
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	133.3365	GEN542955 1-LACYGNE UNIT #1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51242	133.3194	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51240	133.2708	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51235	133.2568	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51117	133.2371	CLEARWATER - ONEILL 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	133.1538	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51613	133.138	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	133.1188	GEN531447 1-HOLCOMB GENERATOR
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51117	133.1133	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	133.095	AINSWORTH - BASSETT 7115.00 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	133.0798	ATKINSON - STUART 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	133.0363	GEN563222 1-G15088_3 0.6900
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51081	132.9941	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51081	132.994	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	132.9721	GEN542951 5-HAWTHORN UNIT #5
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51330	132.9669	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51330	132.9669	FT THOMPSON - OAHE 230KV CKT 2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	132.9432	BASE CASE
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	132.9276	BASSETT 7115.00 - STUART 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51369	132.8933	BROADLAND - HURON 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51369	132.8931	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	132.8922	ATKINSON - EMMET 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51333	132.8767	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51333	132.8767	FT THOMPSON - OAHE 230KV CKT 4
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51180	132.8583	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51139	132.8558	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51139	132.8558	LAWRENCE - SIOUX FALLS 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51369	132.8446	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51369	132.836	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51227	132.8265	CALLAWAY - MAXWELL 115KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51105	132.8111	COLUMEAST - SHELL CREEK 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	132.8017	ANSON - SPLIT ROCK 115KV CKT 2
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	132.7773	ANSON 115/17.5KV TRANSFORMER CKT 4
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51127	132.7743	BURR - CANBY 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51184	132.7675	STAPLETON - THEDFORD 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51223	132.7482	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51078	132.7332	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51364	132.7175	FT THOMPSON - LETCHER 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51089	132.7007	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51046	132.6994	P13:230-345:NPPD:SIDNEY 3:KV2A
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50952	132.6909	HOSKINS - RAUN 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50952	132.6909	HOSKINS - RAUN 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51046	132.6895	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51150	132.6757	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51053	132.6752	OGALLALA - SIDNEY 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51046	132.6743	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	132.6163	GEN587153 1-G16-021-GEN10.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	132.5938	HANKINSON - WAHPETON 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	132.5907	GEN300002 1-THOMAS HILL UNIT 2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51017	132.5532	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51235	132.5421	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51135	132.5369	HOLCOMB - SETAB 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	132.5125	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	132.4962	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	132.4956	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	132.4845	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51199	132.4604	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51214	132.4553	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51137	132.4337	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51223	132.4069	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	132.3865	GEN600045 4-ANSON
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51234	132.3455	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51234	132.3455	FT THOMPSON - OAHE 230KV CKT 2
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51234	132.3381	FT THOMPSON - OAHE 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51234	132.3381	FT THOMPSON - OAHE 230KV CKT 2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50481	132.3248	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51140	132.3042	AXTELL - PAULINE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	132.2846	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	132.2635	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	132.2635	FT THOMPSON - OAHE 230KV CKT 4
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	132.2634	FT THOMPSON - OAHE 230KV CKT 3
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	132.2634	FT THOMPSON - OAHE 230KV CKT 4
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51018	132.2634	SUB 3454 - WAGENER 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51214	132.2455	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	132.2174	GEN590010 1-ERCOT EQUIVALENCE
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51135	132.1993	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51135	132.1732	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	132.1605	GEN590011 2-ERCOT EQUIVALENCE
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51283	132.149	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51085	132.1387	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51085	132.1387	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	132.1291	GEN542955 1-LACYGNE UNIT #1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	132.0609	GEN542957 1-IATAN UNIT #1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51082	132.0549	KELLY - SHELL CREEK 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	132.0452	GEN300003 1-THOMAS HILL UNIT 3
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51082	132.0401	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51082	132.04	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	132.0381	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	132.0061	GEN587363 1-G16-055-GEN10.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	131.9991	GEN300007 1-NEW MADRID UNIT 2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	131.9918	GEN300006 1-NEW MADRID UNIT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.9264	GEN642067 1-PLATTE
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51048	131.9254	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.9178	GEN645012 2-NEBRASKA CITY 2
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.9048	AINSWORTH WIND 34KV SWITCHED SHUNT
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51191	131.8938	AS KING - EAU CLAIRE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.8822	GEN542956 2-LACYGNE UNIT #2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51229	131.8732	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.8604	GEN636641 1-LOUISA UNIT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.8404	GEN542962 2-IATAN UNIT #2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51078	131.8378	MINGO - SETAB 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51219	131.8351	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.8332	GEN587443 1-G16-064-GEN10.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51177	131.8244	MISSION - WITTEN 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.8215	GEN659118 1-LARAMIE RIVER UNIT1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	131.821	GEN659353 1-DEERCREK CTG18.000
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.8047	GEN645011 1-NEBRASKA CITY 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.798	GEN659118 1-LARAMIE RIVER UNIT1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	131.7772	GEN659354 1-DEERCREK STG18.000
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51133	131.7723	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.7411	GEN642067 1-PLATTE
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.7379	GEN514806 1-SOONER UNIT 2
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51088	131.7356	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.7344	GEN514805 1-SOONER UNIT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.7328	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.6891	GEN542957 1-IATAN UNIT #1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51127	131.6884	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.6712	GEN542955 1-LACYGNE UNIT #1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51200	131.6678	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50681	131.6575	AINSWORTH - AINSWORTH 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51088	131.6415	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51118	131.635	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.6186	GEN515042 1-SEMINOLE 3G
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.599	GEN515040 1-SEMINOLE 1G

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.5978	GEN542951 5-HAWTHORN UNIT #5
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51229	131.5971	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53362	131.5909	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53356	131.586	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.5753	JEFFREY - NORTH PLATTE 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.5654	GEN640016 1-KINGSLEY HYDRO
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.5529	GEN542956 2-LACYGNE UNIT #2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.5525	GEN515041 1-SEMINOLE 2G
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51008	131.5478	RAUN - SIOUX CITY 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51094	131.5419	COOPER - MOORE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51131	131.5405	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51122	131.5346	GERALD GENTLEMAN STATION (GGS T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51122	131.5345	GERALD GENTLEMAN STATION (GGS T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51088	131.5182	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51147	131.5177	LAKEFIELD 3 - NOBLES 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51122	131.5105	ATKINSON - EMMET 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51122	131.5038	GERALD GENTLEMAN STATION (GGS T2) 345/230/13.8KV TRANSFORMER CKT 2
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51122	131.5037	GERALD GENTLEMAN STATION (GGS T2) 345/230/13.8KV TRANSFORMER CKT 2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.5	GEN509394 1-FLINT CREEK
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.4988	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.4988	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51230	131.4983	CROOKED CREEK - RIVERDALE 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.4961	KEARNEY 115KV SWITCHED SHUNT
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51108	131.4953	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKE
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.4863	GEN512688 2-GRDA1 GSU2 22
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.4777	GEN640028 1-COLUMCOGENERATION
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51110	131.4736	GRAND ISLAND - RIVERDALE 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.4735	GEN515226 1-MUSKOGEE 6G
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.4733	GEN515225 1-MUSKOGEE 5G
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.4613	GEN515223 1-MUSKOGEE 4G
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.4462	GEN511840 1-NORTHEASTERN STATION #3
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.4404	GEN513601 1-GRECCTG_1 20.000
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.4352	GEN511842 1-RIVERSIDE STATION #1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.4234	GEN511839 1-NORTHEASTERN STATION #2
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.4082	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.4047	GEN511843 1-RIVERSIDE STATION #2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.3891	GEN541151 3-SIBLEY GENERATING UNIT #3
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51075	131.3854	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51043	131.3619	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51043	131.3619	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50972	131.3609	G15088_T 345.00 - PAULINE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.3561	GEN509416 1-TURK GENERATION
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.3448	GEN645041 1-CASS COUNTY 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51108	131.3378	BONESTEEL - GREGORY 115KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51229	131.2671	BROKEN BOW - CROOKED CREEK 115KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51230	131.2606	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50800	131.241	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.2383	GEN509394 1-FLINT CREEK
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.222	GEN645042 2-CASS COUNTY 2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.2106	GEN509403 1-PIRKEY GENERATION
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50371	131.2032	COLUMWEST - KELLY 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51179	131.1738	STAPLETON - THEDFORD 115KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51190	131.1646	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.1586	GEN645033 3-SARPY COUNTY 3
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.1483	BASE CASE
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.1446	1222-AINSWORTH WIND
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.1446	1303-KEARNEY
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.1446	2560-BRDLAND-LNX3345.00
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.1446	2561-BRDLAND-LNX3345.00
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.1446	BASE CASE
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.1399	GEN509406 1-WELSH #3
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.1397	GEN509404 1-WELSH #1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	131.1344	GEN660016 1-B_H WIND 0.7000
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	131.1264	GEN659291 1-FT MP COLLECTOR
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51135	131.123	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.1081	GEN640016 1-KINGSLEY HYDRO
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51190	131.0996	G13-010T 345.00 - POST ROCK 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	131.0829	GEN662101 1-WESSINGTON190.5750
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50918	131.0719	AXTELL - G16-050-TAP 345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50994	131.059	AINSWORTH - STUART 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51122	131.0476	CALLAWAY - MAXWELL 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51075	131.0379	STAPLETON - THEDFORD 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	131.0352	GEN652545 7-BIG BEND
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51218	131.029	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51198	131.0251	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51189	131.0193	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.0164	GEN509416 1-TURK GENERATION
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50994	131.0078	ATKINSON - EMMET 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51106	130.9891	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51106	130.9891	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51106	130.988	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51106	130.9879	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50994	130.986	ATKINSON - STUART 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51369	130.975	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	130.9737	GEN509409 1-WILKES #3
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51229	130.971	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51126	130.968	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51211	130.9361	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51211	130.9334	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	130.9207	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	130.8992	GEN509403 1-PIRKEY GENERATION
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	130.8939	GEN587153 1-G16-021-GEN10.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	130.8801	BASE CASE
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51497	130.8578	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51228	130.8525	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	130.8331	GEN300002 1-THOMAS HILL UNIT 2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50966	130.8321	G15088_T 345.00 - PAULINE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	130.8252	GEN587093 1-G16-023-GEN10.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	130.8252	GEN587193 1-G16-029-GEN10.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51038	130.7882	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51190	130.7634	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51141	130.7626	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51114	130.7616	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51082	130.7493	P13:230-345:NPPD:STEGALL3:KV3A
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51028	130.7004	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51028	130.7003	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51209	130.6979	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	130.6951	GEN300011 1-ST FRANCIS UNIT 2
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	130.6949	GEN300002 1-THOMAS HILL UNIT 2
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51114	130.693	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51125	130.6909	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	130.6873	GEN600045 4-ANSON
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	130.6828	GEN300010 1-ST FRANCIS UNIT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51497	130.6818	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	130.6734	GEN300015 1-1SGPDEL 18.000
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51314	130.6701	FT RANDAL - FT THOMPSON 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51153	130.6668	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51486	130.6504	GLENHAM - L3 HAWDON 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	130.6504	GEN505432 1-SIKESTON
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51135	130.6435	AXTELL - PAULINE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51497	130.6373	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	130.6313	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50900	130.6213	RAUN - SUB 3451 FT CAL 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51497	130.6077	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	130.5782	GEN587593 1-J460-GEN1 0.6900
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	130.5654	GEN587153 1-G16-021-GEN10.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51497	130.5416	GLENHAM - WHITLOK 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51108	130.5315	GREGORY - WINNER 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51154	130.5305	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51132	130.517	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51120	130.5027	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51114	130.4986	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51114	130.4985	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51221	130.4878	FORMAN - HANKINSON 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50475	130.4801	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50927	130.4596	AXTELL - SWEETWATER 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51125	130.4558	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51194	130.4516	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51035	130.4409	LOUP CITY - NORTH LOUP 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51385	130.4274	FT THOMPSON - WESSINGTON 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51124	130.411	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51030	130.4019	AXTELL - PAULINE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51043	130.4015	103RD & ROKEBY - MOORE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51196	130.3869	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51312	130.3685	FT THOMPSON - LAKE PLATT 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51108	130.3629	MISSION - WITTEN 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51108	130.3399	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51108	130.3361	WINNER - WITTEN 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50954	130.3179	MINGO - RED WILLOW 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	130.3095	GEN600045 4-ANSON
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50371	130.2891	COLUMWEST - GRAND ISLAND 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51012	130.2834	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51119	130.2783	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	130.2636	GEN590010 1-ERCOT EQUIVALENCE
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51221	130.2526	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50907	130.2336	SUB 3454 - WAGENER 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50907	130.2336	SUB 3454 - WAGENER 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	130.2246	GEN652544 5-BIG BEND
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	130.2196	GEN300006 1-NEW MADRID UNIT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51207	130.1891	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	130.158	GEN652543 3-BIG BEND
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	130.157	GEN652542 1-BIG BEND
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51017	130.1452	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	130.1444	GEN300003 1-THOMAS HILL UNIT 3
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50922	130.1264	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51126	130.1154	COOPER - ST JOE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	130.1	GEN590010 1-ERCOT EQUIVALENCE
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51108	130.0907	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51218	130.0857	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51028	130.0777	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	130.0673	GEN590011 2-ERCOT EQUIVALENCE
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51169	130.0535	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	130.0347	GEN300007 1-NEW MADRID UNIT 2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51194	130.0026	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51127	129.9966	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51119	129.992	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51127	129.989	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	129.9798	GEN300003 1-THOMAS HILL UNIT 3
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51129	129.9716	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51170	129.9649	MISSION - WITTEN 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51127	129.953	G15-005T 345.00 - SIBLEY 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51232	129.9194	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51108	129.9132	P12:115:UMZW:# 172 #: WI IN SD.
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	129.8949	GEN300007 1-NEW MADRID UNIT 2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	129.8909	GEN563232 1-G15089_3 0.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51199	129.8887	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	129.8849	GEN300006 1-NEW MADRID UNIT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51218	129.8847	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50976	129.8823	MINGO - SETAB 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50976	129.8822	MINGO - SETAB 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51287	129.8808	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	129.8806	GEN600004 2-PRAIRIE ISLAND G2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	129.8725	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51232	129.8703	FORMAN - OAKES 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	129.8405	GEN652457 1-GARRISON
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	129.8405	GEN652458 2-GARRISON
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	129.8405	GEN652459 3-GARRISON
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51292	129.8235	HURON - WATERTOWN 230KV CKT 2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50922	129.8212	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	129.7946	GEN590011 2-ERCOT EQUIVALENCE
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51301	129.7626	P12:230:UMZW:# 166 #: PL IN SD. TAP
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51301	129.7626	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51133	129.7616	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51198	129.7451	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50988	129.7441	COOPER - MOORE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50939	129.7416	103RD & ROKEBY - MOORE 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50939	129.7411	103RD & ROKEBY - MOORE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51216	129.737	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51216	129.737	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51292	129.7364	CARPENTER - WATERTOWN 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51224	129.7329	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	129.7157	GEN659403 1-NDSUNFLWR W0.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51362	129.7071	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51175	129.6764	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51194	129.6687	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51221	129.6632	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51221	129.6517	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	129.637	GEN 11123 1-G736-GEN1 0.6900
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50731	129.6287	NF
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	129.6272	GEN 11133 1-J442-GEN1 0.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51168	129.6187	BYRON - NORTH ROCHESTER 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51224	129.5946	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51215	129.5548	AUDUBON - SHEYNNE 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51091	129.5405	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51124	129.5208	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	129.4777	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51224	129.4199	HENNING - INMANN 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51268	129.3983	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51268	129.3982	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	129.3913	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51268	129.3882	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50794	129.3651	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	129.3644	GEN659411 1-CAMPBLCNTY W0.6900
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	129.3361	COYOTE 345/24.0KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51219	129.3335	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51230	129.3276	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50972	129.3276	G15088_T 345.00 - MOORE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	129.2998	GEN659353 1-DEERCREK CTG18.000
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51169	129.2913	BYRON - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51237	129.2901	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51220	129.264	MN VALLEY TAP - PANTHER 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	129.2268	GEN600006 1-AS KING
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51206	129.2164	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50862	129.2111	G15088_T 345.00 - PAULINE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51225	129.1901	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51490	129.1619	GLENHAM - WHITLOK 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51211	129.1066	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	129.0909	GEN660016 1-B_H WIND 0.7000
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51490	129.0662	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	129.0387	GEN659296 2-SDPRAIRWND1W0.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51223	129.0386	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51196	129.0362	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51479	129.0208	GLENHAM - L3 HAWDON 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51490	128.9908	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	128.9789	GEN662101 1-WESSINGTON190.5750
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51490	128.9346	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51490	128.9068	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.8754	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	128.8754	HANKINSON - WAHPETON 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	128.8648	GEN652556 2-OAHE
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	128.8648	GEN652557 4-OAHE
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	128.8648	GEN652558 6-OAHE
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51207	128.8625	P13:115-230:NPPD:WAYSIDE4:T1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	128.8192	GEN652559 1-OAHE
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.8188	GEN652906 1-G09_006IS_3 0.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	128.7948	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50826	128.7912	AXTELL - SWEETWATER 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	128.7736	GEN615010 1-STANTON4
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51232	128.7689	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51225	128.719	FRANKS - HUBEN 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.6656	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	128.6448	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.6354	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.5942	GEN652907 1-G09_007IS_3 0.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51193	128.5891	CENTER - CNTSHNT3 345.00 345KV CKT Z1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	128.5524	GEN659110 1-LELAND OLDS UNIT1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	128.5406	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51080	128.529	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51080	128.529	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	128.5117	GEN587593 1-J460-GEN1 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	128.5096	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51136	128.4441	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51175	128.4356	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.4257	CENTER 230/22.0KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.4057	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51134	128.3882	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	128.388	GEN587053 1-G16-007-GEN10.6500
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	128.3784	GEN652545 7-BIG BEND
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	128.362	GEN659141 1-K10215A
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.3534	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	128.2939	GEN652906 1-G09_006IS_3 0.6900
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50918	128.2557	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.2529	GEN563232 1-G15089_3 0.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	128.2407	GEN652544 5-BIG BEND
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	128.2084	GEN652543 3-BIG BEND
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	128.2079	GEN652542 1-BIG BEND
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	128.1443	GEN587653 1-J526-GEN1 0.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	128.1	GEN600005 1-MONTICELLO
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	128.0636	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	128.0457	GEN652907 1-G09_007IS_3 0.6900
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.0307	GEN 10648 1-G830_GEN 0.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	128.0104	GEN659010 4-G07_027IS_2 0.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	127.9977	GEN659194 1-NDPRAIRWND1W0.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51330	127.9951	FT THOMPSON - OAHE 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51330	127.9951	FT THOMPSON - OAHE 230KV CKT 2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	127.9947	GEN659366 3-WILTON 3 W0.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	127.9803	GEN652461 5-GARRISON
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	127.9792	GEN652460 4-GARRISON
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	127.9494	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51333	127.9427	FT THOMPSON - OAHE 230KV CKT 3
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51333	127.9427	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51213	127.9188	BLAIR - GRANITE FALLS 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	127.8993	GEN652459 3-GARRISON
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	127.8992	GEN652457 1-GARRISON
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	127.8992	GEN652458 2-GARRISON
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	127.8852	GEN563232 1-G15089_3 0.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	127.8555	BASE CASE
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51136	127.8414	J290_SUB 230.00 - RUGBY 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	127.8361	GEN587633 1-J510-GEN1 18.000
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51150	127.7981	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	127.785	GEN659403 1-NDSUNFLWR W0.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	127.7677	GEN659407 1-ANTELPHILLSW0.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51236	127.7212	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51236	127.7212	P12:115:UMZB:# 119 #: IN NE.
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51185	127.6947	AS KING - EAU CLAIRE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	127.6499	GEN652559 1-OAHE
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	127.6293	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	127.6253	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51613	127.6142	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	127.6054	GEN 11123 1-G736-GEN1 0.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	127.5974	GEN 11133 1-J442-GEN1 0.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	127.5442	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	127.4952	GEN659411 1-CAMPBLCNTY W0.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	127.4684	GEN600004 2-PRAIRIE ISLAND G2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	127.4582	GEN600003 1-PRAIRIE ISLAND G1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51223	127.4481	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50862	127.4479	G15088_T 345.00 - MOORE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51121	127.4142	GRIMES - LEHIGH 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51112	127.3992	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51003	127.3871	RAUN - SIOUX CITY 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51135	127.3705	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51134	127.3473	ADAMS - MITCHLCO3 345.00 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51199	127.3133	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51137	127.3061	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51192	127.2729	NOBLES - SPLIT ROCK 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51223	127.2302	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	127.1983	GEN659296 2-SDPRAIRWND1W0.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51369	127.1749	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51369	127.1691	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51369	127.1576	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	127.0915	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51148	127.0862	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51018	127.0692	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51183	127.0644	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	127.0078	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51216	126.9724	FORMAN - HANKINSON 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	126.9551	GEN652556 2-OAHE
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	126.9551	GEN652557 4-OAHE
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	126.9551	GEN652558 6-OAHE
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	126.9255	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	126.9052	GEN600006 1-AS KING
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	126.9051	EMERY 161/18.0KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	126.8197	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	126.8197	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51401	126.8172	OAHE - SULLEY BUTTE 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51380	126.7933	FT THOMPSON - WESSINGTON 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	126.7127	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51152	126.7058	ADAMS - PLEASANT VALLEY 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51048	126.696	103RD & ROKEBY - MOORE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51078	126.6671	MINGO - SETAB 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51215	126.642	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	126.6171	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	126.6012	GEN659110 1-LELAND OLDS UNIT1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51203	126.5943	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51078	126.5742	P13:230-345:NPPD:STEGALL3:KV3A
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	126.57	GEN659453 1-GI1414GEN W0.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51213	126.5516	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51226	126.4549	FORMAN - OAKES 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51227	126.4528	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	126.4009	GEN659141 1-K10215A
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51164	126.3613	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51213	126.3545	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	126.2847	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51192	126.2766	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51282	126.2615	GAVINS POINT - YANKON JCT 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	126.2227	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51287	126.208	HURON - WATERTOWN 230KV CKT 2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	126.197	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	126.1953	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51193	126.1833	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51286	126.1748	P12:230:UMZW:# 166 #: PL IN SD. TAP
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51286	126.1748	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	126.1672	GEN652173 1-G09_001IS_2 0.6900
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.49627	126.1594	MCCOOL - MOORE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51215	126.1259	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51287	126.1225	CARPENTER - WATERTOWN 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51219	126.1087	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51215	126.1075	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51211	126.1075	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51211	126.1075	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	126.0752	GEN587653 1-J526-GEN1 0.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	126.0227	SHEYENNE SVC - SHEYNNE 115KV CKT Z
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51209	125.9812	AUDUBON - SHEYNNE 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51221	125.9699	BALTA - RAMSEY 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51219	125.9514	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51194	125.9513	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51127	125.9335	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	125.9296	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51497	125.8671	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51497	125.8671	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	125.8395	GEN659407 1-ANTELPHILLSW0.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51219	125.7923	HENNING - INMANN 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51262	125.7794	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51262	125.7793	NAPA JCT7 115.00 - UTICA 115KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51232	125.771	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51262	125.7704	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	125.7667	GEN587633 1-J510-GEN1 18.000
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51133	125.7606	HIGHLND 3 345.00 - RAUN 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51214	125.7314	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51219	125.7266	PRAIRIE - RAMSEY 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51199	125.725	CENTER - COYOTE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51165	125.7042	BYRON - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51215	125.6942	MN VALLEY TAP - PANTHER 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51214	125.6415	PRAIRIE - WINGER 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51224	125.622	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51198	125.5589	FARGO - SHEYNNE 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51210	125.546	AUDUBON - HUBBARD 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51220	125.5342	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51218	125.5249	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	125.5149	GEN615010 1-STANTON4
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	125.4991	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	125.4958	GEN652173 1-G09_001IS_2 0.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51200	125.4952	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51205	125.4692	KARLSTAD - WINGER 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51165	125.4689	BYRON - PLEASANT VALLEY 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51191	125.4385	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51205	125.358	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51227	125.3481	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51218	125.336	MCLEOD - PANTHER 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	125.3214	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50954	125.2767	MINGO - RED WILLOW 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	125.2389	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51202	125.2139	P13:115-230:NPPD:WAYSIDE4:T1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	125.1849	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51118	125.1546	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51220	125.1182	FRANKS - HUBEN 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	125.0996	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	125.0801	GEN587033 1-G16-004-GEN10.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	125.0515	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	125.0222	STANTON 230/18.0KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	124.9979	GEN657749 1-YOUNG 1 GENERATOR
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	124.9701	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	124.9128	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	124.8444	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	124.7936	GEN600005 1-MONTICELLO
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	124.7154	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51145	124.6646	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	124.6452	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	124.2838	BASE CASE
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51325	124.2735	FT THOMPSON - OAHE 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51325	124.2735	FT THOMPSON - OAHE 230KV CKT 2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51218	124.2527	SUB 3455 - SUB 3740 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51237	124.2487	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51329	124.2378	FT THOMPSON - OAHE 230KV CKT 3
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51329	124.2378	FT THOMPSON - OAHE 230KV CKT 4
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51231	124.1706	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51231	124.1706	P12:115:UMZB:# 119 #: IN NE.
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	124.1615	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	124.1263	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	124.1012	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	124.0851	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	124.0674	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51227	124.0472	P12:115:TSGT:GRANTNB7-OGALALA7_2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	124.0466	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	124.0347	GEN659103 1-ANTELOPE VALLEY UNIT1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	124.0347	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	124.0121	P12:115:TSGT:BLKWDCK7-ELSIETP7
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	123.9402	GEN579459 1-G16-075-GEN10.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51362	123.9059	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51362	123.9047	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51362	123.8907	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51218	123.8717	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	123.8299	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	123.7926	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51132	123.7367	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	123.7075	GEN600000 1-SHERBURNECNTY G1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53648	123.7049	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51194	123.5744	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51136	123.5482	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53648	123.4892	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51133	123.4184	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	123.347	EMERY 161/18.0KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51012	123.3356	SUB 3454 - WAGENER 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51043	123.3261	103RD & ROKEBY - MOORE 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	123.3151	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	123.3108	J460 345.00 - J460-TAP 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	123.3108	J460 345.00 345/34.5KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51129	123.3093	HOLCOMB - SETAB 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	123.2898	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	123.2094	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51194	123.0918	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51604	123.0718	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	123.0349	LADISH 115/13.2KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51175	122.8589	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51175	122.8435	P12:345:SPS:J07.1.FINN.HITCH
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	122.7375	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	122.6734	GEN659111 2-LELAND OLDS UNIT2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	122.6388	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	122.6347	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	122.6173	GEN659125 1-COVEY
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53636	122.6021	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.49339	122.5884	GRAND ISLAND - MCCOOL 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	122.5652	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51490	122.5619	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51490	122.5619	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51072	122.4227	MINGO - SETAB 345KV CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	122.31	GEN615001 1-COAL CREEK
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	122.2658	GEN600001 2-SHERBURNE CNTY G2
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	122.2188	GEN615002 2-COAL CREEK
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	122.1227	GEN600002 3-SHERBURNE CNTY G3
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	122.1198	GEN659103 1-ANTELOPE VALLEY UNIT1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	122.1198	GEN659107 2-ANTELOPE VALLEY UNIT2
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	121.7072	GEN620315 1-BIG STONE GEN
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	121.5729	ALMA 161 161/24.0KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	121.5409	STANTON 230/18.0KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50948	121.1201	MINGO - RED WILLOW 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51232	120.9127	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	120.8431	GEN587293 1-G16-044-GEN10.6900
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	120.8088	GEN659111 2-LELAND OLDS UNIT2
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53632	120.7098	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	120.6446	GEN659125 1-COVEY
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	120.6171	GEN587133 1-G16-017-GEN10.6900
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53632	120.6073	Z810X2
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	120.1586	GEN659103 1-ANTELOPE VALLEY UNIT1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	120.1586	GEN659107 2-ANTELOPE VALLEY UNIT2
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	119.8067	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	119.625	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	118.9554	GEN587293 1-G16-044-GEN10.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	118.9033	GEN587133 1-G16-017-GEN10.6900
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	118.7387	GEN659125 1-COVEY
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	118.6776	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53632	118.4623	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	118.2951	GEN615001 1-COAL CREEK
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	118.1828	GEN615002 2-COAL CREEK
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	117.8904	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	117.195	BIG STONE 230/24.0KV TRANSFORMER CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	116.8203	GEN587133 1-G16-017-GEN10.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	115.8273	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53636	114.332	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	107.5737	GEN652353 2-GR PRAIRIEG 0.6900
0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	106.2914	GEN652353 2-GR PRAIRIEG 0.6900
0	20WP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51328	102.9724	KELLY - MEADOWGROVE4230.00 230KV CKT 1
0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	102.961	GEN652353 2-GR PRAIRIEG 0.6900
0	20WP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51951	101.0205	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
0	20WP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51976	100.1844	STORLA - WESSINGTON 230KV CKT 1
0	20WP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51467	99.9	SPLIT ROCK - WHITE 345KV CKT 1
0	20WP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51789	99.5	GEN562714 1-G15_023_4 0.6900
0	20WP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51789	99.5	GEN562715 1-G15_023_5 0.6900
0	20WP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51851	99.2	HANLON - STORLA 230KV CKT 1
0	16WP	G16_075	-	Non-Converged Contingency	0.0	0.0	0.93916	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
0	16WP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.46958	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	16WP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.46958	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	16WP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.46958	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	16WP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.46958	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	16WP	G16_075	-	Non-Converged Contingency	0.0	0.0	0.30243	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
0	17G	G16_075	-	Non-Converged Contingency	0.0	0.0	1.57327	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
0	17G	G16_075	-	Non-Converged Contingency	0.0	0.0	1.04885	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
0	17G	G16_075	-	Non-Converged Contingency	720.0	720.0	0.56871	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	17G	G16_075	-	Non-Converged Contingency	720.0	720.0	0.56871	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	17G	G16_075	-	Non-Converged Contingency	720.0	720.0	0.52442	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
0	17G	G16_075	-	Non-Converged Contingency	720.0	720.0	0.52442	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
0	17G	G16_075	-	Non-Converged Contingency	720.0	720.0	0.52442	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
0	17G	G16_075	-	Non-Converged Contingency	720.0	720.0	0.47558	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	17G	G16_075	-	Non-Converged Contingency	720.0	720.0	0.47558	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	17SP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.57021	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
0	17SP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.57021	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	20WP	G16_075	-	Non-Converged Contingency	0.0	0.0	1.03578	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
0	20WP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.51789	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
0	20WP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.51789	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
0	25SP	G16_075	-	Non-Converged Contingency	956.09	1051.7	0.07012	-	GEN525561 1-TOLK GEN #1 24 KV
0	25SP	G16_075	-	Non-Converged Contingency	956.09	1051.7	0.07012	-	GEN525562 1-TOLK GEN #2 24 KV
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34287	144.5367	BALTA - RAMSEY 230KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34248	144.1364	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34304	143.787	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34304	143.7726	NAPA JCT7 115.00 - UTICA 115KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34304	143.6564	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34248	143.5623	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34402	143.4326	FT THOMPSON - WESSINGTON 230KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34283	143.0987	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34221	142.9315	GRIMES - LEHIGH 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34271	142.9214	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34274	142.8622	NOBLES - SPLIT ROCK 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34286	142.8513	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34230	142.7899	BYRON - PLEASANT VALLEY 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34212	142.3853	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34283	142.2791	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34283	142.2378	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34282	142.2258	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34286	142.0964	PRAIRIE - RAMSEY 230KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34584	142.0739	FT THOMPSON - HURON 230KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34584	142.0739	FT THOMPSON - HURON 230KV CKT 2
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34282	141.9393	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34280	141.9028	PRAIRIE - WINGER 230KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34170	141.8683	HIGHLND 3 345.00 - RAUN 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34277	141.868	AUDUBON - HUBBARD 230KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34271	141.8343	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34295	141.8299	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34295	141.8299	P12:115:UMZB:# 119 #: IN NE.
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.8142	ANSON - SPLIT ROCK 115KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34298	141.7112	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.6597	ANSON - SPLIT ROCK 115KV CKT 2
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.6521	ANSON 115/17.5KV TRANSFORMER CKT 4
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34305	141.6502	LAWRENCE - SIOUX FALLS 115KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34316	141.6488	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34295	141.638	LUND - MORANVILLE 230KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34275	141.633	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34295	141.6196	BURR - CANBY 115KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34282	141.6052	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34246	141.6016	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34205	141.6005	FIELD NORTH - LKFLDXL3 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34312	141.5074	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34205	141.5054	FIELD SOUTH - WILMARTH 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.4997	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.4991	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34205	141.4668	FIELD NORTH - FIELD SOUTH 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34312	141.4623	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34260	141.4314	ARNOLD - HAZLETON 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34288	141.3992	GENOA 161 - SENECA 161 161KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34250	141.3524	HIGHLND 3 345.00 - LAKEFIELD 3 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34283	141.2837	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34238	140.5014	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34201	140.4552	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	140.4189	2560-BRDLAND-LNX3345.00
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	140.4189	2561-BRDLAND-LNX3345.00
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	140.4189	BASE CASE
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34256	139.8671	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34255	139.8644	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34170	139.7228	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34170	139.7213	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34084	139.4386	SUB 3454 - WAGENER 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.4283	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34109	139.3987	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34269	139.3817	BONDURANT - MONTEZUMA 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34295	139.3111	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT.
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.2829	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	139.2322	EMERY 161/18.0KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34289	139.2111	COOPER - FAIRPORT 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34285	139.0911	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34250	139.0485	DRAYTON - LETELLIER 230KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34110	139.0105	103RD & ROKEBY - MOORE 345KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.9174	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.8956	COYOTE 345/24.0KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.7139	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.5816	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.5175	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.4301	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.3778	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.3734	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.3729	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.2461	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.2161	CENTER 230/22.0KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.1732	LADISH 115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	138.1708	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.5811	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.578	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	137.155	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.9499	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.9093	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.7401	ALMA 161 161/24.0KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34510	136.6831	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34510	136.6831	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	136.6044	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	135.6531	STANTON 230/18.0KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	134.7874	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	131.4043	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	130.592	BIG STONE 230/24.0KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46980	120.9919	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.42293	113.7736	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34311	112.3689	KELLY - MEADOWGROVE4230.00 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33220	111.7468	GRAND ISLAND - SWEETWATER 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34851	110.866	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34871	110.2428	STORLA - WESSINGTON 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34606	110.2215	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34524	109.6283	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34541	109.6152	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34774	109.5006	HANLON - STORLA 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34541	109.4825	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34541	109.4754	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34541	109.4754	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34635	108.9881	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34862	108.978	FT THOMPSON - LETCHER 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34862	108.978	FT THOMPSON - LETCHER 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34444	108.8118	RAUN - SUB 3451 FT CAL 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34444	108.8118	RAUN - SUB 3451 FT CAL 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34501	108.2933	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34501	108.1878	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34501	108.1874	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	108.0978	GEN635024 4-WALTER SCOTT UNIT 4
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34311	108.0594	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34484	107.9845	SPLIT ROCK - WHITE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34484	107.9845	SPLIT ROCK - WHITE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34615	107.9014	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	107.8033	GEN640009 1-COOPER NUCLEAR STATION
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34842	107.7601	FT RANDAL - FT THOMPSON 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34842	107.7601	FT RANDAL - FT THOMPSON 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34839	107.7272	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34839	107.7272	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	107.7232	GEN641089 2-ENERGY CENTER 2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	107.7207	LETCHER - SIOUX FALLS 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34524	107.7183	G09_001IST 345.00 - GROTON 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	107.6839	GEN635023 3-WALTER SCOTT UNIT 3
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34601	107.6454	CENTER - JAMESTOWN 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34636	107.5678	BISON 3 345.00 - BUFFALO 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34670	107.5591	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34676	107.531	FT RANDAL - SIOUX CITY 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34839	107.5064	FT RANDAL - LAKE PLATT 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34674	107.3953	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34681	107.3689	AS KING - EAU CLAIRE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34615	107.2216	ADAMS - MITCHLCO3 345.00 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	107.2175	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	107.2068	GEN563222 1-G15088_3 0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34448	107.1344	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34448	107.1344	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34448	107.0891	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34448	107.0536	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34661	107.0254	RASMUSN - UTICA JCT 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.9415	GEN344225 1-1CAL G1 25.000
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34753	106.9403	HANLON - SIOUX FALLS 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34922	106.9162	MINGO - RED WILLOW 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34922	106.9162	MINGO - RED WILLOW 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34875	106.9092	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34636	106.8641	ADAMS - PLEASANT VALLEY 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34653	106.8612	GRIMES - LEHIGH 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34661	106.86	RASMUSN - SIOUX CITY 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36080	106.8238	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36077	106.8195	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34684	106.8001	ELLENDALE - OAKES 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34684	106.8001	ELLENDALE - OAKES 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34672	106.7865	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34686	106.7637	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34684	106.7617	FORMAN - OAKES 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34642	106.7371	PAHOJA - SIOUX FALLS 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34610	106.7135	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34638	106.6871	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.6647	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.6012	GEN336153 1-WATERFORD UNIT#3
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34683	106.568	LAKEFIELD 3 - NOBLES 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.5262	GEN587353 1-G16-050-GEN10.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34700	106.5114	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34634	106.5096	CROOKED CREEK - RIVERDALE 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34684	106.4747	FORMAN - HANKINSON 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34638	106.4709	J290_SUB 230.00 - RUGBY 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34642	106.4518	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.4317	GEN335831 1-RIVERBEND UNIT#1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34699	106.421	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.4156	GEN336821 1-GRAND GULF UNIT
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.4103	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34699	106.4091	CLEARWATER - ONEILL 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	106.4082	CARPENTER - HURON 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34871	106.4033	FT THOMPSON - WESSINGTON 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34871	106.4033	FT THOMPSON - WESSINGTON 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.3981	GEN542962 2-IATAN UNIT #2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34640	106.3959	CHISAGO COUNTY - FORBES 500KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34316	106.3952	HOSKINS - SHELL CREEK 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.3911	GEN337653 1-WHITE BLUFF UNIT #2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34700	106.3891	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34699	106.3619	CLEARWATER - NELIGH 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34640	106.3511	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.3453	GEN642067 1-PLATTE
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.3382	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34728	106.3283	FT RANDAL - UTICA JCT 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	106.3207	HURON - WATERTOWN 230KV CKT 2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	106.3207	HURON - WATERTOWN 230KV CKT 2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34524	106.3167	RAUN - SIOUX CITY 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34651	106.3126	BYRON - NORTH ROCHESTER 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34611	106.2974	COLUMEAST - SHELL CREEK 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34719	106.2931	HANKINSON - WAHPETON 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.2763	GEN645012 2-NEBRASKA CITY 2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34554	106.2698	NUNDRWD - WAYSIDE 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	106.2689	CARPENTER - WATERTOWN 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	106.2689	CARPENTER - WATERTOWN 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34635	106.2638	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34635	106.2638	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.1839	GEN587363 1-G16-055-GEN10.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34739	106.1806	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34739	106.1806	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.1423	GEN587443 1-G16-064-GEN10.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34543	106.14	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34651	106.1369	BYRON - PLEASANT VALLEY 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34543	106.1059	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.0902	GEN501801 1-DOLET HILLS UNIT1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34685	106.0839	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.0826	GEN337652 1-WHITE BLUFF UNIT #1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34685	106.0776	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.059	GEN338143 1-INDEPENDENCE UNIT #1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34705	106.059	BLAIR - GRANITE FALLS 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34705	106.059	BLAIR - GRANITE FALLS 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	106.0575	GEN338146 1-INDEPENDENCE UNIT #2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34543	106.0471	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34692	106.0342	CENTER - COYOTE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34827	106.0199	MINGO - SETAB 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34827	106.0199	MINGO - SETAB 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34646	105.9925	GAVINS POINT - HARTINGTON 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34491	105.9779	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.9625	GEN542957 1-IATAN UNIT #1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34911	105.9466	STAPLETON - THEDFORD 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34693	105.9295	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.35031	105.9284	FT THOMPSON - HURON 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.35031	105.9284	FT THOMPSON - HURON 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.35031	105.9284	FT THOMPSON - HURON 230KV CKT 2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.35031	105.9284	FT THOMPSON - HURON 230KV CKT 2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34837	105.9221	AINSWORTH - STUART 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.9188	GEN501813 1-RODEMACHER UNIT 3
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34720	105.9128	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.9102	GEN344897 4-1LAB G4 20.000
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.9087	GEN344894 1-1LAB G1 20.000
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.9085	GEN344896 3-1LAB G3 20.000
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34837	105.889	ATKINSON - STUART 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.8838	GEN344895 2-1LAB G2 20.000
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34700	105.8738	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.8634	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34598	105.8541	SIDNEY - STEGALL 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.35250	105.8518	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34837	105.8478	ATKINSON - EMMET 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.8461	GEN345670 1-1RUSH G1 18.000
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.8459	GEN345671 2-1RUSH G2 18.000
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.8399	GEN335206 1-NELSON UNIT 6
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34669	105.8313	GARRISON - JAMES TOWN 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34614	105.8263	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34837	105.8248	EMMET - ONEILL 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34703	105.8204	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34702	105.8196	DENISON - SIOUX CITY 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34627	105.8196	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.8086	GEN562547 1-G14_039_3 0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.7939	P13:115-230:NPPD:NUCOR-3
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34739	105.7824	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34739	105.7824	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.7751	GEN501812 1-RODEMACHER UNIT 2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34718	105.7697	MENNO JCT - TRIPP JCT 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34747	105.7611	BROKEN BOW - LOUP CITY 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34713	105.747	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34713	105.747	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.7453	P13:230-345:NPPD:NUCOR-1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34691	105.7427	FARGO - JAMES TOWN 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34692	105.7263	FARGO - JAMES TOWN 230KV CKT 2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34646	105.7218	BELDEN - HARTINGTON 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.7168	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34701	105.7154	AUDUBON - SHEYNNE 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34711	105.715	BALTA - RAMSEY 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.7125	GEN336252 1-NINEMILE POINT UNIT#5
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.7119	GEN563212 1-G15087_3 0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34697	105.7112	BISMARK - JAMES TOWN 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34718	105.7093	MENNO JCT - UTICA 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.7007	P13:115-345:NPPD:NUCOR-2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34697	105.696	JAMES TOWN - WEBER 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34708	105.695	NOBLES - SPLIT ROCK 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34697	105.6937	BISMARK - WEBER 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.6918	GEN336831 1-BAXTER WILSON SES
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34713	105.6829	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34713	105.6829	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34699	105.6804	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34717	105.6799	JEFFREY - NORTH PLATTE 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34707	105.6785	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34744	105.6716	CALLAWAY - MAXWELL 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34718	105.6687	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34678	105.6631	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34678	105.6631	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.6599	GEN337041 1-GERALD ANDRUS
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.6573	GEN641086 1-ENERGY CENTER
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.6299	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.6297	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.619	GEN334440 1-SABINE UNIT 4
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.6089	GEN336251 1-NINEMILE POINT UNIT#4
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34911	105.5969	MAXWELL - STAPLETON 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34667	105.5603	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34667	105.559	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34614	105.3363	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34614	105.3363	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34614	105.3329	GRAND ISLAND - HASTINGS 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34705	105.2513	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34705	105.2513	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	105.1206	BASE CASE
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34715	104.8309	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34662	104.784	KELLY - SHELL CREEK 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34662	104.7825	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34662	104.7825	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34583	104.7256	HOSKINS - RAUN 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34637	104.6686	MOORE - NW68TH & HOLDREGE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34637	104.6686	MOORE - NW68TH & HOLDREGE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34686	104.6523	AURORA - GRAND ISLAND 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34670	104.6522	G15088_T 345.00 - PAULINE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.6283	GEN652345 W-G07_023IS_2 0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.6152	GEN659353 1-DEERCREK CTG18.000
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.6106	GEN652414 4-FT PECK
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.6106	GEN652415 5-FT PECK
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.6018	GEN615032 2-PLEASANT VALLEY
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34606	104.601	CENTRAL CITY - SILVER CREEK 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.6002	GEN600012 2-BLACK DOG GEN 2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34692	104.5999	FAIRBURY - HARBINE 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.5942	GEN672347 1-CORY COGEN GENERATOR 1 GT1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.5942	GEN672348 2-CORY COGEN GENERATOR 2 GT2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.5897	GEN672350 1-NIPAWIN GENERATOR 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.5897	GEN672351 2-NIPAWIN GENERATOR 2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.5897	GEN672352 3-NIPAWIN GENERATOR 3
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34692	104.5661	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.5648	GEN620324 3-HOOT LAKE 3 GEN
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.5636	GEN657600 1-L1GEN3 9 0.5750
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34692	104.5576	FAIRBURY - G15087_T 115.00 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.5326	GEN672367 1-MERIDIAN GENERATOR 1 GT1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.5326	GEN672368 2-MERIDIAN GENERATOR 2 GT2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.532	GEN672349 3-CORY COGEN GENERATOR 3 ST
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.5319	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.5316	LADISH 115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34692	104.5263	BONDURANT - MONTEZUMA 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34630	104.5262	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.5238	GEN600050 1-FEP
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.5238	GEN659273 2-GROTON SYNC COND
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.5238	GEN659294 1-WILTONCOL9
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.5238	GEN672339 16-QE 16G 13.800
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.5238	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34531	104.5234	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34531	104.5234	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.514	GEN652558 6-OAHE
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34686	104.4953	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.4897	GEN587583 1-J432-GEN1 0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34642	104.4747	P12:115:NPPD:1155:YORK 7:SEWARD 7:BTB
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34642	104.468	TAMORA - YORK 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34683	104.4641	CRETE - FRIEND 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.4523	GEN600065 7-HIGH BRIDGE
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.4523	GEN600066 8-HIGH BRIDGE
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.4473	GEN659192 6-LYNN
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34688	104.4466	HILLS - MONTEZUMA 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.4463	GEN659162 4-RED WLCK
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.4463	GEN659163 5-BLACK WDCK
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34642	104.4363	ATCHSNT3 345.00 - COOPER 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34642	104.4363	ATCHSNT3 345.00 - COOPER 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.4342	GEN672393 2-NBECST2G 13.800
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.4203	GEN660016 1-B_H WIND 0.7000
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.4064	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.3958	GEN600014 4-BLACK DOG GEN 4
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.3942	GEN600067 9-HIGH BRIDGE
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.3916	GEN600011 5-BLACK DOG GEN 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.39	GEN600071 10-RIVER SIDE
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.3899	GEN600070 9-RIVER SIDE
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.3896	GEN657985 1-ASH1GEN9 0.5750
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34696	104.3798	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.3796	GEN600007 7-RIVERSIDE GEN 7
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.3649	GEN681522 3-GENOA 3
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34606	104.3556	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.3445	GEN600017 C-LS POWER CT
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34964	104.3334	OAHE - SULLEY BUTTE 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.3267	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34713	104.3261	COOPER - FAIRPORT 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.3231	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.3077	GEN659291 1-FT MP COLLECTOR
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.3071	GEN562872 1-G15046_3 0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.3027	GEN662101 1-WESSINGTON190.5750
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.2995	GEN615052 1-CAMBRIDGE GENERATING STATION
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34696	104.2975	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34954	104.2926	GLENHAM - L3 HAWDON 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34964	104.266	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34670	104.2632	G15088_T 345.00 - MOORE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34964	104.257	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34964	104.2567	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34626	104.256	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34626	104.256	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34686	104.2551	FALLOW 3 345.00 - GRIMES 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34642	104.2494	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.2481	GEN 11104 1-J262_GEN 0.6000
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.2481	GEN 11108 1-J263_GEN 0.6000
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34964	104.2346	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34964	104.2346	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.216	GEN615015 1-GRE-SPRITWDG13.200
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34964	104.2084	GLENHAM - WHITLOK 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.195	GEN910006 1-G12_012IS_3 0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.1894	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34709	104.1836	STMDSJFAFACO
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34709	104.1835	COPSTJCPFRSJ
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.1232	GEN615021 1-GRE-ER 14G 16.000
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34639	104.0968	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34639	104.0968	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.0965	GEN587623 1-J493-GEN1 0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.0885	GEN587053 1-G16-007-GEN10.6500
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.0257	GEN 10648 1-G830_GEN 0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.0229	GEN672304 4-BOUNDARY DAM GENERATOR 4
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.0229	GEN672305 5-BOUNDARY DAM GENERATOR 5
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	104.0228	GEN672303 3-BOUNDARY DAM GENERATOR 3
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33916	104.0144	COLUMWEST - KELLY 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.984	GEN652460 4-GARRISON
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.984	GEN652461 5-GARRISON
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.9632	GEN652906 1-G09_006IS_3 0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.9485	GEN652458 2-GARRISON
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.9485	GEN652459 3-GARRISON
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.9484	GEN652457 1-GARRISON
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34711	103.9463	COOPER - ST JOE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.9278	GEN659010 4-G07_027IS_2 0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.9172	GEN659366 3-WILTON 3 W0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.8979	GEN659194 1-NDPRAIRWND1W0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34713	103.8832	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34713	103.8822	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.8576	GEN587593 1-J460-GEN1 0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.8505	GEN672392 1-NBECGT1G 18.000
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.8279	GEN652907 1-G09_007IS_3 0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.817	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.8028	GEN659403 1-NDSUNFLWR W0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34713	103.7828	G15-005T 345.00 - SIBLEY 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.739	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.697	GEN659110 1-LELAND OLDS UNIT1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.6891	GEN681542 6-JP MADGETT
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.6616	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.6431	GEN563232 1-G15089_3 0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.584	GEN659411 1-CAMPBLCNTY W0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34511	103.5804	SUB 3454 - WAGENER 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34511	103.5804	SUB 3454 - WAGENER 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.4664	GEN659296 2-SDPRAIRWND1W0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.4617	GEN652559 1-OAHE
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34536	103.3434	103RD & ROKEBY - MOORE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34536	103.3434	103RD & ROKEBY - MOORE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34535	103.298	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.2406	GEN652556 2-OAHE
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.2213	GEN652557 5-OAHE
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.1966	GEN659453 1-GI1414GEN W0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.1961	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.1265	GEN652173 1-G09_001IS_2 0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	103.0752	GEN659141 1-K10215A
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34560	102.9731	COOPER - MOORE 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.964	GEN615010 1-STANTON4
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.8884	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.8827	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.8255	GEN659407 1-ANTELPHILLSW0.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.8156	GEN600004 2-PRAIRIE ISLAND G2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.8121	GEN600003 1-PRAIRIE ISLAND G1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.8074	GEN672321 1-SHAND GENERATOR 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.7927	GEN659118 1-LARAMIE RIVER UNIT1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33916	102.7918	COLUMWEST - GRAND ISLAND 230KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.7585	GEN672310 1-POPLAR RIVER GENERATOR 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.7585	GEN672311 2-POPLAR RIVER GENERATOR 2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.7484	GEN672306 6-BOUNDARY DAM GENERATOR 6
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.5996	GEN600006 1-AS KING
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.4617	GEN587033 1-G16-004-GEN10.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.3121	GEN657749 1-YOUNG 1 GENERATOR
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.2404	GEN659111 2-LELAND OLDS UNIT2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.1858	GEN600005 1-MONTICELLO
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36591	102.0869	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36591	102.076	Z810X2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.0005	GEN659103 1-ANTELOPE VALLEY UNIT1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	102.0005	GEN659107 2-ANTELOPE VALLEY UNIT2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	101.9456	GEN579459 1-G16-075-GEN10.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36591	101.9419	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	101.6656	GEN600000 1-SHERBURNECNTY G1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	101.1822	GEN600001 2-SHERBURNE CNTY G2
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	100.8846	GEN620315 1-BIG STONE GEN
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	100.8142	GEN600002 3-SHERBURNE CNTY G3
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	100.582	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	100.5557	GEN661015 1-COYOTE
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	100.3146	GEN587293 1-G16-044-GEN10.6900
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	100.1614	GEN657748 1-YOUNG 2 GENERATOR
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	100.0715	GEN659125 1-COVEY
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34721	100	BIG STONE 230/24.0KV TRANSFORMER CKT 1
2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36591	99.7	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34287	143.8323	BALTA - RAMSEY 230KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34248	143.4004	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34304	143.0671	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34304	143.0534	NAPA JCT7 115.00 - UTICA 115KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34304	142.9456	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34248	142.8274	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34283	142.3982	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34221	142.1979	GRIMES - LEHIGH 345KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34274	142.1243	NOBLES - SPLIT ROCK 345KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34286	142.1194	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34230	142.0705	BYRON - PLEASANT VALLEY 345KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34283	141.5494	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34282	141.4922	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34286	141.3819	PRAIRIE - RAMSEY 230KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34584	141.3608	FT THOMPSON - HURON 230KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34584	141.3608	FT THOMPSON - HURON 230KV CKT 2
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34252	141.2157	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34282	141.2054	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34280	141.1853	PRAIRIE - WINGER 230KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34277	141.1477	AUDUBON - HUBBARD 230KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.1148	ANSON - SPLIT ROCK 115KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34271	141.1027	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.0937	AINSWORTH WIND 34KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34298	141.0009	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.94	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.9296	ANSON - SPLIT ROCK 115KV CKT 2
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34305	140.9262	LAWRENCE - SIOUX FALLS 115KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.9219	ANSON 115/17.5KV TRANSFORMER CKT 4
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34145	140.9215	HOSKINS - RAUN 345KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34295	140.8961	LUND - MORANVILLE 230KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34295	140.8727	BURR - CANBY 115KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34316	140.865	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34205	140.8638	FIELD NORTH - LKFLDXL3 345KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34312	140.7857	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34252	140.769	P13:230-345:NPPD:SIDNEY 3:KV2A
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34312	140.7328	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34299	140.6564	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34406	140.6321	MINGO - SETAB 345KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34348	140.6126	FT THOMPSON - OAHE 230KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34348	140.6126	FT THOMPSON - OAHE 230KV CKT 2
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34350	140.5777	FT THOMPSON - OAHE 230KV CKT 3
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34350	140.5777	FT THOMPSON - OAHE 230KV CKT 4
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.5601	AINSWORTH WIND 34KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34279	140.5425	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34279	140.5425	P12:230:UMZW:# 158 #: MH IN ND.
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.4338	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34316	140.4124	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.0101	KEARNEY 115KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.9878	KEARNEY 115KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.7952	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34238	139.7539	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34201	139.7094	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.6723	1222-AINSWORTH WIND
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.6723	1303-KEARNEY
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.6723	2554-RCDC EAST 4230.00
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.6723	2558-RCDC EAST 4230.00
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.6723	2560-BRDLAND-LNX3345.00
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.6723	2561-BRDLAND-LNX3345.00
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.6723	BASE CASE
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34256	139.1186	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.1166	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34255	139.1158	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.0746	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34170	138.9713	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34170	138.9699	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34299	138.9279	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34299	138.9279	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34299	138.9279	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34339	138.869	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	138.7759	RCDC EAST 4230.00 230KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34084	138.6845	SUB 3454 - WAGENER 345KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34109	138.6468	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	138.5383	RCDC EAST 4230.00 230KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34250	138.2836	DRAYTON - LETELLIER 230KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34110	138.2565	103RD & ROKEBY - MOORE 345KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	138.2498	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	138.1827	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	138.1461	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	138.126	COYOTE 345/24.0KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.7777	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.7109	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.6258	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.5865	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.5851	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.5685	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.438	CENTER 230/22.0KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.4181	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.3967	LADISH 115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	137.3425	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	136.8012	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	136.798	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	136.3702	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	135.963	ALMA 161 161/24.0KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34510	135.898	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34510	135.898	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	135.8214	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	134.8526	STANTON 230/18.0KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	133.9952	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	130.594	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46980	120.1461	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.42293	112.9177	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34311	111.4779	KELLY - MEADOWGROVE4230.00 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33220	110.7477	GRAND ISLAND - SWEETWATER 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34851	109.9891	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34871	109.3676	STORLA - WESSINGTON 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34606	109.2803	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34524	108.7773	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34541	108.7453	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34774	108.6189	HANLON - STORLA 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34541	108.6094	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34541	108.6024	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34541	108.6024	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34862	108.0927	FT THOMPSON - LETCHER 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34862	108.0927	FT THOMPSON - LETCHER 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34635	108.0724	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34444	107.9119	RAUN - SUB 3451 FT CAL 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34444	107.9119	RAUN - SUB 3451 FT CAL 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34501	107.4421	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34501	107.3353	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34501	107.3349	GROTON - GROTON-LNX3 345.00 345KV CKT Z
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	107.1948	GEN635024 4-WALTER SCOTT UNIT 4
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34311	107.1784	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34484	107.1141	SPLIT ROCK - WHITE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34484	107.1141	SPLIT ROCK - WHITE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34615	107.0214	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34842	106.8876	FT RANDAL - FT THOMPSON 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34842	106.8876	FT RANDAL - FT THOMPSON 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	106.8791	GEN640009 1-COOPER NUCLEAR STATION
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	106.8578	GEN641089 2-ENERGY CENTER 2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34524	106.8563	G09_001IST 345.00 - GROTON 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34839	106.8552	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34839	106.8552	FT THOMPSON - LAKE PLATT 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	106.8353	LETCHER - SIOUX FALLS 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	106.7829	GEN635023 3-WALTER SCOTT UNIT 3
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34601	106.7789	CENTER - JAMESTOWN 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34636	106.6994	BISON 3 345.00 - BUFFALO 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34670	106.6843	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34676	106.6459	FT RANDAL - SIOUX CITY 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34839	106.633	FT RANDAL - LAKE PLATT 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34674	106.4914	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34681	106.4908	AS KING - EAU CLAIRE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34615	106.3416	ADAMS - MITCHLCO3 345.00 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	106.3208	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	106.3161	GEN563222 1-G15088_3 0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34448	106.2518	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34448	106.2518	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34448	106.2078	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34448	106.1716	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34661	106.1418	RASMUSN - UTICA JCT 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	106.0609	GEN344225 1-1CAL G1 25.000
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34753	106.0601	HANLON - SIOUX FALLS 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34875	106.0001	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34922	105.9971	MINGO - RED WILLOW 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34922	105.9971	MINGO - RED WILLOW 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34636	105.9854	ADAMS - PLEASANT VALLEY 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34661	105.9769	RASMUSN - SIOUX CITY 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34653	105.9736	GRIMES - LEHIGH 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36080	105.9634	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36077	105.9591	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34684	105.9301	ELLENDALE - OAKES 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34684	105.9301	ELLENDALE - OAKES 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34672	105.9088	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34686	105.8914	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34684	105.8909	FORMAN - OAKES 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34642	105.8538	PAHOJA - SIOUX FALLS 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34610	105.8412	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34638	105.815	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.7935	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.7291	GEN336153 1-WATERFORD UNIT#3
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34683	105.6848	LAKEFIELD 3 - NOBLES 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.6593	GEN587353 1-G16-050-GEN10.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34700	105.6317	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34634	105.6064	CROOKED CREEK - RIVERDALE 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34684	105.602	FORMAN - HANKINSON 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34638	105.5978	J290_SUB 230.00 - RUGBY 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34642	105.5697	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.5593	GEN335831 1-RIVERBEND UNIT#1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.543	GEN336821 1-GRAND GULF UNIT
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34699	105.5416	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.5384	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	105.531	CARPENTER - HURON 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34699	105.5299	CLEARWATER - ONEILL 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34871	105.527	FT THOMPSON - WESSINGTON 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34871	105.527	FT THOMPSON - WESSINGTON 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34640	105.5231	CHISAGO COUNTY - FORBES 500KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.5186	GEN337653 1-WHITE BLUFF UNIT #2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34700	105.5098	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.4996	GEN542962 2-IATAN UNIT #2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34316	105.4989	HOSKINS - SHELL CREEK 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34699	105.481	CLEARWATER - NELIGH 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34640	105.4783	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.4696	GEN642067 1-PLATTE
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.4494	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34728	105.4475	FT RANDAL - UTICA JCT 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	105.4447	HURON - WATERTOWN 230KV CKT 2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	105.4447	HURON - WATERTOWN 230KV CKT 2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34524	105.4366	RAUN - SIOUX CITY 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34651	105.4349	BYRON - NORTH ROCHESTER 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34719	105.4175	HANKINSON - WAHPETON 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34611	105.4152	COLUMEAST - SHELL CREEK 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34554	105.4107	NUNDRWD - WAYSIDE 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	105.3926	CARPENTER - WATERTOWN 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	105.3926	CARPENTER - WATERTOWN 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34635	105.3788	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34635	105.3788	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.3745	GEN645012 2-NEBRASKA CITY 2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.3234	GEN587363 1-G16-055-GEN10.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.3087	GEN645011 1-NEBRASKA CITY 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34739	105.2857	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34739	105.2857	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.2801	GEN587443 1-G16-064-GEN10.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34651	105.2596	BYRON - PLEASANT VALLEY 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.2187	GEN501801 1-DOLET HILLS UNIT1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.2095	GEN337652 1-WHITE BLUFF UNIT #1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34685	105.2033	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34543	105.1995	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34685	105.1977	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.185	GEN338143 1-INDEPENDENCE UNIT #1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.1837	GEN338146 1-INDEPENDENCE UNIT #2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34705	105.183	BLAIR - GRANITE FALLS 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34705	105.183	BLAIR - GRANITE FALLS 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34692	105.1608	CENTER - COYOTE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34827	105.1205	MINGO - SETAB 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34827	105.1205	MINGO - SETAB 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34646	105.1142	GAVINS POINT - HARTINGTON 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34491	105.1002	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.0731	GEN542957 1-IATAN UNIT #1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34911	105.066	STAPLETON - THEDFORD 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35031	105.0546	FT THOMPSON - HURON 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35031	105.0546	FT THOMPSON - HURON 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35031	105.0546	FT THOMPSON - HURON 230KV CKT 2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35031	105.0546	FT THOMPSON - HURON 230KV CKT 2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34693	105.053	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.0456	GEN501813 1-RODEMACHER UNIT 3
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34837	105.0416	AINSWORTH - STUART 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34720	105.0352	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.0329	GEN344897 4-1LAB G4 20.000
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.0315	GEN344894 1-1LAB G1 20.000
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.0313	GEN344896 3-1LAB G3 20.000
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34837	105.0085	ATKINSON - STUART 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	105.0067	GEN344895 2-1LAB G2 20.000
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34700	104.9965	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34598	104.9903	SIDNEY - STEGALL 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	104.98	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	104.9694	GEN345670 1-1RUSH G1 18.000
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	104.9692	GEN345671 2-1RUSH G2 18.000
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35250	104.9677	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34837	104.9675	ATKINSON - EMMET 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	104.9666	GEN335206 1-NELSON UNIT 6
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34669	104.9584	GARRISON - JAMES TOWN 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34627	104.9555	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34614	104.9519	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34703	104.9455	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34837	104.9448	EMMET - ONEILL 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34702	104.939	DENISON - SIOUX CITY 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	104.9282	GEN562547 1-G14_039_3 0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	104.9139	P13:115-230:NPPD:NUCOR-3
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34777	104.9035	AXTELL - PAULINE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	104.9015	GEN501812 1-RODEMACHER UNIT 2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34718	104.8953	MENNO JCT - TRIPP JCT 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34739	104.895	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34739	104.895	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34747	104.878	BROKEN BOW - LOUP CITY 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34713	104.8697	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34713	104.8697	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	104.866	P13:230-345:NPPD:NUCOR-1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34646	104.844	BELDEN - HARTINGTON 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	104.8396	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	104.8385	GEN336252 1-NINEMILE POINT UNIT#5
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	104.8335	GEN563212 1-G15087_3 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	104.8177	GEN336831 1-BAXTER WILSON SES
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34708	104.8164	NOBLES - SPLIT ROCK 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34717	104.7975	JEFFREY - NORTH PLATTE 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34744	104.7898	CALLAWAY - MAXWELL 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	104.7803	GEN641086 1-ENERGY CENTER
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34911	104.7164	MAXWELL - STAPLETON 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34614	104.4767	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34614	104.4767	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	104.2451	BASE CASE
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34662	103.901	KELLY - SHELL CREEK 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34662	103.8998	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34662	103.8998	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34583	103.8429	HOSKINS - RAUN 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34637	103.7911	MOORE - NW68TH & HOLDREGE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34637	103.7911	MOORE - NW68TH & HOLDREGE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34686	103.7741	AURORA - GRAND ISLAND 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34670	103.7337	G15088_T 345.00 - PAULINE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34606	103.7252	CENTRAL CITY - SILVER CREEK 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34692	103.721	FAIRBURY - HARBINE 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34692	103.6863	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34692	103.6784	FAIRBURY - G15087_T 115.00 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.6586	GEN672367 1-MERIDIAN GENERATOR 1 GT1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.6586	GEN672368 2-MERIDIAN GENERATOR 2 GT2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.658	GEN672349 3-CORY COGEN GENERATOR 3 ST
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.6574	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.6573	LADISH 115/13.2KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34692	103.6559	BONDURANT - MONTEZUMA 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34630	103.6533	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34531	103.6512	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34531	103.6512	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.6501	GEN600050 1-FEP
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.6499	GEN672339 16-QE 16G 13.800
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.6499	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.6485	GEN659273 2-GROTON SYNC COND
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.6485	GEN659294 1-WILTONCOL9
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.6396	GEN652558 6-OAHE
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34686	103.6246	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.6167	GEN587583 1-J432-GEN1 0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34642	103.609	P12:115:NPPD:1155:YORK 7:SEWARD 7:BTB
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34642	103.6026	TAMORA - YORK 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34683	103.5849	CRETE - FRIEND 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34688	103.5807	HILLS - MONTEZUMA 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.5789	GEN600065 7-HIGH BRIDGE
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.5789	GEN600066 8-HIGH BRIDGE
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.5724	GEN659192 6-LYNN
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.5714	GEN659162 4-RED WLCK
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.5714	GEN659163 5-BLACK WDCK
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34642	103.5656	ATCHSNT3 345.00 - COOPER 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34642	103.5656	ATCHSNT3 345.00 - COOPER 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.5607	GEN672393 2-NBECST2G 13.800
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.5468	GEN660016 1-B_H WIND 0.7000
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.534	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.5228	GEN600014 4-BLACK DOG GEN 4
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.5211	GEN600067 9-HIGH BRIDGE
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.5187	GEN600011 5-BLACK DOG GEN 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.517	GEN600071 10-RIVER SIDE
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.5169	GEN600070 9-RIVER SIDE
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.5162	GEN657985 1-ASH1GEN9 0.5750
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34696	103.509	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.5067	GEN600007 7-RIVERSIDE GEN 7
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.4914	GEN681522 3-GENOA 3
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34606	103.4795	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.4718	GEN600017 C-LS POWER CT
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34713	103.4657	COOPER - FAIRPORT 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34964	103.4621	OAHE - SULLEY BUTTE 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.453	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.4496	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.4355	GEN659291 1-FT MP COLLECTOR
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.4324	GEN562872 1-G15046_3 0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.4307	GEN662101 1-WESSINGTON190.5750

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.4269	GEN615052 1-CAMBRIDGE GENERATING STATION
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34954	103.4215	GLENHAM - L3 HAWDON 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34696	103.415	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34964	103.3952	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34686	103.39	FALLOW 3 345.00 - GRIMES 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34964	103.3863	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34964	103.386	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34642	103.3782	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.3752	GEN 11104 1-J262_GEN 0.6000
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.3752	GEN 11108 1-J263_GEN 0.6000
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34626	103.3691	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34626	103.3691	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34964	103.364	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34964	103.364	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.3433	GEN615015 1-GRE-SPRITWDG13.200
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34964	103.338	GLENHAM - WHITLOK 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.3232	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.3208	GEN910006 1-G12_012IS_3 0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34709	103.3188	STMDSJFAFACO
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34709	103.3187	COPSTJCPFRSJ
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34670	103.287	G15088_T 345.00 - MOORE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.2515	GEN615021 1-GRE-ER 14G 16.000
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34639	103.2262	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34639	103.2262	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.2253	GEN587623 1-J493-GEN1 0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.2143	GEN587053 1-G16-007-GEN10.6500
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.1574	GEN 10648 1-G830_GEN 0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.1555	GEN672303 3-BOUNDARY DAM GENERATOR 3
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.1555	GEN672304 4-BOUNDARY DAM GENERATOR 4
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.1555	GEN672305 5-BOUNDARY DAM GENERATOR 5
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33916	103.1336	COLUMWEST - KELLY 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.1099	GEN652460 4-GARRISON
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.1099	GEN652461 5-GARRISON
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.0998	GEN652906 1-G09_006IS_3 0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34711	103.0961	COOPER - ST JOE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.0745	GEN652458 2-GARRISON
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.0745	GEN652459 3-GARRISON
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.0744	GEN652457 1-GARRISON
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.054	GEN659010 4-G07_027IS_2 0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.0434	GEN659366 3-WILTON 3 W0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34713	103.0291	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34713	103.0277	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	103.0242	GEN659194 1-NDPRAIRWND1W0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.9991	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.9927	GEN587593 1-J460-GEN1 0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.984	GEN672392 1-NBECGT1G 18.000
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.9655	GEN652907 1-G09_007IS_3 0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34713	102.9317	G15-005T 345.00 - SIBLEY 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.9297	GEN659403 1-NDSUNFLWR W0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.8731	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.8547	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.8277	GEN659110 1-LELAND OLDS UNIT1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.8233	GEN681542 6-JP MADGETT
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.7778	GEN563232 1-G15089_3 0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.7163	GEN659411 1-CAMPBLCNTY W0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34511	102.7067	SUB 3454 - WAGENER 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34511	102.7067	SUB 3454 - WAGENER 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.6023	GEN659296 2-SDPRAIRWND1W0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.5967	GEN652559 1-OAHE
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34536	102.4614	103RD & ROKEBY - MOORE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34536	102.4614	103RD & ROKEBY - MOORE 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34535	102.4052	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.3765	GEN652556 2-OAHE
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.3575	GEN652557 5-OAHE
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.3333	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.3308	GEN659453 1-GI1414GEN W0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.2605	GEN652173 1-G09_001IS_2 0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.2097	GEN659141 1-K10215A
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.1031	GEN615010 1-STANTON4
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34560	102.0954	COOPER - MOORE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.0374	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	102.0317	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	101.9884	GEN659118 1-LARAMIE RIVER UNIT1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	101.9612	GEN659407 1-ANTELPHILLSW0.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	101.9566	GEN600004 2-PRAIRIE ISLAND G2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	101.9531	GEN600003 1-PRAIRIE ISLAND G1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	101.9503	GEN672321 1-SHAND GENERATOR 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33916	101.9161	COLUMWEST - GRAND ISLAND 230KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	101.9004	GEN672310 1-POPLAR RIVER GENERATOR 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	101.9004	GEN672311 2-POPLAR RIVER GENERATOR 2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	101.8844	GEN672306 6-BOUNDARY DAM GENERATOR 6
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	101.7431	GEN600006 1-AS KING
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	101.5995	GEN587033 1-G16-004-GEN10.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	101.4587	GEN657749 1-YOUNG 1 GENERATOR
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	101.3799	GEN659111 2-LELAND OLDS UNIT2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	101.3344	GEN600005 1-MONTICELLO
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36591	101.2392	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36591	101.2283	2810X2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	101.1422	GEN659103 1-ANTELOPE VALLEY UNIT1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	101.1422	GEN659107 2-ANTELOPE VALLEY UNIT2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	101.0889	GEN579459 1-G16-075-GEN10.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36591	101.0819	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	100.8185	GEN600000 1-SHERBURNECNTY G1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	100.339	GEN600001 2-SHERBURNE CNTY G2
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	100.1	GEN620315 1-BIG STONE GEN
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	100	GEN600002 3-SHERBURNE CNTY G3
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	99.8	GEN661015 1-COYOTE
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	99.7	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	99.5	GEN587293 1-G16-044-GEN10.6900
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	99.4	GEN657748 1-YOUNG 2 GENERATOR
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	99.2	BIG STONE 230/24.0KV TRANSFORMER CKT 1
2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34721	99.2	GEN659125 1-COVEY
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51116	136.6364	BALTA - RAMSEY 230KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51065	136.0496	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51138	135.7118	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51138	135.6961	NAPA JCT7 115.00 - UTICA 115KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51138	135.5686	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51065	135.3379	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51110	134.92	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51114	134.5846	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51098	134.5338	NOBLES - SPLIT ROCK 345KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51038	134.4885	BYRON - PLEASANT VALLEY 345KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51109	133.7646	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51114	133.6015	PRAIRIE - RAMSEY 230KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51117	133.4369	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51107	133.3668	PRAIRIE - WINGER 230KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51102	133.3388	AUDUBON - HUBBARD 230KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	133.282	ANSON - SPLIT ROCK 115KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51131	133.1916	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51081	133.1806	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51139	133.0633	LAWRENCE - SIOUX FALLS 115KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	133.0505	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	133.0412	ANSON - SPLIT ROCK 115KV CKT 2
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	133.0315	ANSON 115/17.5KV TRANSFORMER CKT 4
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51126	133.0042	LUND - MORANVILLE 230KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51127	132.9696	BURR - CANBY 115KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51089	132.9391	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50952	132.9234	HOSKINS - RAUN 345KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	132.8071	AINSWORTH WIND 34KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51046	132.6636	P13:230-345:NPPD:SIDNEY 3:KV2A
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51234	132.5029	FT THOMPSON - OAHE 230KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51234	132.5029	FT THOMPSON - OAHE 230KV CKT 2
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	132.4695	FT THOMPSON - OAHE 230KV CKT 3
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	132.4695	FT THOMPSON - OAHE 230KV CKT 4
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	132.1537	AINSWORTH WIND 34KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51122	131.7534	GERALD GENTLEMAN STATION (GGS T1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.7439	KEARNEY 115KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51108	131.7223	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKEI
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.6948	KEARNEY 115KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51082	131.6566	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51043	131.5097	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51127	131.5013	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51127	131.5013	P12:115:UMZB:# 119 #: IN NE.
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.4491	1222-AINSWORTH WIND
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.4491	1303-KEARNEY
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.4491	2560-BRDLAND-LNX3345.00
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.4491	2561-BRDLAND-LNX3345.00
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.4491	BASE CASE
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51106	131.1938	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51106	131.1927	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	131.0033	P12:115:TSGT:BLKWDCK7-ELSIETP7
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51114	130.9475	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51028	130.8749	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	130.811	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	130.7646	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51114	130.6854	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51108	130.54	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50907	130.3783	SUB 3454 - WAGENER 345KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50976	130.1348	MINGO - SETAB 345KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51108	130.1203	P12:115:UMZW:# 172 #: WI IN SD.
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50939	129.9532	103RD & ROKEBY - MOORE 345KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	129.5732	COYOTE 345/24.0KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	129.5067	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	129.4225	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.9337	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.846	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.7333	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.7305	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.7292	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.6577	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.6008	CENTER 230/22.0KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.5362	LADISH 115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.3709	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	128.2794	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	127.7709	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	127.7668	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	127.2107	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	125.2462	STANTON 230/18.0KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	124.7978	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	118.7451	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	117.9705	BIG STONE 230/24.0KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51116	136.3891	BALTA - RAMSEY 230KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51065	135.8459	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51138	135.5021	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51138	135.4869	NAPA JCT7 115.00 - UTICA 115KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51138	135.3607	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51065	135.149	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51110	134.7308	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51114	134.3864	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51098	134.3504	NOBLES - SPLIT ROCK 345KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51038	134.3066	BYRON - PLEASANT VALLEY 345KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51109	133.5771	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51114	133.4162	PRAIRIE - RAMSEY 230KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51117	133.2672	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51107	133.1852	PRAIRIE - WINGER 230KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51102	133.158	AUDUBON - HUBBARD 230KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	133.0882	ANSON - SPLIT ROCK 115KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51081	133.0199	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51131	133.0055	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51139	132.8874	LAWRENCE - SIOUX FALLS 115KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	132.8595	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	132.8479	ANSON - SPLIT ROCK 115KV CKT 2
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	132.8384	ANSON 115/17.5KV TRANSFORMER CKT 4
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51126	132.8245	LUND - MORANVILLE 230KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51127	132.7875	BURR - CANBY 115KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51089	132.7732	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50952	132.7597	HOSKINS - RAUN 345KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	132.6416	AINSWORTH WIND 34KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51046	132.5087	P13:230-345:NPPD:SIDNEY 3:KV2A
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51234	132.2853	FT THOMPSON - OAHE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51234	132.2853	FT THOMPSON - OAHE 230KV CKT 2
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	132.2552	FT THOMPSON - OAHE 230KV CKT 3
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	132.2552	FT THOMPSON - OAHE 230KV CKT 4
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.9996	AINSWORTH WIND 34KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51122	131.599	GERALD GENTLEMAN STATION (GGS T1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.588	KEARNEY 115KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51108	131.5575	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKE
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.5399	KEARNEY 115KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51082	131.5052	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51043	131.3605	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51127	131.3492	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51127	131.3492	P12:115:UMZB:# 119 #: IN NE.
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.2941	1222-AINSWORTH WIND
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.2941	1303-KEARNEY
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.2941	2560-BRDLAND-LNX3345.00
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.2941	2561-BRDLAND-LNX3345.00
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	131.2941	BASE CASE
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51106	131.0406	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51106	131.0396	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	130.8521	P12:115:TSGT:BLKWDCK7-ELSIETP7
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51114	130.797	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51028	130.7242	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	130.6536	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	130.6078	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51114	130.5347	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51108	130.3905	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50907	130.2306	SUB 3454 - WAGENER 345KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50976	129.9878	MINGO - SETAB 345KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51108	129.9742	P12:115:UMZW:# 172 #: WI IN SD.
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50939	129.8077	103RD & ROKEBY - MOORE 345KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	129.5055	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	129.4506	COYOTE 345/24.0KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	129.4213	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.8678	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.7812	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.6769	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.6394	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.6374	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.6016	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.4948	CENTER 230/22.0KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.4219	LADISH 115/13.2KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.351	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	128.2609	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	127.6689	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	127.6648	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	127.1162	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	125.1806	STANTON 230/18.0KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	124.7163	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	118.6799	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	117.9092	BIG STONE 230/24.0KV TRANSFORMER CKT 1
2	16WP	G16_075	-	Non-Converged Contingency	0.0	0.0	1.03769	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
2	16WP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.51885	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
2	16WP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.51885	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
2	16WP	G16_075	-	Non-Converged Contingency	0.0	0.0	0.27036	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
2	17SP	G16_075	-	Non-Converged Contingency	785.0	785.0	0.03069	-	MINGO - RED WILLOW 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46426	168.2827	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.41866	156.7463	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.41865	150.523	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34042	150.332	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34045	147.1274	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34565	145.8696	STORLA - WESSINGTON 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34223	145.7216	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34479	145.1533	HANLON - STORLA 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34249	144.3126	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34554	144.0587	FT THOMPSON - LETCHER 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34042	143.8795	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34249	143.6518	NUNDRWD - WAYSIDE 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34365	143.6299	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34304	143.6028	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34304	143.4411	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34304	143.3243	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34183	143.1308	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	143.0927	GEN640009 1-COOPER NUCLEAR STATION
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34274	142.9814	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	142.9147	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	142.91	GEN336153 1-WATERFORD UNIT#3
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	142.9068	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34289	142.8907	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34482	142.8821	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34205	142.8239	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34569	142.7332	STORLA - WESSINGTON 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	142.6664	GEN635024 4-WALTER SCOTT UNIT 4
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34253	142.6512	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	142.6452	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	142.6271	GEN335831 1-RIVERBEND UNIT#1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34516	142.5517	FT RANDAL - FT THOMPSON 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34532	142.5029	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34532	142.5029	MINGO - RED WILLOW 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34205	142.5015	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34323	142.4641	FT RANDAL - UTICA JCT 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34515	142.2873	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34436	142.2456	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34436	142.2456	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33929	142.2425	HOSKINS - SHELL CREEK 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34154	142.1939	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34154	142.1939	RAUN - SIOUX CITY 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34387	142.1769	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34252	142.1375	PAHOJA - SIOUX FALLS 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34280	142.1348	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34286	142.1287	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34286	142.1287	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34274	142.1089	RASMUSN - SIOUX CITY 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	142.0514	GEN635023 3-WALTER SCOTT UNIT 3
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34301	142.0449	FARGO - JAMES TOWN 230KV CKT 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34280	142.0378	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34156	142.0025	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34275	141.9975	LAKEFIELD 3 - NOBLES 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	141.9943	GEN336821 1-GRAND GULF UNIT
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.9927	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34281	141.9922	GARRISON - JAMES TOWN 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34483	141.9491	HANLON - STORLA 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34515	141.9389	FT RANDAL - LAKE PLATT 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34309	141.9125	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.8823	GEN337653 1-WHITE BLUFF UNIT #2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.8735	GEN337652 1-WHITE BLUFF UNIT #1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.8483	GEN338146 1-INDEPENDENCE UNIT #2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34304	141.8456	CLEARWATER - ONEILL 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.8429	GEN338143 1-INDEPENDENCE UNIT #1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.8327	GEN563222 1-G15088_3 0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34340	141.8238	OAHE - PHILIP TAP 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.8185	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	141.8144	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34304	141.7808	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34261	141.764	BYRON - NORTH ROCHESTER 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34226	141.7414	SIDNEY - STEGALL 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34256	141.7198	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34254	141.7161	GRIMES - LEHIGH 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34480	141.6869	LETCHER - SIOUX FALLS 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34286	141.6503	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34331	141.6326	GAVINS POINT - YANKON JCT 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34331	141.6326	GAVINS POINT - YANKON JCT 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.6301	GEN501801 1-DOLET HILLS UNIT1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34304	141.6299	CLEARWATER - NELIGH 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34238	141.6184	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34286	141.5641	FT RANDAL - SPENCER 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34309	141.5469	AUDUBON - SHEYNNE 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34252	141.4822	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34336	141.4584	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34336	141.4549	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34336	141.4549	NAPA JCT7 115.00 - UTICA 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34336	141.4271	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34336	141.4271	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34616	141.4128	FT THOMPSON - HURON 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34616	141.4128	FT THOMPSON - HURON 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34616	141.4128	FT THOMPSON - HURON 230KV CKT 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34616	141.4128	FT THOMPSON - HURON 230KV CKT 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34156	141.4045	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.3842	GEN645012 2-NEBRASKA CITY 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34156	141.37	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.3694	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.369	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.3665	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.3603	GEN336252 1-NINEMILE POINT UNIT#5
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34407	141.3404	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.3201	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34318	141.2881	MENNO JCT - TRIPP JCT 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.2879	GEN501813 1-RODEMACHER UNIT 3
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34558	141.2642	FT THOMPSON - LETCHER 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.35754	141.2541	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34203	141.2531	HIGHLND 3 345.00 - RAUN 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.35750	141.2478	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.2478	GEN344897 4-1LAB G4 20.000
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.2435	GEN344894 1-1LAB G1 20.000
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.243	GEN344896 3-1LAB G3 20.000
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.228	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34314	141.2166	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	141.2132	GEN344225 1-1CAL G1 25.000
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34259	141.2131	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34318	141.1992	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.1664	GEN344895 2-1LAB G2 20.000
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.1633	GEN336831 1-BAXTER WILSON SES
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34262	141.1631	BYRON - PLEASANT VALLEY 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.1445	GEN336251 1-NINEMILE POINT UNIT#4
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34370	141.14	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34244	141.1303	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34244	141.1303	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.1243	GEN345670 1-1RUSH G1 18.000
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34220	141.1238	COLUMEAST - SHELL CREEK 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.1237	GEN345671 2-1RUSH G2 18.000
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.1157	GEN587353 1-G16-050-GEN10.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34315	141.1092	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.1056	GEN635213 3-NEAL UNIT 3
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.0677	GEN641089 2-ENERGY CENTER 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.0608	GEN337041 1-GERALD ANDRUS
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34613	141.0503	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.0477	GEN335206 1-NELSON UNIT 6
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34319	141.0375	BALTA - RAMSEY 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34307	141.0328	NOBLES - SPLIT ROCK 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34302	141.0322	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34302	141.0322	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34253	141.0216	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34253	141.0216	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	141.0126	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34306	141.0125	BISMARK - JAMES TOWN 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34313	140.9963	BALTA - MCHENRY 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34319	140.9392	ELM CREEK - MONTICELLO 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34514	140.9165	STAPLETON - THEDFORD 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.9117	GEN635214 4-NEAL UNIT 4
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34259	140.9087	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34306	140.8976	JAMES TOWN - WEBER 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.8569	GEN501812 1-RODEMACHER UNIT 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34302	140.8454	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34318	140.8442	MENNO JCT - UTICA 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34423	140.8421	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34306	140.8357	BISMARK - WEBER 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34318	140.8329	PRAIRIE - RAMSEY 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.8186	GEN334440 1-SABINE UNIT 4
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34284	140.816	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34352	140.7966	CALLAWAY - MAXWELL 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34664	140.7721	MINGO - RED WILLOW 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34315	140.7438	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34315	140.7438	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	140.7368	GEN336153 1-WATERFORD UNIT#3
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34045	140.7142	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34309	140.7017	AUDUBON - HUBBARD 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34284	140.7004	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34315	140.6998	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.6947	GEN336191 1-LITTLE GYPSY UNIT#3
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34444	140.6875	AINSWORTH - STUART 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	140.6806	GEN640009 1-COOPER NUCLEAR STATION
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.68	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.68	P12:115:UMZB:# 119 #: IN NE.
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.6727	GEN335614 1-WILLOW GLENN UNIT#4
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.663	GEN336464 1-MICHOUD UNIT #3
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.661	GEN334441 1-SABINE UNIT 5
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.6563	GEN338388 1-1PLUM PT U1 23.000
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.6435	GEN335204 1-NELSON UNIT 4
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34284	140.6426	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34303	140.6414	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	140.6404	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34314	140.6182	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.6122	GEN336801 1-BAXTER WILSON UNIT #1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34850	140.602	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34298	140.5854	EAGLE - PHILIP 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34347	140.5814	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34347	140.5814	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34347	140.5725	P12:230:UMZW:# 166 #: PL IN SD. TAP
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34347	140.5725	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34274	140.5116	GAVINS POINT - HARTINGTON 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34394	140.4962	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34296	140.477	G16-034-TAP 345.00 - KEYSTONE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.4443	GEN336222 1-LITTLE GYPSY UNIT#2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.4426	GEN334433 1-SABINE UNIT 3
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34436	140.4361	MINGO - SETAB 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34436	140.4361	MINGO - SETAB 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34298	140.4346	EAGLE - MARTIN 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34344	140.4223	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34344	140.4223	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.4211	GEN303007 1-1BC2 U2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34270	140.4158	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34292	140.4153	ARNOLD - HAZLETON 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.4133	GEN303006 1-1BC2 U1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34344	140.4109	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34300	140.4067	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34300	140.4067	HURON WEST PARK - MITCHELL NW 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.4065	GEN587363 1-G16-055-GEN10.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34375	140.3999	PAHOJA - SIOUX FALLS 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34444	140.3977	ATKINSON - STUART 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34471	140.3715	HANLON - SIOUX FALLS 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34325	140.3686	CANBY - GRANITE FALLS 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34325	140.3686	CANBY - GRANITE FALLS 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34337	140.3684	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34337	140.3684	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34318	140.353	MT VERN - STORLA 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.3495	GEN587443 1-G16-064-GEN10.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34331	140.3391	FT RANDAL - WHITE SWAN 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	140.3267	GEN335831 1-RIVERBEND UNIT#1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34297	140.3246	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34322	140.3133	MARTIN - SHANNON 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34331	140.3014	TYNDALL - WHITE SWAN 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34307	140.2975	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.2921	GEN336152 1-WATERFORD UNIT#2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.2915	GEN336151 1-WATERFORD UNIT#1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34314	140.2872	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.2773	GEN336170 1-GULF OXY U4
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.2766	GEN303008 1-1BC2 U3
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34570	140.267	AINSWORTH - AINSWORTH 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34313	140.264	CENTER - SQUARE BUTTE 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34309	140.2517	PALXFRASBTHI
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34308	140.2465	WATERTN-LNX3345.00 - WHITE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34317	140.2352	CHADRON - WAYSIDE 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34317	140.2288	P13:115-230:NPPD:WAYSIDE4:T1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34317	140.2256	JAMES TOWN - PICKERT 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34439	140.2206	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34317	140.2176	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34279	140.2148	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34309	140.2069	7PALM TAP 345.00 - SUB T 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.2055	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34326	140.2025	JEFFREY - NORTH PLATTE 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34313	140.1945	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34314	140.1918	CHADRON - DUNLAP 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34326	140.1814	GRANT - MITCHELL 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34326	140.1814	GRANT - MITCHELL 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.1785	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34327	140.1778	MORANVILLE - ROSEAU 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34327	140.1719	RICHER - ROSEAU 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34320	140.1677	ELM CREEK - PARKERS LAKE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34394	140.1651	RASMUSN - SIOUX CITY 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34335	140.1564	AXTELL - SWEETWATER 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34327	140.156	BURR - CANBY 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.1554	GEN501811 1-RODEMACHER UNIT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34185	140.1543	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34309	140.154	DENISON - SIOUX CITY 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34318	140.149	CAYLER5 161.00 - WISDOM5 161.00 161KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34318	140.149	CAYLER5 161.00 - WISDOM5 161.00 161KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	140.1428	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.139	GEN636641 1-LOUISA UNIT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34514	140.1354	MAXWELL - STAPLETON 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34318	140.1334	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34325	140.1234	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34274	140.1204	BELDEN - HARTINGTON 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34315	140.1077	MN VALLEY TAP - PANTHER 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34315	140.0923	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34315	140.0923	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34238	140.0917	FIELD NORTH - LKFLDXL3 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34347	140.0786	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34347	140.0786	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34238	140.059	FIELD SOUTH - WILMARTH 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34444	140.0502	ATKINSON - EMMET 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34314	140.0484	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34283	140.0376	HIGHLND 3 345.00 - LAKEFIELD 3 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.0322	GEN337766 1-TRACTEBEL UNIT S1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.0305	GEN334071 1-LEWIS CREEK 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	140.0243	GEN334070 1-LEWIS CREEK 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34668	139.9679	MINGO - RED WILLOW 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34052	139.8847	HOSKINS - SHELL CREEK 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34270	139.8652	KELLY - SHELL CREEK 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34375	139.8627	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34352	139.8608	BROKEN BOW - CALLAWAY 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34270	139.8528	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34270	139.8528	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34308	139.8524	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	139.8334	GEN635024 4-WALTER SCOTT UNIT 4
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.825	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34308	139.7784	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.7581	GEN563222 1-G15088_3 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34391	139.7061	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.6601	GEN337653 1-WHITE BLUFF UNIT #2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.6244	GEN337652 1-WHITE BLUFF UNIT #1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.6234	GEN338146 1-INDEPENDENCE UNIT #2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.6182	GEN338143 1-INDEPENDENCE UNIT #1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34519	139.6022	FT RANDAL - FT THOMPSON 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34617	139.549	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34458	139.5396	FT RANDAL - UTICA JCT 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34454	139.5304	MISSION - ST FRANCIS 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34256	139.4894	G09_001IST 345.00 - GROTON 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34208	139.4891	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34565	139.4732	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.4698	GEN645012 2-NEBRASKA CITY 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	139.4559	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.4528	GEN501801 1-DOLET HILLS UNIT1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34234	139.4111	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34234	139.4111	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.3708	GEN336252 1-NINEMILE POINT UNIT#5
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34300	139.3695	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34518	139.3669	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34454	139.3627	HARMONY - ST FRANCIS 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.3529	GEN645011 1-NEBRASKA CITY 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.3443	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34413	139.34	FT RANDAL - SPENCER 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34253	139.3119	NUNDRWD - WAYSIDE 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34430	139.2993	CLEARWATER - ONEILL 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.2879	GEN336251 1-NINEMILE POINT UNIT#4
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.2839	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.2836	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.2807	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.2753	GEN336831 1-BAXTER WILSON SES
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34413	139.2649	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34277	139.2542	G15088_T 345.00 - PAULINE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34144	139.25	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34345	139.2445	COLUMEAST - SHELL CREEK 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.2338	GEN337041 1-GERALD ANDRUS
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	139.2321	GEN635023 3-WALTER SCOTT UNIT 3
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34439	139.2165	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.2056	GEN635214 4-NEAL UNIT 4
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.2031	GEN501813 1-RODEMACHER UNIT 3
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34643	139.2029	STAPLETON - THEDFORD 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	139.1944	GEN336821 1-GRAND GULF UNIT
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33528	139.1899	COLUMWEST - KELLY 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34965	139.1724	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.1707	GEN344897 4-1LAB G4 20.000
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.1691	GEN344894 1-1LAB G1 20.000
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.169	GEN344895 2-1LAB G2 20.000
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.1689	GEN344896 3-1LAB G3 20.000
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.1657	GEN641089 2-ENERGY CENTER 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	139.1637	2560-BRDLAND-LNX3345.00
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	139.1637	2561-BRDLAND-LNX3345.00
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	139.1637	BASE CASE
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34454	139.1574	HARMONY - VALENTINE 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34208	139.1466	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34487	139.1255	CALLAWAY - MAXWELL 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34370	139.1162	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.1054	GEN345671 2-1RUSH G2 18.000
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.1007	GEN345670 1-1RUSH G1 18.000
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34493	139.0923	GAVINS POINT - YANKON JCT 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34439	139.0809	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34343	139.0676	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34449	139.0616	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34343	139.0515	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34343	139.0489	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34495	139.0401	CARPENTER - HURON 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.0374	GEN335206 1-NELSON UNIT 6
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.0278	GEN587353 1-G16-050-GEN10.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34518	139.0258	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34495	139.0174	HURON - WATERTOWN 230KV CKT 2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	139.0118	GEN635213 3-NEAL UNIT 3
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34430	138.9978	CLEARWATER - NELIGH 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.9897	GEN334440 1-SABINE UNIT 4
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.9855	GEN542962 2-IATAN UNIT #2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34300	138.9805	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34162	138.9797	GRAND ISLAND - RIVERDALE 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34354	138.97	SIDNEY - STEGALL 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34495	138.9519	CARPENTER - WATERTOWN 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34384	138.9508	GAVINS POINT - HARTINGTON 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34300	138.9456	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.9076	GEN501812 1-RODEMACHER UNIT 2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.9046	GEN336191 1-LITTLE GYPSY UNIT#3
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34454	138.9044	AINSWORTH - VALENTINE 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.8788	GEN338388 1-1PLUM PT U1 23.000
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34426	138.8763	FARGO - JAMES TOWN 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34473	138.863	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34448	138.8618	MENNO JCT - TRIPP JCT 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34277	138.8596	G15088_T 345.00 - MOORE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34391	138.8457	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34427	138.8402	FARGO - JAMES TOWN 230KV CKT 2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34576	138.8395	BASSETT 7115.00 - STUART 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34391	138.8347	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34484	138.8287	LETCHER - SIOUX FALLS 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.8142	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.7942	GEN335614 1-WILLOW GLENN UNIT#4
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.7865	GEN336801 1-BAXTER WILSON UNIT #1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.7845	GEN335204 1-NELSON UNIT 4
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.7838	GEN336464 1-MICHOUD UNIT #3
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34407	138.7838	GARRISON - JAMES TOWN 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34565	138.7772	MINGO - SETAB 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.7696	GEN334441 1-SABINE UNIT 5
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34576	138.7458	AINSWORTH - BASSETT 7115.00 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34463	138.7362	OAHE - PHILIP TAP 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34441	138.7267	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34387	138.719	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34294	138.7181	AURORA - GRAND ISLAND 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34475	138.7158	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34291	138.7103	CRETE - FRIEND 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34475	138.7084	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.7045	GEN542957 1-IATAN UNIT #1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34262	138.6932	LOUP CITY - ST LIBORY 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34448	138.6898	MENNO JCT - UTICA 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.686	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.6788	GEN587363 1-G16-055-GEN10.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34299	138.6611	FAIRBURY - G15087_T 115.00 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34576	138.6483	ATKINSON - STUART 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.6477	GEN636641 1-LOUISA UNIT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34288	138.6422	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34288	138.6422	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.6397	GEN334433 1-SABINE UNIT 3
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34287	138.6393	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34287	138.6393	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34441	138.6377	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.629	GEN587443 1-G16-064-GEN10.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.5964	GEN336222 1-LITTLE GYPSY UNIT#2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34382	138.5711	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34441	138.5596	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34384	138.5381	BELDEN - HARTINGTON 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34432	138.5362	BISMARK - JAMES TOWN 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34643	138.5281	MAXWELL - STAPLETON 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.515	GEN336151 1-WATERFORD UNIT#1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.515	GEN336152 1-WATERFORD UNIT#2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34467	138.5135	WINNER - WITTEN 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34432	138.5039	BISMARK - WEBER 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34432	138.5034	JAMES TOWN - WEBER 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34427	138.4973	FARGO - SHEYNNE 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34427	138.4796	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34202	138.4765	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34202	138.4765	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34202	138.4751	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34202	138.4751	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34410	138.4724	FT RANDAL - SIOUX CITY 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34452	138.4702	JEFFREY - NORTH PLATTE 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.4684	GEN303007 1-1BC2 U2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.4617	GEN303006 1-1BC2 U1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34117	138.447	SUB 3454 - WAGENER 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34117	138.447	SUB 3454 - WAGENER 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34668	138.4436	AINSWORTH - AINSWORTH 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34435	138.4212	DENISON - SIOUX CITY 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.4026	GEN336170 1-GULF OXY U4
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34473	138.399	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.3968	GEN303008 1-1BC2 U3
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34387	138.3917	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34378	138.3905	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34215	138.364	CENTRAL CITY - GRAND ISLAND 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34576	138.3576	ATKINSON - EMMET 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34395	138.3567	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34467	138.3514	GREGORY - WINNER 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34487	138.3456	BROKEN BOW - CALLAWAY 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.3435	GEN659353 1-DEERCREK CTG18.000
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34443	138.3297	JAMES TOWN - PICKERT 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34395	138.3142	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.3076	GEN660001 2-ABERDEEN SIEBRECHT
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.3023	GEN659354 1-DEERCREK STG18.000
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.3021	GEN501811 1-RODEMACHER UNIT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.2927	GEN600050 1-FEP
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	138.2852	GEN344225 1-1CAL G1 25.000
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.2825	EMERY 161/18.0KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34301	138.2819	BONDURANT - MONTEZUMA 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.2637	GEN652345 W-G07_023IS_2 0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	138.2624	GEN562547 1-G14_039_3 0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34443	138.2507	MARTIN - SHANNON 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.2241	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.2141	GEN587583 1-J432-GEN1 0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34322	138.1977	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33528	138.194	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34459	138.1751	AXTELL - SWEETWATER 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.1727	GEN672339 16-QE 16G 13.800
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.1727	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.1699	GEN600063 1-COLVILLE GEN 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.1699	GEN600064 2-COLVILLE GEN 2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	138.1653	GEN640009 1-COOPER NUCLEAR STATION
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.1644	GEN600043 7-BLUE LAKE5
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.1644	GEN600044 8-BLUE LAKE6
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34141	138.1417	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34141	138.1417	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.1276	GEN600014 4-BLACK DOG GEN 4
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.127	GEN652410 3-FT PECK
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.1172	GEN600011 5-BLACK DOG GEN 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.1132	GEN600065 7-HIGH BRIDGE
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.1132	GEN600066 8-HIGH BRIDGE
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.1032	GEN600071 10-RIVER SIDE
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.1028	GEN600070 9-RIVER SIDE
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34304	138.093	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.0855	GEN600007 7-RIVERSIDE GEN 7
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34321	138.0766	COOPER - FAIRPORT 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34321	138.0766	COOPER - FAIRPORT 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.0417	GEN600017 C-LS POWER CT
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34143	138.0373	103RD & ROKEBY - MOORE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34143	138.0373	103RD & ROKEBY - MOORE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.0311	GEN652414 4-FT PECK
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	138.0311	GEN652415 5-FT PECK
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34317	137.9759	COPSTJCPFRSJ
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34317	137.9759	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34317	137.9759	STMDSJFAFACO
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	137.9738	GEN645012 2-NEBRASKA CITY 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.9725	GEN659272 2-GROTON 2G13.800
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.9538	GEN615021 1-GRE-ER 14G 16.000
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.9358	COYOTE 345/24.0KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.9083	GEN660016 1-B_H WIND 0.7000
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.8848	GEN659274 1-GROTON
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.8792	GEN615052 1-CAMBRIDGE GENERATING STATION
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	137.8711	GEN336153 1-WATERFORD UNIT#3
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.8545	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	137.8144	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.8078	GEN659273 2-GROTON SYNC COND
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.8078	GEN659294 1-WILTONCOL9
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34168	137.7549	COOPER - MOORE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.748	GEN662101 1-WESSINGTON190.5750
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.7177	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.7023	GEN659192 6-LYNN
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.7011	GEN659162 4-RED WLCK
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.7011	GEN659163 5-BLACK WDCK
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.6961	GEN600067 9-HIGH BRIDGE
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	137.6945	GEN645011 1-NEBRASKA CITY 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.688	GEN659291 1-FT MP COLLECTOR
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34394	137.5949	KELLY - SHELL CREEK 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34397	137.5909	RASMUSN - UTICA JCT 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34394	137.5878	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	137.5582	BASE CASE
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34378	137.5256	PAHOJA - SIOUX FALLS 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	137.5128	GEN335831 1-RIVERBEND UNIT#1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34474	137.4999	HANLON - SIOUX FALLS 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.4979	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34442	137.4944	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.4766	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34320	137.4753	COOPER - ST JOE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.4605	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.4545	GEN659270 1-WEST SW
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.4316	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.42	GEN 11104 1-J262_GEN 0.6000
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.42	GEN 11108 1-J263_GEN 0.6000
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34357	137.4157	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.4088	GEN562872 1-G15046_3 0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34401	137.4053	G15088_T 345.00 - PAULINE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.3911	GEN563232 1-G15089_3 0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.3429	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.3429	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	137.3425	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.3392	GEN615015 1-GRE-SPRITWDG13.200
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	137.3261	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34322	137.3065	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34322	137.3012	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34273	137.2784	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.2686	GEN587593 1-J460-GEN1 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34397	137.267	RASMUSN - SIOUX CITY 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34262	137.2651	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.2631	GEN587623 1-J493-GEN1 0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34401	137.2628	G15088_T 345.00 - MOORE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34288	137.2533	GRAND ISLAND - RIVERDALE 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.2056	LADISH 115/13.2KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34391	137.1975	LOUP CITY - ST LIBORY 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	137.1858	GEN910006 1-G12_012IS_3 0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34322	137.1705	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34416	137.1326	CRETE - FRIEND 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34418	137.1276	AURORA - GRAND ISLAND 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	137.0904	GEN563222 1-G15088_3 0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34424	137.0808	FAIRBURY - G15087_T 115.00 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34568	137.0686	MINGO - SETAB 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34054	137.0383	HOSKINS - SHELL CREEK 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34144	136.9955	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.9908	GEN587053 1-G16-007-GEN10.6500
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.9807	GEN337652 1-WHITE BLUFF UNIT #1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.972	GEN338146 1-INDEPENDENCE UNIT #2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34378	136.9698	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.9691	GEN338143 1-INDEPENDENCE UNIT #1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.964	GEN 10648 1-G830_GEN 0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34412	136.9387	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34412	136.9352	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.8897	GEN659353 1-DEERCREK CTG18.000
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.886	GEN652906 1-G09_006IS_3 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.874	GEN337653 1-WHITE BLUFF UNIT #2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.8701	GEN659354 1-DEERCREK STG18.000
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.8632	GEN652543 3-BIG BEND
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.8619	GEN652542 1-BIG BEND
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34326	136.8549	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34326	136.8535	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34445	136.8491	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.8206	GEN587583 1-J432-GEN1 0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.782	GEN659272 2-GROTON 2G13.800
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.7641	GEN615021 1-GRE-ER 14G 16.000
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.7581	GEN659273 2-GROTON SYNC COND
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.7581	GEN659294 1-WILTONCOL9
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.7517	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.7489	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34242	136.7477	SUB 3454 - WAGENER 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34462	136.7437	FT RANDAL - UTICA JCT 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.7416	GEN615052 1-CAMBRIDGE GENERATING STATION
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33646	136.7349	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.7295	GEN659162 4-RED WLCK
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.7295	GEN659163 5-BLACK WDCK
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.7287	GEN659192 6-LYNN
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.7264	GEN659274 1-GROTON
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.7142	GEN652907 1-G09_007IS_3 0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34338	136.6978	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34569	136.6961	FT THOMPSON - WESSINGTON 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34968	136.6854	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34536	136.6843	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34428	136.6842	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.6816	GEN501801 1-DOLET HILLS UNIT1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.6799	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.6796	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.6773	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.6681	GEN659010 4-G07_027IS_2 0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.6572	GEN652460 4-GARRISON
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.6571	GEN652461 5-GARRISON
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.6559	GEN659366 3-WILTON 3 W0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34445	136.6439	COOPER - FAIRPORT 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34416	136.6253	FT RANDAL - SPENCER 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.6209	GEN600067 9-HIGH BRIDGE
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.6094	GEN336252 1-NINEMILE POINT UNIT#5
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.5658	GEN 11104 1-J262_GEN 0.6000
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.5658	GEN 11108 1-J263_GEN 0.6000
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.5657	MISSION - ST FRANCIS 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.5643	GEN652457 1-GARRISON
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.5643	GEN652458 2-GARRISON
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.5643	GEN652459 3-GARRISON
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.5578	GEN659194 1-NDPRAIRWND1W0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34646	136.5556	STAPLETON - THEDFORD 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34441	136.5397	COPSTJCPFRSJ
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34441	136.5397	STMDSJFAFACO
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34442	136.5346	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.5319	GEN659270 1-WEST SW
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.5318	GEN660016 1-B_H WIND 0.7000
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.5315	GEN336251 1-NINEMILE POINT UNIT#4
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34452	136.5228	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34265	136.5106	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.5094	GEN562872 1-G15046_3 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.509	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.5051	GEN641089 2-ENERGY CENTER 2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34433	136.5031	CLEARWATER - ONEILL 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.5004	GEN659291 1-FT MP COLLECTOR
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.4989	GEN336831 1-BAXTER WILSON SES
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.4979	GEN681542 6-JP MADGETT
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.4965	GEN659403 1-NDSUNFLWR W0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.4963	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.4963	GEN672304 4-BOUNDARY DAM GENERATOR 4
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.4963	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34491	136.4832	CALLAWAY - MAXWELL 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.4756	GEN615015 1-GRE-SPRITWDG13.200
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.4754	GEN662101 1-WESSINGTON190.5750
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.4524	HARMONY - ST FRANCIS 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34416	136.4485	ONEILL - SPENCER 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.4481	GEN337041 1-GERALD ANDRUS
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.4461	GEN672392 1-NBECGT1G 18.000
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34348	136.4278	COLUMEAST - SHELL CREEK 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.4224	GEN501813 1-RODEMACHER UNIT 3
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.3968	GEN542962 2-IATAN UNIT #2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34266	136.388	103RD & ROKEBY - MOORE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.3858	GEN587623 1-J493-GEN1 0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.3844	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34442	136.3819	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.3682	GEN344897 4-1LAB G4 20.000
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.3668	GEN344894 1-1LAB G1 20.000
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.3666	GEN344895 2-1LAB G2 20.000

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.3665	GEN344896 3-1LAB G3 20.000
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.3656	GEN652545 7-BIG BEND
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.3601	GEN635214 4-NEAL UNIT 4
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34357	136.3356	SIDNEY - STEGALL 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.3352	GEN587353 1-G16-050-GEN10.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34496	136.3333	GAVINS POINT - YANKON JCT 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34533	136.3232	GLENHAM - L3 HAWDON 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.3043	GEN345671 2-1RUSH G2 18.000
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.3015	GEN345670 1-1RUSH G1 18.000
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34430	136.2969	FARGO - JAMES TOWN 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.2924	GEN910006 1-G12_012IS_3 0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.2667	GEN 10648 1-G830_GEN 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34498	136.2651	CARPENTER - HURON 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34430	136.2579	FARGO - JAMES TOWN 230KV CKT 2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.2572	GEN335206 1-NELSON UNIT 6
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34498	136.2546	CARPENTER - WATERTOWN 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34543	136.2429	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34498	136.2315	HURON - WATERTOWN 230KV CKT 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34543	136.2302	OAHE - SULLEY BUTTE 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.2262	GEN334440 1-SABINE UNIT 4
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.2061	GEN652559 1-OAHE
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34543	136.2039	GLENHAM - WHITLOK 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.2021	GEN587053 1-G16-007-GEN10.6500
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34580	136.1896	BASSETT 7115.00 - STUART 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.188	GEN338388 1-1PLUM PT U1 23.000
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34387	136.1869	GAVINS POINT - HARTINGTON 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34373	136.1869	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34390	136.1791	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34443	136.1595	COOPER - ST JOE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.1457	GEN635213 3-NEAL UNIT 3
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.1435	GEN542957 1-IATAN UNIT #1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34580	136.1432	AINSWORTH - BASSETT 7115.00 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34433	136.1432	CLEARWATER - NELIGH 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34660	136.1389	OAHE - SULLEY BUTTE 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.1362	GEN336191 1-LITTLE GYPSY UNIT#3
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	136.1346	GEN587593 1-J460-GEN1 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.1268	GEN501812 1-RODEMACHER UNIT 2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34451	136.1202	MENNO JCT - TRIPP JCT 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	136.1033	GEN659296 2-SDPRAIRWND1W0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34543	136.103	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34289	136.1009	COOPER - MOORE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34347	136.0881	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34543	136.086	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34347	136.0838	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34347	136.0772	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34445	136.0676	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34445	136.0658	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34410	136.0623	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34543	136.0589	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34543	136.0589	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.0583	AINSWORTH - VALENTINE 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34478	136.0382	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34651	136.0335	GLENHAM - L3 HAWDON 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34671	136.033	AINSWORTH - AINSWORTH 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34478	136.0239	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34443	136.0211	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.0165	GEN336801 1-BAXTER WILSON UNIT #1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.0154	GEN335614 1-WILLOW GLENN UNIT#4
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.0096	GEN334441 1-SABINE UNIT 5
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	136.0048	GEN336464 1-MICHOUD UNIT #3
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	135.9994	GEN335204 1-NELSON UNIT 4
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34580	135.9897	ATKINSON - STUART 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.9831	ALMA 161 161/24.0KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.9805	GEN652559 1-OAHE
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.9801	GEN659010 4-G07_027IS_2 0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.975	GEN659411 1-CAMPBLCNTY W0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	135.9735	GEN587363 1-G16-055-GEN10.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.9703	GEN600004 2-PRAIRIE ISLAND G2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34660	135.9695	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.9669	GEN659366 3-WILTON 3 W0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.9654	GEN659194 1-NDPRAIRWND1W0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.9648	GEN600003 1-PRAIRIE ISLAND G1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34660	135.9608	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34660	135.9602	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.9591	GEN652460 4-GARRISON
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.9591	GEN652461 5-GARRISON
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.9521	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34451	135.9479	MENNO JCT - UTICA 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34445	135.9458	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.9414	GEN652544 5-BIG BEND
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34660	135.9369	GLENHAM - WHITLOK 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.9367	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34443	135.9365	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34462	135.9279	OAHE - PHILIP TAP 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34435	135.9263	BISMARK - JAMES TOWN 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34394	135.9214	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.9192	GEN652543 3-BIG BEND
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.9189	GEN652542 1-BIG BEND
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	135.9182	GEN587443 1-G16-064-GEN10.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.9096	GEN652458 2-GARRISON
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.9096	GEN652459 3-GARRISON
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.9095	GEN652457 1-GARRISON
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34394	135.8985	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34528	135.8911	HOLCOMB - SETAB 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34435	135.8823	JAMES TOWN - WEBER 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.8815	GEN563232 1-G15089_3 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34435	135.8727	BISMARK - WEBER 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	135.8726	GEN334433 1-SABINE UNIT 3
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.8673	GEN 11123 1-G736-GEN1 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	135.8664	GEN636641 1-LOUISA UNIT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.8613	GEN 11133 1-J442-GEN1 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34431	135.8586	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.8444	GEN652556 2-OAHE
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.8444	GEN652557 4-OAHE
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.8444	GEN652558 6-OAHE
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.8441	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34443	135.8428	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34470	135.8386	WINNER - WITTEN 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	135.8368	GEN336222 1-LITTLE GYPSY UNIT#2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.8193	GEN659403 1-NDSUNFLWR W0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.8143	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34646	135.8117	MAXWELL - STAPLETON 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34456	135.8116	JEFFREY - NORTH PLATTE 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	135.7716	GEN303007 1-1BC2 U2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34384	135.7711	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	135.7654	GEN303006 1-1BC2 U1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34387	135.7563	BELDEN - HARTINGTON 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34476	135.7513	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	135.7509	GEN336152 1-WATERFORD UNIT#2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	135.7508	GEN336151 1-WATERFORD UNIT#1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34446	135.7359	JAMES TOWN - PICKERT 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34390	135.7101	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34580	135.7078	ATKINSON - EMMET 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	135.7064	GEN336170 1-GULF OXY U4
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	135.7013	GEN303008 1-1BC2 U3
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34462	135.7009	AXTELL - SWEETWATER 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34470	135.6743	GREGORY - WINNER 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34398	135.6716	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.6464	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34398	135.6366	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.6227	GEN600006 1-AS KING
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34491	135.591	BROKEN BOW - CALLAWAY 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	135.5855	GEN562547 1-G14_039_3 0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.582	GEN600004 2-PRAIRIE ISLAND G2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.5814	GEN652173 1-G09_001IS_2 0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.5797	GEN652906 1-G09_006IS_3 0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.577	GEN600003 1-PRAIRIE ISLAND G1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.5454	GEN672321 1-SHAND GENERATOR 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.5394	GEN659411 1-CAMPBLCNTY W0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.5144	GEN672310 1-POPLAR RIVER GENERATOR 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.5144	GEN672311 2-POPLAR RIVER GENERATOR 2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.4831	GEN672321 1-SHAND GENERATOR 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.4256	GEN672310 1-POPLAR RIVER GENERATOR 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.4256	GEN672311 2-POPLAR RIVER GENERATOR 2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.4245	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.4238	GEN659110 1-LELAND OLDS UNIT1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.4092	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.3958	GEN659453 1-GI1414GEN W0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.3729	GEN652907 1-G09_007IS_3 0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.3255	GEN659296 2-SDPRAIRWND1W0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.2907	GEN659141 1-K10215A
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.284	GEN600006 1-AS KING
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34262	135.2472	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.2441	GEN615010 1-STANTON4
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.2379	GEN659110 1-LELAND OLDS UNIT1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.2233	GEN615010 1-STANTON4
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34360	135.2214	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.1929	GEN659453 1-GI1414GEN W0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	135.1358	STANTON 230/18.0KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.1174	GEN659141 1-K10215A
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.1172	GEN652556 2-OAHE
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.1172	GEN652557 4-OAHE
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.1172	GEN652558 6-OAHE
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.0701	GEN587653 1-J526-GEN1 0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	135.0171	GEN652173 1-G09_001IS_2 0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	134.969	GEN600005 1-MONTICELLO
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	134.9581	GEN657749 1-YOUNG 1 GENERATOR
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34397	134.9496	KELLY - SHELL CREEK 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34397	134.9423	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34447	134.9017	SUB 3455 - SUB 3740 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34412	134.8989	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	134.8814	GEN659118 1-LARAMIE RIVER UNIT1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	134.8779	BASE CASE
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34404	134.8668	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	134.8428	GEN587633 1-J510-GEN1 18.000
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	134.8384	GEN659407 1-ANTELPHILLSW0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34404	134.8069	G15088_T 345.00 - MOORE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	134.7963	GEN659407 1-ANTELPHILLSW0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34412	134.7056	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	134.6756	GEN657749 1-YOUNG 1 GENERATOR
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34434	134.6709	SUB 3456 - SUB 3458 NEB CTY 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	134.6362	GEN600005 1-MONTICELLO
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34498	134.5645	MAXWELL - NORTH PLATTE 115KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	134.49	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34394	134.4787	LOUP CITY - ST LIBORY 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34419	134.4774	CRETE - FRIEND 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34422	134.4642	AURORA - GRAND ISLAND 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34292	134.4526	GRAND ISLAND - RIVERDALE 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34427	134.4371	FAIRBURY - G15087_T 115.00 115KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	134.4277	GEN600000 1-SHERBURNECNTY G1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34600	134.3985	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	134.3906	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	134.3626	GEN587033 1-G16-004-GEN10.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	134.2758	GEN587033 1-G16-004-GEN10.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34416	134.2593	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34415	134.2558	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34539	134.2504	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	134.2485	GEN600000 1-SHERBURNECNTY G1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34449	134.2436	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	134.2356	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	134.2211	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34329	134.1523	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34329	134.1508	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34431	134.1339	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34265	134.1302	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	134.1171	GEN659272 2-GROTON 2G13.800
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	134.1091	GEN659273 2-GROTON SYNC COND
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	134.1091	GEN659294 1-WILTONCOL9
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34449	134.0945	COOPER - FAIRPORT 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33648	134.0916	COLUMWEST - GRAND ISLAND 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	134.0851	GEN659162 4-RED WLCK
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	134.0851	GEN659163 5-BLACK WDCK
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	134.0845	GEN659192 6-LYNN
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	134.0746	GEN615052 1-CAMBRIDGE GENERATING STATION
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	134.0743	GEN659274 1-GROTON
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	134.0686	GEN652559 1-OAHE
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	134.0674	GEN659353 1-DEERCREK CTG18.000
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	134.067	GEN659354 1-DEERCREK STG18.000
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	134.0578	GEN615021 1-GRE-ER 14G 16.000
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34341	134.0196	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34444	133.9711	STMDSJFAFACO
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34444	133.971	COPSTJCPFRSJ
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.9536	GEN600067 9-HIGH BRIDGE
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34245	133.9172	SUB 3454 - WAGENER 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34269	133.9085	103RD & ROKEBY - MOORE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.8864	GEN660016 1-B_H WIND 0.7000
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.8742	GEN659270 1-WEST SW
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34292	133.8594	COOPER - MOORE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	133.8524	GEN659118 1-LARAMIE RIVER UNIT1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.8504	GEN562872 1-G15046_3 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.8444	GEN659291 1-FT MP COLLECTOR
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.8345	GEN615015 1-GRE-SPRITWDG13.200
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.8326	GEN 11104 1-J262_GEN 0.6000
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.8326	GEN 11108 1-J263_GEN 0.6000
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.8172	GEN662101 1-WESSINGTON190.5750
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	133.8094	GEN620315 1-BIG STONE GEN
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34268	133.8006	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	133.7564	GEN661015 1-COYOTE
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	133.7272	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.7066	GEN587623 1-J493-GEN1 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34447	133.7036	COOPER - ST JOE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	133.6892	GEN600002 3-SHERBURNE CNTY G3
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.6464	GEN910006 1-G12_012IS_3 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34662	133.6227	OAHE - SULLEY BUTTE 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34449	133.5971	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34449	133.5903	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.5855	GEN 10648 1-G830_GEN 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.534	GEN587053 1-G16-007-GEN10.6500
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34662	133.5172	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34662	133.5018	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34662	133.5018	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34653	133.4915	GLENHAM - L3 HAWDON 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.4795	GEN587593 1-J460-GEN1 0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	133.4473	GEN600001 2-SHERBURNE CNTY G2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34662	133.4359	GLENHAM - WHITLOK 230KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34449	133.4154	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.3795	GEN652545 7-BIG BEND
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.3276	GEN659010 4-G07_027IS_2 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.3191	GEN652460 4-GARRISON
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.3191	GEN652461 5-GARRISON
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.3154	GEN659366 3-WILTON 3 W0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.3031	GEN659194 1-NDPRAIRWND1W0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	133.2933	GEN600001 2-SHERBURNE CNTY G2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.2927	GEN652544 5-BIG BEND
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.2813	GEN652543 3-BIG BEND
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.281	GEN652542 1-BIG BEND
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.2548	GEN652458 2-GARRISON
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.2548	GEN652459 3-GARRISON
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.2547	GEN652457 1-GARRISON
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.2236	GEN563232 1-G15089_3 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.166	GEN 11123 1-G736-GEN1 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.1607	GEN659403 1-NDSUNFLWR W0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	133.1592	GEN 11133 1-J442-GEN1 0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	133.1364	GEN600002 3-SHERBURNE CNTY G3
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	133.1117	GEN657748 1-YOUNG 2 GENERATOR
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.927	GEN652906 1-G09_006IS_3 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.9239	GEN600004 2-PRAIRIE ISLAND G2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.9191	GEN600003 1-PRAIRIE ISLAND G1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.9126	GEN659411 1-CAMPBLCNTY W0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	132.8781	GEN661015 1-COYOTE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	132.8043	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.7675	GEN659296 2-SDPRAIRWND1W0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.7098	GEN652907 1-G09_007IS_3 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.648	GEN600006 1-AS KING
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	132.5528	GEN620315 1-BIG STONE GEN
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.5466	GEN659110 1-LELAND OLDS UNIT1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.5372	GEN615010 1-STANTON4
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	132.522	GEN657748 1-YOUNG 2 GENERATOR
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.4942	GEN659453 1-GI1414GEN W0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.4919	GEN652556 2-OAHE
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.4919	GEN652557 4-OAHE
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.4919	GEN652558 6-OAHE
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.4845	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.48	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	132.4236	GEN659103 1-ANTELOPE VALLEY UNIT1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	132.4236	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.4138	GEN659141 1-K10215A
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	132.4063	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.4052	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34265	132.3966	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.3418	GEN587653 1-J526-GEN1 0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.46919	132.3378	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.1375	GEN659407 1-ANTELPHILLSW0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.1039	GEN587633 1-J510-GEN1 18.000
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36076	132.0724	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36076	132.0581	2810X2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	132.0106	GEN600005 1-MONTICELLO
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	131.971	GEN659103 1-ANTELOPE VALLEY UNIT1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	131.971	GEN659107 2-ANTELOPE VALLEY UNIT2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36149	131.9569	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36149	131.9428	2810X2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	131.8856	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	131.7943	GEN587293 1-G16-044-GEN10.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	131.7852	GEN600000 1-SHERBURNECNTY G1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	131.6887	GEN587033 1-G16-004-GEN10.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36149	131.5763	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	131.5423	GEN659125 1-COVEY
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	131.467	GEN620315 1-BIG STONE GEN
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	131.2524	GEN587293 1-G16-044-GEN10.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	131.1955	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	131.159	GEN600002 3-SHERBURNE CNTY G3
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	131.0656	GEN659118 1-LARAMIE RIVER UNIT1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	131.0204	GEN600001 2-SHERBURNE CNTY G2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	130.9919	GEN659125 1-COVEY
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	130.8764	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	130.8574	GEN615001 1-COAL CREEK
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36076	130.7882	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	130.7152	GEN615002 2-COAL CREEK
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.32272	130.4157	MCCOOL - MOORE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	130.3346	GEN659111 2-LELAND OLDS UNIT2
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	130.0627	GEN615001 1-COAL CREEK
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	129.9721	BIG STONE 230/24.0KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	129.9293	GEN615002 2-COAL CREEK
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	129.9246	GEN659103 1-ANTELOPE VALLEY UNIT1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	129.9246	GEN659107 2-ANTELOPE VALLEY UNIT2
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	129.8775	GEN587133 1-G16-017-GEN10.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36148	129.8147	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36148	129.8005	2810X2
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36148	129.5676	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	129.4598	GEN587133 1-G16-017-GEN10.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	129.2796	GEN587293 1-G16-044-GEN10.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	129.0742	GEN659125 1-COVEY
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.32374	128.4174	MCCOOL - MOORE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	128.1288	GEN615001 1-COAL CREEK
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	128.0938	GEN615002 2-COAL CREEK
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	127.4218	GEN587133 1-G16-017-GEN10.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36149	127.3674	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36149	127.1716	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36149	127.1412	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.32375	126.9425	MCCOOL - MOORE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	126.2768	GEN562714 1-G15_023_4 0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	126.2768	GEN562715 1-G15_023_5 0.6900
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.31839	126.1908	GRAND ISLAND - MCCOOL 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	125.5844	GEN562714 1-G15_023_4 0.6900
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	125.5844	GEN562715 1-G15_023_5 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36148	125.2	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36148	125.1823	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36148	125.1577	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.31936	123.833	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	123.0681	GEN562714 1-G15_023_4 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	123.0681	GEN562715 1-G15_023_5 0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.42328	123.0277	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.31937	122.3584	GRAND ISLAND - MCCOOL 345KV CKT 1
3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34453	120.8923	GEN652353 2-GR PRAIRIEG 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.47071	120.3638	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34328	119.7632	GEN652353 2-GR PRAIRIEG 0.6900
3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34457	118.7929	GEN652353 2-GR PRAIRIEG 0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34377	118.2989	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33277	115.525	GRAND ISLAND - SWEETWATER 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34514	115.2806	SPLIT ROCK - WHITE 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34914	115.2769	STORLA - WESSINGTON 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34822	114.6392	HANLON - STORLA 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34666	114.492	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34503	114.4225	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34906	114.0149	FT THOMPSON - LETCHER 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34564	113.8113	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34377	113.7542	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	113.6742	GEN635024 4-WALTER SCOTT UNIT 4
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34693	113.5343	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	113.2104	GEN635023 3-WALTER SCOTT UNIT 3
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.42386	113.1782	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34872	113.0518	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34870	113.0133	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34523	113.0132	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34523	112.9254	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34627	112.8651	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34820	112.8257	LETCHER - SIOUX FALLS 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	112.7842	GEN336821 1-GRAND GULF UNIT
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34870	112.7777	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34733	112.7657	FT RANDAL - SIOUX CITY 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34627	112.7634	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34627	112.738	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	112.7237	GEN640009 1-COOPER NUCLEAR STATION
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34604	112.4692	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	112.4672	GEN344225 1-1CAL G1 25.000
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34604	112.3999	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34604	112.3996	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34718	112.2602	RASMUSN - UTICA JCT 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34564	112.2459	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	112.2287	GEN563222 1-G15088_3 0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34736	112.1675	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34698	112.1014	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	112.0936	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34349	112.0825	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34718	112.0791	RASMUSN - SIOUX CITY 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	112.0617	GEN336153 1-WATERFORD UNIT#3
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34371	112.0361	HOSKINS - SHELL CREEK 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34803	112.0079	HANLON - SIOUX FALLS 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.9009	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34593	111.8996	RAUN - SIOUX CITY 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.8543	GEN335831 1-RIVERBEND UNIT#1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34578	111.8498	NUNDRWD - WAYSIDE 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.8138	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34698	111.7539	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.7412	GEN641089 2-ENERGY CENTER 2
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34930	111.731	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33228	111.6606	GRAND ISLAND - SWEETWATER 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34665	111.632	COLUMEAST - SHELL CREEK 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34690	111.5926	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.564	GEN587353 1-G16-050-GEN10.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.5419	GEN337653 1-WHITE BLUFF UNIT #2
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36165	111.5307	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36161	111.5276	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34980	111.4813	MINGO - RED WILLOW 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34753	111.4689	CLEARWATER - ONEILL 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34783	111.4668	FT RANDAL - UTICA JCT 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.4626	GEN645012 2-NEBRASKA CITY 2
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.4249	GEN501801 1-DOLET HILLS UNIT1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34753	111.4181	CLEARWATER - NELIGH 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.4178	GEN337652 1-WHITE BLUFF UNIT #1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.3955	GEN338143 1-INDEPENDENCE UNIT #1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.3955	GEN338146 1-INDEPENDENCE UNIT #2
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34914	111.3945	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.3928	GEN645011 1-NEBRASKA CITY 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34758	111.3759	BLAIR - GRANITE FALLS 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.3718	GEN542962 2-IATAN UNIT #2
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34966	111.3548	STAPLETON - THEDFORD 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.2798	GEN587363 1-G16-055-GEN10.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.2433	GEN501813 1-RODEMACHER UNIT 3
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.2376	GEN587443 1-G16-064-GEN10.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34703	111.2095	GAVINS POINT - HARTINGTON 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.187	GEN344897 4-1LAB G4 20.000
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.1868	GEN344894 1-1LAB G1 20.000
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.1866	GEN344896 3-1LAB G3 20.000
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.1585	GEN344895 2-1LAB G2 20.000
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.1567	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.1483	GEN345670 1-1RUSH G1 18.000
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.1481	GEN345671 2-1RUSH G2 18.000
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.1455	GEN335206 1-NELSON UNIT 6
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34828	111.1238	CARPENTER - HURON 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34792	111.1129	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34759	111.0992	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34768	111.0728	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.0718	GEN336252 1-NINEMILE POINT UNIT#5
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.0653	GEN501812 1-RODEMACHER UNIT 2
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34669	111.0638	SIDNEY - STEGALL 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34828	111.0373	HURON - WATERTOWN 230KV CKT 2
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.35279	111.0363	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34896	111.0353	BASSETT 7115.00 - STUART 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	111.0338	GEN336831 1-BAXTER WILSON SES
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34896	111.0283	AINSWORTH - BASSETT 7115.00 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34759	111.027	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34755	111.0111	DENISON - SIOUX CITY 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	110.9985	GEN337041 1-GERALD ANDRUS
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34896	110.9959	ATKINSON - STUART 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34828	110.9888	CARPENTER - WATERTOWN 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34792	110.9848	WINNER - WITTEN 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	110.9821	GEN542957 1-IATAN UNIT #1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34723	110.9821	GARRISON - JAMES TOWN 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	110.9656	GEN336251 1-NINEMILE POINT UNIT#4
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34966	110.9604	MAXWELL - STAPLETON 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34768	110.9594	MENNO JCT - TRIPP JCT 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34896	110.9557	ATKINSON - EMMET 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	110.9356	GEN334440 1-SABINE UNIT 4
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34896	110.9221	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34701	110.9213	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34703	110.9177	BELDEN - HARTINGTON 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	110.9127	GEN562547 1-G14_039_3 0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34744	110.9052	FARGO - JAMES TOWN 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34745	110.8881	FARGO - JAMES TOWN 230KV CKT 2
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34768	110.8818	MENNO JCT - UTICA 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34750	110.8657	BISMARK - JAMES TOWN 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	110.8624	GEN336191 1-LITTLE GYPSY UNIT#3
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34750	110.8511	JAMES TOWN - WEBER 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34805	110.8502	CALLAWAY - MAXWELL 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34715	110.8467	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34750	110.8437	BISMARK - WEBER 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34733	110.8319	FT RANDAL - SPENCER 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	110.8307	GEN335204 1-NELSON UNIT 4
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34792	110.8163	GREGORY - WINNER 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34715	110.8151	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34580	110.8144	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	110.8136	GEN563212 1-G15087_3 0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	110.8086	GEN336801 1-BAXTER WILSON UNIT #1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34793	110.8074	OAHE - PHILIP TAP 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	110.8045	GEN335614 1-WILLOW GLENN UNIT#4
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	110.7986	GEN336464 1-MICHOUD UNIT #3
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34733	110.7937	ONEILL - SPENCER 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	110.7933	GEN334441 1-SABINE UNIT 5
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	110.7895	GEN303007 1-1BC2 U2
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	110.786	GEN303006 1-1BC2 U1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34727	110.7676	G13-010T 345.00 - POST ROCK 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34714	110.7599	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	110.7568	GEN642067 1-PLATTE
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34670	110.747	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34770	110.7425	JEFFREY - NORTH PLATTE 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34670	110.7284	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34670	110.728	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34778	110.4405	AXTELL - SWEETWATER 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34600	110.299	GRAND ISLAND - RIVERDALE 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	110.2551	BASE CASE
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34664	110.1074	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34624	110.0664	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33969	110.0025	COLUMWEST - KELLY 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34712	109.988	KELLY - SHELL CREEK 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34712	109.9861	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34907	109.9588	STORLA - WESSINGTON 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34737	109.8388	AURORA - GRAND ISLAND 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34743	109.8365	FAIRBURY - HARBINE 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34731	109.8049	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34720	109.7974	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34657	109.7526	CENTRAL CITY - CLARKS 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34743	109.7341	FAIRBURY - G15087_T 115.00 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.6938	GEN652414 4-FT PECK
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.6938	GEN652415 5-FT PECK
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34735	109.6841	CRETE - FRIEND 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34675	109.6759	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.6752	GEN600046 1-MECST
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.6651	GEN659354 1-DEERCREK STG18.000
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.665	GEN659353 1-DEERCREK CTG18.000
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.6623	GEN600047 1-MECCT1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.6412	GEN659272 2-GROTON 2G13.800
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.6364	GEN659274 1-GROTON
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.6217	GEN659273 2-GROTON SYNC COND
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.6217	GEN659294 1-WILTONCOL9
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.6184	GEN672393 2-NBECST2G 13.800
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.6133	GEN587583 1-J432-GEN1 0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.6075	GEN600014 4-BLACK DOG GEN 4
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.6061	GEN600065 7-HIGH BRIDGE
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.6061	GEN600066 8-HIGH BRIDGE
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.6011	GEN600011 5-BLACK DOG GEN 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.5963	GEN600071 10-RIVER SIDE
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.5962	GEN600070 9-RIVER SIDE
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.5864	GEN600007 7-RIVERSIDE GEN 7
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.5836	GEN659162 4-RED WLCK
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.5836	GEN659163 5-BLACK WDCK
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.5831	GEN659192 6-LYNN
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.5782	GEN681522 3-GENOA 3
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34689	109.5698	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.5649	GEN657985 1-ASH1GEN9 0.5750
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.5626	GEN600017 C-LS POWER CT
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.5329	GEN659270 1-WEST SW
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34657	109.525	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34747	109.5187	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34583	109.5126	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34764	109.5099	COOPER - FAIRPORT 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34693	109.5068	ATCHSNT3 345.00 - COOPER 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.4975	GEN615052 1-CAMBRIDGE GENERATING STATION
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.4825	GEN660016 1-B_H WIND 0.7000
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34999	109.4586	OAHE - SULLEY BUTTE 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34720	109.428	G15088_T 345.00 - MOORE 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34559	109.4244	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34989	109.4131	GLENHAM - L3 HAWDON 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.3974	GEN659291 1-FT MP COLLECTOR
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.396	GEN 11104 1-J262_GEN 0.6000
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.396	GEN 11108 1-J263_GEN 0.6000
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.3917	GEN662101 1-WESSINGTON190.5750
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.3894	GEN562872 1-G15046_3 0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34999	109.3797	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34999	109.3794	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34999	109.3794	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34760	109.3736	COPSTJCPFRSJ
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34760	109.3736	STMDSJFAFACO
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.3651	GEN615015 1-GRE-SPRITWDG13.200
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.3407	GEN600067 9-HIGH BRIDGE
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.3376	GEN615021 1-GRE-ER 14G 16.000
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34577	109.3369	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34999	109.3143	GLENHAM - WHITLOK 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.291	GEN657705 X-DRAYTON
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.2749	GEN587623 1-J493-GEN1 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34809	109.2368	HANLON - STORLA 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.221	GEN910006 1-G12_012IS_3 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34577	109.2048	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.1915	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.1915	GEN672304 4-BOUNDARY DAM GENERATOR 4
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.1915	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.1853	GEN587053 1-G16-007-GEN10.6500
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34577	109.1852	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.1788	GEN 10648 1-G830_GEN 0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34762	109.1547	COOPER - ST JOE 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34764	109.1131	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.1059	GEN672392 1-NBECGT1G 18.000
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34764	109.1048	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.1037	GEN681542 6-JP MADGETT
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.053	GEN652460 4-GARRISON
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.053	GEN652461 5-GARRISON
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.0182	GEN652457 1-GARRISON
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.0182	GEN652458 2-GARRISON
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.0182	GEN652459 3-GARRISON
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	109.0134	GEN587593 1-J460-GEN1 0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34764	109.005	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34560	109.0046	SUB 3454 - WAGENER 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.9994	GEN659010 4-G07_027IS_2 0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.9884	GEN659366 3-WILTON 3 W0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.9616	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.9559	GEN659194 1-NDPRAIRWND1W0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.8607	GEN659403 1-NDSUNFLWR W0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34580	108.8467	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.8172	GEN 11123 1-G736-GEN1 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34657	108.8148	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.8142	GEN 11133 1-J442-GEN1 0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.8078	GEN652559 1-OAHE
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34585	108.7556	103RD & ROKEBY - MOORE 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33969	108.7494	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.7128	GEN652906 1-G09_006IS_3 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34897	108.707	FT THOMPSON - LETCHER 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.6625	GEN659411 1-CAMPBLCNTY W0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.659	GEN563232 1-G15089_3 0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.6473	GEN659110 1-LELAND OLDS UNIT1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34480	108.5631	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.5337	GEN652907 1-G09_007IS_3 0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.5326	GEN659296 2-SDPRAIRWND1W0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34607	108.4514	COOPER - MOORE 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.3092	GEN652556 2-OAHE
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.3086	GEN652558 6-OAHE
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.2891	GEN652557 5-OAHE
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.2565	GEN600004 2-PRAIRIE ISLAND G2
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.2531	GEN600003 1-PRAIRIE ISLAND G1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.2306	GEN659453 1-GI1414GEN W0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.1629	GEN615010 1-STANTON4

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.1517	GEN652173 1-G09_001IS_2 0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.1181	GEN659141 1-K10215A
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.0464	GEN587653 1-J526-GEN1 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34535	108.0135	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	108.0133	GEN600006 1-AS KING
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	107.9538	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	107.929	GEN672321 1-SHAND GENERATOR 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34535	107.9175	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34535	107.9172	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	107.8803	GEN672310 1-POPLAR RIVER GENERATOR 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	107.8803	GEN672311 2-POPLAR RIVER GENERATOR 2
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	107.8652	GEN659407 1-ANTELPHILLSW0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	107.8543	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	107.8517	GEN635024 4-WALTER SCOTT UNIT 4
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	107.84	GEN587633 1-J510-GEN1 18.000
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34349	107.7943	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34519	107.7223	SPLIT ROCK - WHITE 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	107.6092	GEN659118 1-LARAMIE RIVER UNIT1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	107.5613	GEN640009 1-COOPER NUCLEAR STATION
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	107.5495	GEN657749 1-YOUNG 1 GENERATOR
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34878	107.4964	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	107.4939	GEN620315 1-BIG STONE GEN
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	107.4907	GEN587033 1-G16-004-GEN10.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	107.4863	GEN641089 2-ENERGY CENTER 2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34875	107.4609	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34807	107.4559	LETCHER - SIOUX FALLS 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	107.4385	GEN635023 3-WALTER SCOTT UNIT 3
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34559	107.4368	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	107.3473	GEN600005 1-MONTICELLO
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34710	107.2842	FT RANDAL - SIOUX CITY 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34875	107.2455	FT RANDAL - LAKE PLATT 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34707	107.173	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	107.1466	GEN600000 1-SHERBURNECNTY G1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36571	107.1186	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36571	107.1138	2810X2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	106.9706	GEN563222 1-G15088_3 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	106.9697	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	106.9333	GEN659111 2-LELAND OLDS UNIT2
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	106.9125	GEN579459 1-G16-075-GEN10.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36571	106.91	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34483	106.8903	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34483	106.8059	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34695	106.7775	RASMUSN - UTICA JCT 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34903	106.7044	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34951	106.7043	MINGO - RED WILLOW 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	106.704	GEN344225 1-1CAL G1 25.000
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34787	106.6853	HANLON - SIOUX FALLS 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	106.6716	GEN659103 1-ANTELOPE VALLEY UNIT1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	106.6716	GEN659107 2-ANTELOPE VALLEY UNIT2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34695	106.6155	RASMUSN - SIOUX CITY 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36110	106.5991	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36106	106.5947	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34718	106.5664	ELLENDALE - OAKES 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34676	106.4952	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	106.445	GEN600001 2-SHERBURNE CNTY G2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	106.4274	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	106.3645	GEN336153 1-WATERFORD UNIT#3
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	106.3439	GEN600002 3-SHERBURNE CNTY G3
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34666	106.2878	CROOKED CREEK - RIVERDALE 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	106.2674	GEN587353 1-G16-050-GEN10.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34676	106.2074	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	106.1955	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	106.1953	GEN335831 1-RIVERBEND UNIT#1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34560	106.1904	NUNDRWD - WAYSIDE 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	106.1796	GEN336821 1-GRAND GULF UNIT
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	106.162	GEN542962 2-IATAN UNIT #2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34807	106.1597	CARPENTER - HURON 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34734	106.159	CLEARWATER - ONEILL 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34907	106.156	FT THOMPSON - WESSINGTON 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	106.1547	GEN337653 1-WHITE BLUFF UNIT #2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34352	106.1458	HOSKINS - SHELL CREEK 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34734	106.1128	CLEARWATER - NELIGH 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	106.1093	GEN642067 1-PLATTE
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	106.1014	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34762	106.0841	FT RANDAL - UTICA JCT 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34807	106.072	HURON - WATERTOWN 230KV CKT 2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34559	106.0675	RAUN - SIOUX CITY 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34645	106.057	COLUMEAST - SHELL CREEK 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	106.0431	GEN645012 2-NEBRASKA CITY 2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34807	106.0226	CARPENTER - WATERTOWN 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34670	106.0217	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.952	GEN587363 1-G16-055-GEN10.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	105.9511	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.9152	GEN587443 1-G16-064-GEN10.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	105.8755	GEN661015 1-COYOTE
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.8537	GEN501801 1-DOLET HILLS UNIT1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.8462	GEN337652 1-WHITE BLUFF UNIT #1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.8229	GEN338143 1-INDEPENDENCE UNIT #1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.8215	GEN338146 1-INDEPENDENCE UNIT #2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34739	105.8189	BLAIR - GRANITE FALLS 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34858	105.8185	MINGO - SETAB 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34625	105.7639	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34680	105.7558	GAVINS POINT - HARTINGTON 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.7283	GEN542957 1-IATAN UNIT #1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34944	105.7132	STAPLETON - THEDFORD 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34871	105.685	AINSWORTH - STUART 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.35065	105.6833	FT THOMPSON - HURON 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.35065	105.6833	FT THOMPSON - HURON 230KV CKT 2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.6828	GEN501813 1-RODEMACHER UNIT 3
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.6752	GEN344897 4-1LAB G4 20.000
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.6737	GEN344894 1-1LAB G1 20.000
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.6735	GEN344896 3-1LAB G3 20.000
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34871	105.6519	ATKINSON - STUART 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.6489	GEN344895 2-1LAB G2 20.000
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.35278	105.634	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.6297	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.6111	GEN345670 1-1RUSH G1 18.000
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.6109	GEN345671 2-1RUSH G2 18.000
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34871	105.6108	ATKINSON - EMMET 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.6042	GEN335206 1-NELSON UNIT 6
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34871	105.5881	EMMET - ONEILL 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34702	105.5864	GARRISON - JAMES TOWN 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34735	105.5827	DENISON - SIOUX CITY 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.5745	GEN562547 1-G14_039_3 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	105.5488	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.5396	GEN501812 1-RODEMACHER UNIT 2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34752	105.5291	MENNO JCT - TRIPP JCT 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34780	105.5155	BROKEN BOW - LOUP CITY 115KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	105.5069	GEN657748 1-YOUNG 2 GENERATOR
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34747	105.5065	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34725	105.4977	FARGO - JAMES TOWN 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34649	105.492	SIDNEY - STEGALL 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34726	105.4843	FARGO - JAMES TOWN 230KV CKT 2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34680	105.4822	BELDEN - HARTINGTON 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.478	GEN563212 1-G15087_3 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.4774	GEN336252 1-NINEMILE POINT UNIT#5
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34731	105.4706	BISMARK - JAMES TOWN 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34752	105.4646	MENNO JCT - UTICA 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34731	105.4585	JAMES TOWN - WEBER 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.4566	GEN336831 1-BAXTER WILSON SES
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34731	105.4535	BISMARK - WEBER 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34747	105.44	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34750	105.4337	JEFFREY - NORTH PLATTE 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34777	105.4324	CALLAWAY - MAXWELL 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.4272	GEN641086 1-ENERGY CENTER
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.4247	GEN337041 1-GERALD ANDRUS
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.3839	GEN334440 1-SABINE UNIT 4
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	105.3739	GEN336251 1-NINEMILE POINT UNIT#4
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34681	105.3709	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34944	105.3688	MAXWELL - STAPLETON 115KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	105.3284	GEN587293 1-G16-044-GEN10.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34647	105.0957	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34647	105.0924	GRAND ISLAND - HASTINGS 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	105.0144	GEN659125 1-COVEY
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.891	BASE CASE
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34749	104.6067	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34695	104.5447	KELLY - SHELL CREEK 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34695	104.5434	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34617	104.4894	HOSKINS - RAUN 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34671	104.4352	MOORE - NW68TH & HOLDREGE 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34720	104.4218	AURORA - GRAND ISLAND 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.4045	GEN652345 W-G07_023IS_2 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34704	104.4045	G15088_T 345.00 - PAULINE 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3893	GEN659353 1-DEERCREK CTG18.000
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3869	GEN652414 4-FT PECK
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3869	GEN652415 5-FT PECK
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3782	GEN615032 2-PLEASANT VALLEY
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3765	GEN600012 2-BLACK DOG GEN 2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3708	GEN672347 1-CORY COGEN GENERATOR 1 GT1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3708	GEN672348 2-CORY COGEN GENERATOR 2 GT2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34641	104.367	CENTRAL CITY - SILVER CREEK 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34725	104.3665	FAIRBURY - HARBINE 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3663	GEN672350 1-NIPAWIN GENERATOR 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3663	GEN672351 2-NIPAWIN GENERATOR 2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3663	GEN672352 3-NIPAWIN GENERATOR 3
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3403	GEN657600 1-L1GEN3 9 0.5750
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3394	GEN620324 3-HOOT LAKE 3 GEN
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34725	104.324	FAIRBURY - G15087_T 115.00 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3093	GEN672367 1-MERIDIAN GENERATOR 1 GT1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3093	GEN672368 2-MERIDIAN GENERATOR 2 GT2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3087	GEN672349 3-CORY COGEN GENERATOR 3 ST
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3083	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3006	GEN672339 16-QE 16G 13.800
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3006	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3004	GEN659273 2-GROTON SYNC COND
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3004	GEN659294 1-WILTONCOL9
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.3002	GEN600050 1-FEP
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34565	104.2942	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.2905	GEN652558 6-OAHE
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.2661	GEN587583 1-J432-GEN1 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34717	104.2343	CRETE - FRIEND 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34676	104.2316	TAMORA - YORK 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.2285	GEN600065 7-HIGH BRIDGE
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.2285	GEN600066 8-HIGH BRIDGE
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.224	GEN659192 6-LYNN
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.223	GEN659162 4-RED WLCK
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.223	GEN659163 5-BLACK WDCK
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.1979	GEN660016 1-B_H WIND 0.7000
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.1931	GEN672393 2-NBECST2G 13.800
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34677	104.1862	ATCHSNT3 345.00 - COOPER 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.172	GEN600014 4-BLACK DOG GEN 4
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.1707	GEN600067 9-HIGH BRIDGE
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.168	GEN600011 5-BLACK DOG GEN 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.1665	GEN657985 1-ASH1GEN9 0.5750
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.1664	GEN600071 10-RIVER SIDE
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.1663	GEN600070 9-RIVER SIDE
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.156	GEN600007 7-RIVERSIDE GEN 7
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.1415	GEN681522 3-GENOA 3
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	104.1285	GEN615001 1-COAL CREEK
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34641	104.1227	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.1211	GEN600017 C-LS POWER CT
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34747	104.0937	COOPER - FAIRPORT 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.0845	GEN659291 1-FT MP COLLECTOR
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.084	GEN562872 1-G15046_3 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.0786	GEN662101 1-WESSINGTON190.5750
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34998	104.0768	OAHE - SULLEY BUTTE 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.0762	GEN615052 1-CAMBRIDGE GENERATING STATION
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34730	104.0636	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34988	104.0534	GLENHAM - L3 HAWDON 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	104.0449	GEN615002 2-COAL CREEK

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34704	104.0309	G15088_T 345.00 - MOORE 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34660	104.0185	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34998	104.0092	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.0076	GEN 11104 1-J262_GEN 0.6000
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	104.0076	GEN 11108 1-J263_GEN 0.6000
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34998	104.004	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34998	104.0039	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.9753	GEN615015 1-GRE-SPRITWDG13.200
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34743	103.9594	COPSTJCPFRSJ
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34743	103.9593	STMDSJFAFACO
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.9539	GEN910006 1-G12_012IS_3 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34998	103.9519	GLENHAM - WHITLOK 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.8821	GEN615021 1-GRE-ER 14G 16.000
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34672	103.8706	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.8657	GEN587053 1-G16-007-GEN10.6500
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.8592	GEN587623 1-J493-GEN1 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.8061	GEN 10648 1-G830_GEN 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.7998	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.7997	GEN672304 4-BOUNDARY DAM GENERATOR 4
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.7997	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33954	103.7596	COLUMWEST - KELLY 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	103.7551	GEN587133 1-G16-017-GEN10.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.7433	GEN652460 4-GARRISON
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.7433	GEN652461 5-GARRISON
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.7392	GEN652906 1-G09_006IS_3 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34745	103.7183	COOPER - ST JOE 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.7063	GEN652457 1-GARRISON
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.7063	GEN652458 2-GARRISON
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.7063	GEN652459 3-GARRISON
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.6878	GEN659010 4-G07_027IS_2 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.6773	GEN659366 3-WILTON 3 W0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.6583	GEN659194 1-NDPRAIRWND1W0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34747	103.6583	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34747	103.6556	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.6369	GEN587593 1-J460-GEN1 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.6272	GEN672392 1-NBECGT1G 18.000
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.6063	GEN652907 1-G09_007IS_3 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.5647	GEN659403 1-NDSUNFLWR W0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34747	103.5517	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.5434	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.4783	GEN659110 1-LELAND OLDS UNIT1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.4681	GEN681542 6-JP MADGETT
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.424	GEN563232 1-G15089_3 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.3772	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.3698	GEN659411 1-CAMPBLCNTY W0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34546	103.3482	SUB 3454 - WAGENER 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.2797	GEN652559 1-OAHE
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.2491	GEN659296 2-SDPRAIRWND1W0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34571	103.1103	103RD & ROKEBY - MOORE 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34570	103.0598	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.0257	GEN652556 2-OAHE
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	103.0065	GEN652557 5-OAHE
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	102.9827	GEN659453 1-GI1414GEN W0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	102.9148	GEN652173 1-G09_001IS_2 0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	102.8613	GEN659141 1-K10215A
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	102.7571	GEN615010 1-STANTON4
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34594	102.7435	COOPER - MOORE 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	102.6922	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	102.6729	GEN659118 1-LARAMIE RIVER UNIT1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	102.6104	GEN659407 1-ANTELPHILLSW0.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	102.6009	GEN600004 2-PRAIRIE ISLAND G2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	102.5971	GEN600003 1-PRAIRIE ISLAND G1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	102.5907	GEN672321 1-SHAND GENERATOR 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	102.5401	GEN672310 1-POPLAR RIVER GENERATOR 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	102.5401	GEN672311 2-POPLAR RIVER GENERATOR 2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.33954	102.5375	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36571	102.509	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36571	102.4936	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36571	102.4889	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	102.4842	GEN672306 6-BOUNDARY DAM GENERATOR 6

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	102.3859	GEN600006 1-AS KING
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	102.2483	GEN587033 1-G16-004-GEN10.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	102.1291	GEN657749 1-YOUNG 1 GENERATOR
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	102.0267	GEN659111 2-LELAND OLDS UNIT2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	101.9695	GEN600005 1-MONTICELLO
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36623	101.8688	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36623	101.8626	2810X2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	101.7885	GEN659103 1-ANTELOPE VALLEY UNIT1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	101.7885	GEN659107 2-ANTELOPE VALLEY UNIT2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	101.7291	GEN579459 1-G16-075-GEN10.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.36623	101.7256	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	101.4622	GEN600000 1-SHERBURNECNTY G1
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	100.9821	GEN600001 2-SHERBURNE CNTY G2
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	100.6855	GEN620315 1-BIG STONE GEN
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	100.6114	GEN600002 3-SHERBURNE CNTY G3
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	100.3616	GEN661015 1-COYOTE
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	100.1146	GEN587293 1-G16-044-GEN10.6900
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	100	GEN657748 1-YOUNG 2 GENERATOR
3	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34754	99.9	GEN659125 1-COVEY
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.32686	99.5	MCCOOL - MOORE 345KV CKT 1
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	99.4	GEN562714 1-G15_023_4 0.6900
3	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720.0	720.0	0.34772	99.4	GEN562715 1-G15_023_5 0.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46426	166.9846	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.41866	155.7054	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.41865	149.3466	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34042	149.3358	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34045	146.0077	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34565	144.8771	STORLA - WESSINGTON 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34223	144.8754	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34479	144.172	HANLON - STORLA 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34249	143.5076	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34554	143.0502	FT THOMPSON - LETCHER 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34042	142.8702	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34249	142.7247	NUNDRWD - WAYSIDE 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34365	142.5332	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	142.3306	GEN640009 1-COOPER NUCLEAR STATION
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33002	142.2834	GRAND ISLAND - SWEETWATER 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34274	142.246	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	142.201	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	142.1877	GEN336153 1-WATERFORD UNIT#3
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34289	142.1105	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34183	142.0981	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34482	142.0646	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	141.9582	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	141.9144	GEN335831 1-RIVERBEND UNIT#1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	141.9043	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34205	141.8219	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34323	141.73	FT RANDAL - UTICA JCT 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34253	141.6838	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34532	141.6705	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34532	141.6705	MINGO - RED WILLOW 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	141.6582	GEN635024 4-WALTER SCOTT UNIT 4
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34569	141.6126	STORLA - WESSINGTON 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34516	141.5461	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34205	141.4941	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33929	141.4753	HOSKINS - SHELL CREEK 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34286	141.4081	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34286	141.4081	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34280	141.3809	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34301	141.3346	FARGO - JAMES TOWN 230KV CKT 2
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34280	141.3099	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34515	141.2824	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34156	141.2777	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34281	141.2688	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	141.2277	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34309	141.1974	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	141.1374	GEN337653 1-WHITE BLUFF UNIT #2
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	141.1271	GEN337652 1-WHITE BLUFF UNIT #1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34340	141.1171	OAHE - PHILIP TAP 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34387	141.1079	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	141.1015	GEN338146 1-INDEPENDENCE UNIT #2
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	141.0959	GEN338143 1-INDEPENDENCE UNIT #1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	141.0233	GEN635023 3-WALTER SCOTT UNIT 3
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34256	141.016	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34261	141.0159	BYRON - NORTH ROCHESTER 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34226	141.0102	SIDNEY - STEGALL 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34515	140.9298	FT RANDAL - LAKE PLATT 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34286	140.9159	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.8865	GEN501801 1-DOLET HILLS UNIT1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34331	140.8836	GAVINS POINT - YANKON JCT 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34331	140.8836	GAVINS POINT - YANKON JCT 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34238	140.8757	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.8559	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	140.8516	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34286	140.8241	FT RANDAL - SPENCER 115KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34483	140.8206	HANLON - STORLA 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34309	140.8029	AUDUBON - SHEYNNE 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34336	140.7149	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34336	140.7114	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34336	140.7114	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34616	140.6851	FT THOMPSON - HURON 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34616	140.6851	FT THOMPSON - HURON 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34616	140.6851	FT THOMPSON - HURON 230KV CKT 2
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34616	140.6851	FT THOMPSON - HURON 230KV CKT 2
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34336	140.6848	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34336	140.6848	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34480	140.6675	LETCHER - SIOUX FALLS 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34156	140.6573	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34156	140.6236	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.6044	GEN336252 1-NINEMILE POINT UNIT#5
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.5997	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.5992	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.5636	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34318	140.5539	MENNO JCT - TRIPP JCT 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35754	140.5377	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.5367	GEN501813 1-RODEMACHER UNIT 3
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35750	140.5314	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34203	140.5067	HIGHLND 3 345.00 - RAUN 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.4844	GEN344897 4-1LAB G4 20.000
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.4801	GEN344894 1-1LAB G1 20.000
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34259	140.4801	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.4796	GEN344896 3-1LAB G3 20.000
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34318	140.4462	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34262	140.4235	BYRON - PLEASANT VALLEY 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.4055	GEN336831 1-BAXTER WILSON SES
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.4033	GEN344895 2-1LAB G2 20.000
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.3868	GEN336251 1-NINEMILE POINT UNIT#4
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34315	140.3722	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.3668	GEN635213 3-NEAL UNIT 3
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.3578	GEN345670 1-1RUSH G1 18.000
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.3573	GEN345671 2-1RUSH G2 18.000
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34407	140.3195	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.3004	GEN337041 1-GERALD ANDRUS
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34319	140.2991	BALTA - RAMSEY 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.2984	GEN335206 1-NELSON UNIT 6
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34302	140.2857	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34302	140.2857	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34253	140.2789	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34253	140.2789	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34306	140.2723	BISMARK - JAMES TOWN 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.2704	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34313	140.2587	BALTA - MCHENRY 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34319	140.1965	ELM CREEK - MONTICELLO 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34259	140.1716	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.1694	GEN635214 4-NEAL UNIT 4
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34306	140.1562	JAMES TOWN - WEBER 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34558	140.1315	FT THOMPSON - LETCHER 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34514	140.1297	STAPLETON - THEDFORD 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.1031	GEN501812 1-RODEMACHER UNIT 2
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34318	140.0938	PRAIRIE - RAMSEY 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34306	140.0862	BISMARK - WEBER 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34284	140.0829	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	140.0635	GEN334440 1-SABINE UNIT 4
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34352	140.0112	CALLAWAY - MAXWELL 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34613	139.9695	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34284	139.9691	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34315	139.9563	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34309	139.9504	AUDUBON - HUBBARD 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	139.9445	GEN336191 1-LITTLE GYPSY UNIT#3
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34370	139.9186	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34284	139.9031	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	139.9009	GEN334441 1-SABINE UNIT 5
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	139.8838	GEN335204 1-NELSON UNIT 4
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34284	139.8641	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34284	139.8641	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34298	139.8356	EAGLE - PHILIP 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34347	139.832	P12:230:UMZW:# 166 #: PL IN SD. TAP
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34347	139.832	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34850	139.8007	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34347	139.7829	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34347	139.7829	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34423	139.7776	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34296	139.7282	G16-034-TAP 345.00 - KEYSTONE 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34298	139.6876	EAGLE - MARTIN 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34664	139.6834	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34344	139.6823	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34344	139.6823	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34436	139.6414	MINGO - SETAB 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34436	139.6414	MINGO - SETAB 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	139.6271	GEN587363 1-G16-055-GEN10.6900
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34325	139.6242	CANBY - GRANITE FALLS 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34325	139.6242	CANBY - GRANITE FALLS 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	139.6235	GEN640009 1-COOPER NUCLEAR STATION
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34337	139.6228	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34337	139.6228	LAWRENCE - SIOUX FALLS 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34380	139.5969	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34380	139.5969	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34380	139.5969	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34380	139.5969	FT THOMPSON - OAHE 230KV CKT 2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34045	139.5824	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34297	139.5806	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34322	139.5713	MARTIN - SHANNON 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	139.57	GEN587443 1-G16-064-GEN10.6900
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34382	139.5412	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34382	139.5412	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34382	139.5412	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34382	139.5412	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34178	139.5117	HOSKINS - RAUN 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34178	139.5117	HOSKINS - RAUN 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34331	139.4998	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34330	139.4926	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34394	139.477	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34301	139.4633	P13:115-230:TSGT:SIDNEY-KV1A
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34302	139.4236	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34302	139.4234	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34302	139.4189	P13:230-345:NPPD:SIDNEY 3:KV2A
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34270	139.4059	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34311	139.4021	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34311	139.4021	P12:230:UMZW:# 158 #: MH IN ND.
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	139.3843	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34375	139.3817	PAHOJA - SIOUX FALLS 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	139.3812	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	139.3812	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34471	139.3574	HANLON - SIOUX FALLS 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34335	139.3471	AXTELL - SWEETWATER 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34514	139.3424	MAXWELL - STAPLETON 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	139.3337	AINSWORTH WIND 34KV SWITCHED SHUNT
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	139.3274	GEN642067 1-PLATTE
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	139.3167	AINSWORTH WIND 34KV SWITCHED SHUNT
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	139.2449	ANSON - SPLIT ROCK 115KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	139.2417	ANSON 115/17.5KV TRANSFORMER CKT 4
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34389	139.219	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	139.1845	ANSON - SPLIT ROCK 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	139.1839	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34394	139.1472	RASMUSN - SIOUX CITY 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34308	139.1316	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34286	139.1162	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34270	139.0984	KELLY - SHELL CREEK 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34270	139.0882	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34270	139.0882	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34185	138.9998	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33008	138.8945	GRAND ISLAND - SWEETWATER 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34052	138.8593	HOSKINS - SHELL CREEK 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34375	138.8441	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	138.8416	GEN531447 1-HOLCOMB GENERATOR
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	138.7912	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34308	138.7355	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	138.7289	GEN563222 1-G15088_3 0.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34668	138.7172	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	138.6955	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	138.6728	GEN635024 4-WALTER SCOTT UNIT 4
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34308	138.6574	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34234	138.6424	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34234	138.6424	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34386	138.5948	BISON - HETINGER 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34386	138.5799	BISON - MAURINE 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34454	138.5619	MISSION - ST FRANCIS 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34458	138.5231	FT RANDAL - UTICA JCT 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34391	138.5116	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34519	138.4754	FT RANDAL - FT THOMPSON 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34144	138.4752	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34277	138.4675	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34565	138.4564	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	138.4292	GEN645012 2-NEBRASKA CITY 2
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33528	138.4036	COLUMWEST - KELLY 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	138.3952	1222-AINSWORTH WIND
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	138.3952	2516-WATERTNCAP 4230.00
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	138.3952	2560-BRDLAND-LNX3345.00
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	138.3952	2561-BRDLAND-LNX3345.00
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	138.3952	BASE CASE
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34454	138.385	HARMONY - ST FRANCIS 115KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34208	138.3561	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34617	138.3239	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	138.3146	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34377	138.3053	MAXWELL - NORTH PLATTE 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34430	138.2827	CLEARWATER - ONEILL 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	138.252	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	138.2518	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	138.2492	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34518	138.2407	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34345	138.2241	COLUMEAST - SHELL CREEK 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34162	138.1909	GRAND ISLAND - RIVERDALE 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34454	138.1767	HARMONY - VALENTINE 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34643	138.1561	STAPLETON - THEDFORD 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	138.1284	GEN641089 2-ENERGY CENTER 2
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	138.1249	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34965	138.1178	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34487	138.0783	CALLAWAY - MAXWELL 115KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	138.0737	GEN336821 1-GRAND GULF UNIT
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	138.0724	GEN635023 3-WALTER SCOTT UNIT 3
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34277	138.0506	G15088_T 345.00 - MOORE 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	138.0299	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	138.0215	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	138.015	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34208	138.0145	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	138.0042	GEN587353 1-G16-050-GEN10.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34430	137.9821	CLEARWATER - NELIGH 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34384	137.9363	GAVINS POINT - HARTINGTON 115KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34518	137.8969	FT RANDAL - LAKE PLATT 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34288	137.8674	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34288	137.8674	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34287	137.8644	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34287	137.8644	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34473	137.822	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34576	137.8102	BASSETT 7115.00 - STUART 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34565	137.73	MINGO - SETAB 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34576	137.7172	AINSWORTH - BASSETT 7115.00 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34202	137.707	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34202	137.707	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34202	137.7056	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34202	137.7056	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34484	137.6869	LETCHER - SIOUX FALLS 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34117	137.6794	SUB 3454 - WAGENER 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34117	137.6794	SUB 3454 - WAGENER 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	137.662	GEN587363 1-G16-055-GEN10.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34576	137.6197	ATKINSON - STUART 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	137.6125	GEN587443 1-G16-064-GEN10.6900
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34215	137.5977	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34382	137.585	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34643	137.4971	MAXWELL - STAPLETON 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34452	137.4438	JEFFREY - NORTH PLATTE 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33528	137.4265	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34668	137.4164	AINSWORTH - AINSWORTH 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34141	137.3717	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34141	137.3717	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34473	137.363	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34410	137.329	FT RANDAL - SIOUX CITY 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34576	137.3288	ATKINSON - EMMET 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34487	137.3201	BROKEN BOW - CALLAWAY 115KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34427	137.2941	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34143	137.2619	103RD & ROKEBY - MOORE 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34143	137.2619	103RD & ROKEBY - MOORE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35900	137.178	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35896	137.1769	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	137.1742	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	137.1705	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	137.1514	GEN344225 1-1CAL G1 25.000
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34536	137.1129	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	136.9851	GEN640009 1-COOPER NUCLEAR STATION
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34168	136.9807	COOPER - MOORE 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	136.8137	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	136.8018	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	136.7938	GEN645012 2-NEBRASKA CITY 2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	136.744	GEN336153 1-WATERFORD UNIT#3
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34499	136.7223	FT THOMPSON - OAHE 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34499	136.7223	FT THOMPSON - OAHE 230KV CKT 2
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34501	136.693	FT THOMPSON - OAHE 230KV CKT 3
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34501	136.693	FT THOMPSON - OAHE 230KV CKT 4
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	136.6883	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	136.6762	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	136.6755	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	136.6691	GEN659270 1-WEST SW
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	136.6397	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	136.6228	GEN562872 1-G15046_3 0.6900
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	136.6198	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34394	136.5736	KELLY - SHELL CREEK 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34394	136.5666	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	136.5591	GEN615015 1-GRE-SPRITWDG13.200
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34322	136.5542	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34322	136.5507	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	136.547	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	136.5425	BASE CASE
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34598	136.5233	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	136.5223	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	136.4543	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34397	136.4493	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	136.4205	LADISH 115/13.2KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	136.4057	GEN910006 1-G12_012IS_3 0.6900
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34322	136.3999	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	136.3844	GEN335831 1-RIVERBEND UNIT#1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34357	136.383	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34378	136.3828	PAHOJA - SIOUX FALLS 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34474	136.3641	HANLON - SIOUX FALLS 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34442	136.3623	BLAIR - GRANITE FALLS 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34262	136.2432	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34288	136.2303	GRAND ISLAND - RIVERDALE 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34495	136.2268	MAXWELL - NORTH PLATTE 115KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	136.2148	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34144	136.2138	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	136.2075	GEN587053 1-G16-007-GEN10.6500
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	136.1849	GEN 10648 1-G830_GEN 0.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34401	136.1826	G15088_T 345.00 - MOORE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	136.1678	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34273	136.1425	RAUN - SIOUX CITY 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34397	136.1243	RASMUSN - SIOUX CITY 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34536	136.1229	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34536	136.1184	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34536	136.1182	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34536	136.1165	BROADLAND - HURON 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	135.958	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	135.9552	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	135.9391	GEN563222 1-G15088_3 0.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34412	135.9231	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34412	135.9196	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34054	135.887	HOSKINS - SHELL CREEK 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34568	135.8765	MINGO - SETAB 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	135.8732	GEN659010 4-G07_027IS_2 0.6900
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	135.8621	GEN652460 4-GARRISON
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	135.8621	GEN652461 5-GARRISON
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	135.861	GEN659366 3-WILTON 3 W0.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34326	135.8399	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34326	135.8385	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34378	135.8269	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	135.768	GEN652457 1-GARRISON
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	135.768	GEN652458 2-GARRISON
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	135.768	GEN652459 3-GARRISON
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	135.7612	GEN659194 1-NDPRAIRWND1W0.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34242	135.722	SUB 3454 - WAGENER 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33646	135.7187	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	135.6922	GEN659403 1-NDSUNFLWR W0.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34338	135.6835	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34536	135.6749	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34445	135.6333	COOPER - FAIRPORT 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34462	135.6032	FT RANDAL - UTICA JCT 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	135.5889	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34569	135.562	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34441	135.5336	COPSTJCPFRSJ
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34441	135.5336	STMDSJFAFACO
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	135.5253	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	135.525	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	135.5229	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34968	135.5042	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34265	135.4964	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	135.4685	MISSION - ST FRANCIS 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34543	135.4362	OAHE - SULLEY BUTTE 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34442	135.3988	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34646	135.3919	STAPLETON - THEDFORD 115KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	135.3689	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34266	135.366	103RD & ROKEBY - MOORE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34433	135.3549	CLEARWATER - ONEILL 115KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	135.3538	GEN641089 2-ENERGY CENTER 2
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	135.3528	GEN652545 7-BIG BEND
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	135.3497	HARMONY - ST FRANCIS 115KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34491	135.3207	CALLAWAY - MAXWELL 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34543	135.3091	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34543	135.292	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34348	135.2858	COLUMEAST - SHELL CREEK 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34543	135.2653	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34543	135.2653	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34442	135.2452	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	135.2392	GEN542962 2-IATAN UNIT #2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	135.2001	GEN587353 1-G16-050-GEN10.6900
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	135.1741	GEN659411 1-CAMPBLCNTY W0.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34443	135.1587	COOPER - ST JOE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34498	135.1293	CARPENTER - HURON 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34660	135.1223	OAHE - SULLEY BUTTE 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34498	135.0968	HURON - WATERTOWN 230KV CKT 2
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34289	135.0803	COOPER - MOORE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34445	135.0642	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34445	135.0624	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34373	135.0496	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34387	135.0486	GAVINS POINT - HARTINGTON 115KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34580	135.0363	BASSETT 7115.00 - STUART 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	135.0202	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34651	135.0163	GLENHAM - L3 HAWDON 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34433	135.0055	CLEARWATER - NELIGH 115KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34580	134.9898	AINSWORTH - BASSETT 7115.00 115KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	134.9884	GEN542957 1-IATAN UNIT #1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34660	134.9551	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34660	134.9464	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34660	134.9458	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34445	134.9428	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.9224	GEN652544 5-BIG BEND
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.9193	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34660	134.9191	GLENHAM - WHITLOK 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.8998	GEN652543 3-BIG BEND
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.8995	GEN652542 1-BIG BEND
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34671	134.881	AINSWORTH - AINSWORTH 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.8657	GEN563232 1-G15089_3 0.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	134.8365	GEN587363 1-G16-055-GEN10.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34580	134.8362	ATKINSON - STUART 115KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	134.7807	GEN587443 1-G16-064-GEN10.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34377	134.7463	CROOKED CREEK - RIVERDALE 230KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	134.7443	GEN672321 1-SHAND GENERATOR 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34528	134.7252	HOLCOMB - SETAB 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.7244	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	134.7126	GEN672310 1-POPLAR RIVER GENERATOR 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	134.7126	GEN672311 2-POPLAR RIVER GENERATOR 2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34456	134.6607	JEFFREY - NORTH PLATTE 115KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34646	134.6578	MAXWELL - STAPLETON 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	134.6224	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	134.6113	GEN659110 1-LELAND OLDS UNIT1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34476	134.5964	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	134.584	GEN659453 1-GI1414GEN W0.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.5623	GEN652906 1-G09_006IS_3 0.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.5621	GEN600004 2-PRAIRIE ISLAND G2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34580	134.5587	ATKINSON - EMMET 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.5571	GEN600003 1-PRAIRIE ISLAND G1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	134.4812	GEN659141 1-K10215A
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.4605	GEN672321 1-SHAND GENERATOR 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34491	134.4432	BROKEN BOW - CALLAWAY 115KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	134.4139	GEN615010 1-STANTON4
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.4029	GEN672310 1-POPLAR RIVER GENERATOR 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.4029	GEN672311 2-POPLAR RIVER GENERATOR 2
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.3864	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.3558	GEN652907 1-G09_007IS_3 0.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34539	134.3305	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	134.3254	STANTON 230/18.0KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.3046	GEN659296 2-SDPRAIRWND1W0.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.2631	GEN600006 1-AS KING
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34469	134.2444	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34262	134.2221	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.2189	GEN615010 1-STANTON4
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.2081	GEN659110 1-LELAND OLDS UNIT1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34466	134.1939	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	134.1795	GEN659118 1-LARAMIE RIVER UNIT1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.1638	GEN659453 1-GI1414GEN W0.6900
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	134.1478	GEN657749 1-YOUNG 1 GENERATOR
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.0925	GEN652556 2-OAHE
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.0925	GEN652557 4-OAHE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.0925	GEN652558 6-OAHE
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.0872	GEN659141 1-K10215A
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34360	134.0639	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	134.0475	GEN587653 1-J526-GEN1 0.6900
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	134.0225	GEN659407 1-ANTELPHILLSW0.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	133.9899	GEN652173 1-G09_001IS_2 0.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	133.8197	GEN587633 1-J510-GEN1 18.000
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34397	133.8028	KELLY - SHELL CREEK 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34397	133.7957	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	133.7641	GEN659407 1-ANTELPHILLSW0.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34447	133.7516	SUB 3455 - SUB 3740 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	133.739	BASE CASE
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	133.649	GEN657749 1-YOUNG 1 GENERATOR
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	133.6144	GEN600005 1-MONTICELLO
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34404	133.6053	G15088_T 345.00 - MOORE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34539	133.5359	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34539	133.5341	BROADLAND - HURON 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34539	133.5341	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34539	133.531	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	133.4486	GEN587033 1-G16-004-GEN10.6900
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	133.4411	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34498	133.4327	MAXWELL - NORTH PLATTE 115KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	133.4059	GEN600000 1-SHERBURNECNTY G1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	133.3725	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	133.3283	GEN587033 1-G16-004-GEN10.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34292	133.3119	GRAND ISLAND - RIVERDALE 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34600	133.2702	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34416	133.1201	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34539	133.1176	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34415	133.1166	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34449	133.1093	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34329	133.0142	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34329	133.0127	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34431	132.9905	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34265	132.9808	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34449	132.9609	COOPER - FAIRPORT 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33648	132.9513	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	132.9106	GEN659118 1-LARAMIE RIVER UNIT1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34341	132.8807	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34444	132.8378	STMDSJFAFACO
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34444	132.8377	COPSTJCPFRSJ
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	132.7867	GEN620315 1-BIG STONE GEN
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34245	132.7759	SUB 3454 - WAGENER 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34269	132.7635	103RD & ROKEBY - MOORE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	132.7267	GEN661015 1-COYOTE
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	132.7138	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34292	132.7137	COOPER - MOORE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	132.6645	GEN600002 3-SHERBURNE CNTY G3
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34268	132.6633	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34447	132.5739	COOPER - ST JOE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34662	132.4846	OAHE - SULLEY BUTTE 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34449	132.4657	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34449	132.459	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	132.4223	GEN600001 2-SHERBURNE CNTY G2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34662	132.3804	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34662	132.3648	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34662	132.3648	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34653	132.3546	GLENHAM - L3 HAWDON 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34662	132.2993	GLENHAM - WHITLOK 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34449	132.2827	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	132.243	GEN652545 7-BIG BEND
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	132.1514	GEN652544 5-BIG BEND
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	132.1402	GEN652543 3-BIG BEND
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	132.14	GEN652542 1-BIG BEND
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	132.0836	GEN563232 1-G15089_3 0.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	132.0773	GEN657748 1-YOUNG 2 GENERATOR
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	132.0552	GEN661015 1-COYOTE
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	132.0221	GEN 11123 1-G736-GEN1 0.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	132.0154	GEN 11133 1-J442-GEN1 0.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.7863	GEN652906 1-G09_006IS_3 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.7818	GEN600004 2-PRAIRIE ISLAND G2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.777	GEN600003 1-PRAIRIE ISLAND G1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.7645	GEN659411 1-CAMPBLCNTY W0.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	131.76	GEN659111 2-LELAND OLDS UNIT2
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	131.6976	GEN657748 1-YOUNG 2 GENERATOR
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.6223	GEN659296 2-SDPRAIRWND1W0.6900
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	131.5744	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.5674	GEN652907 1-G09_007IS_3 0.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.505	GEN600006 1-AS KING
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46919	131.4717	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.4575	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.4535	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.3936	GEN659110 1-LELAND OLDS UNIT1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.3891	GEN615010 1-STANTON4
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	131.3765	GEN659103 1-ANTELOPE VALLEY UNIT1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	131.3765	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.3429	GEN652556 2-OAHE
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.3429	GEN652557 4-OAHE
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.3429	GEN652558 6-OAHE
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.3421	GEN659453 1-GI1414GEN W0.6900
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36076	131.2807	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36076	131.2728	2810X2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.2605	GEN659141 1-K10215A
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.2535	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34265	131.2398	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	131.1957	GEN587653 1-J526-GEN1 0.6900
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	131.1356	GEN659103 1-ANTELOPE VALLEY UNIT1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	131.1356	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	130.9818	GEN659407 1-ANTELPHILLSW0.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	130.957	GEN587633 1-J510-GEN1 18.000
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36149	130.9324	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36149	130.9184	2810X2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	130.8665	GEN600005 1-MONTICELLO
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	130.7458	GEN587293 1-G16-044-GEN10.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	130.7429	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	130.6369	GEN600000 1-SHERBURNECNTY G1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	130.529	GEN587033 1-G16-004-GEN10.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36149	130.5216	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	130.4909	GEN659125 1-COVEY
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	130.3193	GEN620315 1-BIG STONE GEN
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	130.0603	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	130.0129	GEN600002 3-SHERBURNE CNTY G3
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	130.0028	GEN659118 1-LARAMIE RIVER UNIT1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	129.8737	GEN600001 2-SHERBURNE CNTY G2
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	129.8152	GEN615001 1-COAL CREEK
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	129.6723	GEN615002 2-COAL CREEK
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.32272	129.6553	MCCOOL - MOORE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	129.1685	GEN659111 2-LELAND OLDS UNIT2
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	128.8405	GEN587133 1-G16-017-GEN10.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	128.7563	GEN659103 1-ANTELOPE VALLEY UNIT1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	128.7563	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36148	128.6666	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36148	128.6523	2810X2
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	128.6486	GEN587133 1-G16-017-GEN10.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36148	128.3908	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	128.1105	GEN587293 1-G16-044-GEN10.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	127.9058	GEN659125 1-COVEY
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.32374	127.366	MCCOOL - MOORE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	126.9729	GEN615001 1-COAL CREEK
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	126.9381	GEN615002 2-COAL CREEK
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36149	126.3636	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	126.2665	GEN587133 1-G16-017-GEN10.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36149	126.1361	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36149	126.1082	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.32375	125.758	MCCOOL - MOORE 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	125.7001	GEN562714 1-G15_023_4 0.6900
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	125.7001	GEN562715 1-G15_023_5 0.6900
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.31839	125.431	GRAND ISLAND - MCCOOL 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	124.742	GEN562714 1-G15_023_4 0.6900
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	124.742	GEN562715 1-G15_023_5 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36148	124.0511	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36148	124.0093	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36148	124	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.31936	122.7993	GRAND ISLAND - MCCOOL 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.42328	122.1891	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	122.0923	GEN562714 1-G15_023_4 0.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	122.0923	GEN562715 1-G15_023_5 0.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.31937	121.1897	GRAND ISLAND - MCCOOL 345KV CKT 1
3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34453	119.9296	GEN652353 2-GR PRAIRIEG 0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.47071	119.5208	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34328	119.0092	GEN652353 2-GR PRAIRIEG 0.6900
3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34457	117.7036	GEN652353 2-GR PRAIRIEG 0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34377	117.4618	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33277	114.5676	GRAND ISLAND - SWEETWATER 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34514	114.4717	SPLIT ROCK - WHITE 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34914	114.4532	STORLA - WESSINGTON 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34822	113.8095	HANLON - STORLA 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34666	113.6062	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34503	113.576	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34906	113.1831	FT THOMPSON - LETCHER 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34564	113.0061	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34377	112.9258	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	112.8229	GEN635024 4-WALTER SCOTT UNIT 4
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34693	112.673	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	112.3624	GEN635023 3-WALTER SCOTT UNIT 3
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.42386	112.3217	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34872	112.2319	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34870	112.194	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34523	112.1847	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34523	112.0965	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34627	112.0437	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34820	111.9929	LETCHER - SIOUX FALLS 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	111.9674	GEN336821 1-GRAND GULF UNIT
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34870	111.9567	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34627	111.9402	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34733	111.9317	FT RANDAL - SIOUX CITY 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34627	111.9147	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	111.8559	GEN640009 1-COOPER NUCLEAR STATION
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34604	111.6599	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	111.6412	GEN344225 1-1CAL G1 25.000
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34604	111.5896	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34604	111.5893	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34564	111.4309	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34718	111.4293	RASMUSN - UTICA JCT 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	111.3911	GEN563222 1-G15088_3 0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34736	111.3184	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	111.2757	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34698	111.2701	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34718	111.2483	RASMUSN - SIOUX CITY 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	111.2428	GEN336153 1-WATERFORD UNIT#3
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34371	111.1924	HOSKINS - SHELL CREEK 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34349	111.1853	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34803	111.1802	HANLON - SIOUX FALLS 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34593	111.0712	RAUN - SIOUX CITY 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	111.0624	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34578	111.0496	NUNDRWD - WAYSIDE 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	111.0348	GEN335831 1-RIVERBEND UNIT#1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.9949	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34698	110.9238	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.9171	GEN641089 2-ENERGY CENTER 2
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34930	110.8778	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34665	110.8002	COLUMEAST - SHELL CREEK 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34690	110.759	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.75	GEN587353 1-G16-050-GEN10.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36165	110.7224	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.7215	GEN337653 1-WHITE BLUFF UNIT #2
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36161	110.7193	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33228	110.6567	GRAND ISLAND - SWEETWATER 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34753	110.6397	CLEARWATER - ONEILL 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34783	110.6371	FT RANDAL - UTICA JCT 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34980	110.6261	MINGO - RED WILLOW 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.6163	GEN645012 2-NEBRASKA CITY 2
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.6057	GEN501801 1-DOLET HILLS UNIT1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.5971	GEN337652 1-WHITE BLUFF UNIT #1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34753	110.5891	CLEARWATER - NELIGH 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.5739	GEN338146 1-INDEPENDENCE UNIT #2
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.5738	GEN338143 1-INDEPENDENCE UNIT #1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34914	110.5696	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34758	110.5521	BLAIR - GRANITE FALLS 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.5479	GEN645011 1-NEBRASKA CITY 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.531	GEN542962 2-IATAN UNIT #2
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34966	110.5192	STAPLETON - THEDFORD 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.4611	GEN587363 1-G16-055-GEN10.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.4225	GEN501813 1-RODEMACHER UNIT 3
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.4174	GEN587443 1-G16-064-GEN10.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34703	110.3828	GAVINS POINT - HARTINGTON 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.3608	GEN344897 4-1LAB G4 20.000
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.3605	GEN344894 1-1LAB G1 20.000
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.3603	GEN344896 3-1LAB G3 20.000
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34687	110.3567	CROOKED CREEK - RIVERDALE 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.3323	GEN344895 2-1LAB G2 20.000
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.3261	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.3244	GEN335206 1-NELSON UNIT 6
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.3236	GEN345670 1-1RUSH G1 18.000
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.3234	GEN345671 2-1RUSH G2 18.000
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34828	110.2991	CARPENTER - HURON 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34759	110.2743	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34792	110.2718	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34768	110.2505	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.2499	GEN336252 1-NINEMILE POINT UNIT#5
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.2439	GEN501812 1-RODEMACHER UNIT 2
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34828	110.2138	HURON - WATERTOWN 230KV CKT 2
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.2118	GEN336831 1-BAXTER WILSON SES
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34896	110.2021	BASSETT 7115.00 - STUART 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34759	110.2016	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35279	110.2002	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34896	110.1975	AINSWORTH - BASSETT 7115.00 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34755	110.1824	DENISON - SIOUX CITY 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.1762	GEN337041 1-GERALD ANDRUS
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34828	110.165	CARPENTER - WATERTOWN 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34792	110.162	WINNER - WITTEN 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34896	110.1618	ATKINSON - STUART 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.1473	GEN542957 1-IATAN UNIT #1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.1435	GEN336251 1-NINEMILE POINT UNIT#4
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34768	110.1369	MENNO JCT - TRIPP JCT 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34966	110.1263	MAXWELL - STAPLETON 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34896	110.1237	ATKINSON - EMMET 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.1138	GEN334440 1-SABINE UNIT 4
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34703	110.0922	BELDEN - HARTINGTON 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34896	110.0887	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	110.0839	GEN562547 1-G14_039_3 0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34882	110.0323	MINGO - SETAB 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34805	110.0186	CALLAWAY - MAXWELL 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34829	110.0138	AXTELL - PAULINE 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	109.9862	GEN563212 1-G15087_3 0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	109.4309	BASE CASE
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34712	109.1571	KELLY - SHELL CREEK 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34712	109.1554	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34624	109.1194	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34907	109.0786	STORLA - WESSINGTON 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34720	108.9411	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34657	108.9283	CENTRAL CITY - CLARKS 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34743	108.908	FAIRBURY - G15087_T 115.00 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34735	108.8577	CRETE - FRIEND 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34675	108.841	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34689	108.7514	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.7387	GEN600017 C-LS POWER CT
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.7071	GEN659270 1-WEST SW
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34657	108.7001	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34764	108.6967	COOPER - FAIRPORT 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34583	108.6933	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34747	108.6894	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34693	108.6872	ATCHSNT3 345.00 - COOPER 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.6744	GEN615052 1-CAMBRIDGE GENERATING STATION
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.6598	GEN660016 1-B_H WIND 0.7000
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34999	108.6372	OAHE - SULLEY BUTTE 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34989	108.5918	GLENHAM - L3 HAWDON 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.5743	GEN659291 1-FT MP COLLECTOR
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.572	GEN 11104 1-J262_GEN 0.6000
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.572	GEN 11108 1-J263_GEN 0.6000
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.5695	GEN662101 1-WESSINGTON190.5750
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34559	108.5676	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.564	GEN562872 1-G15046_3 0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34760	108.561	COPSTJCPFRSJ
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34760	108.561	STMDSJFAFACO
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34999	108.5585	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34999	108.5582	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34999	108.5582	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.541	GEN615015 1-GRE-SPRITWDG13.200
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34720	108.523	G15088_T 345.00 - MOORE 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.5176	GEN600067 9-HIGH BRIDGE
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.5145	GEN615021 1-GRE-ER 14G 16.000
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34999	108.4932	GLENHAM - WHITLOK 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.4671	GEN657705 X-DRAYTON
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34577	108.4606	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.4516	GEN587623 1-J493-GEN1 0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.3955	GEN910006 1-G12_012IS_3 0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.3676	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.3676	GEN672304 4-BOUNDARY DAM GENERATOR 4
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.3676	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.3594	GEN587053 1-G16-007-GEN10.6500
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.3542	GEN 10648 1-G830_GEN 0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34809	108.3496	HANLON - STORLA 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34762	108.3478	COOPER - ST JOE 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34577	108.3265	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34577	108.306	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34764	108.305	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34764	108.2959	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.282	GEN672392 1-NBECGT1G 18.000
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.2802	GEN681542 6-JP MADGETT
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.2264	GEN652461 5-GARRISON
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.2263	GEN652460 4-GARRISON
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.2055	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34764	108.1973	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.1914	GEN652457 1-GARRISON
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.1914	GEN652458 2-GARRISON
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.1914	GEN652459 3-GARRISON
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.1911	GEN587593 1-J460-GEN1 0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34560	108.1818	SUB 3454 - WAGENER 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.1727	GEN659010 4-G07_027IS_2 0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.1617	GEN659366 3-WILTON 3 W0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.1292	GEN659194 1-NDPRAIRWND1W0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	108.034	GEN659403 1-NDSUNFLWR W0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34580	108.0115	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.9936	GEN 11123 1-G736-GEN1 0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.9905	GEN 11133 1-J442-GEN1 0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.9835	GEN652559 1-OAHE
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34585	107.9269	103RD & ROKEBY - MOORE 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33969	107.9226	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34657	107.8936	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.8923	GEN652906 1-G09_006IS_3 0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.8374	GEN563232 1-G15089_3 0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.8365	GEN659411 1-CAMPBLCNTY W0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.8195	GEN659110 1-LELAND OLDS UNIT1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34897	107.8162	FT THOMPSON - LETCHER 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.7118	GEN652907 1-G09_007IS_3 0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.711	GEN659296 2-SDPRAIRWND1W0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34480	107.6571	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34607	107.6256	COOPER - MOORE 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.484	GEN652556 2-OAHE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.4834	GEN652558 6-OAHE
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.4639	GEN652557 5-OAHE
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.4333	GEN600004 2-PRAIRIE ISLAND G2
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.4299	GEN600003 1-PRAIRIE ISLAND G1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.4027	GEN659453 1-GI1414GEN W0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.3369	GEN615010 1-STANTON4
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.3243	GEN652173 1-G09_001IS_2 0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.2894	GEN659141 1-K10215A
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.2218	GEN587653 1-J526-GEN1 0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.1899	GEN600006 1-AS KING
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34535	107.1571	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.1364	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.1069	GEN672321 1-SHAND GENERATOR 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34535	107.0595	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34535	107.0591	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.0581	GEN672310 1-POPLAR RIVER GENERATOR 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.0581	GEN672311 2-POPLAR RIVER GENERATOR 2
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.0347	GEN659407 1-ANTELPHILLSW0.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.032	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	107.0154	GEN587633 1-J510-GEN1 18.000
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	106.9417	GEN635024 4-WALTER SCOTT UNIT 4
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34349	106.9081	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	106.8485	GEN659118 1-LARAMIE RIVER UNIT1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34519	106.8462	SPLIT ROCK - WHITE 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	106.7228	GEN657749 1-YOUNG 1 GENERATOR
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	106.6739	GEN620315 1-BIG STONE GEN
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	106.659	GEN587033 1-G16-004-GEN10.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	106.6301	GEN640009 1-COOPER NUCLEAR STATION
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34878	106.6187	FT RANDAL - FT THOMPSON 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	106.6164	GEN641089 2-ENERGY CENTER 2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34875	106.5842	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34559	106.5678	G09_001IST 345.00 - GROTON 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34807	106.5653	LETCHER - SIOUX FALLS 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	106.5324	GEN635023 3-WALTER SCOTT UNIT 3
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	106.5239	GEN600005 1-MONTICELLO
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34710	106.3921	FT RANDAL - SIOUX CITY 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34875	106.3672	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	106.3243	GEN600000 1-SHERBURNECNTY G1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36571	106.3112	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36571	106.3063	2810X2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34707	106.2645	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	106.1038	GEN659111 2-LELAND OLDS UNIT2
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	106.0898	GEN579459 1-G16-075-GEN10.6900
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36571	106.0755	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	106.0742	GEN563222 1-G15088_3 0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	106.0674	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34483	106.0031	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34483	105.9179	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34695	105.8888	RASMUSN - UTICA JCT 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	105.8427	GEN659103 1-ANTELOPE VALLEY UNIT1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	105.8427	GEN659107 2-ANTELOPE VALLEY UNIT2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	105.818	GEN344225 1-1CAL G1 25.000
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34787	105.8001	HANLON - SIOUX FALLS 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34903	105.79	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34951	105.7801	MINGO - RED WILLOW 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36110	105.7341	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36106	105.7297	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34695	105.7271	RASMUSN - SIOUX CITY 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34718	105.6907	ELLENDALE - OAKES 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	105.6241	GEN600001 2-SHERBURNE CNTY G2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34676	105.6067	PAHOJA - SIOUX FALLS 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	105.551	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	105.5236	GEN600002 3-SHERBURNE CNTY G3
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	105.4872	GEN336153 1-WATERFORD UNIT#3
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	105.3985	GEN587353 1-G16-050-GEN10.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34666	105.3786	CROOKED CREEK - RIVERDALE 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34560	105.3293	NUNDRWD - WAYSIDE 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34676	105.3202	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	105.3185	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	105.3176	GEN335831 1-RIVERBEND UNIT#1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	105.3017	GEN336821 1-GRAND GULF UNIT
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34807	105.2773	CARPENTER - HURON 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	105.277	GEN337653 1-WHITE BLUFF UNIT #2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34907	105.2744	FT THOMPSON - WESSINGTON 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34734	105.2734	CLEARWATER - ONEILL 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	105.2582	GEN542962 2-IATAN UNIT #2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34352	105.2443	HOSKINS - SHELL CREEK 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	105.2288	GEN642067 1-PLATTE
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34734	105.2273	CLEARWATER - NELIGH 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	105.2073	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34762	105.198	FT RANDAL - UTICA JCT 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34807	105.1908	HURON - WATERTOWN 230KV CKT 2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34559	105.1822	RAUN - SIOUX CITY 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34645	105.1697	COLUMEAST - SHELL CREEK 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34807	105.141	CARPENTER - WATERTOWN 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	105.136	GEN645012 2-NEBRASKA CITY 2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34670	105.1314	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	105.0894	GEN587363 1-G16-055-GEN10.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	105.0703	GEN645011 1-NEBRASKA CITY 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	105.0574	GEN661015 1-COYOTE
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	105.0508	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	105.0504	GEN587443 1-G16-064-GEN10.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.977	GEN501801 1-DOLET HILLS UNIT1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.9679	GEN337652 1-WHITE BLUFF UNIT #1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.9437	GEN338143 1-INDEPENDENCE UNIT #1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.9424	GEN338146 1-INDEPENDENCE UNIT #2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34739	104.9373	BLAIR - GRANITE FALLS 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34858	104.9137	MINGO - SETAB 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34625	104.8978	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34680	104.8722	GAVINS POINT - HARTINGTON 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.8336	GEN542957 1-IATAN UNIT #1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34944	104.828	STAPLETON - THEDFORD 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.8044	GEN501813 1-RODEMACHER UNIT 3
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35065	104.8041	FT THOMPSON - HURON 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35065	104.8041	FT THOMPSON - HURON 230KV CKT 2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34871	104.7995	AINSWORTH - STUART 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.7927	GEN344897 4-1LAB G4 20.000
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.7912	GEN344894 1-1LAB G1 20.000
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.791	GEN344896 3-1LAB G3 20.000
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.7665	GEN344895 2-1LAB G2 20.000
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34871	104.7663	ATKINSON - STUART 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.35278	104.7478	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.7411	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.7292	GEN345670 1-1RUSH G1 18.000
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.7289	GEN345671 2-1RUSH G2 18.000
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.7257	GEN335206 1-NELSON UNIT 6
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34871	104.7255	ATKINSON - EMMET 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34702	104.7084	GARRISON - JAMES TOWN 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34871	104.703	EMMET - ONEILL 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34735	104.697	DENISON - SIOUX CITY 230KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	104.6916	GEN657748 1-YOUNG 2 GENERATOR
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.6891	GEN562547 1-G14_039_3 0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34810	104.6693	AXTELL - PAULINE 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.6608	GEN501812 1-RODEMACHER UNIT 2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	104.6561	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34752	104.6495	MENNO JCT - TRIPP JCT 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34780	104.6314	BROKEN BOW - LOUP CITY 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34747	104.6241	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34680	104.5993	BELDEN - HARTINGTON 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.5982	GEN336252 1-NINEMILE POINT UNIT#5
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.5948	GEN563212 1-G15087_3 0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34752	104.5848	MENNO JCT - UTICA 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.5773	GEN336831 1-BAXTER WILSON SES
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34747	104.5573	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34750	104.5488	JEFFREY - NORTH PLATTE 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34777	104.5465	CALLAWAY - MAXWELL 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.5454	GEN641086 1-ENERGY CENTER
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	104.5056	GEN587293 1-G16-044-GEN10.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34944	104.4844	MAXWELL - STAPLETON 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	104.1966	GEN659125 1-COVEY

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	104.0115	BASE CASE
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34695	103.6566	KELLY - SHELL CREEK 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34695	103.6554	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34617	103.6025	HOSKINS - RAUN 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34671	103.5539	MOORE - NW68TH & HOLDREGE 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34720	103.5396	AURORA - GRAND ISLAND 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34641	103.4879	CENTRAL CITY - SILVER CREEK 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34725	103.484	FAIRBURY - HARBINE 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34704	103.481	G15088_T 345.00 - PAULINE 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.4628	GEN620324 3-HOOT LAKE 3 GEN
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34725	103.4411	FAIRBURY - G15087_T 115.00 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.4327	GEN672367 1-MERIDIAN GENERATOR 1 GT1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.4327	GEN672368 2-MERIDIAN GENERATOR 2 GT2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.4321	GEN672349 3-CORY COGEN GENERATOR 3 ST
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.4312	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.424	GEN672339 16-QE 16G 13.800
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.424	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.4238	GEN600050 1-FEP
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.4225	GEN659273 2-GROTON SYNC COND
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.4225	GEN659294 1-WILTONCOL9
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34565	103.4187	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.4136	GEN652558 6-OAHE
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34676	103.4135	SEWARD - TAMORA 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.3905	GEN587583 1-J432-GEN1 0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34676	103.3642	TAMORA - YORK 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.3525	GEN600065 7-HIGH BRIDGE
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.3525	GEN600066 8-HIGH BRIDGE
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34717	103.3508	CRETE - FRIEND 115KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.3464	GEN659192 6-LYNN
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.3455	GEN659162 4-RED WLCK
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.3455	GEN659163 5-BLACK WDCK
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	103.3248	GEN615001 1-COAL CREEK
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.3217	GEN660016 1-B_H WIND 0.7000
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.3207	GEN672393 2-NBECST2G 13.800
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34677	103.3171	ATCHSNT3 345.00 - COOPER 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.2964	GEN600014 4-BLACK DOG GEN 4
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.2951	GEN600067 9-HIGH BRIDGE
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.2924	GEN600011 5-BLACK DOG GEN 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.2908	GEN600071 10-RIVER SIDE
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.2907	GEN600070 9-RIVER SIDE
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.2906	GEN657985 1-ASH1GEN9 0.5750
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.2804	GEN600007 7-RIVERSIDE GEN 7
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.2653	GEN681522 3-GENOA 3
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.2457	GEN600017 C-LS POWER CT
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34641	103.2435	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	103.2419	GEN615002 2-COAL CREEK
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34747	103.231	COOPER - FAIRPORT 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.2097	GEN659291 1-FT MP COLLECTOR
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34998	103.2068	OAHE - SULLEY BUTTE 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.2067	GEN562872 1-G15046_3 0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.204	GEN662101 1-WESSINGTON190.5750
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.201	GEN615052 1-CAMBRIDGE GENERATING STATION
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34988	103.1836	GLENHAM - L3 HAWDON 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34730	103.1778	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34998	103.1397	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.136	GEN 11104 1-J262_GEN 0.6000
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.136	GEN 11108 1-J263_GEN 0.6000
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34998	103.1346	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34998	103.1346	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34660	103.1263	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.1038	GEN615015 1-GRE-SPRITWDG13.200
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34743	103.0919	COPSTJCPFRSJ
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34743	103.0918	STMDSJFAFACO
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34998	103.0828	GLENHAM - WHITLOK 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.0809	GEN910006 1-G12_012IS_3 0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34704	103.0491	G15088_T 345.00 - MOORE 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	103.0116	GEN615021 1-GRE-ER 14G 16.000
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34672	102.9973	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.9893	GEN587623 1-J493-GEN1 0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.9889	GEN587053 1-G16-007-GEN10.6500

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34772	102.9479	GEN587133 1-G16-017-GEN10.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.9354	GEN 10648 1-G830_GEN 0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.9298	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.9298	GEN672304 4-BOUNDARY DAM GENERATOR 4
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.9298	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33954	102.8753	COLUMWEST - KELLY 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.8737	GEN652906 1-G09_006IS_3 0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.8705	GEN652461 5-GARRISON
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.8704	GEN652460 4-GARRISON
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34745	102.8655	COOPER - ST JOE 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.8339	GEN652457 1-GARRISON
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.8339	GEN652458 2-GARRISON
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.8339	GEN652459 3-GARRISON
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.8153	GEN659010 4-G07_027IS_2 0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.8049	GEN659366 3-WILTON 3 W0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34747	102.802	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34747	102.7995	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.7861	GEN659194 1-NDPRAIRWND1W0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.7691	GEN587593 1-J460-GEN1 0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.7591	GEN672392 1-NBECGT1G 18.000
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.7424	GEN652907 1-G09_007IS_3 0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.7309	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34747	102.698	G15-005T 345.00 - SIBLEY 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.6933	GEN659403 1-NDSUNFLWR W0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.6071	GEN659110 1-LELAND OLDS UNIT1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.6	GEN681542 6-JP MADGETT
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.5644	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.5566	GEN563232 1-G15089_3 0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.5008	GEN659411 1-CAMPBLCNTY W0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34546	102.4719	SUB 3454 - WAGENER 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.4133	GEN652559 1-OAHE
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.3837	GEN659296 2-SDPRAIRWND1W0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34571	102.2251	103RD & ROKEBY - MOORE 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34570	102.1618	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.1614	GEN652556 2-OAHE
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.1423	GEN652557 5-OAHE
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.1158	GEN659453 1-GI1414GEN W0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	102.0481	GEN652173 1-G09_001IS_2 0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	101.9948	GEN659141 1-K10215A
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	101.8959	GEN615010 1-STANTON4
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	101.8692	GEN659118 1-LARAMIE RIVER UNIT1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34594	101.863	COOPER - MOORE 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	101.8407	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	101.7457	GEN659407 1-ANTELPHILLSW0.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	101.7416	GEN600004 2-PRAIRIE ISLAND G2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	101.7378	GEN600003 1-PRAIRIE ISLAND G1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	101.7333	GEN672321 1-SHAND GENERATOR 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36571	101.7308	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36571	101.7004	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36571	101.6957	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	101.6832	GEN672310 1-POPLAR RIVER GENERATOR 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	101.6832	GEN672311 2-POPLAR RIVER GENERATOR 2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.33954	101.6594	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	101.6277	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	101.5284	GEN600006 1-AS KING
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	101.3858	GEN587033 1-G16-004-GEN10.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	101.2751	GEN657749 1-YOUNG 1 GENERATOR
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	101.1658	GEN659111 2-LELAND OLDS UNIT2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	101.1178	GEN600005 1-MONTICELLO
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36623	101.0208	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36623	101.0146	2810X2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	100.9292	GEN659103 1-ANTELOPE VALLEY UNIT1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	100.9292	GEN659107 2-ANTELOPE VALLEY UNIT2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	100.8722	GEN579459 1-G16-075-GEN10.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.36623	100.8652	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	100.6145	GEN600000 1-SHERBURNECNTY G1
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	100.1379	GEN600001 2-SHERBURNE CNTY G2
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	99.9	GEN620315 1-BIG STONE GEN
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	99.8	GEN600002 3-SHERBURNE CNTY G3
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	99.6	GEN661015 1-COYOTE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	99.3	GEN587293 1-G16-044-GEN10.6900
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	99.2	GEN657748 1-YOUNG 2 GENERATOR
3	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.34754	99	GEN659125 1-COVEY
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50879	141.5285	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50697	138.6294	NUNDRWD - WAYSIDE 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50873	137.1257	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51501	137.0953	STORLA - WESSINGTON 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51386	136.149	HANLON - STORLA 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	135.7463	GEN562714 1-G15_023_4 0.6900
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	135.7463	GEN562715 1-G15_023_5 0.6900
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	135.4525	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51485	134.786	FT THOMPSON - LETCHER 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	134.36	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51091	134.157	ONEILL - SPENCER 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51159	134.0911	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51091	134.0402	FT RANDAL - SPENCER 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51159	133.9859	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50879	133.93	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51159	133.8258	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51278	133.6718	OAHE - PHILIP TAP 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51393	133.5442	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51393	133.5442	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51211	133.3502	FARGO - JAMES TOWN 230KV CKT 2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51153	133.2465	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51148	133.243	PAHOJA - SIOUX FALLS 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51029	133.2255	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51185	133.2205	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51221	133.1571	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	133.1449	GEN336821 1-GRAND GULF UNIT
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51024	133.0553	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51437	133.0433	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51045	132.9801	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51096	132.8781	G09_001IST 345.00 - GROTON 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51497	132.8375	STORLA - WESSINGTON 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50836	132.8324	HOSKINS - SHELL CREEK 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51435	132.7175	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51221	132.6193	AUDUBON - SHEYNNE 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51045	132.5989	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51141	132.5749	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50696	132.5559	NUNDRWD - WAYSIDE 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51154	132.552	MISSION - ST FRANCIS 115KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53326	132.5272	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53320	132.5184	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51029	132.3934	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51148	132.3918	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51029	132.3514	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	132.3248	GEN562714 1-G15_023_4 0.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	132.3248	GEN562715 1-G15_023_5 0.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51435	132.2581	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51154	132.1114	HARMONY - ST FRANCIS 115KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51144	131.9813	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51144	131.9813	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51212	131.9807	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51212	131.9807	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51068	131.975	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51235	131.9648	BALTA - RAMSEY 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	131.9579	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51218	131.9396	BISMARK - JAMES TOWN 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51226	131.9375	BALTA - MCHENRY 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51236	131.8442	CLEARWATER - ONEILL 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51153	131.8296	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51153	131.8247	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51236	131.8033	CLEARWATER - NELIGH 115KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51218	131.79	JAMES TOWN - WEBER 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51388	131.762	LETCHER - SIOUX FALLS 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51382	131.7605	HANLON - STORLA 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51154	131.7536	HARMONY - VALENTINE 115KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	131.7226	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51218	131.6933	BISMARK - WEBER 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	131.6056	GEN635024 4-WALTER SCOTT UNIT 4

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	131.496	GEN563222 1-G15088_3 0.6900
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	131.4442	GEN531447 1-HOLCOMB GENERATOR
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	131.3912	GEN344225 1-1CAL G1 25.000
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	131.3783	GEN635213 3-NEAL UNIT 3
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	131.3679	GEN640009 1-COOPER NUCLEAR STATION
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51205	131.3488	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	131.3355	GEN336153 1-WATERFORD UNIT#3
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	131.2981	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	131.2977	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	131.2771	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51200	131.25	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51200	131.25	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	131.2212	GEN659118 1-LARAMIE RIVER UNIT1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51294	131.1425	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51249	130.9828	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51481	130.9766	FT THOMPSON - LETCHER 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	130.9712	GEN635023 3-WALTER SCOTT UNIT 3
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	130.9708	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	130.9708	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	130.9708	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	130.9708	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.9589	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.9431	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.9426	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.903	GEN635214 4-NEAL UNIT 4
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51356	130.8933	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51356	130.8933	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51356	130.8933	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51356	130.8933	FT THOMPSON - OAHE 230KV CKT 4
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	130.8917	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51203	130.8616	P13:115-230:TSGT:SIDNEY-KV1A
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.7781	GEN587363 1-G16-055-GEN10.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	130.7255	GEN335831 1-RIVERBEND UNIT#1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51154	130.6529	AINSWORTH - VALENTINE 115KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.624	ANSON - SPLIT ROCK 115KV CKT 2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51201	130.6237	FT RANDAL - SPENCER 115KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.6199	ANSON 115/17.5KV TRANSFORMER CKT 4
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51398	130.6119	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51201	130.5471	KELLY - SHELL CREEK 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.5421	ANSON - SPLIT ROCK 115KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.5414	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51201	130.536	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51201	130.536	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	130.5338	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51201	130.4566	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51254	130.4392	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.4065	GEN645012 2-NEBRASKA CITY 2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.3672	AINSWORTH WIND 34KV SWITCHED SHUNT
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.3323	AINSWORTH WIND 34KV SWITCHED SHUNT
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.3198	GEN642067 1-PLATTE
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.3197	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51252	130.3073	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.2855	GEN542957 1-IATAN UNIT #1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.284	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.2563	GEN542962 2-IATAN UNIT #2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51250	130.238	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51207	130.1808	G13-010T 345.00 - POST ROCK 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.156	GEN542951 5-HAWTHORN UNIT #5
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.1533	GEN542955 1-LACYGNE UNIT #1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51278	130.118	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51207	130.0907	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	130.086	GEN542956 2-LACYGNE UNIT #2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51375	130.0629	HANLON - SIOUX FALLS 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51245	130.0621	CROOKED CREEK - RIVERDALE 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51253	130.0349	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51125	130.0236	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	129.9815	GEN640016 1-KINGSLEY HYDRO
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50808	129.9698	AINSWORTH - AINSWORTH 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51009	129.9619	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51009	129.9397	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51009	129.9369	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50797	129.9273	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51333	129.8922	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51162	129.8793	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51162	129.8793	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	129.7896	GEN509394 1-FLINT CREEK
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51112	129.771	AINSWORTH - STUART 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	129.722	GEN337653 1-WHITE BLUFF UNIT #2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51224	129.7062	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKE
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51278	129.7016	RASMUSN - SIOUX CITY 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50873	129.6937	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51246	129.6915	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51246	129.6915	P12:115:UMZB:# 119 #: IN NE.
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	129.6666	GEN337652 1-WHITE BLUFF UNIT #1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51112	129.6402	ATKINSON - STUART 115KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	129.6118	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	129.5878	GEN338146 1-INDEPENDENCE UNIT #2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51228	129.5877	GRAND ISLAND - RIVERDALE 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51154	129.5842	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51240	129.5686	CALLAWAY - MAXWELL 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	129.5686	GEN338143 1-INDEPENDENCE UNIT #1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	129.5508	GEN501801 1-DOLET HILLS UNIT1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	129.5342	1222-AINSWORTH WIND
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	129.5342	2560-BRDLAND-LNX3345.00
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	129.5342	2561-BRDLAND-LNX3345.00
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	129.5342	BASE CASE
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51224	129.5148	BONESTEEL - GREGORY 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51157	129.5095	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	129.4999	GEN509416 1-TURK GENERATION
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51112	129.4975	ATKINSON - EMMET 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51157	129.4933	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50495	129.4788	COLUMWEST - KELLY 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	129.4722	BROKEN BOW - LOUP CITY 115KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51038	129.4561	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51047	129.4504	SIDNEY - STEGALL 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	129.4395	P12:115:TSGT:BLKWDCK7-ELSIETP7
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	129.3699	GEN509403 1-PIRKEY GENERATION
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51253	129.3547	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51193	129.3308	STAPLETON - THEDFORD 115KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51225	129.3041	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51225	129.3041	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51224	129.3029	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51224	129.3029	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	129.2514	GEN336252 1-NINEMILE POINT UNIT#5
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51243	129.2444	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	129.2058	GEN336821 1-GRAND GULF UNIT
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	129.1756	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	129.1756	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	129.1643	GEN300002 1-THOMAS HILL UNIT 2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	129.1352	GEN587153 1-G16-021-GEN10.6900
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	129.1261	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51241	129.1252	HOYT - STRANGER CREEK 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	129.1203	GEN336251 1-NINEMILE POINT UNIT#4
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	129.1146	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51154	129.1132	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51243	129.1117	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	129.0962	GEN336831 1-BAXTER WILSON SES
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51242	129.0739	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	129.0433	GEN562003 1-G11_027_3 0.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	129.0424	GEN501813 1-RODEMACHER UNIT 3
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51018	129.042	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51431	129.0285	FT RANDAL - FT THOMPSON 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51154	129.0185	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	129.0134	GEN337041 1-GERALD ANDRUS
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	129.01	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	129.01	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51147	128.9682	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51147	128.9682	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51151	128.9508	AXTELL - PAULINE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51501	128.9469	FT THOMPSON - WESSINGTON 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	128.9339	GEN660003 3-HURON WEST PARK
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51154	128.9338	LOUP CITY - NORTH LOUP 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51359	128.9188	FT RANDAL - UTICA JCT 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51139	128.8902	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	128.8664	GEN600045 4-ANSON
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51027	128.816	SUB 3454 - WAGENER 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51027	128.816	SUB 3454 - WAGENER 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	128.7988	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50944	128.787	HOSKINS - SHELL CREEK 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.7797	GEN335206 1-NELSON UNIT 6
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51429	128.741	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51224	128.7325	GREGORY - WINNER 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51378	128.7252	OAHE - PHILIP TAP 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.7163	GEN334440 1-SABINE UNIT 4
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51224	128.7069	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51237	128.6853	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.6777	GEN659118 1-LARAMIE RIVER UNIT1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	128.6594	GEN590010 1-ERCOT EQUIVALENCE
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50495	128.6362	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.6358	GEN344897 4-1LAB G4 20.000
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.6335	GEN344894 1-1LAB G1 20.000
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.6333	GEN344895 2-1LAB G2 20.000
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.6333	GEN344896 3-1LAB G3 20.000
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	128.6129	GEN590011 2-ERCOT EQUIVALENCE
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	128.5973	GEN300003 1-THOMAS HILL UNIT 3
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51333	128.5879	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51320	128.5853	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.5748	GEN501812 1-RODEMACHER UNIT 2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51149	128.5742	MISSION - ST FRANCIS 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.5685	GEN345671 2-1RUSH G2 18.000
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51224	128.5681	MISSION - WITTEN 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.5619	GEN345670 1-1RUSH G1 18.000
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51092	128.5592	G09_001IST 345.00 - GROTON 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51224	128.5555	WINNER - WITTEN 115KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51224	128.5503	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.5275	GEN336191 1-LITTLE GYPSY UNIT#3
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51039	128.5195	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51099	128.519	MINGO - SETAB 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51099	128.519	MINGO - SETAB 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	128.4398	GEN300007 1-NEW MADRID UNIT 2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	128.43	GEN300006 1-NEW MADRID UNIT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.4207	GEN587353 1-G16-050-GEN10.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51320	128.4161	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51333	128.4131	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.4057	GEN338388 1-1PLUM PT U1 23.000
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51059	128.3887	103RD & ROKEBY - MOORE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51059	128.3887	103RD & ROKEBY - MOORE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51237	128.388	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51402	128.3862	GAVINS POINT - YANKON JCT 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.3808	GEN335204 1-NELSON UNIT 4
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51226	128.3731	COLUMEAST - SHELL CREEK 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	128.3697	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51407	128.3678	CARPENTER - HURON 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.3645	GEN334441 1-SABINE UNIT 5
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51149	128.3632	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.3598	GEN335614 1-WILLOW GLENN UNIT#4
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	128.3568	GEN562714 1-G15_023_4 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	128.3568	GEN562715 1-G15_023_5 0.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.3375	GEN336464 1-MICHOUD UNIT #3
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.3371	GEN336801 1-BAXTER WILSON UNIT #1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51407	128.3369	HURON - WATERTOWN 230KV CKT 2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51248	128.3071	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51429	128.3069	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.3066	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51320	128.3063	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51107	128.2856	COOPER - MOORE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51139	128.2708	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51407	128.2515	CARPENTER - WATERTOWN 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51224	128.2327	P12:115:UMZW:# 172 #: WI IN SD.
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51090	128.2119	GRAND ISLAND - SWEETWATER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51149	128.209	HARMONY - ST FRANCIS 115KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	128.1917	GEN659353 1-DEERCREK CTG18.000
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.156	GEN334433 1-SABINE UNIT 3
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	128.1324	GEN659354 1-DEERCREK STG18.000
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51345	128.1248	MENNO JCT - TRIPP JCT 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51318	128.1246	FARGO - JAMES TOWN 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51270	128.1225	GAVINS POINT - HARTINGTON 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51039	128.1052	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51319	128.0776	FARGO - JAMES TOWN 230KV CKT 2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	128.0522	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	128.0491	GEN336222 1-LITTLE GYPSY UNIT#2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51292	128.0187	GARRISON - JAMES TOWN 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.9988	GEN531447 1-HOLCOMB GENERATOR
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51210	127.9585	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51382	127.9473	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51382	127.9378	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.9237	GEN336151 1-WATERFORD UNIT#1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.9237	GEN336152 1-WATERFORD UNIT#2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51383	127.909	LETCHER - SIOUX FALLS 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51345	127.9041	MENNO JCT - UTICA 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51179	127.9034	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51325	127.8996	MARTIN - SHANNON 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51149	127.8822	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50985	127.8794	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51179	127.8781	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.8545	GEN303007 1-1BC2 U2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51179	127.8478	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.8439	GEN303006 1-1BC2 U1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51149	127.8412	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	127.8258	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	127.8243	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50856	127.7989	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.7489	GEN336170 1-GULF OXY U4
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.7431	GEN303008 1-1BC2 U3
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.7404	GEN635214 4-NEAL UNIT 4
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.7148	GEN641089 2-ENERGY CENTER 2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51340	127.7024	CLEARWATER - ONEILL 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	127.6964	GEN635024 4-WALTER SCOTT UNIT 4
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51325	127.6849	BISMARK - JAMES TOWN 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51318	127.6634	FARGO - SHEYNNE 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51325	127.6432	JAMES TOWN - WEBER 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51325	127.6395	BISMARK - WEBER 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.6378	GEN635213 3-NEAL UNIT 3
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51270	127.6191	BELDEN - HARTINGTON 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.6168	GEN501811 1-RODEMACHER UNIT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51308	127.604	CHADRON - DUNLAP 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51338	127.6027	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51099	127.5666	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51328	127.5591	DENISON - SIOUX CITY 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51238	127.5534	G16-034-TAP 345.00 - KEYSTONE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51272	127.5451	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.5429	GEN334071 1-LEWIS CREEK 2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.5422	GEN587363 1-G16-055-GEN10.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.5378	GEN334070 1-LEWIS CREEK 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51272	127.4919	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.4521	GEN337766 1-TRACTEBEL UNIT S1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51321	127.4226	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.4064	GEN501910 1-ACADIA UNIT ST1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	127.3926	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.3911	GEN336221 1-LITTLE GYPSY UNIT#1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50950	127.383	AXTELL - SWEETWATER 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.3778	GEN587443 1-G16-064-GEN10.6900
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	127.368	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51308	127.366	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51321	127.3635	CHADRON - WAYSIDE 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53475	127.3574	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53469	127.3556	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.3526	GEN337757 1-DUKE HOTSPRINGS STG1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	127.3499	GEN344225 1-1CAL G1 25.000
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	127.349	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51325	127.336	GORDON - SHANNON 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	127.3325	GEN336153 1-WATERFORD UNIT#3
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.3283	GEN334432 1-SABINE UNIT 2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.3282	GEN334431 1-SABINE UNIT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51258	127.3143	BISON - HETINGER 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.3067	GEN640009 1-COOPER NUCLEAR STATION
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51289	127.2808	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	127.2606	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	127.2052	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	127.1704	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	127.1492	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	127.1386	GEN635023 3-WALTER SCOTT UNIT 3
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	127.1174	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51196	126.9556	FT RANDAL - SPENCER 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	126.9423	GEN645012 2-NEBRASKA CITY 2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50983	126.9306	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50983	126.9306	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51038	126.9187	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	126.9015	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	126.8518	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	126.8218	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	126.8195	GEN335831 1-RIVERBEND UNIT#1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51149	126.7251	AINSWORTH - VALENTINE 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51196	126.6988	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	126.67	GEN563232 1-G15089_3 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	126.654	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51358	126.5684	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51357	126.5613	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51350	126.5556	CROOKED CREEK - RIVERDALE 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51444	126.5301	FT THOMPSON - OAHE 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51444	126.5301	FT THOMPSON - OAHE 230KV CKT 2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51355	126.5141	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51448	126.486	FT THOMPSON - OAHE 230KV CKT 3
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51448	126.486	FT THOMPSON - OAHE 230KV CKT 4
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	126.4379	BASE CASE
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	126.3656	GEN652543 3-BIG BEND
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	126.364	GEN652542 1-BIG BEND
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51265	126.3102	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51273	126.2289	RASMUSN - UTICA JCT 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51370	126.2196	HANLON - SIOUX FALLS 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	126.1944	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51243	126.193	BASSETT 7115.00 - STUART 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51328	126.1873	BLAIR - GRANITE FALLS 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51243	126.1763	ATKINSON - STUART 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50792	126.166	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51342	126.1227	CALLAWAY - MAXWELL 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51243	126.1223	ATKINSON - EMMET 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51725	126.0721	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51243	126.07	AINSWORTH - BASSETT 7115.00 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51299	126.0683	STAPLETON - THEDFORD 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	126.0616	GEN337652 1-WHITE BLUFF UNIT #1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51134	126.0459	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51338	126.0036	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.9835	GEN300002 1-THOMAS HILL UNIT 2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	125.9738	GEN338146 1-INDEPENDENCE UNIT #2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	125.9621	GEN338143 1-INDEPENDENCE UNIT #1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51349	125.9195	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	125.9049	GEN337653 1-WHITE BLUFF UNIT #2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51252	125.904	HOLCOMB - SETAB 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51005	125.8965	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51252	125.8944	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51348	125.8924	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51005	125.8917	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51314	125.8787	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51119	125.8564	RAUN - SIOUX CITY 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51005	125.8418	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51329	125.8329	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51273	125.8324	RASMUSN - SIOUX CITY 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.8174	GEN587153 1-G16-021-GEN10.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51042	125.8127	SIDNEY - STEGALL 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51338	125.8079	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51348	125.7687	CLEVELAND - G15066_T 345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51348	125.7649	G15066_T 345.00 - SOONER 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	125.7568	GEN501801 1-DOLET HILLS UNIT1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51466	125.7497	LARAMIE RIVER - STEGALL 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51484	125.7469	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51484	125.7398	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51484	125.739	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51484	125.7373	BROADLAND - HURON 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.7366	GEN660003 3-HURON WEST PARK
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50600	125.7035	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.6995	GEN652548 5-FT RANDAL
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.6995	GEN652549 7-FT RANDAL
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51329	125.6874	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.6767	GEN652547 3-FT RANDAL
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51241	125.6428	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.6125	GEN600045 4-ANSON
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51257	125.6111	AXTELL - PAULINE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51134	125.6053	SUB 3454 - WAGENER 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.5807	GEN590010 1-ERCOT EQUIVALENCE
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.5666	GEN681522 3-GENOA 3
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51153	125.5538	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.5413	GEN590011 2-ERCOT EQUIVALENCE
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.5235	GEN660001 2-ABERDEEN SIEBRECHT
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.5213	GEN600043 7-BLUE LAKE5
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.5213	GEN600044 8-BLUE LAKE6
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	125.513	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51153	125.5045	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	125.4995	GEN652559 1-OAHE
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	125.4993	GEN336252 1-NINEMILE POINT UNIT#5
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.4951	GEN600014 4-BLACK DOG GEN 4
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.4854	GEN600065 7-HIGH BRIDGE
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.4854	GEN600066 8-HIGH BRIDGE
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.4842	GEN600011 5-BLACK DOG GEN 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.4768	GEN600071 10-RIVER SIDE
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.4764	GEN600070 9-RIVER SIDE
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51285	125.471	MISSION - WITTEN 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.4607	GEN600007 7-RIVERSIDE GEN 7
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.4565	GEN652414 4-FT PECK
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.4565	GEN652415 5-FT PECK
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.4435	GEN652345 W-G07_023IS_2 0.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.4358	GEN587583 1-J432-GEN1 0.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.4317	GEN600017 C-LS POWER CT
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	125.3855	GEN336251 1-NINEMILE POINT UNIT#4
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.379	GEN300003 1-THOMAS HILL UNIT 3
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51133	125.3501	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	125.3315	GEN336831 1-BAXTER WILSON SES
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.3249	GEN615021 1-GRE-ER 14G 16.000
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.3213	GEN300007 1-NEW MADRID UNIT 2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.3092	GEN300006 1-NEW MADRID UNIT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.2931	GEN615052 1-CAMBRIDGE GENERATING STATION
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.2793	GEN659272 2-GROTON 2G13.800
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	125.2742	GEN501813 1-RODEMACHER UNIT 3
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.2687	GEN659294 1-WILTONCOL9
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.2686	GEN659273 2-GROTON SYNC COND
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51164	125.2684	103RD & ROKEBY - MOORE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51497	125.2683	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50985	125.2495	G15088_T 345.00 - MOORE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	125.2449	GEN659118 1-LARAMIE RIVER UNIT1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.2436	GEN659162 4-RED WLCK
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.2436	GEN659163 5-BLACK WDCK
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.2436	GEN659353 1-DEERCREK CTG18.000
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	125.2426	GEN337041 1-GERALD ANDRUS
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.2424	GEN659192 6-LYNN
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51196	125.2417	MINGO - SETAB 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.2198	GEN659354 1-DEERCREK STG18.000
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.1968	GEN659274 1-GROTON
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51354	125.1898	FT RANDAL - UTICA JCT 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51209	125.1693	COOPER - MOORE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	125.1673	GEN659296 2-SDPRAIRWND1W0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51484	125.1602	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.1397	GEN 11104 1-J262_GEN 0.6000
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.1397	GEN 11108 1-J263_GEN 0.6000
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51314	125.128	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.1034	GEN600067 9-HIGH BRIDGE
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	125.0279	GEN335206 1-NELSON UNIT 6
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50938	125.0215	HOSKINS - SHELL CREEK 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.0202	GEN672304 4-BOUNDARY DAM GENERATOR 4
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.0202	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.0201	GEN615015 1-GRE-SPRITWDG13.200
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	125.0201	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51328	125.0103	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.9906	GEN334440 1-SABINE UNIT 4
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	124.9808	GEN600004 2-PRAIRIE ISLAND G2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51362	124.9792	OAHE - PHILIP TAP 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	124.9732	GEN600003 1-PRAIRIE ISLAND G1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.9559	GEN659270 1-WEST SW
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.9529	GEN672392 1-NBECGT1G 18.000
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51341	124.9508	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51313	124.9458	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.9382	GEN659291 1-FT MP COLLECTOR
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	124.924	GEN652556 2-OAHE
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	124.924	GEN652557 4-OAHE
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	124.924	GEN652558 6-OAHE
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.9203	GEN562872 1-G15046_3 0.6900
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	124.9038	ALMA 161 161/24.0KV TRANSFORMER CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.8786	GEN344897 4-1LAB G4 20.000
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.8783	GEN587623 1-J493-GEN1 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.8766	GEN344894 1-1LAB G1 20.000
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.8764	GEN344895 2-1LAB G2 20.000
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.8764	GEN344896 3-1LAB G3 20.000
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.8741	GEN662101 1-WESSINGTON190.5750
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.8632	GEN660016 1-B_H WIND 0.7000
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.8503	GEN681542 6-JP MADGETT
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.8333	GEN501812 1-RODEMACHER UNIT 2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	124.8267	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51328	124.821	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.8145	GEN345671 2-1RUSH G2 18.000
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.8109	GEN345670 1-1RUSH G1 18.000
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.8092	GEN336191 1-LITTLE GYPSY UNIT#3
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.8088	GEN338388 1-1PLUM PT U1 23.000
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.48723	124.8028	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.8011	GEN587353 1-G16-050-GEN10.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51313	124.7816	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50920	124.7771	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.7622	GEN 10648 1-G830_GEN 0.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.7547	GEN652545 7-BIG BEND
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51397	124.7254	GAVINS POINT - YANKON JCT 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51402	124.6886	CARPENTER - HURON 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51133	124.6844	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51312	124.6774	FARGO - JAMES TOWN 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51313	124.6716	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.6665	GEN334441 1-SABINE UNIT 5
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51612	124.6503	OAHE - SULLEY BUTTE 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.6448	GEN335204 1-NELSON UNIT 4
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51402	124.6441	HURON - WATERTOWN 230KV CKT 2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51090	124.6397	G15088_T 345.00 - PAULINE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.6367	GEN335614 1-WILLOW GLENN UNIT#4
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.6329	GEN910006 1-G12_012IS_3 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51314	124.6292	FARGO - JAMES TOWN 230KV CKT 2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.6288	GEN336801 1-BAXTER WILSON UNIT #1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.6159	GEN336464 1-MICHOUD UNIT #3
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51402	124.598	CARPENTER - WATERTOWN 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51220	124.5916	COLUMEAST - SHELL CREEK 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.5387	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51601	124.509	GLENHAM - L3 HAWDON 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.4997	GEN587593 1-J460-GEN1 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51085	124.4604	GRAND ISLAND - SWEETWATER 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.4597	GEN334433 1-SABINE UNIT 3
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51243	124.4528	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	124.4406	GEN600006 1-AS KING
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51612	124.4302	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51612	124.4194	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51339	124.4187	MENNO JCT - TRIPP JCT 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51612	124.4186	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51265	124.3979	GAVINS POINT - HARTINGTON 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.396	GEN587053 1-G16-007-GEN10.6500
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.3949	GEN531447 1-HOLCOMB GENERATOR
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51287	124.3941	GARRISON - JAMES TOWN 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51612	124.3854	GLENHAM - WHITLOK 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.372	GEN336222 1-LITTLE GYPSY UNIT#2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51174	124.3336	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51377	124.3236	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51196	124.3217	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51377	124.3091	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.2916	GEN652559 1-OAHE
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51320	124.2648	MARTIN - SHANNON 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.2607	GEN563222 1-G15088_3 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51174	124.2603	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.2466	GEN336152 1-WATERFORD UNIT#2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.2465	GEN336151 1-WATERFORD UNIT#1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.2264	GEN652906 1-G09_006IS_3 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51339	124.2057	MENNO JCT - UTICA 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51174	124.1887	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.1869	GEN 11123 1-G736-GEN1 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.1827	GEN303007 1-1BC2 U2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.179	GEN 11133 1-J442-GEN1 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.1737	GEN303006 1-1BC2 U1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.1677	GEN652544 5-BIG BEND
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51320	124.1444	BISMARK - JAMES TOWN 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	124.1379	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.1314	GEN641089 2-ENERGY CENTER 2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.1279	GEN659010 4-G07_027IS_2 0.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.1225	GEN652543 3-BIG BEND
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.1221	GEN652542 1-BIG BEND
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.1079	GEN659366 3-WILTON 3 W0.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.1042	GEN659194 1-NDPRAIRWND1W0.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.0928	GEN652460 4-GARRISON
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.0928	GEN652461 5-GARRISON
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51320	124.0913	JAMES TOWN - WEBER 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.0841	GEN336170 1-GULF OXY U4
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51313	124.0814	FARGO - SHEYNNE 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	124.0794	GEN303008 1-1BC2 U3
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51320	124.0781	BISMARK - WEBER 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.0257	GEN652457 1-GARRISON
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.0257	GEN652458 2-GARRISON
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.0257	GEN652459 3-GARRISON
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51333	124.0201	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	124.0067	GEN652907 1-G09_007IS_3 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51335	124.0053	CLEARWATER - ONEILL 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51322	124.0009	DENISON - SIOUX CITY 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51233	123.9837	G16-034-TAP 345.00 - KEYSTONE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	123.964	GEN501811 1-RODEMACHER UNIT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	123.931	GEN587363 1-G16-055-GEN10.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51267	123.931	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.9251	GEN659403 1-NDSUNFLWR W0.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51048	123.917	AXTELL - SWEETWATER 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	123.8962	GEN334070 1-LEWIS CREEK 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	123.8962	GEN334071 1-LEWIS CREEK 2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51265	123.8954	BELDEN - HARTINGTON 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51267	123.8912	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51303	123.8882	CHADRON - DUNLAP 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51315	123.8143	CHADRON - WAYSIDE 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	123.811	GEN337766 1-TRACTEBEL UNIT S1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51315	123.8089	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51134	123.8087	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51075	123.8028	MINGO - RED WILLOW 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	123.7917	GEN337757 1-DUKE HOTSPRINGS STG1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	123.7682	GEN501910 1-ACADIA UNIT ST1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	123.765	GEN587443 1-G16-064-GEN10.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	123.7612	GEN336221 1-LITTLE GYPSY UNIT#1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	123.7594	GEN640009 1-COOPER NUCLEAR STATION
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51275	123.7216	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51303	123.7163	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51257	123.6937	BISON - HETINGER 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	123.6857	GEN645012 2-NEBRASKA CITY 2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51320	123.6451	GORDON - SHANNON 115KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.634	GEN672321 1-SHAND GENERATOR 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	123.6275	GEN600005 1-MONTICELLO
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.6193	GEN563232 1-G15089_3 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51388	123.5856	NUNDRWD - PHILIP TAP 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.5793	GEN600004 2-PRAIRIE ISLAND G2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.5723	GEN600003 1-PRAIRIE ISLAND G1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51257	123.5679	BISON - MAURINE 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.5651	GEN659411 1-CAMPBLCNTY W0.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.5558	GEN672310 1-POPLAR RIVER GENERATOR 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.5557	GEN672311 2-POPLAR RIVER GENERATOR 2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	123.54	GEN645011 1-NEBRASKA CITY 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.534	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51251	123.5289	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51251	123.5125	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51251	123.5125	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	123.5011	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51477	123.432	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.4159	GEN615010 1-STANTON4
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.2267	GEN659296 2-SDPRAIRWND1W0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	123.2097	GEN640016 1-KINGSLEY HYDRO
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.1979	GEN600006 1-AS KING
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51260	123.1882	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.1274	GEN587653 1-J526-GEN1 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51353	123.0396	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.0345	GEN652556 2-OAHE
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.0345	GEN652557 4-OAHE
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.0345	GEN652558 6-OAHE
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51351	123.0254	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.49657	123.0243	MCCOOL - MOORE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.0239	GEN659110 1-LELAND OLDS UNIT1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	123.0183	GEN659453 1-GI1414GEN W0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51349	123.0074	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	122.9502	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	122.8678	GEN659141 1-K10215A
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	122.8631	BASE CASE
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	122.8202	GEN587633 1-J510-GEN1 18.000
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51439	122.8185	FT THOMPSON - OAHE 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51439	122.8185	FT THOMPSON - OAHE 230KV CKT 2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51333	122.7981	SUB 3455 - SUB 3740 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51443	122.7887	FT THOMPSON - OAHE 230KV CKT 3
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51443	122.7887	FT THOMPSON - OAHE 230KV CKT 4
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	122.6797	GEN657749 1-YOUNG 1 GENERATOR
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	122.6266	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51237	122.6226	ATKINSON - EMMET 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	122.6183	GEN509403 1-PIRKEY GENERATION
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51237	122.6117	BASSETT 7115.00 - STUART 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51237	122.6048	ATKINSON - STUART 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51305	122.592	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51237	122.5528	AINSWORTH - BASSETT 7115.00 115KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	122.541	GEN600000 1-SHERBURNECNTY G1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	122.5299	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51337	122.5116	CALLAWAY - MAXWELL 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51294	122.4953	STAPLETON - THEDFORD 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	122.4409	GEN300002 1-THOMAS HILL UNIT 2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51333	122.4286	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51343	122.4118	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51477	122.4111	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51477	122.409	BROADLAND - HURON 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51477	122.409	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51477	122.405	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	122.3986	GEN505432 1-SIKESTON
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51323	122.3921	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	122.3768	GEN659407 1-ANTELPHILLSW0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51090	122.3689	G15088_T 345.00 - MOORE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	122.3193	GEN587033 1-G16-004-GEN10.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51246	122.3092	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	122.3018	GEN600005 1-MONTICELLO
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51461	122.2757	LARAMIE RIVER - STEGALL 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51252	122.2719	AXTELL - PAULINE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51323	122.227	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	122.1947	GEN587153 1-G16-021-GEN10.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50595	122.1672	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51309	122.1427	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	122.1411	GEN652548 5-FT RANDAL
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	122.1411	GEN652549 7-FT RANDAL
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	122.12	GEN652547 3-FT RANDAL
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	122.107	GEN660003 3-HURON WEST PARK
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51235	122.0701	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	122.0083	GEN600045 4-ANSON
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	122.0074	GEN600000 1-SHERBURNECNTY G1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51204	122.0011	COOPER - MOORE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.9981	GEN600063 1-COLVILLE GEN 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.9981	GEN600064 2-COLVILLE GEN 2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.9938	GEN660001 2-ABERDEEN SIEBRECHT
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.987	GEN600043 7-BLUE LAKE5
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.987	GEN600044 8-BLUE LAKE6
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51278	121.9697	MISSION - WITTEN 115KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.9604	GEN600014 4-BLACK DOG GEN 4
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.9551	GEN600065 7-HIGH BRIDGE
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.9551	GEN600066 8-HIGH BRIDGE
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.9504	GEN600011 5-BLACK DOG GEN 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.9466	GEN600071 10-RIVER SIDE
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.9463	GEN600070 9-RIVER SIDE
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	121.9344	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.9313	GEN600007 7-RIVERSIDE GEN 7
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.9303	GEN652414 4-FT PECK
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.9303	GEN652415 5-FT PECK
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.9193	GEN652345 W-G07_023IS_2 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51477	121.9056	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.9006	GEN600017 C-LS POWER CT
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	121.8938	SUB 3454 - WAGENER 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.891	GEN587583 1-J432-GEN1 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51159	121.8842	103RD & ROKEBY - MOORE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.871	GEN300003 1-THOMAS HILL UNIT 3
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51246	121.851	HOLCOMB - SETAB 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.8095	GEN300007 1-NEW MADRID UNIT 2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.804	GEN300006 1-NEW MADRID UNIT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.7844	GEN652559 1-OAHE
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.7648	GEN615052 1-CAMBRIDGE GENERATING STATION
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.7647	GEN659273 2-GROTON SYNC COND
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.7647	GEN659294 1-WILTONCOL9
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.7546	GEN659272 2-GROTON 2G13.800
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.7503	GEN659162 4-RED WLCK
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.7503	GEN659163 5-BLACK WDCK
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.7494	GEN659192 6-LYNN
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.7422	GEN615021 1-GRE-ER 14G 16.000
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	121.7244	GEN587033 1-G16-004-GEN10.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.6913	GEN659274 1-GROTON
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.6826	GEN590010 1-ERCOT EQUIVALENCE
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51309	121.6626	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51309	121.6618	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51717	121.6512	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.648	GEN590011 2-ERCOT EQUIVALENCE
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.6328	GEN657705 X-DRAYTON
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.5819	GEN600067 9-HIGH BRIDGE
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.5464	GEN 11104 1-J262_GEN 0.6000
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.5464	GEN 11108 1-J263_GEN 0.6000
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.5411	GEN615015 1-GRE-SPRITWDG13.200
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.5163	GEN659353 1-DEERCREK CTG18.000
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.516	GEN659354 1-DEERCREK STG18.000
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51084	121.4913	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	121.4746	GEN661015 1-COYOTE
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.4557	GEN659270 1-WEST SW

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.4322	GEN659291 1-FT MP COLLECTOR
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.4206	GEN562872 1-G15046_3 0.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	121.3997	GEN620315 1-BIG STONE GEN
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51291	121.398	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.363	GEN662101 1-WESSINGTON190.5750
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.3616	GEN660016 1-B_H WIND 0.7000
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.3514	GEN587623 1-J493-GEN1 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51605	121.3324	OAHE - SULLEY BUTTE 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.2488	GEN 10648 1-G830_GEN 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51605	121.2022	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	121.1842	GEN600001 2-SHERBURNE CNTY G2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51605	121.1834	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51605	121.1833	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51594	121.1704	GLENHAM - L3 HAWDON 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.1526	GEN910006 1-G12_012IS_3 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51605	121.1028	GLENHAM - WHITLOK 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.50915	121.0901	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	121.0812	GEN661015 1-COYOTE
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	121.0146	GEN600002 3-SHERBURNE CNTY G3
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	121.0015	GEN587593 1-J460-GEN1 0.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	121.0008	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51191	120.9493	MINGO - SETAB 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	120.9392	GEN600002 3-SHERBURNE CNTY G3
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.892	GEN587053 1-G16-007-GEN10.6500
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.48718	120.8732	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.7769	GEN652545 7-BIG BEND
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.7432	GEN652906 1-G09_006IS_3 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.689	GEN652544 5-BIG BEND
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.6579	GEN652543 3-BIG BEND
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.6576	GEN652542 1-BIG BEND
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.6537	GEN 11123 1-G736-GEN1 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.6528	GEN659010 4-G07_027IS_2 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.6452	GEN 11133 1-J442-GEN1 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.6341	GEN659366 3-WILTON 3 W0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.6198	GEN652460 4-GARRISON
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.6197	GEN652461 5-GARRISON
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.6167	GEN659194 1-NDPRAIRWND1W0.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	120.6081	GEN657748 1-YOUNG 2 GENERATOR
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	120.5964	GEN600001 2-SHERBURNE CNTY G2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	120.5908	GEN657748 1-YOUNG 2 GENERATOR
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.5491	GEN652458 2-GARRISON
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.5491	GEN652459 3-GARRISON
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.549	GEN652457 1-GARRISON
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.4923	GEN652907 1-G09_007IS_3 0.6900
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	120.485	GEN620315 1-BIG STONE GEN
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.4446	GEN659403 1-NDSUNFLWR W0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51191	120.418	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51042	120.2551	AXTELL - SWEETWATER 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.1334	GEN659411 1-CAMPBLCNTY W0.6900
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.49372	120.1055	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.0988	GEN563232 1-G15089_3 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.0942	GEN600004 2-PRAIRIE ISLAND G2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	120.0875	GEN600003 1-PRAIRIE ISLAND G1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	119.8954	GEN615010 1-STANTON4
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	119.8722	GEN659296 2-SDPRAIRWND1W0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51128	119.8019	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	119.7431	GEN600006 1-AS KING
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	119.7378	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	119.7013	GEN659111 2-LELAND OLDS UNIT2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53749	119.6922	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53749	119.6859	2810X2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	119.609	GEN652556 2-OAHE
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	119.609	GEN652557 4-OAHE
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	119.609	GEN652558 6-OAHE
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.49750	119.5922	MCCOOL - MOORE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	119.5746	GEN587653 1-J526-GEN1 0.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	119.514	GEN659110 1-LELAND OLDS UNIT1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	119.5052	GEN659453 1-GI1414GEN W0.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	119.4324	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51070	119.3659	MINGO - RED WILLOW 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	119.3466	GEN659141 1-K10215A
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51084	119.3368	G15088_T 345.00 - MOORE 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	119.2583	GEN587633 1-J510-GEN1 18.000
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	119.1084	GEN652173 1-G09_001IS_2 0.6900
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	119.0495	GEN659103 1-ANTELOPE VALLEY UNIT1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	119.0495	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	118.9142	GEN659407 1-ANTELPHILLSW0.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	118.8858	GEN659103 1-ANTELOPE VALLEY UNIT1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	118.8858	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	118.8618	GEN600005 1-MONTICELLO
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53762	118.663	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53762	118.6457	2810X2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	118.5378	GEN600000 1-SHERBURNECNTY G1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	118.3571	GEN620315 1-BIG STONE GEN
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	118.2344	GEN587033 1-G16-004-GEN10.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53762	118.16	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	117.8053	GEN587293 1-G16-044-GEN10.6900
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53749	117.7813	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	117.7379	GEN587293 1-G16-044-GEN10.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	117.693	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	117.6198	GEN600002 3-SHERBURNE CNTY G3
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	117.6066	GEN659125 1-COVEY
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	117.5931	GEN615001 1-COAL CREEK
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	117.5605	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	117.5513	GEN659125 1-COVEY
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	117.4231	GEN600001 2-SHERBURNE CNTY G2
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	117.4079	GEN615002 2-COAL CREEK
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.46426	117.3002	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	117.284	GEN615001 1-COAL CREEK
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	117.1095	GEN615002 2-COAL CREEK
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.49743	116.9492	MCCOOL - MOORE 345KV CKT 1
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	116.6728	BIG STONE 230/24.0KV TRANSFORMER CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.49462	116.4994	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	116.2412	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53750	115.8872	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53750	115.8698	2810X2
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	115.691	GEN587133 1-G16-017-GEN10.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	115.6636	GEN659103 1-ANTELOPE VALLEY UNIT1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	115.6636	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53750	115.5876	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	115.4074	GEN587133 1-G16-017-GEN10.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	114.5139	GEN587293 1-G16-044-GEN10.6900
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	114.4166	GEN659125 1-COVEY
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	114.1628	GEN615001 1-COAL CREEK
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	114.1126	GEN615002 2-COAL CREEK
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.49456	113.868	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	112.2659	GEN587133 1-G16-017-GEN10.6900
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53762	112.1749	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53762	111.868	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53762	111.8324	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53750	109.4	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53750	109.3983	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.53750	109.3797	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51352	102.639	GEN652353 2-GR PRAIRIEG 0.6900
3	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51247	102.1441	GEN652353 2-GR PRAIRIEG 0.6900
3	20WP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51454	102.1223	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51347	99.9	GEN652353 2-GR PRAIRIEG 0.6900
3	20WP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.52099	99.4	STORLA - WESSINGTON 230KV CKT 1
3	20WP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720.0	720.0	0.51590	99.1	SPLIT ROCK - WHITE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50879	141.7977	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50697	138.838	NUNDRWD - WAYSIDE 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50873	137.477	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51501	137.3684	STORLA - WESSINGTON 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51386	136.4397	HANLON - STORLA 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	135.546	GEN562714 1-G15_023_4 0.6900
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	135.546	GEN562715 1-G15_023_5 0.6900
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	135.2921	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51485	135.1003	FT THOMPSON - LETCHER 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51159	134.347	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51159	134.2447	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50879	134.239	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	134.2041	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51159	134.0872	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51091	133.9956	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51091	133.8834	FT RANDAL - SPENCER 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51278	133.4696	OAHE - PHILIP TAP 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	133.4361	GEN336821 1-GRAND GULF UNIT
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51393	133.3914	FT THOMPSON - WESSINGTON 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51393	133.3914	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51024	133.3869	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51437	133.3498	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51045	133.282	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51497	133.1803	STORLA - WESSINGTON 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51211	133.1553	FARGO - JAMES TOWN 230KV CKT 2
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51148	133.1039	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51435	133.024	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51185	133.0235	GARRISON - JAMES TOWN 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51029	133.0197	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51221	132.9732	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51045	132.9045	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50696	132.8957	NUNDRWD - WAYSIDE 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51154	132.8263	MISSION - ST FRANCIS 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50836	132.6864	HOSKINS - SHELL CREEK 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	132.5699	GEN562714 1-G15_023_4 0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	132.5699	GEN562715 1-G15_023_5 0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51435	132.5697	FT RANDAL - LAKE PLATT 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51221	132.4348	AUDUBON - SHEYNNE 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51141	132.3971	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51154	132.3907	HARMONY - ST FRANCIS 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53326	132.3068	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53320	132.2982	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51148	132.2547	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51029	132.2026	GEN-2016-044TAP-GROTONLINEREACTOR-GROTON-345kV-CKT1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51029	132.1615	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51382	132.1016	HANLON - STORLA 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51388	132.0901	LETCHER - SIOUX FALLS 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51154	132.034	HARMONY - VALENTINE 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	131.91	GEN635024 4-WALTER SCOTT UNIT 4
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51068	131.8215	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51212	131.8067	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51212	131.8067	FARGO - SHEYNNE 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51144	131.8046	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51144	131.8046	LELAND OLDS - STANTON 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51235	131.7914	BALTA - RAMSEY 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	131.782	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51226	131.765	BALTA - MCHENRY 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51218	131.7644	BISMARK - JAMES TOWN 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	131.6962	GEN344225 1-1CAL G1 25.000
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51068	131.6908	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51236	131.6859	CLEARWATER - ONEILL 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51234	131.6765	ELM CREEK - MONTICELLO 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	131.6424	GEN336153 1-WATERFORD UNIT#3
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51236	131.6416	CLEARWATER - NELIGH 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51218	131.6173	JAMES TOWN - WEBER 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	131.6078	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	131.5995	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	131.5626	PRAIRIE - RAMSEY 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	131.5519	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51218	131.522	BISMARK - WEBER 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51294	131.4692	FT RANDAL - SIOUX CITY 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	131.3413	GEN563222 1-G15088_3 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51481	131.3168	FT THOMPSON - LETCHER 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	131.2907	GEN531447 1-HOLCOMB GENERATOR
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	131.283	GEN635023 3-WALTER SCOTT UNIT 3
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	131.2076	GEN640009 1-COOPER NUCLEAR STATION
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	131.2071	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51205	131.1908	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	131.1894	GEN635213 3-NEAL UNIT 3
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	131.1165	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51200	131.1048	COUNCIL BLUFFS - SUB 3456 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51200	131.1048	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	131.0816	GEN659118 1-LARAMIE RIVER UNIT1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	131.0376	GEN335831 1-RIVERBEND UNIT#1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51154	130.9503	AINSWORTH - VALENTINE 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51201	130.9399	FT RANDAL - SPENCER 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	130.8478	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51249	130.8158	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.8028	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.787	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.7865	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51201	130.7727	ONEILL - SPENCER 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	130.77	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	130.77	FT THOMPSON - OAHE 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	130.77	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	130.77	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.7169	GEN635214 4-NEAL UNIT 4
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51203	130.7154	P13:115-230:TSGT:SIDNEY-KV1A
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51356	130.6926	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51356	130.6926	FT THOMPSON - OAHE 230KV CKT 3
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51356	130.6926	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51356	130.6926	FT THOMPSON - OAHE 230KV CKT 4
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.4566	ANSON - SPLIT ROCK 115KV CKT 2
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.4527	ANSON 115/17.5KV TRANSFORMER CKT 4
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51278	130.4424	RASMUSN - UTICA JCT 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51398	130.4415	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51201	130.3978	KELLY - SHELL CREEK 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51201	130.3869	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51201	130.3869	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51375	130.3863	HANLON - SIOUX FALLS 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.3736	ANSON - SPLIT ROCK 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.3729	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51253	130.3589	PAHOJA - SIOUX FALLS 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51125	130.3456	RAUN - SIOUX CITY 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51254	130.2983	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51009	130.2672	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.2528	GEN645012 2-NEBRASKA CITY 2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51009	130.2451	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51009	130.2426	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50797	130.236	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.2246	AINSWORTH WIND 34KV SWITCHED SHUNT
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51333	130.1983	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.1871	AINSWORTH WIND 34KV SWITCHED SHUNT
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.1809	GEN642067 1-PLATTE
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51252	130.1708	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.1674	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.1349	GEN542957 1-IATAN UNIT #1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.1339	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.1058	GEN542962 2-IATAN UNIT #2
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51250	130.1032	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51207	130.0411	G13-010T 345.00 - POST ROCK 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	130.04	GEN337653 1-WHITE BLUFF UNIT #2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50873	130.0311	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51278	130.0249	RASMUSN - SIOUX CITY 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.0062	GEN542951 5-HAWTHORN UNIT #5
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	130.0028	GEN542955 1-LACYGNE UNIT #1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	129.9849	GEN337652 1-WHITE BLUFF UNIT #1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51207	129.9519	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	129.9372	GEN542956 2-LACYGNE UNIT #2
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51245	129.9226	CROOKED CREEK - RIVERDALE 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51154	129.9193	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	129.906	GEN338146 1-INDEPENDENCE UNIT #2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	129.8873	GEN338143 1-INDEPENDENCE UNIT #1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	129.8693	GEN501801 1-DOLET HILLS UNIT1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	129.8383	GEN640016 1-KINGSLEY HYDRO
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51157	129.8184	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50808	129.8098	AINSWORTH - AINSWORTH 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51157	129.8025	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51047	129.7632	SIDNEY - STEGALL 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51162	129.7406	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51162	129.7406	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51253	129.6774	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	129.6431	GEN509394 1-FLINT CREEK
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51112	129.6207	AINSWORTH - STUART 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	129.571	GEN336252 1-NINEMILE POINT UNIT#5
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51224	129.5567	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (NOT BREAKE
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51246	129.5498	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51246	129.5498	P12:115:UMZB:# 119 #: IN NE.
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	129.5419	GEN336821 1-GRAND GULF UNIT
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51112	129.4922	ATKINSON - STUART 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	129.4595	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51228	129.4493	GRAND ISLAND - RIVERDALE 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51154	129.4475	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	129.4408	GEN336251 1-NINEMILE POINT UNIT#4
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51240	129.4288	CALLAWAY - MAXWELL 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	129.4165	GEN336831 1-BAXTER WILSON SES
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	129.3941	1222-AINSWORTH WIND
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	129.3941	2560-BRDLAND-LNX3345.00
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	129.3941	2561-BRDLAND-LNX3345.00
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	129.3941	BASE CASE
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51018	129.3796	RAUN - SUB 3451 FT CAL 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51224	129.3672	BONESTEEL - GREGORY 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51431	129.3639	FT RANDAL - FT THOMPSON 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	129.3633	GEN501813 1-RODEMACHER UNIT 3
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	129.354	GEN509416 1-TURK GENERATION
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51154	129.3532	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51112	129.3512	ATKINSON - EMMET 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50495	129.344	COLUMWEST - KELLY 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	129.3342	GEN337041 1-GERALD ANDRUS
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	129.3313	BROKEN BOW - LOUP CITY 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51038	129.3197	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	129.3001	P12:115:TSGT:BLKWDCK7-ELSIETP7
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51501	129.2686	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51359	129.2402	FT RANDAL - UTICA JCT 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	129.2245	GEN509403 1-PIRKEY GENERATION
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51139	129.2073	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51193	129.1925	STAPLETON - THEDFORD 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51225	129.1646	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51225	129.1646	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51224	129.1634	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51224	129.1634	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	129.1336	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50944	129.1082	HOSKINS - SHELL CREEK 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51243	129.1039	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	129.1007	GEN335206 1-NELSON UNIT 6
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51429	129.0756	FT THOMPSON - LAKE PLATT 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51378	129.0414	OAHE - PHILIP TAP 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	129.037	GEN334440 1-SABINE UNIT 4
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	129.0361	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	129.0361	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	129.0203	GEN300002 1-THOMAS HILL UNIT 2
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51241	128.9843	HOYT - STRANGER CREEK 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	128.9798	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	128.9783	GEN587153 1-G16-021-GEN10.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.9722	GEN659118 1-LARAMIE RIVER UNIT1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51243	128.9706	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	128.9682	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.9563	GEN344897 4-1LAB G4 20.000
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.954	GEN344894 1-1LAB G1 20.000
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.9539	GEN344896 3-1LAB G3 20.000
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.9538	GEN344895 2-1LAB G2 20.000
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51242	128.9322	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51333	128.9083	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51149	128.9073	MISSION - ST FRANCIS 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51320	128.899	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	128.8963	GEN562003 1-G11_027_3 0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.8951	GEN501812 1-RODEMACHER UNIT 2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51092	128.8903	G09_001IST 345.00 - GROTON 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.8889	GEN345671 2-1RUSH G2 18.000
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.8822	GEN345670 1-1RUSH G1 18.000
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	128.8723	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	128.8723	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51039	128.8542	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.8478	GEN336191 1-LITTLE GYPSY UNIT#3
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51147	128.8325	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51147	128.8325	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51151	128.8111	AXTELL - PAULINE 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51154	128.7903	LOUP CITY - NORTH LOUP 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	128.7814	GEN660003 3-HURON WEST PARK
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.7426	GEN587353 1-G16-050-GEN10.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51333	128.7331	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51320	128.7317	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.726	GEN338388 1-1PLUM PT U1 23.000
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	128.7094	GEN600045 4-ANSON
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51402	128.7061	GAVINS POINT - YANKON JCT 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.7008	GEN335204 1-NELSON UNIT 4
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51226	128.6936	COLUMEAST - SHELL CREEK 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51149	128.6922	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51407	128.6877	CARPENTER - HURON 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	128.6872	GEN562714 1-G15_023_4 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	128.6872	GEN562715 1-G15_023_5 0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	128.6853	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.6845	GEN334441 1-SABINE UNIT 5
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.6797	GEN335614 1-WILLOW GLENN UNIT#4
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51027	128.6789	SUB 3454 - WAGENER 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51027	128.6789	SUB 3454 - WAGENER 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.6574	GEN336464 1-MICHOUD UNIT #3
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.657	GEN336801 1-BAXTER WILSON UNIT #1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51407	128.6566	HURON - WATERTOWN 230KV CKT 2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51429	128.641	FT RANDAL - LAKE PLATT 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51248	128.6278	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.6264	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51320	128.6262	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51224	128.5981	GREGORY - WINNER 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51139	128.5896	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51407	128.5711	CARPENTER - WATERTOWN 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51224	128.5694	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51237	128.5491	G15_081T 345.00 - TATONGA7 345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51149	128.5415	HARMONY - ST FRANCIS 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51090	128.5366	GRAND ISLAND - SWEETWATER 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	128.5188	GEN590010 1-ERCOT EQUIVALENCE
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50495	128.4992	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.4756	GEN334433 1-SABINE UNIT 3
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	128.4721	GEN590011 2-ERCOT EQUIVALENCE
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	128.4539	GEN300003 1-THOMAS HILL UNIT 3
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51345	128.444	MENNO JCT - TRIPP JCT 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51318	128.4422	FARGO - JAMES TOWN 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51270	128.4418	GAVINS POINT - HARTINGTON 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51039	128.4389	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51224	128.4327	MISSION - WITTEN 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51224	128.4213	WINNER - WITTEN 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51224	128.4159	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51319	128.3956	FARGO - JAMES TOWN 230KV CKT 2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	128.3859	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51099	128.3817	MINGO - SETAB 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51099	128.3817	MINGO - SETAB 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.3685	GEN336222 1-LITTLE GYPSY UNIT#2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51292	128.3347	GARRISON - JAMES TOWN 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.3178	GEN531447 1-HOLCOMB GENERATOR
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	128.2966	GEN300007 1-NEW MADRID UNIT 2
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	128.2868	GEN300006 1-NEW MADRID UNIT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51382	128.2659	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51382	128.2564	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51237	128.2528	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51059	128.2521	103RD & ROKEBY - MOORE 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51059	128.2521	103RD & ROKEBY - MOORE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51383	128.2437	LETCHER - SIOUX FALLS 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.2428	GEN336152 1-WATERFORD UNIT#2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.2427	GEN336151 1-WATERFORD UNIT#1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51345	128.2229	MENNO JCT - UTICA 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51179	128.2226	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51325	128.2188	MARTIN - SHANNON 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.2132	GEN563222 1-G15088_3 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51149	128.2112	GROTON - GROTON-LNX3 345.00 345KV CKT Z
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51179	128.1973	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.1734	GEN303007 1-1BC2 U2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51149	128.1701	GEN-2016-017TAP-LELANDLINEREACTOR-LELANDOLDS-345kV-CKT1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51179	128.1665	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.1628	GEN303006 1-1BC2 U1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51107	128.1505	COOPER - MOORE 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51224	128.1034	P12:115:UMZW:# 172 #: WI IN SD.
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.0677	GEN336170 1-GULF OXY U4
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.0618	GEN303008 1-1BC2 U3
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	128.0526	GEN659353 1-DEERCREK CTG18.000
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	128.0358	GEN641089 2-ENERGY CENTER 2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	128.0308	GEN635024 4-WALTER SCOTT UNIT 4
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51340	128.0202	CLEARWATER - ONEILL 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	127.9938	GEN659354 1-DEERCREK STG18.000
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51270	127.9377	BELDEN - HARTINGTON 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	127.9353	GEN501811 1-RODEMACHER UNIT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51308	127.9219	CHADRON - DUNLAP 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51338	127.9212	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51328	127.8781	DENISON - SIOUX CITY 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51238	127.872	G16-034-TAP 345.00 - KEYSTONE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51272	127.8634	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	127.8612	GEN334071 1-LEWIS CREEK 2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	127.8609	GEN587363 1-G16-055-GEN10.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	127.8562	GEN334070 1-LEWIS CREEK 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	127.8259	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	127.8243	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51210	127.8225	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51272	127.8104	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	127.7702	GEN337766 1-TRACTEBEL UNIT S1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50985	127.7429	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51321	127.7402	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	127.7245	GEN501910 1-ACADIA UNIT ST1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	127.7091	GEN336221 1-LITTLE GYPSY UNIT#1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	127.6959	GEN587443 1-G16-064-GEN10.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51308	127.684	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	127.6824	GEN344225 1-1CAL G1 25.000
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	127.6812	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51321	127.6809	CHADRON - WAYSIDE 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50856	127.6715	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	127.6705	GEN337757 1-DUKE HOTSPRINGS STG1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	127.6648	GEN336153 1-WATERFORD UNIT#3
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51325	127.6546	GORDON - SHANNON 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53475	127.637	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53469	127.6354	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51258	127.6273	BISON - HETINGER 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	127.626	GEN640009 1-COOPER NUCLEAR STATION
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51289	127.614	FT RANDAL - SIOUX CITY 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	127.4722	GEN635023 3-WALTER SCOTT UNIT 3
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51099	127.4482	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	127.435	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	127.3368	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	127.313	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51484	127.2896	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51196	127.2871	FT RANDAL - SPENCER 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	127.2602	GEN645012 2-NEBRASKA CITY 2
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50950	127.2557	AXTELL - SWEETWATER 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	127.2192	GEN645011 1-NEBRASKA CITY 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	127.1772	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	127.1578	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	127.1508	GEN335831 1-RIVERBEND UNIT#1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	127.1042	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	127.0894	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51149	127.0549	AINSWORTH - VALENTINE 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51196	127.0297	ONEILL - SPENCER 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	126.9849	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51358	126.8867	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51357	126.8787	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	126.8458	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51355	126.8319	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51444	126.8308	FT THOMPSON - OAHE 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51444	126.8308	FT THOMPSON - OAHE 230KV CKT 2
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	126.8139	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50983	126.8111	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50983	126.8111	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51038	126.7896	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51448	126.7878	FT THOMPSON - OAHE 230KV CKT 3
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51448	126.7878	FT THOMPSON - OAHE 230KV CKT 4
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	126.7541	BASE CASE
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51265	126.6274	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51273	126.5597	RASMUSN - UTICA JCT 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51370	126.5497	HANLON - SIOUX FALLS 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	126.5254	PAHOJA - SIOUX FALLS 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51328	126.5171	BLAIR - GRANITE FALLS 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	126.5144	GEN563232 1-G15089_3 0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51243	126.5087	BASSETT 7115.00 - STUART 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50792	126.4947	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51243	126.4922	ATKINSON - STUART 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51342	126.4398	CALLAWAY - MAXWELL 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51243	126.4385	ATKINSON - EMMET 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	126.3917	GEN337652 1-WHITE BLUFF UNIT #1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51243	126.3856	AINSWORTH - BASSETT 7115.00 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51725	126.3731	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51134	126.3616	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51338	126.3197	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	126.3032	GEN338146 1-INDEPENDENCE UNIT #2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	126.2989	GEN300002 1-THOMAS HILL UNIT 2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	126.2919	GEN338143 1-INDEPENDENCE UNIT #1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	126.2413	GEN652543 3-BIG BEND
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	126.2397	GEN652542 1-BIG BEND
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51349	126.2348	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	126.2347	GEN337653 1-WHITE BLUFF UNIT #2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51005	126.225	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51252	126.2204	HOLCOMB - SETAB 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51005	126.2199	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51252	126.2097	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51348	126.2076	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51314	126.1943	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51119	126.1861	RAUN - SIOUX CITY 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51005	126.1706	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51273	126.1626	RASMUSN - SIOUX CITY 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51329	126.1482	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51042	126.1418	SIDNEY - STEGALL 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	126.132	GEN587153 1-G16-021-GEN10.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51338	126.1232	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	126.0859	GEN501801 1-DOLET HILLS UNIT1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51348	126.0835	CLEVELAND - G15066_T 345.00 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	126.051	GEN660003 3-HURON WEST PARK
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51484	126.0495	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51484	126.0436	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51484	126.0426	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51484	126.0411	BROADLAND - HURON 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50600	126.0182	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	126.0138	GEN652548 5-FT RANDAL
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	126.0138	GEN652549 7-FT RANDAL
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51329	126.0021	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.991	GEN652547 3-FT RANDAL
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51241	125.9571	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.9265	GEN600045 4-ANSON
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51257	125.9262	AXTELL - PAULINE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51134	125.9211	SUB 3454 - WAGENER 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.8953	GEN590010 1-ERCOT EQUIVALENCE
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51153	125.8821	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.8808	GEN681522 3-GENOA 3
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.8558	GEN590011 2-ERCOT EQUIVALENCE
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	125.8426	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.8378	GEN660001 2-ABERDEEN SIEBRECHT
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.8357	GEN600043 7-BLUE LAKE5

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.8357	GEN600044 8-BLUE LAKE6
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51153	125.8325	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.8282	GEN336252 1-NINEMILE POINT UNIT#5
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.8095	GEN600014 4-BLACK DOG GEN 4
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.7995	GEN600065 7-HIGH BRIDGE
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.7995	GEN600066 8-HIGH BRIDGE
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.7985	GEN600011 5-BLACK DOG GEN 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.7912	GEN600071 10-RIVER SIDE
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.7908	GEN600070 9-RIVER SIDE
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51285	125.7852	MISSION - WITTEN 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.775	GEN600007 7-RIVERSIDE GEN 7
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.7581	GEN652345 W-G07_023IS_2 0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.7502	GEN587583 1-J432-GEN1 0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.7457	GEN600017 C-LS POWER CT
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.7142	GEN336251 1-NINEMILE POINT UNIT#4
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.6933	GEN300003 1-THOMAS HILL UNIT 3
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51133	125.6785	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.6599	GEN336831 1-BAXTER WILSON SES
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.639	GEN615021 1-GRE-ER 14G 16.000
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.6355	GEN300007 1-NEW MADRID UNIT 2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.6236	GEN300006 1-NEW MADRID UNIT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.6068	GEN615052 1-CAMBRIDGE GENERATING STATION
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.6025	GEN501813 1-RODEMACHER UNIT 3
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51497	125.5955	FT THOMPSON - WESSINGTON 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.5937	GEN659272 2-GROTON 2G13.800
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.5831	GEN659273 2-GROTON SYNC COND
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.5831	GEN659294 1-WILTONCOL9
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51164	125.5825	103RD & ROKEBY - MOORE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.5708	GEN337041 1-GERALD ANDRUS
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.5705	GEN659118 1-LARAMIE RIVER UNIT1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.558	GEN659162 4-RED WLCK
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.558	GEN659163 5-BLACK WDCK
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.5573	GEN659353 1-DEERCREK CTG18.000
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.5569	GEN659192 6-LYNN
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51196	125.556	MINGO - SETAB 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.5335	GEN659354 1-DEERCREK STG18.000
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51354	125.5182	FT RANDAL - UTICA JCT 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.5112	GEN659274 1-GROTON
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51209	125.4832	COOPER - MOORE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51484	125.4726	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.4534	GEN 11104 1-J262_GEN 0.6000
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.4534	GEN 11108 1-J263_GEN 0.6000
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51314	125.4413	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.4171	GEN600067 9-HIGH BRIDGE
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	125.3854	GEN652559 1-OAHE
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.3556	GEN335206 1-NELSON UNIT 6
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50938	125.3497	HOSKINS - SHELL CREEK 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51328	125.338	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.3336	GEN615015 1-GRE-SPRITWDG13.200
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.3336	GEN672303 3-BOUNDARY DAM GENERATOR 3
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.3336	GEN672304 4-BOUNDARY DAM GENERATOR 4
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.3336	GEN672305 5-BOUNDARY DAM GENERATOR 5
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.3183	GEN334440 1-SABINE UNIT 4
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51362	125.306	OAHE - PHILIP TAP 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51341	125.2778	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51313	125.2726	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.27	GEN659270 1-WEST SW
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.2662	GEN672392 1-NBECGT1G 18.000
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.2518	GEN659291 1-FT MP COLLECTOR
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.234	GEN562872 1-G15046_3 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.2061	GEN344897 4-1LAB G4 20.000
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.2041	GEN344894 1-1LAB G1 20.000
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.204	GEN344895 2-1LAB G2 20.000
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.204	GEN344896 3-1LAB G3 20.000
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.1913	GEN587623 1-J493-GEN1 0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.1875	GEN662101 1-WESSINGTON190.5750
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.1764	GEN660016 1-B_H WIND 0.7000
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.163	GEN681542 6-JP MADGETT
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.1607	GEN501812 1-RODEMACHER UNIT 2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51328	125.1484	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.142	GEN345671 2-1RUSH G2 18.000
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.1383	GEN345670 1-1RUSH G1 18.000
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.1365	GEN336191 1-LITTLE GYPSY UNIT#3
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.1362	GEN338388 1-1PLUM PT U1 23.000
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50985	125.1289	G15088_T 345.00 - MOORE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	125.1285	GEN587353 1-G16-050-GEN10.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.48723	125.1271	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51313	125.1082	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50920	125.0898	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.0754	GEN 10648 1-G830_GEN 0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	125.0668	GEN652545 7-BIG BEND
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	125.0542	GEN659296 2-SDPRAIRWND1W0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51397	125.0525	GAVINS POINT - YANKON JCT 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51402	125.0155	CARPENTER - HURON 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51133	125.0106	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51312	125.0039	FARGO - JAMES TOWN 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51313	124.998	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.9936	GEN334441 1-SABINE UNIT 5
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.9716	GEN335204 1-NELSON UNIT 4
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51402	124.9709	HURON - WATERTOWN 230KV CKT 2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.9637	GEN335614 1-WILLOW GLENN UNIT#4
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51612	124.9628	OAHE - SULLEY BUTTE 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51314	124.9557	FARGO - JAMES TOWN 230KV CKT 2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.9556	GEN336801 1-BAXTER WILSON UNIT #1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51090	124.9527	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.9458	GEN910006 1-G12_012IS_3 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.9428	GEN336464 1-MICHOUD UNIT #3
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51402	124.925	CARPENTER - WATERTOWN 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51220	124.9189	COLUMEAST - SHELL CREEK 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	124.8674	GEN600004 2-PRAIRIE ISLAND G2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.8652	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	124.8598	GEN600003 1-PRAIRIE ISLAND G1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51601	124.8213	GLENHAM - L3 HAWDON 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	124.8145	GEN652556 2-OAHE
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	124.8145	GEN652557 4-OAHE
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	124.8145	GEN652558 6-OAHE
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.8118	GEN587593 1-J460-GEN1 0.6900
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	124.7958	ALMA 161 161/24.0KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51085	124.792	GRAND ISLAND - SWEETWATER 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.7864	GEN334433 1-SABINE UNIT 3
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51243	124.7783	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51339	124.7452	MENNO JCT - TRIPP JCT 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51612	124.7419	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51612	124.7311	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	124.7303	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51612	124.7303	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51265	124.7245	GAVINS POINT - HARTINGTON 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.7209	GEN531447 1-HOLCOMB GENERATOR
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51287	124.7195	GARRISON - JAMES TOWN 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.7084	GEN587053 1-G16-007-GEN10.6500
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.6984	GEN336222 1-LITTLE GYPSY UNIT#2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51612	124.6975	GLENHAM - WHITLOK 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51174	124.6588	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51377	124.6497	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51196	124.6353	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51377	124.6348	NAPA JCT7 115.00 - UTICA 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.604	GEN652559 1-OAHE
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51320	124.5911	MARTIN - SHANNON 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.5875	GEN563222 1-G15088_3 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51174	124.5868	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.5726	GEN336152 1-WATERFORD UNIT#2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.5725	GEN336151 1-WATERFORD UNIT#1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.5378	GEN652906 1-G09_006IS_3 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51339	124.5317	MENNO JCT - UTICA 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51174	124.5147	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.509	GEN303007 1-1BC2 U2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.5	GEN303006 1-1BC2 U1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.4986	GEN 11123 1-G736-GEN1 0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.4908	GEN 11133 1-J442-GEN1 0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.4793	GEN652544 5-BIG BEND

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51320	124.47	BISMARK - JAMES TOWN 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.4589	GEN641089 2-ENERGY CENTER 2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.4399	GEN659010 4-G07_027IS_2 0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.4342	GEN652543 3-BIG BEND
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.4337	GEN652542 1-BIG BEND
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.4198	GEN659366 3-WILTON 3 W0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51320	124.4167	JAMES TOWN - WEBER 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.4161	GEN659194 1-NDPRAIRWND1W0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.4101	GEN336170 1-GULF OXY U4
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51313	124.4068	FARGO - SHEYNNE 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.4055	GEN303008 1-1BC2 U3
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.4047	GEN652460 4-GARRISON
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.4047	GEN652461 5-GARRISON
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51320	124.4037	BISMARK - WEBER 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51333	124.3457	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.3375	GEN652457 1-GARRISON
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.3375	GEN652458 2-GARRISON
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.3375	GEN652459 3-GARRISON
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	124.336	GEN600006 1-AS KING
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51335	124.3333	CLEARWATER - ONEILL 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51322	124.3272	DENISON - SIOUX CITY 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.3176	GEN652907 1-G09_007IS_3 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51233	124.3098	G16-034-TAP 345.00 - KEYSTONE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.2898	GEN501811 1-RODEMACHER UNIT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51267	124.257	BLOOMFIELD - GAVINS POINT 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.2567	GEN587363 1-G16-055-GEN10.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	124.2367	GEN659403 1-NDSUNFLWR W0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51048	124.2288	AXTELL - SWEETWATER 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51335	124.2239	CLEARWATER - NELIGH 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.2219	GEN334070 1-LEWIS CREEK 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.2219	GEN334071 1-LEWIS CREEK 2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51265	124.2211	BELDEN - HARTINGTON 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51267	124.2166	BLOOMFIELD - CREIGHTON 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51303	124.2134	CHADRON - DUNLAP 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51315	124.1389	CHADRON - WAYSIDE 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.1365	GEN337766 1-TRACTEBEL UNIT S1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51315	124.1336	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51134	124.1199	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.1171	GEN337757 1-DUKE HOTSPRINGS STG1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51075	124.1155	MINGO - RED WILLOW 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.0936	GEN501910 1-ACADIA UNIT ST1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.0903	GEN587443 1-G16-064-GEN10.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.0866	GEN336221 1-LITTLE GYPSY UNIT#1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.0861	GEN640009 1-COOPER NUCLEAR STATION
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51275	124.0445	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51303	124.0414	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	124.0401	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.0282	GEN334432 1-SABINE UNIT 2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.028	GEN334431 1-SABINE UNIT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51257	124.0174	BISON - HETINGER 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	124.0122	GEN645012 2-NEBRASKA CITY 2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51320	123.9712	GORDON - SHANNON 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.9446	GEN672321 1-SHAND GENERATOR 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.9288	GEN563232 1-G15089_3 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51257	123.892	BISON - MAURINE 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.8893	GEN600004 2-PRAIRIE ISLAND G2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.8823	GEN600003 1-PRAIRIE ISLAND G1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.8757	GEN659411 1-CAMPBLCNTY W0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.8663	GEN672310 1-POPLAR RIVER GENERATOR 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.8663	GEN672311 2-POPLAR RIVER GENERATOR 2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	123.8658	GEN645011 1-NEBRASKA CITY 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.8445	GEN672306 6-BOUNDARY DAM GENERATOR 6
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	123.826	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51477	123.7526	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.7265	GEN615010 1-STANTON4
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.5361	GEN659296 2-SDPRAIRWND1W0.6900
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	123.5277	GEN600005 1-MONTICELLO
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.5072	GEN600006 1-AS KING
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.437	GEN587653 1-J526-GEN1 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51353	123.366	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51351	123.3515	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.344	GEN652556 2-OAHE
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.344	GEN652557 4-OAHE
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.344	GEN652558 6-OAHE
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.3339	GEN659110 1-LELAND OLDS UNIT1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51349	123.3329	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.3282	GEN659453 1-GI1414GEN W0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.2596	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	123.1867	BASE CASE
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.1775	GEN659141 1-K10215A
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51439	123.1402	FT THOMPSON - OAHE 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51439	123.1402	FT THOMPSON - OAHE 230KV CKT 2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	123.1293	GEN587633 1-J510-GEN1 18.000
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51333	123.1225	SUB 3455 - SUB 3740 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51443	123.1106	FT THOMPSON - OAHE 230KV CKT 3
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51443	123.1106	FT THOMPSON - OAHE 230KV CKT 4
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	122.989	GEN657749 1-YOUNG 1 GENERATOR
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.9417	GEN509403 1-PIRKEY GENERATION
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51237	122.9349	BASSETT 7115.00 - STUART 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51237	122.9283	ATKINSON - STUART 115KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.49657	122.9257	MCCOOL - MOORE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51237	122.8766	AINSWORTH - BASSETT 7115.00 115KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	122.8383	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51337	122.8343	CALLAWAY - MAXWELL 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51294	122.8194	STAPLETON - THEDFORD 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.7639	GEN300002 1-THOMAS HILL UNIT 2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51333	122.7514	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51343	122.7334	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51477	122.7322	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51477	122.7301	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51477	122.73	BROADLAND - HURON 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51477	122.7254	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.7214	GEN505432 1-SIKESTON
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	122.6856	GEN659407 1-ANTELPHILLSW0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51090	122.6787	G15088_T 345.00 - MOORE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51246	122.6324	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	122.6093	GEN600005 1-MONTICELLO
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51461	122.5986	LARAMIE RIVER - STEGALL 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51252	122.5945	AXTELL - PAULINE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51323	122.5495	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.5261	GEN652546 1-FT RANDAL
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.5167	GEN587153 1-G16-021-GEN10.6900
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	122.4969	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50595	122.4897	COLUMWEST - GRAND ISLAND 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51309	122.4651	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.4643	GEN659116 1-SPIRIT MOUND UNIT1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.463	GEN652548 5-FT RANDAL
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.463	GEN652549 7-FT RANDAL
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	122.45	GEN600000 1-SHERBURNECNTY G1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.4418	GEN652547 3-FT RANDAL
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.4289	GEN660003 3-HURON WEST PARK
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51235	122.3921	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.3876	GEN600047 1-MECCT1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.379	GEN600046 1-MECST
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.3297	GEN600045 4-ANSON
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51204	122.3223	COOPER - MOORE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.3204	GEN600063 1-COLVILLE GEN 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.3204	GEN600064 2-COLVILLE GEN 2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.3157	GEN660001 2-ABERDEEN SIEBRECHT
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	122.3143	GEN600000 1-SHERBURNECNTY G1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.3091	GEN600043 7-BLUE LAKE5
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.3091	GEN600044 8-BLUE LAKE6
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51278	122.2928	MISSION - WITTEN 115KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.2823	GEN600014 4-BLACK DOG GEN 4
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.2769	GEN600065 7-HIGH BRIDGE
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.2769	GEN600066 8-HIGH BRIDGE
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.2724	GEN600011 5-BLACK DOG GEN 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	122.272	GEN587033 1-G16-004-GEN10.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.2685	GEN600071 10-RIVER SIDE
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.2683	GEN600070 9-RIVER SIDE

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	122.257	AXTELL - G16-050-TAP 345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.2532	GEN600007 7-RIVERSIDE GEN 7
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.2523	GEN652414 4-FT PECK
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.2523	GEN652415 5-FT PECK
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.2415	GEN652345 W-G07_023IS_2 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51477	122.2264	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.2222	GEN600017 C-LS POWER CT
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	122.2156	SUB 3454 - WAGENER 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.213	GEN587583 1-J432-GEN1 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51159	122.2064	103RD & ROKEBY - MOORE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.1932	GEN300003 1-THOMAS HILL UNIT 3
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51246	122.1731	HOLCOMB - SETAB 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.1313	GEN300007 1-NEW MADRID UNIT 2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.1258	GEN300006 1-NEW MADRID UNIT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.1061	GEN652559 1-OAHE
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.0868	GEN659273 2-GROTON SYNC COND
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.0868	GEN659294 1-WILTONCOL9
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.0862	GEN615052 1-CAMBRIDGE GENERATING STATION
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.0769	GEN659272 2-GROTON 2G13.800
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.0715	GEN659162 4-RED WLCK
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.0715	GEN659163 5-BLACK WDCK
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.0705	GEN659192 6-LYNN
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.0635	GEN615021 1-GRE-ER 14G 16.000
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	122.032	GEN587033 1-G16-004-GEN10.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.0123	GEN659274 1-GROTON
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	122.0041	GEN590010 1-ERCOT EQUIVALENCE
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51309	121.9841	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51309	121.9831	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51717	121.971	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.9694	GEN590011 2-ERCOT EQUIVALENCE
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.9539	GEN657705 X-DRAYTON
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.9029	GEN600067 9-HIGH BRIDGE
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.868	GEN 11104 1-J262_GEN 0.6000
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.868	GEN 11108 1-J263_GEN 0.6000
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.8625	GEN615015 1-GRE-SPRITWDG13.200
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.8371	GEN659353 1-DEERCREK CTG18.000
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.8368	GEN659354 1-DEERCREK STG18.000
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51084	121.813	G15088_T 345.00 - PAULINE 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	121.7817	GEN661015 1-COYOTE
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.7766	GEN659270 1-WEST SW
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.7524	GEN659291 1-FT MP COLLECTOR
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.7415	GEN562872 1-G15046_3 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51291	121.7202	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	121.7056	GEN620315 1-BIG STONE GEN
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.6829	GEN662101 1-WESSINGTON190.5750
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.6821	GEN660016 1-B_H WIND 0.7000
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.6721	GEN587623 1-J493-GEN1 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51605	121.6528	OAHE - SULLEY BUTTE 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.5696	GEN 10648 1-G830_GEN 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51605	121.522	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51605	121.5032	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51605	121.5031	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51594	121.4901	GLENHAM - L3 HAWDON 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.4733	GEN910006 1-G12_012IS_3 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51605	121.4223	GLENHAM - WHITLOK 230KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.50915	121.4108	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.3211	GEN587593 1-J460-GEN1 0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	121.3045	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51191	121.2702	MINGO - SETAB 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	121.2438	GEN600002 3-SHERBURNE CNTY G3
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.2117	GEN587053 1-G16-007-GEN10.6500
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.48718	121.204	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	121.1004	GEN600001 2-SHERBURNE CNTY G2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.0955	GEN652545 7-BIG BEND
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.0623	GEN652906 1-G09_006IS_3 0.6900
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	121.0427	GEN661015 1-COYOTE
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	121.0079	GEN652544 5-BIG BEND
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.9767	GEN652543 3-BIG BEND
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.9764	GEN652542 1-BIG BEND
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.9731	GEN 11123 1-G736-GEN1 0.6900

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.9726	GEN659010 4-G07_027IS_2 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.9646	GEN 11133 1-J442-GEN1 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.9538	GEN659366 3-WILTON 3 W0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.9393	GEN652460 4-GARRISON
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.9393	GEN652461 5-GARRISON
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.9363	GEN659194 1-NDPRAIRWND1W0.6900
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	120.9304	GEN600002 3-SHERBURNE CNTY G3
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	120.9137	GEN657748 1-YOUNG 2 GENERATOR
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	120.9003	GEN600001 2-SHERBURNE CNTY G2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.8687	GEN652458 2-GARRISON
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.8686	GEN652457 1-GARRISON
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.8686	GEN652459 3-GARRISON
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.8109	GEN652907 1-G09_007IS_3 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.764	GEN659403 1-NDSUNFLWR W0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51191	120.7402	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51042	120.5759	AXTELL - SWEETWATER 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	120.5548	GEN657748 1-YOUNG 2 GENERATOR
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.452	GEN659411 1-CAMPBLCNTY W0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.4159	GEN563232 1-G15089_3 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.4119	GEN600004 2-PRAIRIE ISLAND G2
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	120.4107	GEN620315 1-BIG STONE GEN
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.4052	GEN600003 1-PRAIRIE ISLAND G1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.2137	GEN615010 1-STANTON4
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.19	GEN659296 2-SDPRAIRWND1W0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51128	120.1209	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.0602	GEN600006 1-AS KING
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	120.0555	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.49372	120.0074	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	119.9267	GEN652556 2-OAHE
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	119.9267	GEN652557 4-OAHE
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	119.9267	GEN652558 6-OAHE
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.49750	119.8981	MCCOOL - MOORE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	119.892	GEN587653 1-J526-GEN1 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	119.8318	GEN659110 1-LELAND OLDS UNIT1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	119.8229	GEN659453 1-GI1414GEN W0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	119.7361	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51070	119.6871	MINGO - RED WILLOW 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	119.6698	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	119.6641	GEN659141 1-K10215A
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51084	119.6559	G15088_T 345.00 - MOORE 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	119.5752	GEN587633 1-J510-GEN1 18.000
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53749	119.5637	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53749	119.5586	2810X2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	119.4251	GEN652173 1-G09_001IS_2 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	119.231	GEN659407 1-ANTELPHILLSW0.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	119.1886	GEN659103 1-ANTELOPE VALLEY UNIT1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	119.1886	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	119.1772	GEN600005 1-MONTICELLO
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	119.0222	GEN659103 1-ANTELOPE VALLEY UNIT1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	119.0222	GEN659107 2-ANTELOPE VALLEY UNIT2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53762	118.9628	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53762	118.9453	2810X2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	118.8535	GEN600000 1-SHERBURNECNTY G1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	118.6719	GEN620315 1-BIG STONE GEN
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	118.55	GEN587033 1-G16-004-GEN10.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53762	118.4624	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	118.0382	GEN587293 1-G16-044-GEN10.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	118.0048	GEN579459 1-G16-075-GEN10.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	117.9326	GEN600002 3-SHERBURNE CNTY G3
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	117.8932	GEN615001 1-COAL CREEK
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	117.8515	GEN659125 1-COVEY
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	117.777	GEN587293 1-G16-044-GEN10.6900
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53749	117.7691	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	117.7357	GEN600001 2-SHERBURNE CNTY G2
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	117.7078	GEN615002 2-COAL CREEK
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.46426	117.6362	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	117.586	GEN659125 1-COVEY
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	117.5002	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.49743	117.2657	MCCOOL - MOORE 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	117.2656	GEN615001 1-COAL CREEK

SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	117.0911	GEN615002 2-COAL CREEK
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.49462	116.7985	GRAND ISLAND - MCCOOL 345KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	116.6187	BIG STONE 230/24.0KV TRANSFORMER CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	116.5535	GEN659111 2-LELAND OLDS UNIT2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53750	116.1966	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53750	116.1793	2810X2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	115.975	GEN659103 1-ANTELOPE VALLEY UNIT1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	115.975	GEN659107 2-ANTELOPE VALLEY UNIT2
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53750	115.9001	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	115.7013	GEN587133 1-G16-017-GEN10.6900
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	115.6164	GEN587133 1-G16-017-GEN10.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	114.8226	GEN587293 1-G16-044-GEN10.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	114.7251	GEN659125 1-COVEY
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	114.4702	GEN615001 1-COAL CREEK
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	114.4199	GEN615002 2-COAL CREEK
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.49456	114.1778	GRAND ISLAND - MCCOOL 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	112.5683	GEN587133 1-G16-017-GEN10.6900
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53762	112.4576	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53762	112.1542	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53762	112.1184	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53750	109.7	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53750	109.6917	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.53750	109.6754	GEN-2016-017TAP-FTTHOMPSONREACTOR-FTTHOMPSON-CKT1
3	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51352	102.8727	GEN652353 2-GR PRAIRIEG 0.6900
3	20WP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51454	102.1102	KELLY - MEADOWGROVE4230.00 230KV CKT 1
3	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51247	101.9355	GEN652353 2-GR PRAIRIEG 0.6900
3	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51347	100.1686	GEN652353 2-GR PRAIRIEG 0.6900
3	20WP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.52099	99.4	STORLA - WESSINGTON 230KV CKT 1
3	20WP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720.0	720.0	0.51590	99.1	SPLIT ROCK - WHITE 345KV CKT 1
3	16WP	G16_075	-	Non-Converged Contingency	0.0	0.0	1.04017	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	16WP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.52009	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	16WP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.52009	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
3	20SP	G16_075	-	Non-Converged Contingency	0.0	0.0	1.02705	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	20SP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.51352	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	20SP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.51352	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
3	20SP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.34453	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
3	20SP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.34453	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	20SP	G16_075	-	Non-Converged Contingency	1792.0	1792.0	0.16899	-	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
3	20WP	G16_075	-	Non-Converged Contingency	0.0	0.0	1.03820	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
3	20WP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.51910	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
3	20WP	G16_075	-	Non-Converged Contingency	720.0	720.0	0.51910	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
3	25SP	G16_075	-	Non-Converged Contingency	956.09	1051.7	0.07012	-	GEN525561 1-TOLK GEN #1 24 KV

11.9 G1-T: STAND-ALONE THERMAL POWER FLOW ANALYSIS (CONSTRAINTS REQUIRING TRANSMISSION REINFORCEMENT)

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL_ASGI_16_00	0	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28994	140.3987	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17G	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.3139	139.2045	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20L	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28994	138.8917	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17G	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.3139	137.6587	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	16WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.32196	132.9278	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	16WP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.32196	132.0397	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.32172	125.597	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.32172	124.7751	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.32101	123.5956	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17SP	ASGI_16_01	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.32101	122.9455	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17G	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.37531	130.342	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20L	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.3748	127.68	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20SP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.40228	126.5787	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17SP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.39096	123.2367	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	16WP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.38303	106.2382	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	2	20L	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.32723	121.1273	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	2	20SP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.33354	115.4486	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	2	17G	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.30642	114.4313	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	2	20WP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.33196	108.7949	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	2	17SP	ASGI_16_01	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.32633	108.1015	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20WP	ASGI_16_02	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.31982	145.547	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20WP	ASGI_16_02	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.31982	143.5469	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20L	ASGI_16_02	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29282	140.2916	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17G	ASGI_16_02	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.31957	139.5894	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20L	ASGI_16_02	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29282	138.7794	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17G	ASGI_16_02	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.31957	138.0046	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	16WP	ASGI_16_02	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.32762	132.7946	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	16WP	ASGI_16_02	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.32762	131.9159	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20SP	ASGI_16_02	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.32456	125.4732	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20SP	ASGI_16_02	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.32456	124.6589	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17SP	ASGI_16_02	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.32446	123.4636	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17SP	ASGI_16_02	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.32446	122.8216	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17G	ASGI_16_02	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.39424	130.7058	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20L	ASGI_16_02	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.38273	127.5777	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20SP	ASGI_16_02	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.41015	126.4081	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17SP	ASGI_16_02	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.40216	123.0605	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20WP	ASGI_16_02	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.40588	115.9564	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	16WP	ASGI_16_02	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.40197	106.0747	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	2	20L	ASGI_16_02	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.35336	119.4139	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	2	20SP	ASGI_16_02	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.35959	115.315	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	2	17G	ASGI_16_02	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.34744	114.3035	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	2	20WP	ASGI_16_02	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.35802	108.4791	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	2	17SP	ASGI_16_02	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.35384	107.9637	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.1992	109.9129	CHERRY1 - HARRINGTON STATION 230KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.1992	109.9129	CHERRY1 - HARRINGTON STATION 230KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.24964	108.8464	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20WP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.24964	108.8464	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.20278	105.2074	CHERRY1 - HARRINGTON STATION 230KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.20278	105.2074	CHERRY1 - HARRINGTON STATION 230KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17G	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.19703	105.158	CHERRY1 - HARRINGTON STATION 230KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17G	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.24764	104.2484	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.20277	104.1463	CHERRY1 - HARRINGTON STATION 230KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.20277	104.1463	CHERRY1 - HARRINGTON STATION 230KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25372	102.5894	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL_ASGI_16_00	0	17SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25372	102.5894	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25338	100.8796	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL_ASGI_16_00	0	20SP	ASGI_16_04	FROM->TO	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.25338	100.8796	CHERRY1 - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNS	15ALL_ASGI_16_00	0	25SP	ASGI_16_05	FROM->TO	FT RANDAL - SPENCER 115KV CKT 1	120	120	0.04701	104.9332	BASE CASE
FDNS	15ALL_ASGI_16_00	0	20SP	ASGI_16_05	FROM->TO	FT RANDAL - SPENCER 115KV CKT 1	120	120	0.0469	101.5693	BASE CASE
FDNS	15ALL_ASGI_16_00	0	25SP	ASGI_16_05	TO->FROM	ONEILL - SPENCER 115KV CKT 1	120	120	0.04701	100.5003	BASE CASE
FDNS	15ALL_ASGI_16_00	0	25SP	ASGI_16_07	FROM->TO	FT RANDAL - SPENCER 115KV CKT 1	120	120	0.04701	104.9332	BASE CASE
FDNS	15ALL_ASGI_16_00	0	20SP	ASGI_16_07	FROM->TO	FT RANDAL - SPENCER 115KV CKT 1	120	120	0.0469	101.5693	BASE CASE
FDNS	15ALL_ASGI_16_00	0	25SP	ASGI_16_07	TO->FROM	ONEILL - SPENCER 115KV CKT 1	120	120	0.04701	100.5003	BASE CASE
FDNSLock-Blown up	06ALL_G15_018	0	16WP	G15_018	-	Non-Converged Contingency	1532	1793	0.07917	-	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	06ALL_G15_018	0	20WP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.26574	149.7471	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_018	0	20WP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.26574	147.3821	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_018	0	20L	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.24006	145.0224	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_018	0	17G	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.26155	144.1911	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL_G15_018	0	20L	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.24006	143.1046	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_018	0	17G	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.26155	142.2878	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_018	0	16WP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2698	136.9844	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_018	0	16WP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2698	135.8168	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_018	0	20SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.27067	129.5659	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_018	0	20SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.27067	128.5319	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_018	0	17SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.26747	128.0967	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_018	0	17SP	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.26747	127.5165	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_018	0	17G	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.03412	112.9246	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_018	0	17G	G15_018	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.03412	110.9673	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_018	0	17G	G15_018	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.20549	135.3435	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_018	0	20L	G15_018	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.21236	132.7784	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_018	0	20SP	G15_018	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.23843	130.6964	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_018	0	17SP	G15_018	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.21643	127.1679	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_018	0	20WP	G15_018	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.23401	119.8148	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_018	0	16WP	G15_018	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.21342	110.0454	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	00NR_G15_018	0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06456	115.8249	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_018	0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06456	115.8249	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_018	0	25SP	G15_018	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06175	101.6714	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G15_018	0	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03578	101.121	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_018	0	25SP	G15_018	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03578	101.1078	P12:LPL:SPS:K64.1.LP-SE.LUBBS
FDNS	00NR_G15_033	0	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159	160	0.03186	119.8036	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_033	0	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159	160	0.03186	119.8036	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_033	0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165	177	0.11596	113.1257	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_033	0	16WP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165	177	0.11596	113.1257	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_033	0	25SP	G15_033	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159	160	0.0476	103.2006	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	06ALL_G15_033	0	20WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.24978	153.0822	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	20WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.24978	150.4088	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.22345	148.7569	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	17G	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2555	148.6561	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	20L	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.22345	146.5283	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	17G	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2555	146.3464	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	16WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.26399	139.5677	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	16WP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.26399	138.1671	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	20SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.25461	133.0785	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	17SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.25899	131.8954	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	20SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.25461	131.8077	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	17SP	G15_033	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.25899	131.1078	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	17G	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.36791	143.9612	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	20L	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.32675	139.7212	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	20SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.35344	137.6164	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	17SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.36948	135.0697	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	20WP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.34909	125.8158	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_033	0	20L	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.11975	120.4673	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	16WP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.37605	115.235	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_033	0	17G	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.18077	113.4158	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	0	16WP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717	789	0.23047	104.8067	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	0	20WP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717	789	0.21571	103.7258	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	0	17G	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717	789	0.22636	103.6155	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	0	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717	789	0.19754	103.189	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	0	16WP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717	789	0.23047	99.9	GRACEMONT - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.23047	117.4343	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	0	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.21571	116.33	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.22636	116.1567	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.19754	115.2987	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	0	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.23047	112.362	GRACEMONT - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	0	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.21571	111.4463	GRACEMONT - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.22636	111.0831	GRACEMONT - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.19754	110.5964	GRACEMONT - MINCO 345KV CKT 1
FDNS	06NR_G15_033	0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.0664	105.2494	CIMARRON - MINCO 345KV CKT 1
FDNS	06NR_G15_033	0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.06202	104.8564	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	0	17SP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.22693	102.3194	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.14355	102.1502	BASE CASE
FDNS	06ALL_G15_033	0	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.15997	100.39	BASE CASE
FDNS	06NR_G15_033	0	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.0664	100.2213	GRACEMONT - MINCO 345KV CKT 1
FDNS	06NR_G15_033	0	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.06202	100.1122	GRACEMONT - MINCO 345KV CKT 1
FDNS	00NR_G15_033	0	25SP	G15_033	FROM->TO	G15079_T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	318.7	350.57	0.08081	104.0762	HOBBS - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G15_033	0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.16637	119.0961	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_033	0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.16637	119.0961	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_033	0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.16368	105.1056	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G15_033	0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	101.2983	GEN526333 1-JONES GEN #3 21 KV
FDNS	00NR_G15_033	0	25SP	G15_033	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12631	100.9014	GEN526334 1-JONES_4 116.500
FDNS	00NR_G15_033	0	16WP	G15_033	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165	180	0.11596	105.5677	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_033	0	16WP	G15_033	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165	180	0.11596	105.5677	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_033	0	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03595	101.2315	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_033	0	25SP	G15_033	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03595	101.2182	P12:LPL:SPS:K64.1.LP-SE.LUBBS
FDNS	00NR_G15_033	0	25SP	G15_033	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.06383	107.6339	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G15_033	0	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250	288	0.06348	120.0796	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_033	0	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250	288	0.06348	120.0796	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_033	0	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250	288	0.06348	113.4152	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_033	0	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250	288	0.06348	113.4152	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_033	0	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250	288	0.06348	120.0796	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_033	0	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250	288	0.06348	120.0796	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_033	0	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250	288	0.06348	113.4152	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_033	0	25SP	G15_033	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250	288	0.06348	113.4152	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_033	0	17SP	G15_033	FROM->TO	TUCO INTERCHANGE (GE_M102345) 230/115/13.2KV TRANSFORMER CKT 1	242	252	0.08718	100.112	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_033	0	17SP	G15_033	FROM->TO	TUCO INTERCHANGE (GE_M102345) 230/115/13.2KV TRANSFORMER CKT 1	242	252	0.08718	100.112	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_033	0	17SP	G15_033	FROM->TO	TUCO INTERCHANGE (GE_M102345) 230/115/13.2KV TRANSFORMER CKT 1	242	252	0.08718	99.6	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_033	0	17SP	G15_033	FROM->TO	TUCO INTERCHANGE (GE_M102345) 230/115/13.2KV TRANSFORMER CKT 1	242	252	0.08718	99.6	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_033	0	17SP	G15_033	FROM->TO	WOLFFORTH INTERCHANGE (WH_7001668) 230/115/13.2KV TRANSFORMER CKT 1	120	154	0.05291	103.2623	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
FDNS	00NR_G15_033	0	17SP	G15_033	FROM->TO	WOLFFORTH INTERCHANGE (WH_7001668) 230/115/13.2KV TRANSFORMER CKT 1	120	154	0.05291	100	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
FDNS	06ALL_G15_033	2	20L	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.38551	130.0267	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	2	20SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.39159	126.9848	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	2	17G	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.39553	126.7036	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	2	17SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.39263	120.0299	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	2	20WP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.38998	118.7274	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_033	2	20L	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.28107	113.3699	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	2	16WP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.399	103.5427	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	2	16WP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717	789	0.22901	105.1547	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	2	17G	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717	789	0.22477	104.0137	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	2	20WP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717	789	0.21555	103.8544	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	2	20L	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717	789	0.19735	103.307	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	2	16WP	G15_033	TO->FROM	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1	717	789	0.22901	100.2086	GRACEMONT - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.22901	117.7871	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.22477	116.5634	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.21555	116.4615	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.19735	115.4201	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.22901	112.7179	GRACEMONT - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.21555	111.5773	GRACEMONT - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.22477	111.4983	GRACEMONT - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.19735	110.7193	GRACEMONT - MINCO 345KV CKT 1
FDNS	06NR_G15_033	2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.06102	105.6395	CIMARRON - MINCO 345KV CKT 1
FDNS	06NR_G15_033	2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.06168	104.9521	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	2	17SP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.22548	102.5995	CIMARRON - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.14345	102.241	BASE CASE
FDNS	06NR_G15_033	2	17G	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.06102	100.5925	GRACEMONT - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	2	20WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.15988	100.4732	BASE CASE
FDNS	06NR_G15_033	2	20L	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.06168	100.2093	GRACEMONT - MINCO 345KV CKT 1
FDNS	06ALL_G15_033	2	16WP	G15_033	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.16684	99.7	BASE CASE
FDNS	06ALL_G15_033	3	20L	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.38551	130.0267	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	3	17G	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.39553	126.7036	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	3	17SP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.39263	120.0299	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	3	20WP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.38998	118.7274	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_033	3	20L	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.29859	113.3754	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_033	3	16WP	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.399	103.5427	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_033	3	17G	G15_033	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.3314	102.675	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	00NR_G15_033	3	25SP	G15_033	FROM->TO	G15079_T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	318.7	350.57	0.07954	103.5945	HOBBS - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G15_033	3	25SP	G15_033	TO->FROM	HALE CO INTERCHANGE - TUCO2 115.00 115KV CKT 1	95.81	95.81	0.03254	109.2012	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
FDNS	00NR_G15_033	3	25SP	G15_033	TO->FROM	HALE CO INTERCHANGE - TUCO2 115.00 115KV CKT 1	95.81	95.81	0.03254	109.2012	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
FDNSLock-Blown up	01ALL_G15_038	0	16WP	G15_038	-	Non-Converged Contingency	1314	1314	0.03169	-	CRAIG - WEST GARDNER 345KV CKT 1
FDNSLock-Blown up	01ALL_G15_038	0	16WP	G15_038	-	Non-Converged Contingency	1314	1314	0.03035	-	PECULIAR - STILWELL 345KV CKT 1
FDNS	06ALL_G15_039	0	20WP	G15_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.20557	147.5842	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_039	0	20WP	G15_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.20557	145.4079	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_039	0	17G	G15_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2048	141.3991	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_039	0	17G	G15_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2048	139.6714	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_039	0	16WP	G15_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.21297	134.8173	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL_G15_039	0	16WP	G15_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.21297	133.7942	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_039	0	20SP	G15_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.21037	127.3857	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_039	0	20SP	G15_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.21037	126.4911	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	00NR_G15_039	0	25SP	G15_039	FROM->TO	G15079_T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	318.7	350.57	0.05115	103.2436	HOBBS - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G15_039	0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.0844	116.6072	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_039	0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.0844	116.6072	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_039	0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.08361	102.5929	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G15_039	0	25SP	G15_039	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.06983	99.5	GEN526333 1-JONES GEN #3 21 KV
FDNS	00NR_G15_039	0	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.0358	101.0981	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_039	0	25SP	G15_039	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.0358	101.0849	P12:LPL:SPS:K64.1.LP-SE.LUBBS
FDNS	06ALL_G15_040	0	20WP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29606	148.4494	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_040	0	20WP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29606	146.2049	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_040	0	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.27092	143.2817	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_040	0	17G	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28566	142.1549	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_040	0	17G	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28566	140.3788	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_040	0	16WP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29386	135.6201	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_040	0	16WP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29386	134.5473	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_040	0	20SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.30085	128.2896	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_040	0	20SP	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.30085	127.3474	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_040	0	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.05909	118.3215	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_040	0	20L	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.05909	117.8924	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_040	0	17G	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.05804	111.4148	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_040	0	17G	G15_040	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.05804	109.5537	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_040	0	17G	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.28151	133.725	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_040	0	20L	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.32204	131.3505	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_040	0	20SP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.34722	129.9747	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_040	0	20WP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.34291	119.2653	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_040	0	20L	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.11361	112.4116	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_040	0	16WP	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.28937	109.1448	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_040	0	17G	G15_040	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.0941	103.9986	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_040	0	20L	G15_040	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.1088	99.5	BASE CASE
FDNS	00NR_G15_040	0	25SP	G15_040	FROM->TO	G15079_T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	318.7	350.57	0.12576	104.1932	HOBBS - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G15_040	0	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03574	101.0788	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_040	0	25SP	G15_040	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03574	101.0656	P12:LPL:SPS:K64.1.LP-SE.LUBBS
FDNS	00NR_G15_040	0	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250	288	0.18272	103.9776	MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	00NR_G15_040	0	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250	288	0.18272	103.9776	MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	00NR_G15_040	0	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250	288	0.18272	102.5501	MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	00NR_G15_040	0	25SP	G15_040	FROM->TO	MUSTANG STATION (ENRCO 136161) 230/115/13.2KV TRANSFORMER CKT 1	250	288	0.18272	102.5501	MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	00NR_G15_040	0	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150	150	0.06513	132.1959	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_040	0	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150	150	0.06513	132.1959	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_040	0	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150	150	0.06513	122.8525	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_040	0	25SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150	150	0.06513	122.8525	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_040	0	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150	150	0.07717	115.2893	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_040	0	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150	150	0.07717	115.2893	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_040	0	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150	150	0.06603	110.9341	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_040	0	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150	150	0.06603	110.9341	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_040	0	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150	150	0.07717	108.3984	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_040	0	17SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150	150	0.07717	108.3984	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_040	0	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150	150	0.06603	104.9501	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_040	0	20SP	G15_040	FROM->TO	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1	150	150	0.06603	104.9501	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_040	0	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150	150	0.06582	133.539	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_040	0	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150	150	0.06582	133.539	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_040	0	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150	150	0.06582	124.36	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_040	0	25SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150	150	0.06582	124.36	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_040	0	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150	150	0.07797	116.4632	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_040	0	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150	150	0.07797	116.4632	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_040	0	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150	150	0.06673	111.3303	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_040	0	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150	150	0.06673	111.3303	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_040	0	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150	150	0.07797	109.6948	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_040	0	17SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150	150	0.07797	109.6948	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_040	0	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150	150	0.06673	105.8727	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_040	0	20SP	G15_040	FROM->TO	SEMINOLE (GE M101898) 230/115/13.2KV TRANSFORMER CKT 2	150	150	0.06673	105.8727	SEMINOLE (GE M101687) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_040	0	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150	150	0.05461	101.012	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_040	0	17SP	G15_040	FROM->TO	YOAKUM COUNTY INTERCHANGE (YOAKUM_T2) 230/115/13.2KV TRANSFORMER CKT 2	150	150	0.05461	101.012	YOAKUM COUNTY INTERCHANGE (YOAKUM_T1) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	06ALL_G15_040	2	20L	G15_040	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.10865	99.5	BASE CASE
FDNS	00NR_G15_041	0	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159	160	0.03264	119.0747	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_041	0	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159	160	0.03264	119.0747	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_041	0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165	177	0.12084	110.6149	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_041	0	16WP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165	177	0.12084	110.6149	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_041	0	25SP	G15_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159	160	0.04903	102.1541	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G15_041	0	25SP	G15_041	FROM->TO	G15079_T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	318.7	350.57	0.08241	103.543	HOBBS - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G15_041	0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.17091	117.23	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_041	0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.17091	117.23	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_041	0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.16821	103.2804	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G15_041	0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	100	GEN526333 1-JONES GEN #3 21 KV
FDNS	00NR_G15_041	0	25SP	G15_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12948	99.5	GEN526334 1-JONES_4 116.500
FDNS	00NR_G15_041	0	16WP	G15_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165	180	0.12084	103.103	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_041	0	16WP	G15_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165	180	0.12084	103.103	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_041	0	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03596	101.0429	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_041	0	25SP	G15_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03596	101.0296	P12:LPL:SPS:K64.1.LP-SE.LUBBS
FDNS	00NR_G15_041	0	25SP	G15_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.06572	105.9889	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G15_041	0	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250	288	0.06819	118.677	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_041	0	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250	288	0.06819	118.677	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_041	0	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250	288	0.06819	112.0647	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_041	0	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1	250	288	0.06819	112.0647	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_041	0	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250	288	0.06819	118.677	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_041	0	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250	288	0.06819	118.677	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_041	0	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250	288	0.06819	112.0647	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_041	0	25SP	G15_041	FROM->TO	TUCO INTERCHANGE (ENRCO 136422) 230/115/13.2KV TRANSFORMER CKT 2	250	288	0.06819	112.0647	TUCO INTERCHANGE (ENRCO 136401) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_041	0	17SP	G15_041	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	120	154	0.05438	102.2215	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
FDNS	00NR_G15_041	2	25SP	G15_041	TO->FROM	HALE CO INTERCHANGE - TUCO2 115.00 115KV CKT 1	95.81	95.81	0.03568	104.7895	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
FDNS	00NR_G15_041	2	25SP	G15_041	TO->FROM	HALE CO INTERCHANGE - TUCO2 115.00 115KV CKT 1	95.81	95.81	0.03568	104.7895	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1
FDNS	00NR_G15_041	2	16WP	G15_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165	180	0.12168	104.3211	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_041	2	16WP	G15_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165	180	0.12168	104.3211	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_078	0	25SP	G15_078	TO->FROM	ALLRED TAP - SHELL C3 TAP 115KV CKT 1	179	179	0.03029	101.3919	P12:115:LCEC:W56.1.HOBBG.LE-LVN
FDNS	00NR_G15_078	0	25SP	G15_078	TO->FROM	ALLRED TAP - SHELL C3 TAP 115KV CKT 1	179	179	0.03029	100.9045	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
FDNS	06ALL_G15_078	0	20WP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2968	148.4549	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_078	0	20WP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2968	146.2101	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_078	0	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.27166	143.2875	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_078	0	17G	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28679	142.1642	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_078	0	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.27166	141.5302	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_078	0	17G	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28679	140.3875	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_078	0	16WP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29498	135.6293	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_078	0	16WP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29498	134.5559	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_078	0	20SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.30158	128.2972	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_078	0	20SP	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.30158	127.3542	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_078	0	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.05982	118.3268	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_078	0	20L	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.05982	117.8974	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_078	0	17G	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.05917	111.425	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_078	0	17G	G15_078	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.05917	109.5634	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_078	0	17G	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.28526	133.7582	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_078	0	20L	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.32326	131.3627	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_078	0	20SP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.34843	129.985	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_078	0	20WP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.34412	119.2771	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_078	0	20L	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.11483	112.4226	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G15_078	0	16WP	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.29312	109.1742	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G15_078	0	17G	G15_078	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.09785	104.0323	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	00NR_G15_078	0	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159	160	0.05376	138.2645	MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	00NR_G15_078	0	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159	160	0.05376	138.2645	MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	00NR_G15_078	0	20SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159	160	0.05506	114.7633	MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	00NR_G15_078	0	20SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159	160	0.05506	114.7633	MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	00NR_G15_078	0	17SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159	160	0.0559	111.2273	MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	00NR_G15_078	0	17SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	159	160	0.0559	111.2273	MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	00NR_G15_078	0	20WP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	165	177	0.0551	99.9	MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	00NR_G15_078	0	20WP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SAN_ANDS_TP3115.00 115KV CKT 1	165	177	0.0551	99.9	MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	00NR_G15_078	0	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SHELL C2 SUB 115KV CKT 1	159	175	0.03029	113.6298	P12:115:LCEC:W56.1.HOBBG.LE-LVN
FDNS	00NR_G15_078	0	25SP	G15_078	FROM->TO	DENVER CITY INTERCHANGE S. - SHELL C2 SUB 115KV CKT 1	159	175	0.03029	113.1249	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
FDNS	06ALL_G15_078	0	20L	G15_078	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.10874	99.5	BASE CASE
FDNS	00NR_G15_078	0	25SP	G15_078	FROM->TO	G15079_T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	318.7	350.57	0.05204	102.9542	HOBBS - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G15_078	0	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03569	101.0724	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G15_078	0	25SP	G15_078	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03569	101.0591	P12:LPL:SPS:K64.1.LP-SE.LUBBS
FDNS	00NR_G15_078	0	25SP	G15_078	FROM->TO	SAN_ANDS_TP3115.00 - SEMINOLE 115KV CKT 1	159	160	0.05376	118.0401	MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	00NR_G15_078	0	25SP	G15_078	FROM->TO	SAN_ANDS_TP3115.00 - SEMINOLE 115KV CKT 1	159	160	0.05376	118.0401	MUSTANG STATION - SEMINOLE 230KV CKT 1
FDNS	00NR_G15_078	0	25SP	G15_078	FROM->TO	SHELL C2 SUB - SHELL C3 TAP 115KV CKT 1	179	179	0.03029	104.1077	P12:115:LCEC:W56.1.HOBBG.LE-LVN
FDNS	00NR_G15_078	0	25SP	G15_078	FROM->TO	SHELL C2 SUB - SHELL C3 TAP 115KV CKT 1	179	179	0.03029	103.6179	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1
FDNS	06ALL_G15_078	2	20L	G15_078	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.10862	99.5	BASE CASE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_078	3	25SP	G15_078	TO->FROM	GAINES COUNTY INTERCHANGE - SEMINOLE 115KV CKT 1	159.95	159.95	0.04125	101.4128	DOSS INTERCHANGE - SEMINOLE 115KV CKT 1
FDNS	00NR_G15_078	3	25SP	G15_078	TO->FROM	GAINES COUNTY INTERCHANGE - SEMINOLE 115KV CKT 1	159.95	159.95	0.04125	101.4128	DOSS INTERCHANGE - SEMINOLE 115KV CKT 1
FDNSLock-Blown up	00NR_G15_082	0	20SP	G15_082	-	Non-Converged Contingency	1299	1299	0.04571	-	GEN514805 1-SOONER UNIT 1
FDNSLock-Blown up	00NR_G15_082	0	20SP	G15_082	-	Non-Converged Contingency	1299	1299	0.04571	-	GEN514806 1-SOONER UNIT 2
FDNSLock-Blown up	00NR_G15_082	0	20SP	G15_082	-	Non-Converged Contingency	1299	1299	0.04571	-	GEN515042 1-SEMINOLE 3G
FDNSLock-Blown up	00NR_G15_082	0	20SP	G15_082	-	Non-Converged Contingency	1299	1299	0.04571	-	GEN515223 1-MUSKOGEE 4G
FDNSLock-Blown up	00NR_G15_082	0	20SP	G15_082	-	Non-Converged Contingency	1299	1299	0.04571	-	GEN515225 1-MUSKOGEE 5G
FDNSLock-Blown up	00NR_G15_082	0	20SP	G15_082	-	Non-Converged Contingency	1299	1299	0.04571	-	GEN515226 1-MUSKOGEE 6G
FDNSLock-Blown up	00NR_G15_082	0	20SP	G15_082	-	Non-Converged Contingency	1016	1016	0.03724	-	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNSLock-Blown up	00NR_G15_082	0	20SP	G15_082	-	Non-Converged Contingency	1016	1016	0.03724	-	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNSLock-Blown up	00NR_G15_082	0	20SP	G15_082	-	Non-Converged Contingency	1016	1016	0.03724	-	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNSLock-Blown up	00NR_G15_082	0	20SP	G15_082	-	Non-Converged Contingency	1016	1016	0.03724	-	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNSLock-Blown up	00NR_G15_082	0	20SP	G15_082	-	Non-Converged Contingency	1016	1016	0.03724	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G15_082	0	25SP	G15_082	FROM->TO	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1	560	644	0.05709	99.6	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_082	0	25SP	G15_082	FROM->TO	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1	560	644	0.05709	99.6	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G15_082	0	25SP	G15_082	FROM->TO	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2	560	644	0.05832	101.9754	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_082	0	25SP	G15_082	FROM->TO	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2	560	644	0.05832	101.9754	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_082	0	25SP	G15_082	FROM->TO	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2	560	644	0.05832	100.4061	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_082	0	25SP	G15_082	FROM->TO	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2	560	644	0.05832	100.4061	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	02ALL_G15_082	0	25SP	G15_082	FROM->TO	SPSNORTH_STX	1160	1160	0.11911	104.1849	BASE CASE
FDNSLock-Blown up	09ALL_G15_089	0	16WP	G15_089	-	Non-Converged Contingency	720	720	0.06818	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G15_089	0	17SP	G15_089	-	Non-Converged Contingency	720	720	0.07211	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G15_089	0	25SP	G15_089	-	Non-Converged Contingency	368	368	0.03123	-	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120	120	0.03033	112.9335	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120	120	0.03033	112.9061	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120	120	0.03034	112.1473	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120	120	0.03034	111.9334	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120	120	0.04181	102.6152	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120	120	0.04181	101.3453	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120	120	0.04182	101.3294	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	BELDEN - HARTINGTON 115KV CKT 1	120	120	0.04182	100	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	BLOOMFIELD - GAVINS POINT 115KV CKT 1	120	120	0.03053	102.4136	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	BLOOMFIELD - GAVINS POINT 115KV CKT 1	120	120	0.03053	101.4407	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	BLOOMFIELD - GAVINS POINT 115KV CKT 1	120	120	0.03053	100.7661	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	BLOOMFIELD - GAVINS POINT 115KV CKT 1	120	120	0.03053	100	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.03033	140.7823	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.03034	140.7427	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.03034	140.5632	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.03033	140.2883	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.04181	129.3669	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.04182	128.8985	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.04181	128.1276	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.04182	127.5149	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.03033	123.98	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.03034	122.3796	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.03451	115.7106	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.03451	115.5115	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.03574	112.3488	UTICA JCT - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.03576	112.2774	UTICA JCT - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.04535	108.6239	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	20WP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	132	0.03053	108.1237	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.04535	107.2966	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.02953	103.4938	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.03629	103.3577	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.0363	102.9048	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	20WP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	132	0.03053	102.2826	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	0	20WP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	132	0.04202	102.1747	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	20WP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	132	0.04202	101.2155	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	16WP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	132	0.02969	100.8993	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	0	20WP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	132	0.03053	100.6082	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.03132	99.7	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.11925	119.2056	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.11925	117.3103	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08813	117.1512	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.07765	108.8042	BERSFORD - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08813	108.0066	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.09505	107.6096	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08674	107.5399	FT RANDAL - SPENCER 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08674	107.3995	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08674	107.3995	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08674	107.014	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.12597	106.9909	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08624	106.8655	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.12599	105.0847	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.12597	104.6143	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08541	103.9561	BASE CASE
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.12599	103.0794	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08384	102.8134	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08384	102.6323	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08384	102.6256	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08384	102.5565	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08517	102.5292	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08517	102.5292	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08384	102.4968	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08715	101.6045	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08443	101.2166	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08443	101.2166	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08541	101.118	GEN652575 1-GAVINS POINT
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08541	101.118	GEN652576 2-GAVINS POINT
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08404	101.0737	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08541	101.0368	GEN652577 3-GAVINS POINT
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08465	100.6628	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.12037	100.6528	UTICA JCT - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08568	100.4273	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08528	100.3138	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08528	100.2991	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.0853	100.2845	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08528	100	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08568	99.8	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.07765	99.8	BERSFORD - MANNING 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08689	99.7	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08689	99.7	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03343	120.0726	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03343	119.6307	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03353	114.8891	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0329	114.7867	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0329	114.7808	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0329	114.7808	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.05095	114.5004	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0329	114.3608	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.05095	114.0639	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03291	113.8224	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03291	113.812	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03291	113.812	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.05095	113.7458	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.05095	113.5432	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03291	113.4939	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03158	112.4608	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03105	111.923	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03105	111.923	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03223	111.7155	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03223	111.7155	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03159	111.6079	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03224	111.5188	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03224	111.5188	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03396	111.3738	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03396	111.3738	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02954	111.2502	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	111.2415	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03396	111.2069	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03396	111.2069	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03007	111.142	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03007	111.0544	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03007	111.0544	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03106	111.039	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03106	111.039	HOSKINS - RAUN 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	111.0266	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03007	110.7734	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03007	110.7634	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03007	110.7267	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02954	110.665	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	110.6135	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	110.4669	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	110.4502	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	110.2854	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03528	110.277	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03095	110.1787	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03529	110.1762	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.04005	110.1101	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.04005	110.1101	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03096	110.0506	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	109.9721	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	109.9487	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	109.8915	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	109.7714	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.04006	109.7618	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.04006	109.7618	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03287	109.7468	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	109.7348	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03133	109.6758	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03133	109.6069	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03138	109.5928	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	109.5921	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	109.5525	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03754	109.5032	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03288	109.4932	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	109.4577	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03133	109.4422	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	109.4237	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03133	109.4077	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03101	109.3055	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0513	109.2289	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	109.1807	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03288	109.1761	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	109.1663	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03288	109.147	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03288	109.147	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	109.1233	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03755	109.1142	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03173	109.0361	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03133	109.0246	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03261	108.9997	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03261	108.9515	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03139	108.9356	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03138	108.9328	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03133	108.8563	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03288	108.8189	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02955	108.8017	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03261	108.7338	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03261	108.7322	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02955	108.6922	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03287	108.6898	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0513	108.6513	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03139	108.6162	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02955	108.5876	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03288	108.5733	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03208	108.5641	DIXONCO 230.00 - HOSKINS 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03585	108.5477	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03585	108.5465	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03585	108.5465	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03585	108.5389	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03585	108.5389	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03127	108.5014	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03127	108.5014	MINGO - RED WILLOW 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02955	108.4904	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03209	108.4521	DIXONCO 230.00 - HOSKINS 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03213	108.4197	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02955	108.2992	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02955	108.2992	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02955	108.2992	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03214	108.248	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03586	108.2054	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03586	108.2046	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03586	108.2046	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03586	108.1929	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03586	108.1929	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03167	108.186	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02955	108.1442	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02955	108.1442	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02955	108.1442	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03127	108.102	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.04739	108.0877	UTICA JCT - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03167	108.0191	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03206	108.0068	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03206	108.0068	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03206	107.8727	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03206	107.8727	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.04738	107.7899	UTICA JCT - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03135	107.7517	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	107.241	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	107.2031	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03161	107.1927	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	107.1166	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	107.02	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03109	106.8436	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03109	106.8436	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03246	106.5681	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03246	106.5681	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	106.565	BASE CASE
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03107	106.4827	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02958	106.4572	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	106.4501	BASE CASE
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03223	106.3022	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0396	106.1484	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0396	106.1484	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03448	106.0288	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03449	106.0086	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	105.9457	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03128	105.8736	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03054	105.7108	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03128	105.7008	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03128	105.6912	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03026	105.6238	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03026	105.6238	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0342	105.6086	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0342	105.6086	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	20WP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03397	105.5923	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03129	105.5454	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03695	105.5273	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03054	105.522	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	105.4794	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03224	105.4734	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03129	105.4486	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03129	105.4469	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03026	105.3476	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	105.3171	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03026	105.2553	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03002	105.2055	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03002	105.1908	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03002	105.1568	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	105.1367	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0358	105.12	HOSKINS - SHELL CREEK 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03265	105.089	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03265	105.0883	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	104.989	GEN652546 1-FT RANDAL
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03163	104.9833	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03272	104.974	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03107	104.9644	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03163	104.9139	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	104.8932	GEN652546 1-FT RANDAL
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03266	104.8572	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03266	104.8555	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	104.8435	P13:115-230:NPPD:COLMBUS4:T1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	104.8433	KELLY (KELLY T1) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	104.8359	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	104.8326	COLUMBUS - KELLY 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	104.8184	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03265	104.8131	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03176	104.8122	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03119	104.7986	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	104.7897	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03112	104.7729	COLUMBUS - KELLY 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03272	104.7724	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03112	104.7688	P13:115-230:NPPD:COLMBUS4:T1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03112	104.7687	KELLY (KELLY T1) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03154	104.7677	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	104.7495	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	104.7315	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03265	104.6622	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	104.6333	GEN652548 5-FT RANDAL
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	104.6333	GEN652549 7-FT RANDAL
FDNSLock	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03125	104.6306	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	104.6239	GEN652547 3-FT RANDAL
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03266	104.564	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02951	104.5594	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	104.5367	GEN652548 5-FT RANDAL
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	104.5367	GEN652549 7-FT RANDAL
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	104.5274	GEN652547 3-FT RANDAL
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03126	104.5272	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03289	104.5255	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	104.4826	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03327	104.4805	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02951	104.4664	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03289	104.4616	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03289	104.4469	2810X2
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	104.4234	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	104.4227	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	104.421	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	104.4161	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03266	104.3888	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	104.3874	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	104.3821	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03069	104.3801	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03163	104.3436	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03107	104.3144	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03289	104.3046	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	104.2997	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03154	104.2815	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03141	104.274	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03577	104.1514	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03104	104.15	COLUMEAST - KELLY 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03104	104.1474	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03104	104.1474	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03577	104.1443	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03577	104.1443	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	104.1414	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	104.1328	GEN600006 1-AS KING
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	104.1297	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03577	104.1286	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03577	104.1286	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	104.1192	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	104.1047	GEN600006 1-AS KING
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02951	104.101	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02951	104.101	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02951	104.101	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03105	104.0784	COLUMEAST - KELLY 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03105	104.0781	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03105	104.0781	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	104.0729	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0329	104.0727	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03141	104.0701	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03223	104.0598	DIXONCO 230.00 - HOSKINS 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03065	104.0444	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	104.0144	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0329	104.0133	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	104.0131	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0329	104.0053	2810X2
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	103.979	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03292	103.9769	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	103.9748	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03224	103.9642	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	103.9482	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03292	103.9396	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	103.8883	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	103.8882	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	103.8616	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0329	103.8372	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0329	103.8372	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0329	103.8313	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0329	103.8275	2801X
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03159	103.8262	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	103.8129	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.04765	103.7358	UTICA JCT - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0329	103.6802	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03327	103.6519	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03183	103.6414	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	103.5985	GEN600005 1-MONTICELLO
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02951	103.5917	TYNDALL - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03161	103.5826	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03161	103.5701	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03161	103.5701	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0318	103.5607	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	103.5315	GEN661015 1-COYOTE
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0318	103.4634	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	103.4415	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03222	103.3991	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03222	103.3991	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	103.386	GEN600005 1-MONTICELLO
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	103.2866	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	103.2175	GEN661015 1-COYOTE
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	103.1982	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03162	103.1614	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03162	103.1571	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03162	103.1571	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	103.1562	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	103.1495	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	102.9065	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	102.6142	GEN645063 W-PR BRZ1W 0.6900
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	102.6142	GEN645064 W-PR BRZ2W 0.6900
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	102.5518	GEN645063 W-PR BRZ1W 0.6900
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	102.5518	GEN645064 W-PR BRZ2W 0.6900
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	102.5357	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	102.4006	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	102.3988	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	102.277	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	102.1917	BASE CASE
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	102.1214	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	101.9444	GEN659111 2-LELAND OLDS UNIT2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	101.9289	GEN620315 1-BIG STONE GEN
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03463	101.8588	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	101.71	GEN563232 1-G15089_3 0.6900
FDNSLock	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	101.6951	GEN563232 1-G15089_3 0.6900
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	101.6353	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	101.577	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	101.577	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	101.5656	GEN620315 1-BIG STONE GEN
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	101.5569	GEN659125 1-COVEY
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03254	101.3992	BONESTEEL - FT RANDAL 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03239	101.3901	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03254	101.3834	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (I
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03065	101.3439	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	101.2795	GEN659125 1-COVEY
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	101.2577	GEN615001 1-COAL CREEK
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03142	101.2101	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	101.1965	GEN615002 2-COAL CREEK
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	101.1896	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	101.1896	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G15_089	0	20WP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.05146	101.1765	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03142	101.1547	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03142	101.1499	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	100.8173	GEN615001 1-COAL CREEK
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03254	100.7916	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G15_089	0	20WP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.05146	100.7651	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	100.7559	GEN615002 2-COAL CREEK
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03254	100.6806	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	100.6447	GEN652546 1-FT RANDAL
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03299	100.5436	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	100.537	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	100.5291	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03254	100.5205	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03254	100.5108	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03254	100.485	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03128	100.4734	P13:115-230:NPPD:COLMBUS4:T1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03128	100.4733	KELLY (KELLY T1) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03128	100.4584	COLUMBUS - KELLY 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	100.3531	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	100.3026	GEN652548 5-FT RANDAL
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	100.3026	GEN652549 7-FT RANDAL
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	100.2949	GEN652547 3-FT RANDAL
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	100.2555	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	100.1185	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	100.0863	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	100	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	99.9	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0331	99.8	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	99.8	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	99.8	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	99.8	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03121	99.8	COLUMEAST - KELLY 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03121	99.8	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03121	99.8	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0331	99.7	2810X2
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0331	99.7	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	99.7	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	99.7	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0331	99.6	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03137	99.6	GEN600006 1-AS KING
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03124	99.6	GEN562528 1-G14_031_2 0.6900
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03123	99.6	GEN562528 1-G14_031_2 0.6900
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0331	99.5	2801X
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0331	99.5	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0331	99.5	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.14456	147.6935	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.14456	145.0631	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.09704	144.4566	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.09704	142.8522	TYNDALL - WHITE SWAN 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.14967	138.1423	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.14971	135.8538	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.14967	135.0494	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.09704	133.8818	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.09704	133.8818	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.09704	133.8818	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.09704	133.8724	TYNDALL - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.14971	133.1541	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.1031	129.6396	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10818	127.9154	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.1031	127.8997	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10313	127.0087	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10113	125.721	BERSFORD - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11443	125.4399	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10313	125.3636	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10677	120.6961	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10677	120.6961	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.14623	120.4374	UTICA JCT - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.1031	119.8689	TYNDALL - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10818	119.7032	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.1031	119.4706	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.1031	119.4706	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.1031	119.4706	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10839	119.2548	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11347	118.9862	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	118.6737	GEN652575 1-GAVINS POINT
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	118.6737	GEN652576 2-GAVINS POINT
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	118.6319	GEN652577 3-GAVINS POINT
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10597	117.9185	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10597	117.8424	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10597	117.8301	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10597	117.7726	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10597	117.7185	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10846	117.1704	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10846	117.1704	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10712	117.0141	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10313	116.9639	TYNDALL - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10644	116.7147	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10644	116.7147	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10313	116.6806	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10313	116.6806	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10313	116.6806	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10597	116.6787	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.13189	116.2536	SIOUX FALLS - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10644	116.176	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10644	116.0084	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10712	115.9775	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10113	115.9074	BERSFORD - MANNING 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10715	115.8767	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.1069	115.8479	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	115.6262	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10723	115.2324	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	115.1078	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10723	115.0399	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10723	115.0399	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10717	115.0147	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10707	115.0094	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10707	115.0094	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10723	115.0066	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	114.3457	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10063	114.0058	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.12237	113.6802	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.12237	113.6802	MITCHELL - TRIPP JCT 115KV CKT 1
FDNSLock	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11139	112.8839	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11139	112.7381	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11139	112.4919	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11139	112.4403	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10067	112.2152	GAVINS POINT - SPIRIT MOUND 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.1202	111.3252	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11143	111.2627	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	110.8904	BASE CASE
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11225	110.1664	GEN659116 1-SPIRIT MOUND UNIT1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11143	110.0776	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11143	110.0631	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11343	109.8458	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11143	109.4794	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11143	109.2634	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10789	109.1895	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11241	109.0792	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11211	108.9533	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11211	108.9533	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.12025	108.6035	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11225	108.3093	GEN659117 2-SPIRIT MOUND UNIT2
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10663	108.1666	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11367	108.1641	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11367	108.1641	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10555	108.1468	BELDEN - TWIN CHURCH 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11229	108.1273	GEN659116 1-SPIRIT MOUND UNIT1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10663	107.974	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10848	107.9673	LETCHER - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10663	107.9233	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.15152	107.8724	UTICA JCT - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11372	107.737	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10934	107.3816	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10934	107.3816	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	107.2625	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11347	107.2588	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11226	107.1855	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10848	107.1191	LETCHER (LET KV3A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11133	107.0001	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11236	106.9857	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11169	106.9423	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11169	106.7489	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11225	106.6711	GEN652575 1-GAVINS POINT
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11225	106.6711	GEN652576 2-GAVINS POINT
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11225	106.6314	GEN652577 3-GAVINS POINT
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	106.5448	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11229	106.2583	GEN659117 2-SPIRIT MOUND UNIT2
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11216	106.1825	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11216	106.1825	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	106.1213	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	106.1193	GEN620315 1-BIG STONE GEN
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11242	106.1115	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	106.0788	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	106.0611	GEN659125 1-COVEY
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	106.0106	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	106.0106	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10934	105.9963	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10934	105.9963	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11371	105.8805	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11371	105.8805	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11225	105.5385	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11245	105.3823	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	105.381	GEN615001 1-COAL CREEK
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11376	105.3277	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	105.3091	GEN615002 2-COAL CREEK
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11173	105.2375	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11173	105.2375	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11236	105.185	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11249	105.1248	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	105.0838	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNSLock	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11214	105.0298	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11249	104.8768	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11249	104.8768	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11214	104.8074	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.15154	104.8061	UTICA JCT - VFODNES 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10698	104.7809	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11225	104.7596	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11249	104.6286	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11229	104.6005	GEN652575 1-GAVINS POINT
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11229	104.6005	GEN652576 2-GAVINS POINT
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11227	104.5629	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11229	104.5602	GEN652577 3-GAVINS POINT
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11214	104.5137	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11173	104.4629	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11241	104.4467	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10912	104.4232	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10912	104.4232	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11201	104.4135	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11173	104.3112	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11225	104.2428	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11225	104.2388	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11226	104.0676	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11229	103.9389	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11218	103.8682	NUNDRWD - WAYSIDE 230KV CKT 1
FDNSLock	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11214	103.8538	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11248	103.851	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11225	103.5978	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11201	103.5715	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11137	103.4549	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11225	103.4327	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11211	103.4189	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11238	103.3546	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11238	103.3546	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11225	103.3383	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11225	103.168	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10113	103.1478	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11246	103.1371	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11229	103.0155	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11241	103.014	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.1122	103.0132	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11225	102.9317	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10296	102.8974	BELDEN - HOSKINS 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11225	102.8567	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11218	102.8203	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11229	102.6739	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11228	102.6083	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11204	102.508	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11242	102.4055	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11242	102.4055	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11231	102.0927	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11204	102.0567	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11221	101.968	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11229	101.926	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11225	101.8838	GEN640418 1-ELKHORN RIDGE WIND
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10983	101.8838	BERSFORD - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.12726	101.7976	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.12726	101.7976	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11253	101.7902	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11229	101.7469	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11204	101.6692	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11253	101.6577	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11253	101.6577	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11253	101.5928	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11218	101.5726	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11229	101.5385	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11252	101.3341	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11218	101.3189	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11218	101.2834	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11242	101.2311	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11242	101.2311	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11224	101.0966	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11229	101.0156	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11218	100.9638	HARMONY - VALENTINE 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11221	100.9148	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11229	100.8816	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11229	100.3857	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11246	100.2512	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11246	100.2512	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.09832	100.1433	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.1099	100	BERSFORD - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11229	99.8	GEN640418 1-ELKHORN RIDGE WIND
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.1273	99.7	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.1273	99.7	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14456	147.5357	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14456	144.9054	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.09704	144.2522	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.09704	142.6485	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14967	137.9541	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14971	135.6715	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14967	134.861	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.09704	133.6466	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.09704	133.6466	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.09704	133.6466	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.09704	133.6361	TYNDALL - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14971	132.9719	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1031	129.3974	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10818	127.717	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1031	127.657	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10313	126.7702	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10113	125.5404	BERSFORD - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11443	125.2079	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10313	125.1255	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10677	120.5208	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10677	120.5208	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14623	120.251	UTICA JCT - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1031	119.5986	TYNDALL - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10818	119.5106	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1031	119.2046	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1031	119.2046	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1031	119.2046	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10839	119.0748	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11347	118.7354	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	118.5058	GEN652575 1-GAVINS POINT
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	118.5058	GEN652576 2-GAVINS POINT
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	118.4648	GEN652577 3-GAVINS POINT
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10597	117.7153	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10597	117.6404	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10597	117.6276	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10597	117.57	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10597	117.5158	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10846	116.9673	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10846	116.9673	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10712	116.8217	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10313	116.6954	TYNDALL - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10644	116.5139	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10644	116.5139	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10597	116.4638	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10313	116.4154	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10313	116.4154	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10313	116.4154	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13189	116.0557	SIOUX FALLS - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10644	115.9752	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10644	115.8077	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10712	115.7835	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10113	115.6998	BERSFORD - MANNING 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10715	115.679	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1069	115.6402	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	115.4237	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10723	115.0453	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	114.9043	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10723	114.8512	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10723	114.8512	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10723	114.8172	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10717	114.8149	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10707	114.8033	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10707	114.8033	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10689	114.2136	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	114.1437	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	114.0422	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10063	113.7746	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12237	113.48	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12237	113.48	MITCHELL - TRIPP JCT 115KV CKT 1
FDNSLock	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11139	112.6246	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11139	112.4792	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11139	112.2339	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11139	112.1833	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10067	111.9779	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1202	111.0574	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11143	110.9961	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	110.6863	BASE CASE
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11225	109.9208	GEN659116 1-SPIRIT MOUND UNIT1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11143	109.82	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11143	109.8093	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11343	109.6053	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11143	109.2231	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11143	109.008	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10789	108.9779	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11241	108.8288	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11211	108.745	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11211	108.745	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12025	108.3353	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11225	108.062	GEN659117 2-SPIRIT MOUND UNIT2
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10663	107.9582	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10555	107.9432	BELDEN - TWIN CHURCH 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11367	107.9151	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11367	107.9151	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11229	107.8822	GEN659116 1-SPIRIT MOUND UNIT1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10848	107.7651	LETCHER - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10663	107.7649	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10663	107.7137	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.15152	107.6505	UTICA JCT - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11372	107.5159	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10934	107.1807	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10934	107.1807	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11347	107.0203	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11226	106.9219	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10848	106.9159	LETCHER (LET KV3A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11236	106.7463	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11133	106.7339	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11169	106.695	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11169	106.4997	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11225	106.4581	GEN652575 1-GAVINS POINT
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11225	106.4581	GEN652576 2-GAVINS POINT
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11225	106.4191	GEN652577 3-GAVINS POINT
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	106.3288	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11229	106.0123	GEN659117 2-SPIRIT MOUND UNIT2
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11216	105.9667	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11216	105.9667	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	105.9054	GEN620315 1-BIG STONE GEN
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	105.9053	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	105.8678	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11242	105.8601	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	105.8476	GEN659125 1-COVEY
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	105.7972	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	105.7972	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10934	105.7949	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10934	105.7949	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11371	105.6332	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11371	105.6332	RAUN - SIOUX CITY 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11225	105.284	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	105.1684	GEN615001 1-COAL CREEK
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11245	105.1371	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11376	105.1074	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	105.0966	GEN615002 2-COAL CREEK
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11173	104.9872	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11173	104.9872	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11236	104.9454	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11249	104.8869	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	104.8674	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNSLock	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11214	104.7755	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11249	104.6385	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11249	104.6385	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.15154	104.5832	UTICA JCT - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10698	104.5646	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11214	104.5534	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11225	104.5067	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11249	104.3887	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11229	104.3882	GEN652575 1-GAVINS POINT
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11229	104.3882	GEN652576 2-GAVINS POINT
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11229	104.3487	GEN652577 3-GAVINS POINT
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11227	104.3056	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11214	104.26	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11173	104.2176	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10912	104.215	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10912	104.215	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11241	104.2094	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11201	104.153	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11173	104.0654	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11225	103.9858	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11225	103.9801	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11226	103.8068	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11229	103.6853	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11218	103.6108	NUNDRWD - WAYSIDE 230KV CKT 1
FDNSLock	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11214	103.6006	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11248	103.595	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11225	103.3433	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11201	103.3109	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11137	103.1949	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11225	103.1717	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11211	103.1638	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11238	103.1011	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11238	103.1011	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11225	103.0855	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11201	102.9463	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11201	102.9463	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11225	102.9159	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10113	102.9062	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11222	102.8896	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11222	102.8896	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11246	102.8878	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11241	102.7757	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11229	102.7642	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1122	102.7571	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10296	102.687	BELDEN - HOSKINS 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11225	102.6796	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11214	102.677	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11221	102.6384	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11225	102.6037	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11218	102.568	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNSLock	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11214	102.4575	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11229	102.4103	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11228	102.3584	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11204	102.2499	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11242	102.1655	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11242	102.1655	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11228	102.0525	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11231	101.838	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11204	101.7992	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11221	101.7102	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11229	101.675	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10983	101.6348	BERSFORD - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11238	101.6018	CHERRY CREEK - GRANT 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12726	101.5539	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12726	101.5539	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11253	101.5538	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11229	101.4857	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11253	101.4208	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11253	101.4208	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11204	101.4173	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11253	101.355	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11218	101.3219	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11229	101.2871	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11252	101.0833	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11218	101.0679	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11218	101.0316	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11242	100.9795	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11242	100.9795	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11224	100.8405	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11229	100.7649	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11218	100.7304	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11218	100.7115	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11221	100.6627	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11229	100.631	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11229	100.1348	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11246	100	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11246	100	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.09832	99.9	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1099	99.7	BERSFORD - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11242	99.6	CHERRY CREEK - GRANT 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1273	99.5	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1273	99.5	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04791	116.05	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.0478	115.5379	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04791	115.1641	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.0478	114.3184	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04881	104.1404	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	0	17SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04881	103.2037	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	PLYMOUTH - SIOUX CITY 161KV CKT 1	444	444	0.08651	107.1716	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	20SP	G15_089	TO->FROM	PLYMOUTH - SIOUX CITY 161KV CKT 1	444	444	0.08651	107.1716	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	PLYMOUTH - SIOUX CITY 161KV CKT 1	444	444	0.08646	104.6845	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	0	25SP	G15_089	TO->FROM	PLYMOUTH - SIOUX CITY 161KV CKT 1	444	444	0.08646	104.6845	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.03444	113.1998	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.03444	112.9237	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.04523	106.3921	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	120	0.04523	105.1913	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	2	16WP	G15_089	FROM->TO	GAVINS POINT - HARTINGTON 115KV CKT 1	120	132	0.0296	100.1376	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.1191	115.1239	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08802	114.5716	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.1191	113.4275	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.07758	106.1429	BERSFORD - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08802	103.6635	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08385	103.3013	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08385	103.1044	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08385	103.0183	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08673	102.9514	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08673	102.8751	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08673	102.8751	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08385	102.8662	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08385	102.8655	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08615	102.5119	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08673	102.3366	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08533	101.2608	BASE CASE
FDNSLock	00NR_G15_089	2	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	139.6	153.5	0.08428	100.556	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03322	112.1232	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.05093	106.8722	RASMUSN - UTICA JCT 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.05093	106.3884	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03274	106.206	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03274	106.206	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03274	106.2025	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03274	105.9374	ONEILL - SPENCER 115KV CKT 1
FDNSLock	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02972	105.0901	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03084	104.7031	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03084	104.7031	HOSKINS - RAUN 345KV CKT 1
FDNSLock	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0308	104.5158	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03218	104.1664	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03218	104.1664	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02972	103.8816	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02972	103.8561	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02972	103.8561	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0393	103.8397	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0393	103.8397	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	103.7284	GEN635024 4-WALTER SCOTT UNIT 4
FDNSLock	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.0308	103.6003	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03081	103.3942	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03392	103.3831	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03392	103.3831	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	103.2532	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03001	103.1782	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03001	103.1782	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03125	103.1147	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03125	103.0553	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	103.027	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03548	102.9807	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03001	102.9597	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02987	102.9574	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03001	102.9158	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	102.8798	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02987	102.8606	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03681	102.8355	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02971	102.7262	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02971	102.7262	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03082	102.677	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.02987	102.6505	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03149	102.6246	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	102.5582	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	102.5327	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03125	102.5285	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03094	102.4985	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03127	102.4726	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03099	102.4255	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03299	102.3878	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03099	102.2777	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	102.2526	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.031	102.2101	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	102.1859	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03099	102.1592	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03099	102.1228	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03115	102.0842	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03016	102.0712	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03127	102.0529	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03043	102.0333	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03099	102.008	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03115	102.0026	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03082	101.9999	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03197	101.9935	DIXONCO 230.00 - HOSKINS 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03552	101.9297	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03552	101.9297	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03552	101.9297	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03552	101.9265	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03552	101.9265	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03198	101.9134	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03266	101.8985	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03266	101.8864	BLOOMFIELD - CREIGHTON 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03043	101.8319	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	101.8031	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	101.8021	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	101.7696	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	101.7663	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03085	101.7416	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.04734	101.7358	UTICA JCT - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03099	101.7156	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	101.6541	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03133	101.6475	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03299	101.6161	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03157	101.5584	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03153	101.4754	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	101.475	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	101.4733	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03153	101.3963	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03153	101.377	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03195	101.3627	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03195	101.3627	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	100.8255	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03111	100.223	BASE CASE
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.14456	143.2095	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.09701	141.167	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.14456	140.8022	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.09701	139.5534	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.09701	130.7971	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.09701	130.7971	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.09701	130.7971	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.09701	130.7531	TYNDALL - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.1082	123.4584	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10118	122.5591	BERSFORD - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.11452	119.389	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10603	117.8829	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10603	117.7775	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10603	117.7113	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10603	117.6107	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10603	117.6023	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.14627	117.5769	UTICA JCT - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10682	116.9274	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10682	116.9274	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10843	116.0226	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10702	115.5231	GEN652575 1-GAVINS POINT
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10702	115.5231	GEN652576 2-GAVINS POINT
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10702	115.4802	GEN652577 3-GAVINS POINT
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.1082	115.4455	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10715	113.5111	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10849	113.3753	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10849	113.3753	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.13193	113.3119	SIOUX FALLS - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10118	112.8748	BERSFORD - MANNING 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10602	112.8319	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10715	112.652	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10648	112.5285	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10648	112.5285	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10648	112.2587	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10648	112.1926	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10711	111.9701	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10711	111.9701	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10702	111.8669	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.1072	111.3892	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.12241	111.2343	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.12241	111.2343	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10702	108.0704	BASE CASE
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.1078	106.337	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10559	105.3098	BELDEN - TWIN CHURCH 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10668	105.303	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10852	105.2722	LETCHER - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10794	105.2176	HANLON - STORLA 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10668	105.1153	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10668	105.0848	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10938	104.6406	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10938	104.6406	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10702	104.5786	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10852	104.4441	LETCHER (LET KV3A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10702	104.0653	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10702	103.9706	GEN620315 1-BIG STONE GEN
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10702	103.9095	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10702	103.8955	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10702	103.5597	GEN659125 1-COVEY
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10702	103.5125	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10702	103.5125	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10938	103.2408	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10938	103.2408	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10702	103.1775	GEN615001 1-COAL CREEK
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10702	103.1141	GEN615002 2-COAL CREEK
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10702	102.9308	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10702	102.6634	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10917	100.9176	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10917	100.9176	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.103	100.3368	BELDEN - HOSKINS 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	120	120	0.10118	100.2024	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14456	143.0529	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.09701	140.9608	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14456	140.6448	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.09701	139.3481	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.09701	130.5593	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.09701	130.5593	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.09701	130.5593	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.09701	130.5129	TYNDALL - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1082	123.2715	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10118	122.3712	BERSFORD - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11452	119.1608	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10603	117.6794	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10603	117.5744	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10603	117.5086	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10603	117.4089	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10603	117.4004	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14627	117.3848	UTICA JCT - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10682	116.7532	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10682	116.7532	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10843	115.8376	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10702	115.3567	GEN652575 1-GAVINS POINT
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10702	115.3567	GEN652576 2-GAVINS POINT
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10702	115.3147	GEN652577 3-GAVINS POINT
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1082	115.2575	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10715	113.3146	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10849	113.175	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10849	113.175	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13193	113.1087	SIOUX FALLS - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10118	112.6597	BERSFORD - MANNING 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10602	112.6204	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10715	112.4529	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10648	112.3328	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10648	112.3328	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10648	112.0605	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10648	111.9958	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10711	111.7582	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10711	111.7582	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10702	111.6699	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12241	111.0268	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12241	111.0268	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10702	107.8599	BASE CASE
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1078	106.1238	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10559	105.0996	BELDEN - TWIN CHURCH 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10668	105.089	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10852	105.0623	LETCHER - MITCHELL 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10794	105.0102	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10668	104.8995	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10668	104.8687	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10938	104.4333	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10938	104.4333	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10702	104.3628	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10852	104.2339	LETCHER (LET KV3A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10702	103.8502	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10702	103.755	GEN620315 1-BIG STONE GEN
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10702	103.6963	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10702	103.6778	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10702	103.347	GEN659125 1-COVEY
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10702	103.2999	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10702	103.2999	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10938	103.0327	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10938	103.0327	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10702	102.9641	GEN615001 1-COAL CREEK
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10702	102.9005	GEN615002 2-COAL CREEK
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10702	102.7137	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10702	102.4474	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10917	100.7136	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10917	100.7136	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.103	100.1199	BELDEN - HOSKINS 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.10118	100	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04862	102.0777	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	2	17SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04862	101.1988	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	193	193	0.1479	109.4972	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	193	193	0.11053	108.0238	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	193	193	0.1479	107.8645	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	193	193	0.1186	101.2805	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	TO->FROM	GAVINS POINT - YANKON JCT 115KV CKT 1	193	193	0.15575	100.1312	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	193	193	0.18093	112.7349	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	193	193	0.18093	110.8641	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	193	193	0.12012	108.2431	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	193	193	0.12012	107.0871	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	193	193	0.18734	106.8924	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	193	193	0.18734	104.7136	RASMUSN - SIOUX CITY 230KV CKT 1
FDNSLock	00NR_G15_089	3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	193	193	0.18729	104.4173	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	193	193	0.18729	102.4029	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	193	193	0.12012	100.4432	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
FDNS	00NR_G15_089	3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	193	193	0.12012	100.4432	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
FDNS	00NR_G15_089	3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	193	193	0.12012	100.4432	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	00NR_G15_089	3	17SP	G15_089	TO->FROM	NAPA JCT7 115.00 - UTICA 115KV CKT 1	193	193	0.12012	100.4131	TYNDALL - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.18093	181.2797	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.18093	178.2707	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12012	174.0415	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12012	172.1824	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.18734	171.877	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.18734	168.3739	RASMUSN - SIOUX CITY 230KV CKT 1
FDNSLock	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.18729	167.8986	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.18729	164.6586	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12012	161.4896	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12012	161.4896	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12012	161.4896	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12012	161.4412	TYNDALL - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13668	159.0227	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12753	156.8282	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12753	154.9161	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12749	154.7697	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12546	154.3154	BERSFORD - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12749	152.7565	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1433	152.5454	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13384	151.363	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13384	151.2841	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13384	151.1756	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13384	151.1696	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13384	151.1121	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14272	150.7537	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13461	149.8603	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13461	149.8603	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.18314	149.3315	UTICA JCT - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	148.7723	GEN652575 1-GAVINS POINT
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	148.7723	GEN652576 2-GAVINS POINT
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	148.732	GEN652577 3-GAVINS POINT
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1365	148.5724	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13668	148.5468	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14325	147.2699	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13532	145.863	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13698	145.5542	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13698	145.5542	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13387	144.9698	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13532	144.7798	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12753	144.7452	TYNDALL - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13445	144.6917	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13445	144.6917	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.16571	144.54	SIOUX FALLS - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12753	144.4611	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12753	144.4611	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12753	144.4611	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13445	144.3581	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13445	144.2419	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1354	143.9309	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	143.8135	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14063	143.8063	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	143.755	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	143.755	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13551	143.2609	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12749	143.1556	TYNDALL - YANKON JCT 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1354	143.116	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13551	143.0922	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13551	143.0922	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13551	143.0792	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	143.0321	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12749	142.746	P12:115:UMZW:# 1901 #: TY IN SD. TY-WSW LINE FAULT
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12749	142.746	P12:115:UMZW:# 537 #: TY IN SD. TY-YJ LINE FAULT
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12749	142.746	P13:115:UMZW:# 1902 #: TY IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	142.6381	GEN640418 1-ELKHORN RIDGE WIND
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14063	142.5762	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14063	142.5232	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	142.2717	GEN660006 1-YANKON JCT
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	142.2237	CHERRY CREEK - GRANT 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12546	142.1309	BERSFORD - MANNING 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13456	141.9366	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13456	141.9366	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13428	141.3438	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12485	141.0258	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14063	140.406	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14063	140.228	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14058	140.093	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14058	140.093	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14058	140.093	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14058	139.8325	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12479	139.8302	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	138.8923	BASE CASE
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14058	138.8896	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	138.8828	GEN659116 1-SPIRIT MOUND UNIT1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1433	137.919	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.15	137.3922	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	137.1743	GEN659116 1-SPIRIT MOUND UNIT1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13612	137.0368	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	136.5455	GEN659117 2-SPIRIT MOUND UNIT2
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13435	136.3488	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13435	136.3488	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14132	136.1924	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14132	136.1924	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13454	136.1602	COLUMEAST - SHELL CREEK 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14354	135.9654	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14354	135.9654	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14994	135.9578	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14199	135.8911	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13469	135.8872	NELIGH - PETERSBRG.N7115.00 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13628	135.5496	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1417	135.5396	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14105	135.4733	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14105	135.4733	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13469	135.2494	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14126	135.2043	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14126	135.2043	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	135.1273	GEN600005 1-MONTICELLO
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13681	135.1107	LETCHER - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13469	135.0081	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13469	134.9666	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14319	134.9552	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	134.8251	GEN659117 2-SPIRIT MOUND UNIT2
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	134.8225	GEN652575 1-GAVINS POINT
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	134.8225	GEN652576 2-GAVINS POINT
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14325	134.8201	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	134.7792	GEN652577 3-GAVINS POINT
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	134.6204	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14105	134.5257	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13802	134.4612	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13802	134.4612	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14105	134.2695	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14192	134.1624	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13681	134.0715	LETCHER (LET KV3A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13223	133.8608	BELDEN - TWIN CHURCH 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	133.8161	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14313	133.7952	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14194	133.6911	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	133.6377	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	133.5838	GEN620315 1-BIG STONE GEN
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	133.5294	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	133.489	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14175	133.4077	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	133.263	GEN652575 1-GAVINS POINT
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	133.263	GEN652576 2-GAVINS POINT
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1897	133.2287	UTICA JCT - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	133.2204	GEN652577 3-GAVINS POINT
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	133.0362	GEN659125 1-COVEY
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	132.9735	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	132.9735	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.18967	132.9007	UTICA JCT - VFODNES 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14059	132.8935	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1417	132.8074	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14349	132.7562	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14349	132.7562	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14203	132.7254	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13802	132.7038	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13802	132.7038	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	132.5929	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.141	132.5909	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.141	132.5909	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	132.505	GEN615001 1-COAL CREEK
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14192	132.4833	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	132.4075	GEN615002 2-COAL CREEK
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	132.2956	GEN635023 3-WALTER SCOTT UNIT 3
FDNSLock	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14186	132.0485	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	132.031	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	131.9125	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.141	131.8514	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14182	131.661	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.141	131.6016	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14147	131.4585	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14213	131.354	FT RANDAL - SPENCER 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14213	131.2097	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14213	131.2097	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14147	131.1312	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14213	131.0769	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14185	131.0294	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14185	131.0294	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	130.996	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14147	130.9279	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14209	130.8036	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14165	130.7223	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	130.7086	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14054	130.6823	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14169	130.6463	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	130.5939	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14165	130.5382	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1417	130.4477	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14186	130.393	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14165	130.3899	HARMONY - ST FRANCIS 115KV CKT 1
FDNSLock	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	130.3429	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14185	130.0564	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14185	130.0564	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13781	130.0058	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13781	130.0058	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14198	129.9923	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	129.8941	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	129.8208	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	129.8119	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14166	129.8111	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14164	129.783	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14165	129.7417	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14169	129.6389	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14169	129.6157	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14208	129.3832	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14167	129.3124	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	129.229	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	129.194	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14148	129.1263	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14148	129.1006	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14148	129.1006	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14208	129.0987	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14208	129.0987	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14175	129.0195	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14165	129.0162	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14208	128.9916	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14164	128.954	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14148	128.8661	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	128.8584	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14201	128.8349	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14201	128.8349	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14179	128.7607	CLEARWATER - ONEILL 115KV CKT 1
FDNSLock	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14165	128.7135	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	128.6441	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	128.598	GEN640418 1-ELKHORN RIDGE WIND
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	128.5361	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14142	128.4097	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1416	128.3419	MISSION - ST FRANCIS 115KV CKT 1
FDNSLock	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14176	128.3349	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	128.2802	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14185	128.2631	CHERRY CREEK - GRANT 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	128.2437	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	128.2437	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14162	128.23	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14179	128.2261	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1416	128.2154	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	128.1895	GEN660006 1-YANKON JCT
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14142	128.1242	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14179	128.0982	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1416	128.0248	HARMONY - ST FRANCIS 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14142	127.9725	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14122	127.85	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14122	127.85	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14154	127.8432	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14204	127.837	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14224	127.8109	DIXONCO 230.00 - HOSKINS 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14099	127.7568	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	127.6873	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	127.6662	GEN635213 3-NEAL UNIT 3
FDNSLock	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1416	127.5029	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14165	127.4151	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14165	127.3244	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14164	127.3205	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14161	127.3004	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	127.2838	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14143	127.2618	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14143	127.2618	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14143	127.2618	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	127.2333	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNSLock	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14143	127.2284	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14177	127.14	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	127.0948	GEN640418 1-ELKHORN RIDGE WIND
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14168	126.9614	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12849	126.955	BELDEN - HOSKINS 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	126.7606	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	126.7546	GEN660006 1-YANKON JCT
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14196	126.7478	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14196	126.7478	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	126.6398	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	126.5829	CHERRY CREEK - GRANT 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	126.5607	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14117	126.2563	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14117	126.2563	HOSKINS (HOSKN T4) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12546	126.1355	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14094	126.0678	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	124.8535	BASE CASE
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	123.3562	BASE CASE
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14282	122.8182	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12128	122.3816	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1413	122.2338	NELIGH - PETERSBRG.N7115.00 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14119	122.1705	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1413	121.575	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1413	121.3648	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1413	121.3344	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14336	121.2583	LETCHER - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14097	121.0273	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14097	121.0273	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	120.9879	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14125	120.731	NELIGH - PETERSBRG.N7115.00 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	120.726	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14114	120.6145	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	120.4105	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	120.3763	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	120.2674	GEN661015 1-COYOTE
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	120.2574	GEN600005 1-MONTICELLO
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14028	120.2564	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	120.2232	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14336	120.2106	LETCHER (LET KV3A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14125	120.179	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	120.0106	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	119.9996	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	119.9772	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14125	119.9736	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14452	119.9135	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14452	119.9135	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14125	119.8769	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNSLock	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	119.8186	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	119.8162	GEN600006 1-AS KING

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	119.7698	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1433	119.707	LETCHER - MITCHELL 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	119.3521	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	119.1813	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	119.0533	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	118.9172	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	118.8047	GEN600005 1-MONTICELLO
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14447	118.6561	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14447	118.6561	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1433	118.6524	LETCHER (LET KV3A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	118.5783	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	118.5214	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13914	118.3797	BELDEN - TWIN CHURCH 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	118.3773	GEN661015 1-COYOTE
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14433	118.3536	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14433	118.3536	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14452	118.2536	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14452	118.2536	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	117.8825	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	117.4405	GEN659125 1-COVEY
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	117.3936	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	117.3936	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G15_089	3	20WP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.18721	117.3608	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	117.3025	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13909	117.2596	BELDEN - TWIN CHURCH 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	117.2126	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	117.1599	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	116.884	GEN620315 1-BIG STONE GEN
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14447	116.8477	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14447	116.8477	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	116.5976	GEN615001 1-COAL CREEK
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	116.5267	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	116.4952	GEN615002 2-COAL CREEK
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13518	116.4549	GEN563232 1-G15089_3 0.6900
FDNSLock	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	116.3668	GEN620315 1-BIG STONE GEN
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14427	116.2914	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14427	116.2914	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	116.2409	GEN659125 1-COVEY
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	116.1407	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	116.1407	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	115.5717	GEN615001 1-COAL CREEK
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	115.4789	GEN615002 2-COAL CREEK
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13615	115.2694	BERSFORD - MANNING 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13607	114.7209	BERSFORD - MANNING 115KV CKT 1
FDNS	00NR_G15_089	3	20WP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.18721	114.2886	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	113.8985	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	113.0825	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13615	110.3566	MANNING - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13607	109.8603	MANNING - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13557	109.8555	BELDEN - HOSKINS 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.13552	108.5623	BELDEN - HOSKINS 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1525	107.2244	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1525	107.2115	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	105.5105	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1525	105.1671	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	104.0714	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.1418	103.789	GEN563232 1-G15089_3 0.6900
FDNS	00NR_G15_089	3	16WP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.18827	102.4334	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12882	101.9645	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12887	101.6121	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14174	101.4335	GEN563232 1-G15089_3 0.6900
FDNS	00NR_G15_089	3	20WP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12728	100.8824	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G15_089	3	16WP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.18827	99.9	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	3	20WP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14048	99.9	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G15_089	3	20WP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14048	99.9	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G15_089	3	20WP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.14048	99.8	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.12128	99.7	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	FROM->TO	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1	120	120	0.11527	99.6	BELDEN - HARTINGTON 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G15_089	3	20SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04442	114.402	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04442	113.4715	RASMUSN - SIOUX CITY 230KV CKT 1
FDNSLock	00NR_G15_089	3	25SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04432	111.9375	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04432	111.0256	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04523	100.4007	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G15_089	3	17SP	G15_089	TO->FROM	PAHOJA - SIOUX FALLS 230KV CKT 1	341.8	341.8	0.04523	99.6	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	TO->FROM	PLYMOUTH - SIOUX CITY 161KV CKT 1	444	444	0.0838	106.1454	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	3	20SP	G15_089	TO->FROM	PLYMOUTH - SIOUX CITY 161KV CKT 1	444	444	0.0838	106.1454	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	TO->FROM	PLYMOUTH - SIOUX CITY 161KV CKT 1	444	444	0.08374	101.2947	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G15_089	3	25SP	G15_089	TO->FROM	PLYMOUTH - SIOUX CITY 161KV CKT 1	444	444	0.08374	101.2947	RAUN - SIOUX CITY 345KV CKT 1
FDNSLock-Blown up	01ALL_G15_095	0	16WP	G15_095	-	Non-Converged Contingency	956	956	0.03734	-	SWISSVALE - WEST GARDNER 345KV CKT 1
FDNSLock-Blown up	01ALL_G15_095	0	16WP	G15_095	-	Non-Converged Contingency	1314	1314	0.0358	-	PECULIAR - STILWELL 345KV CKT 1
FDNSLock-Blown up	01ALL_G15_095	0	16WP	G15_095	-	Non-Converged Contingency	1314	1314	0.03206	-	CRAIG - WEST GARDNER 345KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44823	156.4577	BASE CASE
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44785	154.2486	BASE CASE
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44678	154.1699	BASE CASE
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44671	150.3974	BASE CASE
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4469	148.2837	BASE CASE
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4485	140.3265	BASE CASE
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.40998	132.31	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44815	130.3743	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.40814	130.1662	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44812	129.1134	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44975	128.4061	BASE CASE
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43525	128.1794	FAIRVIEW - OKEENE 69KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45683	127.421	MOORELAND - PIC4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.48498	127.3995	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.48498	127.3994	WOODWARD - WWPAR4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45683	127.3851	P12:138:WFEC:MSL12
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45683	127.323	CEDARDALE - PIC4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45683	127.1153	CEDARDALE - OKEENE 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43911	127.1107	BUFBEAR2 - BUFFALO 69KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4334	126.746	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44841	126.7259	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44526	126.3548	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45559	126.1716	MOORELAND - PIC4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45559	126.1437	P12:138:WFEC:MSL12
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45559	126.0727	CEDARDALE - PIC4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43631	126.0612	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43631	126.0484	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4564	125.9765	MOORELAND - PIC4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4564	125.9397	P12:138:WFEC:MSL12
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45559	125.8909	CEDARDALE - OKEENE 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4564	125.8788	CEDARDALE - PIC4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43594	125.8716	FAIRVIEW - OKEENE 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4097	125.8285	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.48452	125.7108	WOODWARD - WWPAR4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.48452	125.7103	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4585	125.6938	P12:138:WFEC:MSL14
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4564	125.6712	CEDARDALE - OKEENE 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4585	125.655	BEARCAT 138.00 - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43911	125.5841	BUFFALO - WEST 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.48281	125.4167	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.48281	125.4165	WOODWARD - WWPAR4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43872	125.3746	BUFBEAR2 - BUFFALO 69KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45207	125.2531	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4585	125.2336	BEARCAT 138.00 - NINE MILE 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45207	125.0796	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45207	124.9291	IMO TAP - MEN TAP 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44526	124.925	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43805	124.7886	BUFBEAR2 - BUFFALO 69KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4585	124.5226	MOREWOOD SW - NINE MILE 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44659	124.4498	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43302	124.3238	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45709	124.3059	P12:138:WFEC:MSL14
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45709	124.2547	BEARCAT 138.00 - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43911	124.211	FREEDOM - WEST 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43872	124.1351	BUFFALO - WEST 69KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43227	123.993	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45709	123.8271	BEARCAT 138.00 - NINE MILE 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45088	123.7747	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45088	123.723	IMO TAP - MEN TAP 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45812	123.7045	P12:138:WFEC:MSL14
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45812	123.6627	BEARCAT 138.00 - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44659	123.642	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45088	123.6404	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45817	123.5307	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43805	123.5201	BUFFALO - WEST 69KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4492	123.3843	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4492	123.3843	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4492	123.3843	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4492	123.3843	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45551	123.3564	MOORELAND - PIC4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45551	123.3196	P12:138:WFEC:MSL12
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43911	123.2858	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45168	123.2855	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45112	123.2645	DEWEY - SOUTHARD 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45551	123.257	CEDARDALE - PIC4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45812	123.2406	BEARCAT 138.00 - NINE MILE 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45168	123.1216	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43872	123.1094	FREEDOM - WEST 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45709	123.1088	MOREWOOD SW - NINE MILE 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44483	123.097	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45817	123.0645	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45551	123.0593	CEDARDALE - OKEENE 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45168	123.0255	IMO TAP - MEN TAP 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45112	122.7561	ROMAN NOSE - SOUTHARD 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44866	122.6417	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44866	122.6417	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43805	122.55	FREEDOM - WEST 69KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43911	122.5361	FT SUPPLY - STOCKHOLM2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44823	122.5303	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45812	122.5284	MOREWOOD SW - NINE MILE 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44799	122.4735	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44799	122.4735	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44799	122.4735	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44799	122.4735	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45702	122.4513	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44724	122.433	CLEO JCT - RINGWOOD 69KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44724	122.4289	CLEO CORNER - CLEO JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43911	122.4069	BUFBEAR2 - STOCKHOLM2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.48255	122.3707	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.48255	122.3704	WOODWARD - WWPAR4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44818	122.3327	CIMARRON - MINCO 345KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45355	122.2563	DOVER SW - OKEENE 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4338	122.1788	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44989	122.177	DEWEY - SOUTHARD 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43594	122.1334	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43594	122.1283	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44307	122.104	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45071	121.9954	DEWEY - SOUTHARD 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45702	121.9889	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44823	121.966	GEN514805 1-SOONER UNIT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45333	121.9512	ELK CITY - RED HILLS WIND 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45333	121.9512	ELK CITY - RED HILLS WIND 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4338	121.902	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43805	121.8934	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.47308	121.8691	FPL SWITCH - WOODWARD 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44681	121.7982	CIMARRON - MINCO 345KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4338	121.7969	ALINETP2 69.000 - ALVA 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45773	121.7794	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44881	121.7692	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44881	121.7692	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44881	121.7692	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44881	121.7692	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43798	121.758	BUFBEAR2 - BUFFALO 69KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43525	121.7486	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43525	121.745	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44826	121.7234	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44826	121.7234	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45071	121.6697	ROMAN NOSE - SOUTHARD 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44483	121.6515	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44989	121.6486	ROMAN NOSE - SOUTHARD 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44785	121.6271	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4082	121.4925	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45773	121.4908	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44848	121.4668	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44848	121.4668	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43911	121.4545	ALVA - WINCH_TAP 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44625	121.4492	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44854	121.4029	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45695	121.308	P12:138:WFEC:MSL14
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44497	121.2734	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45695	121.2546	BEARCAT 138.00 - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45232	121.1726	DOVER SW - OKEENE 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45576	121.124	MOORELAND - PIC4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4827	121.0929	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4827	121.0926	WOODWARD - WWPAR4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45576	121.025	CEDARDALE - PIC4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45315	120.983	DOVER SW - OKEENE 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44777	120.981	CIMARRON - MINCO 345KV CKT 1
FDNSLock	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43519	120.9347	FAIRVIEW - OKEENE 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43872	120.8968	FT SUPPLY - STOCKHOLM2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43872	120.8941	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45082	120.892	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43594	120.8871	CARMEN - EAGLE CHIEF 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45576	120.8399	CEDARDALE - OKEENE 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45695	120.8287	BEARCAT 138.00 - NINE MILE 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45082	120.7728	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43872	120.7218	BUFBEAR2 - STOCKHOLM2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44678	120.6998	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43798	120.668	BUFFALO - WEST 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45082	120.6582	IMO TAP - MEN TAP 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44625	120.6488	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43219	120.6194	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43805	120.5933	ALVA - WINCH_TAP 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44307	120.5857	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44816	120.5466	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44497	120.4863	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4519	120.453	ELK CITY - RED HILLS WIND 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4519	120.453	ELK CITY - RED HILLS WIND 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44678	120.4322	GEN514805 1-SOONER UNIT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43343	120.3796	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43805	120.3489	FT SUPPLY - STOCKHOLM2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44686	120.3428	CLEO JCT - RINGWOOD 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44686	120.3412	CLEO CORNER - CLEO JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43805	120.2411	BUFBEAR2 - STOCKHOLM2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44573	120.2382	CLEO JCT - RINGWOOD 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44573	120.2359	CLEO CORNER - CLEO JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43343	120.2069	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43288	120.1516	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44785	120.1496	GEN514805 1-SOONER UNIT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43343	120.141	ALINETP2 69.000 - ALVA 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45695	120.1127	MOREWOOD SW - NINE MILE 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44816	120.1115	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44808	120.1008	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44808	120.1008	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44714	120.0917	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45295	120.0819	ELK CITY - RED HILLS WIND 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45295	120.0819	ELK CITY - RED HILLS WIND 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44711	120.0623	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44711	120.0623	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.41025	120.0378	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44856	119.9525	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44856	119.9525	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44856	119.9447	P12:345:SPS:J07.1.FINN.HITCH
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43798	119.9445	FREEDOM - WEST 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43288	119.8863	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44793	119.8561	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44793	119.8561	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44793	119.8561	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44793	119.8561	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.47109	119.8416	FPL SWITCH - WOODWARD 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.26048	119.8231	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43537	119.7845	FAIRVIEW - OKEENE 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43288	119.7801	ALINETP2 69.000 - ALVA 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44764	119.7564	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44764	119.7564	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4519	119.7517	ELLIS 4 138.00 - MOREWOOD SW 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44764	119.7516	P12:345:SPS:J07.1.FINN.HITCH
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.29157	119.6671	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43818	119.6544	BUFBEAR2 - BUFFALO 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44981	119.5735	DEWEY - SOUTHARD 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4085	119.3762	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44981	119.2309	ROMAN NOSE - SOUTHARD 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43235	119.216	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45102	119.1778	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45696	119.117	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45102	119.0512	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44675	119.0128	CIMARRON - MINCO 345KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45102	118.9478	IMO TAP - MEN TAP 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43818	118.8833	BUFFALO - WEST 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45717	118.8501	BEARCAT 138.00 - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45696	118.8387	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43659	118.8358	FAIRVIEW - OKEENE 69KV CKT 1
FDNSLock	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44671	118.6128	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45717	118.4256	BEARCAT 138.00 - NINE MILE 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45225	118.4254	DOVER SW - OKEENE 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44289	118.376	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43798	118.372	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44807	118.3255	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44807	118.3255	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43818	118.2594	FREEDOM - WEST 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43519	118.1118	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43519	118.1009	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44285	118.0441	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44968	118.0157	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44968	118.0146	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44968	118.0146	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44968	118.0056	P12:230:AEPW:ELKCITY6:SWEETWT6
FDNSLock	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43631	117.8982	CARMEN - CHEROKEE SW 69KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4573	117.8515	DEWEY - TALOGA 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44823	117.8161	GEN515393 1-OGEWND2G
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44564	117.7998	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44564	117.7971	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44753	117.7807	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44753	117.7807	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44708	117.775	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45003	117.725	DEWEY - SOUTHARD 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44564	117.7128	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45717	117.7085	MOREWOOD SW - NINE MILE 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.452	117.5802	ELK CITY - RED HILLS WIND 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42479	117.579	HELENA TAP - SALINE 69KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44823	117.5624	GEN525561 1-TOLK GEN #1 24 KV
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44823	117.4997	GEN520996 1-MORLND1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44703	117.4897	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44703	117.4897	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.48522	117.4519	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.48522	117.4517	WOODWARD - WWPAR4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45179	117.4367	ELK CITY - RED HILLS WIND 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45179	117.4367	ELK CITY - RED HILLS WIND 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43798	117.4231	FT SUPPLY - STOCKHOLM2 69.000 69KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44671	117.3777	GEN514805 1-SOONER UNIT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45003	117.3596	ROMAN NOSE - SOUTHARD 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44753	117.333	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44823	117.3162	GEN525562 1-TOLK GEN #2 24 KV
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44708	117.3064	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43798	117.2674	BUFBEAR2 - STOCKHOLM2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4328	117.1837	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43818	117.1703	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43798	117.1411	ALVA - WINCH_TAP 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44566	117.1075	CLEO JCT - RINGWOOD 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44566	117.1068	CLEO CORNER - CLEO JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45723	117.0762	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44496	117.0756	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44836	117.0647	FT SUPPLY - IODINE 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4328	117.0187	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4328	116.9505	ALINETP2 69.000 - ALVA 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4469	116.9345	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42479	116.8817	CZYCRVT2 69.000 - SALINE 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44289	116.8744	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43537	116.8648	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43537	116.8574	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44697	116.8322	CIMARRON - MINCO 345KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45179	116.7338	ELLIS 4 138.00 - MOREWOOD SW 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45723	116.73	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45248	116.6187	DOVER SW - OKEENE 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44285	116.5247	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44823	116.2045	GEN515389 1-TLGWND-WTG1 0.7000
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43818	116.1871	ALVA - WINCH_TAP 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.28853	116.1501	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44785	116.119	GEN515393 1-OGEWND2G
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44696	116.1123	IODINE - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44678	116.0794	GEN560217 1-G07_062_6 0.6900
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44678	116.0708	GEN515611 1-NBUFFRG1 0.6900
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4469	116.0655	GEN514805 1-SOONER UNIT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44785	116.0572	GEN520996 1-MORLND1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44933	116.0053	CHISHOLM6 230.00 - ELK CITY 230KV 230KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44933	116.0038	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44933	116.0038	ELK CITY 230KV (ELKCTY-6) 230/138/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44722	116.0027	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44722	116.0027	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44933	116.0023	P12:230:AEPW:ELKCITY6:SWEETWT6
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44785	115.9771	GEN525561 1-TOLK GEN #1 24 KV
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44509	115.9534	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44763	115.911	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44678	115.8548	GEN515393 1-OGEWND2G
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44727	115.8419	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42443	115.8119	HELENA TAP - SALINE 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44785	115.8024	GEN525562 1-TOLK GEN #2 24 KV
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42479	115.7694	CZYCRVT2 69.000 - KNOBHILL 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44402	115.7159	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44798	115.6649	IODINE - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44678	115.6629	GEN520996 1-MORLND1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44584	115.628	CLEO JCT - RINGWOOD 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44584	115.6263	CLEO CORNER - CLEO JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42409	115.5787	HELENA TAP - SALINE 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.2917	115.5618	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43298	115.56	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44402	115.5552	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44402	115.5533	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44823	115.4749	GEN515365 1-CENT 21 0.7000
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44763	115.4666	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45874	115.4663	P12:138:WFEC:MSL14
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.47308	115.4573	FPL SWITCH - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44678	115.4487	GEN525561 1-TOLK GEN #1 24 KV
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45874	115.4256	BEARCAT 138.00 - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43298	115.4019	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44727	115.3853	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42443	115.3775	CZYCRVT2 69.000 - SALINE 69KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43298	115.3425	ALINETP2 69.000 - ALVA 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43818	115.3408	FT SUPPLY - STOCKHOLM2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44109	115.3287	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44678	115.2692	GEN525562 1-TOLK GEN #2 24 KV
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4469	115.249	GEN514806 1-SOONER UNIT 2
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43818	115.2278	BUFBEAR2 - STOCKHOLM2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44823	115.2017	GEN520922 1-SLEEPING BEAR
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.26032	115.199	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44509	115.1885	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44696	115.1442	FT SUPPLY - IODINE 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44798	115.083	FT SUPPLY - IODINE 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45874	115.0047	BEARCAT 138.00 - NINE MILE 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42409	114.9035	CZYCRVT2 69.000 - SALINE 69KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4425	114.8822	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.25664	114.8002	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44815	114.762	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44785	114.5002	GEN515389 1-TLGWND-WTG1 0.7000
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44678	114.3609	GEN515389 1-TLGWND-WTG1 0.7000
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45874	114.2944	MOREWOOD SW - NINE MILE 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42443	114.273	CZYCRVT2 69.000 - KNOBHILL 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.2914	114.1077	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45714	114.0083	MOORELAND - PIC4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43368	114.0078	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44823	113.9825	GEN520997 1-MORLND2
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45714	113.9725	P12:138:WFEC:MSL12
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4394	113.9289	BUFBEAR2 - BUFFALO 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45714	113.9098	CEDARDALE - PIC4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42409	113.8177	CZYCRVT2 69.000 - KNOBHILL 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44785	113.7889	GEN515365 1-CENT 21 0.7000
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45714	113.7101	CEDARDALE - OKEENE 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44221	113.7094	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44823	113.6337	GEN520998 1-MORLND3
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44678	113.5996	GEN515365 1-CENT 21 0.7000
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.2606	113.5923	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44823	113.5526	GEN515787 1-OKLA WIND ENERGY CENTER
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.28853	113.5207	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.47109	113.5079	FPL SWITCH - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44785	113.4936	GEN520922 1-SLEEPING BEAR
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44678	113.3811	GEN520922 1-SLEEPING BEAR
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.26048	113.2719	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44393	113.1809	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44671	113.1802	GEN560217 1-G07_062_6 0.6900
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44393	113.1795	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44671	113.1716	GEN515611 1-NBUFFRG1 0.6900
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43631	113.1416	ALVA - CHEROKEE SW 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.47265	113.115	FPL SWITCH - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44671	113.0881	GEN520996 1-MORLND1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44812	113.0538	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42362	112.997	ALVA - ALVA 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44671	112.9678	GEN515393 1-OGEWND2G
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44785	112.9397	GEN520997 1-MORLND2
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42401	112.8547	HELENA TAP - SALINE 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.2914	112.7803	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42298	112.7453	ALVA - ALVA 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44671	112.6434	GEN525561 1-TOLK GEN #1 24 KV
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44785	112.6311	GEN520998 1-MORLND3
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44109	112.5772	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44688	112.5353	IODINE - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44671	112.5291	GEN525562 1-TOLK GEN #2 24 KV
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4394	112.5172	BUFFALO - WEST 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42401	112.4305	CZYCRVT2 69.000 - SALINE 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44555	112.4296	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.2917	112.298	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43659	112.1661	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43659	112.164	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45236	112.1615	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44116	112.0719	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45236	112.0094	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44678	112.0047	GEN520997 1-MORLND2
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44688	111.9945	FT SUPPLY - IODINE 138KV CKT 1
FDNSLock	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43525	111.9216	ALVA - CHEROKEE SW 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44785	111.9174	GEN515787 1-OKLA WIND ENERGY CENTER
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45236	111.8698	IMO TAP - MEN TAP 138KV CKT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44678	111.7301	GEN515787 1-OKLA WIND ENERGY CENTER
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44678	111.6423	GEN520998 1-MORLND3
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44409	111.5815	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44409	111.5799	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4469	111.5672	GEN560217 1-G07_062_6 0.6900
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4469	111.5586	GEN515611 1-NBUFFRG1 0.6900
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44671	111.4807	GEN515389 1-TLGWND-WTG1 0.7000
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42416	111.3819	HELENA TAP - SALINE 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4469	111.3656	GEN515393 1-OGEWND2G
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42401	111.3528	CZYCRVT2 69.000 - KNOBHILL 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4394	111.2851	FREEDOM - WEST 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.47334	111.0824	FPL SWITCH - WOODWARD 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4469	111.0762	GEN525561 1-TOLK GEN #1 24 KV
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44555	111.0117	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42416	110.9749	CZYCRVT2 69.000 - SALINE 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42323	110.9408	ALVA - ALVA 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44841	110.8484	G11_051T 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44707	110.8326	IODINE - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44671	110.7395	GEN515365 1-CENT 21 0.7000
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45359	110.6892	ELK CITY - RED HILLS WIND 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45359	110.6892	ELK CITY - RED HILLS WIND 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45141	110.6869	DEWEY - SOUTHARD 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44671	110.4982	GEN520922 1-SLEEPING BEAR
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4394	110.4551	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4485	110.3544	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44707	110.3367	FT SUPPLY - IODINE 138KV CKT 1
FDNS	01ALL_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.40025	110.1744	ALVA - KNOBHILL 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45141	110.1586	ROMAN NOSE - SOUTHARD 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45359	110.0136	ELLIS 4 138.00 - MOREWOOD SW 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44689	110.0031	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.47089	109.9644	FPL SWITCH - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42292	109.9454	ALVA - ALVA 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44671	109.9328	GEN520997 1-MORLND2
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43407	109.9054	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42416	109.8857	CZYCRVT2 69.000 - KNOBHILL 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4469	109.8729	GEN515389 1-TLGWND-WTG1 0.7000
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44752	109.8275	CLEO JCT - RINGWOOD 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44752	109.8237	CLEO CORNER - CLEO JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.25664	109.7452	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4485	109.6827	GEN514805 1-SOONER UNIT 1
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.40017	109.677	ALVA - KNOBHILL 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44671	109.6205	GEN520998 1-MORLND3
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43407	109.6132	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45359	109.5241	CUSTER4 138.00 - ELLIS 4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44951	109.5239	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44951	109.5239	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44951	109.5239	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44951	109.5239	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43407	109.501	ALINETP2 69.000 - ALVA 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44896	109.4894	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44896	109.4894	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45359	109.4228	CUSTER4 138.00 - RED HILLS WIND 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4394	109.4222	FT SUPPLY - STOCKHOLM2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45851	109.3924	GLASS MOUNTAIN - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4394	109.2986	BUFBEAR2 - STOCKHOLM2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45385	109.2437	DOVER SW - OKEENE 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44689	109.2227	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44158	109.1901	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43519	109.1494	ALVA - CHEROKEE SW 69KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44116	109.1489	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4469	109.1218	GEN515365 1-CENT 21 0.7000
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42311	109.0889	ALVA - ALVA 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.28871	108.9642	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44671	108.9236	GEN515787 1-OKLA WIND ENERGY CENTER
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.26032	108.912	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4469	108.8888	GEN520922 1-SLEEPING BEAR
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4394	108.8048	ALVA - WINCH_TAP 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.25679	108.5706	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4469	108.4388	GEN520998 1-MORLND3
FDNS	01ALL_G15_095	0	17SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.25664	108.4374	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4469	108.4367	GEN520997 1-MORLND2
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.47106	108.2431	FPL SWITCH - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.28853	108.1307	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.39987	108.0793	ALVA - KNOBHILL 69KV CKT 1
FDNSLock	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43537	107.6463	ALVA - CHEROKEE SW 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4469	107.3363	GEN515787 1-OKLA WIND ENERGY CENTER
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.2606	107.1363	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.28853	106.8133	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4001	106.7659	ALVA - KNOBHILL 69KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.28871	106.5805	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44158	106.2871	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.40027	105.9425	ALVA - KNOBHILL 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44864	105.714	IODINE - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44853	105.633	G14-074T 345.00 - OKLAUNION 345KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4485	105.5341	GEN515393 1-OGEWND2G
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44853	105.5163	G14-074T 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44911	105.4761	CHISHOLM7 345.00 () 345/230/13.2KV TRANSFORMER CKT 1
FDNSLock	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43659	105.4148	CARMEN - CHEROKEE SW 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44849	105.3225	GRACEMONT - MINCO 345KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.48679	105.2306	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.48679	105.2304	WOODWARD - WWPAR4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4485	105.1143	GEN520996 1-MORLND1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42504	105.0716	CZYCRVT2 69.000 - SALINE 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.47334	104.6703	FPL SWITCH - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44864	104.6236	FT SUPPLY - IODINE 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42504	103.9775	CZYCRVT2 69.000 - KNOBHILL 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44277	103.9543	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	16WP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.25664	103.9449	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4485	103.9264	GEN515389 1-TLGWND-WTG1 0.7000
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45854	103.8802	MOORELAND - PIC4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45854	103.8608	P12:138:WFEC:MSL12
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45854	103.7824	CEDARDALE - PIC4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45854	103.6753	CEDARDALE - OKEENE 138KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43488	103.2757	CLEO CORNER (CLEOCOR1) 138/69/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44071	103.2446	BUFBEAR2 - BUFFALO 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4485	103.1436	GEN515365 1-CENT 21 0.7000
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4485	102.9175	GEN520922 1-SLEEPING BEAR
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45367	102.8205	CLEO CORNER - CLEOPLT4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44071	102.7837	BUFFALO - WEST 69KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45367	102.6574	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45367	102.6047	IMO TAP - MEN TAP 138KV CKT 1
FDNS	01ALL_G15_095	0	17G	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.25679	102.4081	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44071	102.3423	FREEDOM - WEST 69KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.46006	102.2731	P12:138:WFEC:MSL14
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.46006	102.233	BEARCAT 138.00 - MOORELAND 138KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45487	101.9309	ELK CITY - RED HILLS WIND 138KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45487	101.9309	ELK CITY - RED HILLS WIND 138KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.46006	101.8269	BEARCAT 138.00 - NINE MILE 138KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45021	101.5909	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45021	101.5909	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45266	101.5706	DEWEY - SOUTHARD 138KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44071	101.5662	FREEDOM - WINCH_TAP 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4485	101.5234	GEN520997 1-MORLND2
FDNSLock	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43784	101.5008	FAIRVIEW - OKEENE 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4485	101.3666	GEN515787 1-OKLA WIND ENERGY CENTER
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45266	101.3641	ROMAN NOSE - SOUTHARD 138KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45069	101.3465	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45069	101.3465	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45069	101.3465	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45069	101.3465	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4485	101.1659	GEN520998 1-MORLND3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44638	101.1623	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.46006	101.1226	MOREWOOD SW - NINE MILE 138KV CKT 1
FDNS	00_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.26043	101.1017	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.41201	101.0608	RENFROW7 345.00 (RENFRO11) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44837	100.872	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44071	100.8669	ALVA - WINCH_TAP 69.000 69KV CKT 1
FDNS	00_G15_095	0	20SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.29152	100.8438	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.4552	100.7896	DOVER SW - OKEENE 138KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44975	100.7597	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43659	100.6994	ALVA - CHEROKEE SW 69KV CKT 1
FDNS	01ALL_G15_095	0	25SP	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.42391	100.677	ALVA - ALVA 69KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45002	100.3821	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43784	100.3191	FAIRVIEW - RINGWOOD JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43784	100.3132	EAGLE CHIEF - RINGWOOD JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44981	100.306	CIMARRON - MINCO 345KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44975	100.2595	GEN514805 1-SOONER UNIT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43526	100.1445	CLEO CORNER - CLEOTP 2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45047	100.0953	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45047	100.0953	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44837	100.0951	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44876	100.0894	CLEO JCT - RINGWOOD 69KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45047	100.0889	P12:345:SPS:J07.1.FINN.HITCH
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44876	100.088	CLEO CORNER - CLEO JCT 69KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43526	100.0733	ALINETP2 69.000 - CLEOTP 2 69.000 69KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.45002	100	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44998	100	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.44998	100	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
FDNS	01ALL_G15_095	0	20L	G15_095	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.43526	100	ALINETP2 69.000 - ALVA 69KV CKT 1
FDNS	01ALL_G15_095	0	20WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200	234	0.44785	104.9695	BASE CASE
FDNS	01ALL_G15_095	0	20SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200	234	0.44823	104.6253	BASE CASE
FDNS	01ALL_G15_095	0	17SP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200	234	0.44678	103.8559	BASE CASE
FDNS	01ALL_G15_095	0	16WP	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200	234	0.44671	102.5666	BASE CASE
FDNS	01ALL_G15_095	0	17G	G15_095	TO->FROM	NOEL_SW 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	200	234	0.4469	100.5382	BASE CASE
FDNSLock-Blown up	02ALL_G16_001	0	16WP	G16_001	-	Non-Converged Contingency	717	789	0.06793	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
FDNSLock-Blown up	02ALL_G16_001	0	16WP	G16_001	-	Non-Converged Contingency	1195	1195	0.06316	-	GRACEMONT - MINCO 345KV CKT 1
FDNSLock-Blown up	02ALL_G16_001	2	16WP	G16_001	-	Non-Converged Contingency	1076	1076	0.03462	-	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
FDNS	02ALL_G16_001	0	20WP	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793	1793	0.67262	101.3888	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
FDNS	02ALL_G16_001	0	20WP	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716	1793	0.67262	101.3888	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
FDNS	02ALL_G16_001	0	20WP	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793	1793	0.67938	101.9859	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	02ALL_G16_001	0	20L	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793	1793	0.66783	99.5	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	02ALL_G16_001	0	20WP	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716	1793	0.67938	101.9859	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	02ALL_G16_001	0	20L	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716	1793	0.66783	99.5	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	02ALL_G16_001	0	25SP	G16_001	FROM->TO	SPSNORTH_STX	1160	1160	0.09048	104.4632	BASE CASE
FDNS	02ALL_G16_001	2	17G	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1	1793	1793	0.67958	100.4253	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
FDNS	02ALL_G16_001	2	17G	G16_001	FROM->TO	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2	1716	1793	0.67958	100.4253	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
FDNS	02ALL_G16_001	2	17G	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1	1793	1793	0.68632	100.9787	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	02ALL_G16_001	2	17G	G16_001	FROM->TO	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2	1716	1793	0.68632	100.9787	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNSLock-Blown up	06ALL_G16_002	0	16WP	G16_002	-	Non-Converged Contingency	1532	1793	0.08242	-	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNSLock-Blown up	06ALL_G16_002	2	16WP	G16_002	-	Non-Converged Contingency	1532	1793	0.08201	-	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_002	0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165	177	0.06486	109.7159	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_002	0	16WP	G16_002	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165	177	0.06486	109.7159	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_002	0	25SP	G16_002	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159	160	0.03509	102.1887	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_002	0	25SP	G16_002	TO->FROM	COX INTERCHANGE - HALE CO INTERCHANGE 115KV CKT 1	95.81	95.81	0.03236	99.7	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
FDNS	06ALL_G16_002	0	20WP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.21356	148.5951	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_002	0	20WP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.21356	146.3441	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_002	0	17G	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.21385	143.2417	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_002	0	17G	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.21385	141.3738	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_002	0	16WP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2221	135.9624	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_002	0	16WP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2221	134.853	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_002	0	20SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.21838	128.4697	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_002	0	20SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.21838	127.4925	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_002	0	17SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.21839	127.0937	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_002	0	17SP	G16_002	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.21839	126.5582	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	00NR_G16_002	0	25SP	G16_002	FROM->TO	G15079_T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	318.7	350.57	0.06265	103.4012	HOBBS - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_002	0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09953	116.7415	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_002	0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09953	116.7415	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_002	0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.0989	102.7298	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_002	0	25SP	G16_002	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.07809	99.5	GEN526333 1-JONES GEN #3 21 KV

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_002	0	16WP	G16_002	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165	180	0.06486	102.2192	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_002	0	16WP	G16_002	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165	180	0.06486	102.2192	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_002	0	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03571	101.1257	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_002	0	25SP	G16_002	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03571	101.1125	P12:LPL:SPS:K64.1.LP-SE.LUBBS
FDNS	00NR_G16_002	0	25SP	G16_002	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.04437	105.9622	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_002	0	17SP	G16_002	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	120	154	0.03706	102.0462	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
FDNS	00NR_G16_002	3	25SP	G16_002	TO->FROM	COX INTERCHANGE - HALE CO INTERCHANGE 115KV CKT 1	95.81	95.81	0.03236	99.7	KRESS INTERCHANGE - KRESS_RURAL3115.00 115KV CKT 1
FDNS	00NR_G16_002	3	16WP	G16_002	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165	180	0.06475	102.8921	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_002	3	16WP	G16_002	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165	180	0.06475	102.8921	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	01ALL_G16_003	0	25SP	G16_003	-	Non-Converged Contingency	1792	1792	0.09845	-	GEN525561 1-TOLK GEN #1 24 KV
FDNSLock-Blown up	01ALL_G16_003	0	25SP	G16_003	-	Non-Converged Contingency	1792	1792	0.09845	-	GEN525562 1-TOLK GEN #2 24 KV
FDNSLock-Blown up	16NR_G16_004	0	17G	G16_004	-	Non-Converged Contingency	0	0	0.29202	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16NR_G16_004	0	17G	G16_004	-	Non-Converged Contingency	0	0	0.29202	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16NR_G16_004	0	17G	G16_004	-	Non-Converged Contingency	0	0	0.19749	-	2810X2
FDNSLock-Blown up	16NR_G16_004	0	17G	G16_004	-	Non-Converged Contingency	0	0	0.14601	-	2809X1
FDNSLock-Blown up	16NR_G16_004	0	17G	G16_004	-	Non-Converged Contingency	0	0	0.14601	-	2809X2
FDNSLock-Blown up	16NR_G16_004	0	17G	G16_004	-	Non-Converged Contingency	717	789	0.09875	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16NR_G16_004	0	17G	G16_004	-	Non-Converged Contingency	717	789	0.073	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16NR_G16_004	0	17G	G16_004	-	Non-Converged Contingency	717	789	0.073	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16NR_G16_004	0	17G	G16_004	-	Non-Converged Contingency	0	0	0.073	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16NR_G16_004	0	17G	G16_004	-	Non-Converged Contingency	0	0	0.073	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16NR_G16_004	0	17G	G16_004	-	Non-Converged Contingency	717	789	0.0624	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16NR_G16_004	0	17G	G16_004	-	Non-Converged Contingency	478	526	0.06027	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.66892	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.66892	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.57397	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.57397	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.49607	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.37205	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.37205	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.36826	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNSLock-Blown up	00NR_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.35451	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.35451	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.33446	-	2801X
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.33446	-	2810X2
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.28698	-	2809X1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.28698	-	2809X2
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.2858	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.2858	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.24551	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.24551	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.17725	-	2809X1
FDNSLock-Blown up	00NR_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.17725	-	2809X2
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	717	789	0.16723	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	717	789	0.16723	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	717	789	0.16723	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.16723	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	717	789	0.14349	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	717	789	0.14349	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.14349	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.14349	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	720	792	0.1429	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	720	792	0.1429	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	717	789	0.12872	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	717	789	0.12872	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.12402	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	478	526	0.12402	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.12402	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	732	732	0.12402	-	BROADLAND - HURON 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	400	400	0.12402	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	400	400	0.12402	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	720	720	0.12275	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	720	720	0.12275	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	720	720	0.12275	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	720	720	0.12275	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	720	720	0.12275	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	720	720	0.12275	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	720	720	0.12275	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	720	792	0.11069	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	720	792	0.11069	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.10283	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	00NR_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.10283	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	717	789	0.08863	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	717	789	0.08863	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.08863	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	00NR_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.08863	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.08239	-	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	478	526	0.06785	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.06268	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	215	236	0.05922	-	BISON - HETINGER 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	384	384	0.05922	-	BISON - MAURINE 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	319	341	0.05253	-	NUNDRWD - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	720	792	0.05141	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	00NR_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	720	792	0.05141	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	318	318	0.0481	-	GARRISON - JAMES TOWN 230KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	717	789	0.04623	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	717	789	0.04623	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	400	480	0.04469	-	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	0	0	0.04359	-	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	320	320	0.04317	-	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	320	320	0.04317	-	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	318	350	0.04242	-	FARGO - JAMES TOWN 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	318.7	318.7	0.04236	-	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	352	352	0.04236	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	352	352	0.04236	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	318	350	0.0415	-	FARGO - JAMES TOWN 230KV CKT 2
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	364	364	0.0412	-	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	318	350	0.03666	-	BISMARK - JAMES TOWN 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	318	350	0.03661	-	BISMARK - WEBER 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	318	350	0.03661	-	JAMES TOWN - WEBER 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	956	1052	0.03219	-	SIDNEY - STEGALL 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	956	956	0.03134	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	17SP	G16_004	-	Non-Converged Contingency	956	956	0.03134	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	00NR_G16_004	0	20SP	G16_004	-	Non-Converged Contingency	0	0	0.34938	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	20SP	G16_004	-	Non-Converged Contingency	0	0	0.34938	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	00NR_G16_004	0	20SP	G16_004	-	Non-Converged Contingency	717	789	0.08734	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	20SP	G16_004	-	Non-Converged Contingency	0	0	0.07791	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	00NR_G16_004	0	20SP	G16_004	-	Non-Converged Contingency	0	0	0.07791	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_004	0	20SP	G16_004	-	Non-Converged Contingency	717	789	0.04334	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	20SP	G16_004	-	Non-Converged Contingency	717	789	0.04334	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	20SP	G16_004	-	Non-Converged Contingency	720	792	0.03896	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	00NR_G16_004	0	20SP	G16_004	-	Non-Converged Contingency	720	792	0.03896	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	20SP	G16_004	-	Non-Converged Contingency	0	0	0.03457	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_004	0	20SP	G16_004	-	Non-Converged Contingency	0	0	0.03295	-	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNSLock-Blown up	00NR_G16_004	0	20SP	G16_004	-	Non-Converged Contingency	720	792	0.03174	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	20SP	G16_004	-	Non-Converged Contingency	720	792	0.03174	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.66426	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.66426	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.56277	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.56277	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.4879	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.36593	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.36593	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.35015	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.35015	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.33213	-	2801X
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.33213	-	2810X2
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.28139	-	2809X1
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.28139	-	2809X2
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.26038	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.17507	-	2809X1
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.17507	-	2809X2
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	717	789	0.16607	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	717	789	0.16607	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	717	789	0.16607	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.16607	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	717	789	0.14069	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	717	789	0.14069	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.14069	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.14069	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	720	720	0.13019	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	720	720	0.13019	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	720	720	0.13019	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.12198	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	478	526	0.12198	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.12198	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	732	732	0.12198	-	BROADLAND - HURON 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	400	400	0.12198	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	400	400	0.12198	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	717	789	0.11947	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	717	789	0.11947	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	717	789	0.08754	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	717	789	0.08754	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.08754	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.08754	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.07816	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.07816	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	478	526	0.06755	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	717	789	0.04356	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	717	789	0.04356	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	720	792	0.03908	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	720	792	0.03908	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.03451	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	0	0	0.03253	-	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	720	792	0.03182	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	0	25SP	G16_004	-	Non-Converged Contingency	720	792	0.03182	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	0	0	0.64676	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	0	0	0.64676	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	0	0	0.60494	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	0	0	0.4964	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	0	0	0.32338	-	2810X2
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	0	0	0.31029	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	0	0	0.31029	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	0	0	0.24257	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	717	789	0.16169	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	717	789	0.16169	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	717	789	0.16169	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	0	0	0.16169	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	717	789	0.15544	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	717	789	0.15544	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	720	792	0.15514	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	720	792	0.15514	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	0	0	0.13966	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	478	526	0.13966	-	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	720	720	0.12128	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	720	720	0.12128	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	720	720	0.12128	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	720	720	0.12128	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	720	720	0.12128	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	0	0	0.11489	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	00NR_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	0	0	0.11489	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	478	526	0.10854	-	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	717	789	0.05906	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	717	789	0.05906	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	720	792	0.05745	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	00NR_G16_004	2	17SP	G16_004	-	Non-Converged Contingency	720	792	0.05745	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	2	20SP	G16_004	-	Non-Converged Contingency	0	0	0.09073	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	00NR_G16_004	2	20SP	G16_004	-	Non-Converged Contingency	0	0	0.09073	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_004	2	20SP	G16_004	-	Non-Converged Contingency	717	789	0.05602	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	2	20SP	G16_004	-	Non-Converged Contingency	717	789	0.05602	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	2	20SP	G16_004	-	Non-Converged Contingency	720	792	0.04537	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	00NR_G16_004	2	20SP	G16_004	-	Non-Converged Contingency	720	792	0.04537	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	2	20SP	G16_004	-	Non-Converged Contingency	0	0	0.03495	-	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNSLock-Blown up	00NR_G16_004	2	20SP	G16_004	-	Non-Converged Contingency	1202	1202	0.03451	-	SPLIT ROCK - WHITE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	00NR_G16_004	2	20SP	G16_004	-	Non-Converged Contingency	1202	1202	0.03451	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	2	20SP	G16_004	-	Non-Converged Contingency	0	0	0.0329	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_004	2	25SP	G16_004	-	Non-Converged Contingency	717	789	0.14587	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_004	2	25SP	G16_004	-	Non-Converged Contingency	717	789	0.14587	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	2	25SP	G16_004	-	Non-Converged Contingency	0	0	0.09103	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	00NR_G16_004	2	25SP	G16_004	-	Non-Converged Contingency	0	0	0.09103	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_004	2	25SP	G16_004	-	Non-Converged Contingency	478	526	0.06244	-	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	2	25SP	G16_004	-	Non-Converged Contingency	478	526	0.06244	-	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock-Blown up	00NR_G16_004	2	25SP	G16_004	-	Non-Converged Contingency	717	789	0.05629	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	2	25SP	G16_004	-	Non-Converged Contingency	717	789	0.05629	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	2	25SP	G16_004	-	Non-Converged Contingency	0	0	0.04926	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNSLock-Blown up	00NR_G16_004	2	25SP	G16_004	-	Non-Converged Contingency	720	792	0.04551	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	00NR_G16_004	2	25SP	G16_004	-	Non-Converged Contingency	720	792	0.04551	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	2	25SP	G16_004	-	Non-Converged Contingency	1202	1202	0.0346	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	2	25SP	G16_004	-	Non-Converged Contingency	1202	1202	0.0346	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_004	2	25SP	G16_004	-	Non-Converged Contingency	0	0	0.03453	-	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNSLock-Blown up	00NR_G16_004	2	25SP	G16_004	-	Non-Converged Contingency	0	0	0.03284	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_004	2	25SP	G16_004	-	Non-Converged Contingency	0	0	0.03284	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_004	3	17SP	G16_004	-	Non-Converged Contingency	0	0	0.71242	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	16ALL_G16_004	3	17SP	G16_004	-	Non-Converged Contingency	0	0	0.57609	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock-Blown up	00NR_G16_004	3	17SP	G16_004	-	Non-Converged Contingency	0	0	0.03174	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_004	0	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04299	105.631	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	00NR_G16_004	0	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04299	105.5649	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	00NR_G16_004	0	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04299	105.5649	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	00NR_G16_004	0	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04299	105.4875	BISMARK - WASHBURN 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.03634	102.2446	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.03634	102.1577	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16NR_G16_004	0	17G	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.03634	102.1577	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16NR_G16_004	0	17G	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.03634	102.0919	BISMARK - WASHBURN 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04513	102.0729	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04513	101.9909	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04513	101.9909	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04513	101.8888	BISMARK - WASHBURN 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04524	100.1152	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04524	100	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04524	100	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04524	99.9	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_004	0	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.0465	99.6	BASE CASE
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210	210	0.04921	109.0343	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210	210	0.04921	108.8334	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210	210	0.04921	108.8334	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210	210	0.04921	108.7528	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210	210	0.04921	108.6476	2801X
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210	210	0.04921	108.4871	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210	210	0.04921	108.4302	2810X2
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210	210	0.04921	108.1597	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210	210	0.04352	101.2284	BISON - HETINGER 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210	210	0.04002	100	RIEL - ROSEAU 500KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210	210	0.04352	99.9	BISON - MAURINE 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210	210	0.04002	99.9	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	BISMARK - L3 HAWDON 230KV CKT 1	210	210	0.04002	99.9	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
FDNS	16ALL_G16_004	0	17SP	G16_004	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.05922	106.4301	BASE CASE
FDNS	16ALL_G16_004	0	25SP	G16_004	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.05625	106.2486	BASE CASE
FDNS	16ALL_G16_004	0	20SP	G16_004	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.05616	101.6522	BASE CASE
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04921	122.7491	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04921	122.5666	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04921	122.5405	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04921	122.5405	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04921	122.4594	2801X
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04921	122.3149	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04921	122.2588	2810X2
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04921	122.076	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04352	114.9584	BISON - HETINGER 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04002	113.9199	RIEL - ROSEAU 500KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04002	113.8949	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04002	113.8948	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04352	113.5798	BISON - MAURINE 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04271	112.6266	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04271	112.2633	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04271	112.2628	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04271	112.2628	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04271	112.2529	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04271	112.2084	BROADLAND - HURON 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04271	112.2084	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04271	112.2084	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04271	112.2078	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16NR_G16_004	0	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06632	108.3357	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06632	108.0043	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06632	108.0043	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_004	0	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06632	107.8777	2801X
FDNS	16NR_G16_004	0	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06632	107.5003	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06632	106.9201	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04192	106.4279	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04192	106.4063	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04192	106.3464	LELANDO3-GROTON-LINE-REACTOR-345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04192	106.3464	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04192	106.3376	2809X1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04192	106.337	2809X2
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04192	106.3302	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04192	106.3257	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04024	106.2772	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03969	104.2334	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03969	104.0438	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04012	103.9758	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04012	103.9758	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03989	103.4125	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03966	103.0037	488489510526345.00 - BSSOUTH3 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04069	102.8381	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04069	102.8381	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04103	102.6613	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03952	102.6562	BROOKING COUNTY - BSSOUTH3 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04069	102.6491	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04028	102.435	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04038	102.4237	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03996	102.3552	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04038	102.0355	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03982	101.1046	BISMARK - WEBER 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03903	101.1023	GEN652556 3-OAHE
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03982	101.0724	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03982	101.0538	JAMES TOWN - WEBER 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03903	101.0496	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04103	100.7787	BOWMAN - HETINGER 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03864	100.7751	CENTER - SQUARE BUTTE 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04071	100.567	HESKETT - WISHEK 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04071	100.448	MERRCRT4 230.00 - WISHEK 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03903	100.2709	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.04009	100.2526	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03903	100.1	GEN336821 1-GRAND GULF UNIT
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03976	100.0824	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03962	99.9	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03903	99.9	GEN635023 3-WALTER SCOTT UNIT 3
FDNSLock	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03919	99.9	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03903	99.7	GEN344225 1-1CAL G1 25.000
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03966	99.5	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03966	99.5	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03966	99.5	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03903	99.5	GEN336153 1-WATERFORD UNIT#3
FDNS	16NR_G16_004	0	20L	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03903	99.5	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0817	120.6735	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0817	120.2476	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0817	120.2476	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0817	120.1283	2801X
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0817	120.0215	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0817	119.6641	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0817	115.2651	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0817	114.9028	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0817	114.9028	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0817	114.877	2801X
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0817	114.7573	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0817	114.4975	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05943	112.928	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05943	112.4755	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05943	112.4357	2801X
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05943	112.4348	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05943	112.4348	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05943	111.9097	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05943	111.8973	2810X2
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05943	111.689	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05364	109.3277	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05364	109.3193	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05364	109.2974	2809X1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05364	109.2672	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05364	109.2672	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05364	109.2629	2809X2
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05364	109.2581	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05364	108.8772	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05943	108.8356	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05943	108.4722	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05943	108.4708	2801X
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05943	108.4082	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05943	108.4082	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05943	107.9423	2810X2
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05943	107.9228	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05943	107.8238	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06646	107.4528	BISON - HETINGER 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06606	107.378	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06646	107.0564	BISON - MAURINE 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06284	106.7796	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06722	106.2928	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06698	105.7093	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05364	105.6686	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05364	105.6496	2809X1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05364	105.6376	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06698	105.6324	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06698	105.6324	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05364	105.6234	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05364	105.6234	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05364	105.6219	2809X2
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05364	105.6208	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06698	105.553	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06698	105.5298	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06698	105.5297	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_004	0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.12402	105.3778	BASE CASE
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06722	105.3335	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06698	105.2976	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05364	105.2875	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_004	0	25SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.12198	105.0712	BASE CASE
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06145	104.6161	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06145	104.439	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.04412	104.2401	RIEL - ROSEAU 500KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.04412	104.2232	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.04412	104.2232	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06168	103.9658	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06606	103.9583	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06646	103.9089	BISON - HETINGER 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06177	103.7191	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06646	103.5669	BISON - MAURINE 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06095	103.3885	BIG STONE - BLAIR 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06095	103.3885	BIG STONE - BLAIR 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06119	103.3529	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06284	103.3377	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05107	103.1792	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 2
FDNSLock	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06092	103.1785	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05107	103.1777	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06267	103.1368	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06267	103.1368	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06267	103.0638	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06722	102.9161	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06189	102.7764	HESKETT - WISHEK 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06025	102.6653	CENTER - COYOTE 345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0662	102.6404	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0662	102.6404	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06061	102.6151	BISMARK - HILKEN 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06189	102.6101	MERRCRT4 230.00 - WISHEK 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0662	102.577	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0662	102.5646	BISMARK - WASHBURN 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06077	102.5455	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_004	0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.09064	102.4888	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06698	102.4044	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06074	102.3615	ELLENDALE - OAKES 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06074	102.3615	ELLENDALE - OAKES 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06698	102.3371	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06698	102.3371	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06329	102.2812	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06698	102.2696	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06168	102.2651	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06698	102.2487	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06698	102.2486	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0607	102.1487	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06722	102.0727	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_004	0	20SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.12168	102.0706	BASE CASE
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06698	102.0447	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05995	102.0126	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0607	102.0058	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT
FDNS	16ALL_G16_004	0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.12402	102.0056	BASE CASE
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0607	101.9968	ABERDEEN JCT - ELLENDALE 115KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06155	101.948	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06073	101.9436	BISMARK - WEBER 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06073	101.9277	JAMES TOWN - WEBER 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06138	101.9252	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06074	101.901	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.04745	101.8555	BISON - HETINGER 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06075	101.8425	FARGO - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_004	0	25SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.12198	101.8335	BASE CASE
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0607	101.8258	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1
FDNS	00NR_G16_004	0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.09064	101.8214	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_004	0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.09064	101.8214	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_004	0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.09064	101.8143	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06073	101.8031	FARGO - JAMES TOWN 230KV CKT 2
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06056	101.7943	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_004	0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.09064	101.7937	2801X
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06047	101.6914	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06055	101.6668	PRAIRIE - RAMSEY 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06061	101.6229	PRAIRIE - WINGER 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06103	101.611	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06103	101.611	P12:230:UMZW:# 158 #: MH IN ND.
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06103	101.5808	MOOREHEAD - MORRIS 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06587	101.5565	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06587	101.5565	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	101.5559	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	101.533	GEN635214 4-NEAL UNIT 4
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	101.5283	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06062	101.4672	FORMAN - HANKINSON 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06145	101.4586	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	101.4247	GEN336821 1-GRAND GULF UNIT
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	101.4042	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06038	101.3941	ELLENDALE - J316_SUB 230.00 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06329	101.3476	BOWMAN - HETINGER 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06037	101.3367	NUNDRWD - PHILIP TAP 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0605	101.3042	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06145	101.3029	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06056	101.2983	KARLSTAD - WINGER 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06029	101.2963	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06029	101.2963	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06032	101.2811	P12:115:UMZB:# 122 #: RUTH IN ND. RUTH TAP
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06039	101.27	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	101.2669	GEN635213 3-NEAL UNIT 3
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06118	101.2518	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06118	101.2518	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	101.2491	GEN336153 1-WATERFORD UNIT#3
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	101.2198	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.04745	101.1919	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_004	0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.09064	101.14	2810X2
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.04412	101.1311	RIEL - ROSEAU 500KV CKT 1
FDNS	00NR_G16_004	0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.09064	101.1279	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.04412	101.1161	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.04412	101.1161	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06168	100.8796	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06177	100.6684	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.09064	100.5818	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	100.4615	BASE CASE
FDNS	16NR_G16_004	0	20L	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.04466	100.4153	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06095	100.3797	BIG STONE - BLAIR 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06095	100.3797	BIG STONE - BLAIR 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06119	100.3218	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	100.3	2560-BRDLAND-LNX3345.00
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	100.3	2561-BRDLAND-LNX3345.00
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	100.2779	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	100.2413	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05107	100.1897	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 2
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05107	100.1889	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 1
FDNSLock	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06092	100.1794	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06267	100.1336	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06267	100.1336	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06267	100.0701	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06189	99.8	HESKETT - WISHEK 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0662	99.7	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0662	99.7	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06189	99.7	MERRCRT4 230.00 - WISHEK 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06061	99.7	BISMARK - HILKEN 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06053	99.7	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06042	99.7	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0603	99.7	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06025	99.7	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06025	99.7	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06025	99.7	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_004	0	17SP	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.09064	99.7	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0662	99.6	BISMARK - WASHBURN 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0662	99.6	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06077	99.6	FORMAN - OAKES 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06053	99.6	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06053	99.6	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06028	99.6	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	99.6	GEN600006 1-AS KING
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	99.6	GEN620115 4-HRDLKGEN 0.6000
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	99.6	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	99.6	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06025	99.6	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06025	99.6	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06019	99.6	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06019	99.6	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05941	99.6	STORLA - WOONSOCKET 115KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06074	99.5	ELLENDALE - OAKES 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06074	99.5	ELLENDALE - OAKES 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	99.5	GEN652410 3-FT PECK
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	99.5	GEN659273 2-GROTON SYNC COND
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	99.5	GEN659294 1-WILTONCOL9
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06027	99.5	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06002	99.5	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	16NR_G16_004	0	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.05941	99.5	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	146.5408	BASE CASE
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	142.7257	BASE CASE
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	141.6742	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	141.6724	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	140.8287	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03201	140.6201	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03147	140.1476	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03147	140.1476	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03144	140.1051	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03144	140.0574	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03913	139.9839	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	139.5345	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	139.5345	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03217	139.2092	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03217	139.2092	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	139.1706	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03368	139.0181	AURORA - BROOKINGS 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03368	139.0181	AURORA - BROOKINGS 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	138.9876	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	138.6998	ANSON - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	138.6995	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03318	138.549	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03318	138.5148	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03318	138.439	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03318	138.3327	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0324	138.289	CHANARANBIE - FENTON 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03368	138.2355	AURORA - FLANDRU 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03368	138.2355	AURORA - FLANDRU 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03261	138.1892	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	138.1493	ANSON 115/17.5KV TRANSFORMER CKT 4
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	138.0648	ANSON - SPLIT ROCK 115KV CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03273	137.8804	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03279	137.8667	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03123	137.8364	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03151	137.7722	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04504	137.7288	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03151	137.6978	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04504	137.6939	2810X2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04504	137.6546	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	137.4743	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04504	137.4578	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04504	137.3927	2801X
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03213	137.3497	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03064	137.3399	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	137.3287	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	137.3157	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	137.2882	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03209	137.2727	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04504	137.148	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04504	137.148	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	137.0419	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	137.0204	GEN600045 4-ANSON
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03154	136.9184	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03154	136.9184	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03154	136.8777	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03227	136.852	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04504	136.8065	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	136.8015	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03203	136.7886	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03197	136.7703	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03179	136.7079	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03154	136.6865	BROOKINGS - WHITE 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03154	136.6865	BROOKINGS - WHITE 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03194	136.5855	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	136.5645	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03288	136.5609	PIPESTONE - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0328	136.5607	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02985	136.5587	BIG STONE - BROWNS VALLEY 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03179	136.4995	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03258	136.4758	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03258	136.4758	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03823	136.4006	HELENA - SHEAS LK3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	136.341	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03197	136.3339	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03172	136.3282	MCLEOD - PANTHER 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03325	136.3099	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03325	136.3099	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03163	136.2911	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03163	136.2911	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02985	136.2698	BROWNS VALLEY - HANKINSON 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03325	136.198	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03199	136.1734	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNSLock	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0315	136.1421	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	136.1108	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03178	136.1104	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03178	136.1104	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03197	136.0661	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	136.0172	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.9861	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.984	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.9757	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.9503	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.9261	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0315	135.8838	PAYNSVILLE - WILLMAR 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03163	135.8815	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03163	135.8815	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.8154	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0318	135.7924	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.7862	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.782	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.779	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.7789	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.7787	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.7646	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03913	135.7382	FIELD SOUTH - WILMARTH 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03212	135.7343	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.73	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.7278	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03913	135.7058	FIELD NORTH - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03277	135.6979	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.6943	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03913	135.6467	FIELD NORTH - FIELD SOUTH 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03325	135.6357	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0354	135.6341	BISON - HETINGER 230KV CKT 1
FDNSLock	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03204	135.624	KARLSTAD - WINGER 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.6212	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.604	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.5916	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.5441	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03201	135.5432	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03156	135.5151	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03156	135.5104	BIG STONE - HIGHWAY 12 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03118	135.4643	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03118	135.4643	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03192	135.4565	FENTON - NOBLES 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03155	135.4451	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.4273	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.4185	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03258	135.4042	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03258	135.4042	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03247	135.3887	CHANARANBIE - FENTON 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03154	135.3739	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03154	135.3739	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.3667	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.3241	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.3238	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03159	135.3233	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.319	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.3168	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03198	135.297	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	135.2904	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03238	135.2814	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03145	135.2746	GRACEVT7 - ORTONVILLE 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.2638	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03181	135.225	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03181	135.225	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03145	135.2175	GRACEVT7 - MORRIS 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03145	135.2175	GRACEVT7 - MORRIS 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03257	135.2154	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.2104	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.2044	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0319	135.1828	FENTON - NOBLES 115KV CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.1809	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.1689	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.165	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.1577	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0354	135.157	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0319	135.1478	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.1464	GEN335204 1-NELSON UNIT 4
FDNSLock	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0326	135.1336	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.1264	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.1244	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.1203	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03194	135.1192	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03201	135.1037	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03201	135.1037	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.101	GEN600020 2-ANGUS ANSON1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.0901	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.0901	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.0689	GEN600021 3-ANGUS ANSON2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03412	135.0159	AURORA - BROOKINGS 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03412	135.0159	AURORA - BROOKINGS 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	135.0095	GEN336464 1-MICHOUD UNIT #3
FDNSLock	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0326	135.0018	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03184	134.9904	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03754	134.9836	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.9688	MEC345 - WILMARTH 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.9654	MEC345 345/19.5KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03185	134.9506	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.9273	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.9203	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03368	134.9128	FLANDRU - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	134.8974	ANSON - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	134.8951	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.8845	MEC115 - WILMARTH 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.8844	MEC115 115/15.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03152	134.8734	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03152	134.8734	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.8598	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0325	134.8244	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0325	134.8244	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.824	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.8225	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.8114	NOBLES 115/34.5KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03229	134.7937	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03229	134.7915	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03168	134.7689	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.7687	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03261	134.7637	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03187	134.757	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	134.744	ANSON 115/17.5KV TRANSFORMER CKT 4
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03171	134.7359	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.7309	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03108	134.7271	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03199	134.7222	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.7039	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.7035	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.6983	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.6979	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.6893	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.6852	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.6819	RGBYWND4 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03185	134.6805	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.6687	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03195	134.6664	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03187	134.6635	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	134.6606	ANSON - SPLIT ROCK 115KV CKT 2
FDNSLock	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04512	134.6455	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04512	134.6455	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.6421	GEN303007 1-1BC2 U2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.6359	GEN303006 1-1BC2 U1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03203	134.6303	AUDUBON - HUBBARD 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.6276	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03185	134.6257	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03166	134.6199	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNSLock	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04512	134.6046	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.6035	GEN600149 W-J183 PROSEW10.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03164	134.5955	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.5844	GENOA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03158	134.5837	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.5828	GEN600150 W-J183 PROSEW20.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.5751	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.5729	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.5702	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.5614	GEN303008 1-1BC2 U3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03181	134.5566	AIRTECH - FEP TAP 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	134.5471	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03722	134.5434	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03164	134.5422	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0318	134.5388	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03181	134.5261	AIRTECH - WEST FARIBAULT 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03722	134.507	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03722	134.507	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0316	134.506	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0316	134.506	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0316	134.506	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0316	134.506	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.4982	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03164	134.4841	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03289	134.4818	HURON - WOONSOCKET 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03722	134.4795	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03722	134.4781	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03185	134.4747	GRAND FORKS - PICKERT 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03186	134.4693	FENTON 115/69KV TRANSFORMER CKT 5
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03722	134.4681	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.4667	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03208	134.4662	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03208	134.4662	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.4658	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.4618	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04512	134.4592	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.4578	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03737	134.4381	GLENHAM - L3 HAWDON 230KV CKT 1
FDNSLock	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03181	134.4256	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03185	134.4243	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.421	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03919	134.4096	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03183	134.4067	FORT RIDGELY - FRANKLIN 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0318	134.4014	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	134.3945	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.381	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.381	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03173	134.3793	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03192	134.3707	ELM CREEK - PARKERS LAKE 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.3701	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.3701	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.3701	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03412	134.3683	AURORA - FLANDRU 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03412	134.3683	AURORA - FLANDRU 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03202	134.3682	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0319	134.3609	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03155	134.3554	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.3445	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	134.3379	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03165	134.336	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03173	134.3249	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.3244	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03722	134.3219	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0318	134.3204	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0318	134.3204	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.3113	GEN645025 5-NORTH OMAHA 5
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03165	134.3091	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03165	134.3091	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.3013	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	134.3005	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0319	134.2969	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03269	134.2879	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
FDNSLock	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03326	134.2766	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.2737	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03326	134.2693	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03326	134.2693	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.2621	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03178	134.2549	BLUE LAKE - MCLEOD 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03188	134.2543	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.2512	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.2507	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03185	134.2505	JAMES TOWN - PICKERT 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03181	134.2425	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03152	134.2334	CHERRY CREEK - GRANT 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.2312	GEN345756 H-1SIOUX 1 18.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03188	134.2243	ARNOLD - HAZLETON 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0326	134.2211	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03181	134.2145	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03281	134.2093	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03161	134.2092	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.2052	GEN512688 2-GRDA1 GSU2 22
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03159	134.2032	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03159	134.2031	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNSLock	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.2022	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03159	134.202	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.2018	GEN514806 1-SOONER UNIT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.2018	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03163	134.2011	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04512	134.2009	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03173	134.1991	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	134.1975	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.1942	GEN514805 1-SOONER UNIT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03155	134.1876	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03173	134.1872	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.187	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.1803	GEN345832 1-1TS G1 13.800
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.1802	AS KING 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.1799	GEN345841 2-1TS G2 13.800
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.1775	GEN334432 1-SABINE UNIT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.1751	GEN334431 1-SABINE UNIT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.1744	RUNNING 230/118KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04512	134.1743	2810X2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03177	134.1697	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03177	134.1697	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03171	134.1625	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03171	134.1625	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03179	134.1539	ARROWHEAD - FORBES 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03214	134.1387	KOSSUTH 3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.1381	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.138	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.1361	GEN336446 1-MICHOUD UNIT #2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03185	134.1297	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.1249	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03181	134.1237	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03161	134.1237	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03181	134.1208	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.1182	GEN629069 1-EMERY STEAM TURBINE 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03183	134.1176	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.1141	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.1094	GEN336242 1-1NMIL ST1 18.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03161	134.0993	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03161	134.0993	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03161	134.0993	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03161	134.0993	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	134.0971	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03181	134.0926	LAWERENCE CREEK - SHAEFER 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.0887	GEN501823 1-TECHE UNIT 3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03164	134.088	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.0803	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.068	GEN525561 1-TOLK GEN #1 24 KV
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03178	134.0613	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03204	134.061	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.0587	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03289	134.0554	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.0545	GEN336944 1-REX BROWN
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.0486	GEN541151 3-SIBLEY GENERATING UNIT #3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.0431	NOBLES 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03289	134.041	STORLA - WOONSOCKET 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.0371	GEN345156 H-1MER 4 18.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02969	134.035	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02969	134.035	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.0229	GEN335612 1-WILLOW GLENN UNIT#2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.0213	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02992	134.0207	BIG STONE - BROWNS VALLEY 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03171	134.0164	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.0134	GEN501970 1-EVANGELINE UNIT 7
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03271	134.0101	MONTICELLO - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	134.0025	GEN334031 1-FRONTIER UNIT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03169	133.9893	PAYNESVILLE - WAKEFIELD 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9887	GEN337430 1-PERYVILLE UNIT #3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9886	GEN337428 1-PERYVILLE UNIT #1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9884	GEN336240 1-1NMIL CT1 18.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9884	GEN336241 1-1NMIL CT2 18.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03143	133.9883	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03197	133.988	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03197	133.988	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0318	133.9879	LYON COUNTY 115/69KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03074	133.9878	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03074	133.9878	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03074	133.9863	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9835	GEN334030 1-FRONTIER UNIT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9793	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03258	133.9725	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03172	133.9657	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	133.9652	TYNDALL - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9609	GEN338443 1-PANDA S1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9605	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	133.9574	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9567	FENTON 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9564	GEN501911 1-ACADIA UNIT CT1A
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0318	133.9557	BONESTEEL - FT RANDAL 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9539	GEN501912 1-ACADIA UNIT CT1B
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03183	133.9496	FRANKLIN - REDWOOD FALLS 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9401	GEN335570 1-CARVILLE CTG
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9394	GEN335571 1-CARVILLE UNIT #1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9369	GEN336167 1-GULF OXY U1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9369	GEN336168 1-GULF OXY U2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9369	GEN336169 1-GULF OXY U3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9337	GEN501971 1-EVANGELINE UNIT 7-1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9337	GEN501972 1-EVANGELINE UNIT 7-2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0318	133.9267	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (N
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9208	GEN645042 2-CASS COUNTY 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9183	GEN645041 1-CASS COUNTY 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9108	GEN337008 1-DUKE MCADAMS S1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04512	133.9052	2801X
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.9012	GEN334392 1-EXXON MOBIL IPP 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0334	133.9	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.8955	GEN337432 1-PERYVILLE UNIT #5
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.8809	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.8763	GEN562517 1-G14_021_S2 0.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.8761	GEN335644 1-EXXON UNIT5
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03193	133.8753	BLUE LAKE - HAMPTON CORNER 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.8729	GEN334393 1-EXXON MOBIL IPP 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.8729	GEN334394 1-EXXON MOBIL IPP 3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0318	133.8703	PLEZIOZO1ARC
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03209	133.8695	LYON COUNTY (8779072) 345/115/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03181	133.8609	ARNOLD - MORGANV3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.8565	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.8545	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.8511	FARIBALT GEN115.00 115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.846	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03178	133.8447	NOBLES () 345/115/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.8442	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03178	133.8412	NOBLES () 345/115/34.5KV TRANSFORMER CKT 10
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.8358	GRAND MEADOW - PLEASANT VALLEY 161KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03183	133.8344	MORGANV3 345.00 - TIFFIN 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.8271	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03177	133.8266	FRANKS - HUBEN 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03172	133.8262	BRANDN 7 115.00 - ELBOWLK7 115.00 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.8228	GEN629046 3-FOX LAKE 5 GENERATOR NO 3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03177	133.8204	CEDRSAUK B4 345.00 - EDG BUS2 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.8126	GEN635803 3-PLEASANT HILL GEN 3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0317	133.8121	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0317	133.8121	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03233	133.8089	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03176	133.8077	COON CREEK - TERMINAL 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.8032	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03177	133.7994	AS KING - WILLOW RIVER 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.7872	GEN635708 1-SYCAMRG1 13.800
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.7872	GEN635709 2-SYCAMRG2 13.800
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03233	133.7862	GROTON - REDFIELD 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.7826	GEN659116 1-SPIRIT MOUND UNIT1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.7691	7CALAWY 1 345.00 345/25.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.7676	GEN629992 1-G164_WF9 34.500
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03181	133.767	OVEXFRMCCOVE
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03179	133.7566	NORTH ROCHESTER (NROC TR) 345/161/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03168	133.7241	GRE-CHUBLAK3345.00 - HAMPTON CORNER 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03205	133.722	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.6885	GEN659117 2-SPIRIT MOUND UNIT2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.6652	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03176	133.6648	GLENCOE MUNI - MCLEOD 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.6353	GEN600112 W-G287 NOB2G W0.5750
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	133.5785	GEN600045 4-ANSON
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03205	133.578	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03172	133.5526	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0318	133.5302	MCLEOD - PANTHER 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04512	133.4888	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	133.4736	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03297	133.3801	PIPESTONE - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02992	133.3479	BROWNS VALLEY - HANKINSON 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	133.3435	GEN640009 1-COOPER NUCLEAR STATION

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03172	133.3138	BROOKINGS - WHITE 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03172	133.3138	BROOKINGS - WHITE 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	133.2863	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03529	133.2741	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03142	133.2568	HAZEL CREEK - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03202	133.167	BREWSTER - ELK 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03265	133.1215	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03265	133.1215	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03203	133.08	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03235	133.0548	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03261	133.0394	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03177	133.0371	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03176	133.0186	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03158	133.0164	PAYNSVILLE - WILLMAR 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03181	132.9923	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03181	132.9923	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0317	132.991	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0317	132.991	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.9641	GEN600046 1-MECST
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.9614	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.9521	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03142	132.9242	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.906	GEN600047 1-MECCT1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03142	132.8945	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03168	132.8892	DIXONCO 230.00 - HOSKINS 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03205	132.8874	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03177	132.8834	CARROLL COUNTY - VICTORY 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.8645	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.8553	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03163	132.8408	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.8189	GEN681540 5-ALMA UNIT 5
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03283	132.8171	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.8013	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03158	132.7885	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03177	132.7623	BROOKING COUNTY - YANKEE 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03177	132.7623	BROOKING COUNTY - YANKEE 115KV CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03181	132.7521	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.7519	GEN615031 1-PLEASANT VALLEY
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.7493	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.7477	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.7419	NEW MADRID 345/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03163	132.7416	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.7407	NEW MADRID 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.7376	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03206	132.7241	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03175	132.7185	LACYGNE - NEOSHO 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.7086	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.7031	GEN660003 3-HURON WEST PARK
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.6925	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03176	132.6911	COOPER - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03176	132.6911	COOPER - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0318	132.6875	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.6844	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03145	132.6781	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.6758	GEN619954 1-HUTCHINSON
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03153	132.6707	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.6664	GEN600130 W-G586 - CWN 10.6000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.6655	GEN600131 W-G586 - CWN 20.6000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.6413	GRE-STNYCRK7115.00 (STNYCR115-69) 115/69/12.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.6384	GEN652004 1-G13_001IS_3 0.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03178	132.6182	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.6135	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03176	132.6125	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03176	132.6125	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.6112	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03177	132.6084	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.5956	GEN600125 2-FEP ST G 13.800
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.5894	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03163	132.5746	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.5663	GEN672372 3-COTEAU CREEK GENERATOR 3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.5662	GEN672370 1-COTEAU CREEK GENERATOR 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.5661	GEN672371 2-COTEAU CREEK GENERATOR 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03039	132.5646	SPLIT ROCK (SPLT 11) 345/115/13.8KV TRANSFORMER CKT 11
FDNSLock	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03177	132.5621	COPSTJCPFRSJ
FDNSLock	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03177	132.5621	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03177	132.5621	STMDSJFAFACO
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.5588	GEN659289 1-DAYCNTYWND W0.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.5568	GEN563312 1-G15097_3 0.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	132.5389	SPLIT ROCK (SPLT 10) 345/115/13.8KV TRANSFORMER CKT 10
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.5238	GEN681522 3-GENOA 3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.52	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.5189	GEN563302 1-G15096_3 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.516	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03201	132.5086	HILLS - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.5067	GEN672369 3-MERIDIAN GENERATOR 3 ST
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.5041	GEN657705 X-DRAYTON
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.5019	GEN600013 3-BLACK DOG GEN 3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03178	132.4839	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03178	132.4833	DENISON - EXIRA 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.4815	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.4812	GEN659031 1-G12_014IS_4 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03153	132.4733	GRACEVT7 - ORTONVILLE 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.4631	GEN659148 1-LONESMCRK 1G13.800
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.4631	GEN659156 2-LONESMCRK 2G13.800
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.4631	GEN659157 3-LONESMCRK 3G13.800
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.4513	GEN620115 1-HRDLKGEN 0.6000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.4482	GEN659147 1-PIONEER 1G13.800
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.4482	GEN659158 2-PIONEER G213.800
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.4482	GEN659159 3-PIONEER G313.800
FDNSLock	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03545	132.4472	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.4432	FRONTER4 230.00 (FRONTIER) 230/69/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.4332	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03209	132.4253	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.4182	GEN603185 1-FIBROMINN GENERATION
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03127	132.4098	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03127	132.4098	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03161	132.4076	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03161	132.4076	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03202	132.4031	ELK - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.4028	GEN672384 1-CENTENNIAL WINDFARM
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.3919	H081 345.00 - H081-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.3919	H081 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.3887	GEN652410 3-FT PECK
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03177	132.3827	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.3764	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.3665	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.3551	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.352	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.3519	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.3517	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.3472	DONALDSON - DONALDSON PIPE 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.3426	GEN600056 W-BUFFALO RIDGE WIND GEN
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.3298	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.3298	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.3199	GEN620285 1-SOLWAY
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03208	132.3167	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.3037	GEN652414 4-FT PECK
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.3037	GEN652415 5-FT PECK
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.2886	YANKEE 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.2853	GEN600050 1-FEP
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.2659	GEN672358 1-CHAPLN1W 0.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.264	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.264	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.2507	GEN620323 2-HOOT LAKE 2 GEN
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.2432	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03177	132.2405	COOPER - ST JOE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03164	132.2378	BIG STONE - HIGHWAY 12 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03178	132.234	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.2311	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.2237	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.2218	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.218	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.2148	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.2148	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.2148	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03163	132.2075	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.194	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.1815	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03219	132.1754	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03181	132.1598	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.1592	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.1383	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.124	GEN659162 4-RED WLCK
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.124	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.1221	GEN659192 6-LYNN
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.1148	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.1145	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.1121	GEN 11143 1-J436GEN1 0.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.1121	GEN 11153 1-J437GEN1 0.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.1079	GEN587603 1-J488&J489GN10.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.1067	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.1032	GEN657964 1-ASH2GEN9 0.5750
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.0993	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.0965	GEN659290 1-EDGECOL
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0328	132.093	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.0918	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.0918	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.0883	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.0804	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.0749	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.0745	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.07	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	132.065	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.0618	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03166	132.0604	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03189	132.0563	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03189	132.0563	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.032	132.0457	FENTON - NOBLES 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03209	132.0403	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03209	132.0403	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	132.0369	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03197	132.0348	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.9926	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.9851	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03205	131.9796	DAN JUHL - SPLIT ROCK 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03216	131.9734	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03216	131.9734	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03166	131.9722	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.9576	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03205	131.9539	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.9409	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.9409	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03265	131.9275	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03265	131.9275	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03179	131.9079	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.8988	GEN587663 1-H081-GEN1 0.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03178	131.8881	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03178	131.874	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.8449	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03205	131.8372	LEHIGH - RAUN 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03205	131.8347	DAN JUHL - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.8303	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.8288	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03197	131.8155	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.7958	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03198	131.7921	FENTON - NOBLES 115KV CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.792	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.792	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03171	131.7892	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03178	131.7858	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.7772	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.7735	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.7727	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.7558	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.7558	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03269	131.755	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.7509	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.7502	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.7494	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.7488	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03164	131.7425	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03264	131.7365	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03264	131.7365	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.734	GEN600017 C-LS POWER CT
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.731	GEN336464 1-MICHOUD UNIT #3
FDNSLock	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.7276	GEN652556 2-OAHE
FDNSLock	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.7276	GEN652557 4-OAHE
FDNSLock	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.7276	GEN652558 6-OAHE
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03208	131.7246	BONDURANT - MONTEZUMA 345KV CKT 1
FDNSLock	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03545	131.7104	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.707	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.6944	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.6941	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03187	131.691	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03192	131.6894	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.689	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03325	131.6543	FLANDRU - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.6474	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.6435	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03197	131.6411	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.6392	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.6384	GEN659270 1-WEST SW
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03212	131.6339	KARLSTAD - WINGER 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.6285	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.6285	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03153	131.6192	GRACEVT7 - MORRIS 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03153	131.6192	GRACEVT7 - MORRIS 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.6174	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.6043	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.5941	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03163	131.5842	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03211	131.5581	AUDUBON - HUBBARD 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03729	131.5561	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.5544	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0326	131.5534	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0326	131.5534	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.5434	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.5371	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.5358	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.533	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.5223	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.5166	MEC345 345/19.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.5129	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03729	131.5077	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03729	131.5077	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.4778	GEN600020 2-ANGUS ANSON1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.4726	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03264	131.471	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03264	131.471	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.4676	NOBLES 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.4671	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03264	131.467	CARPENTER - HURON 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.4622	MEC345 - WILMARTH 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03188	131.461	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.4574	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03729	131.4544	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.4476	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03197	131.4385	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03193	131.4358	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03163	131.4336	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03729	131.4297	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03729	131.4279	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.427	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03744	131.4172	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.4114	GEN600021 3-ANGUS ANSON2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.3984	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.3965	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03166	131.3825	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0316	131.3784	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0316	131.3784	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.3609	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.3529	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.3505	MEC115 - WILMARTH 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.3504	MEC115 115/15.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.3483	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.3477	GEN652559 1-OAHE
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.3456	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.3456	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.3199	NOBLES 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03202	131.3166	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.3071	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.307	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.3038	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03191	131.2995	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03168	131.287	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.2848	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.2791	RGBYWND4 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03193	131.2706	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03171	131.2667	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03729	131.2607	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.2579	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03181	131.2561	PRAIRIE - WINGER 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.2558	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.2558	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.2558	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.2273	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.226	GEN600069 W-YANKEE 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03268	131.2226	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.2111	GEN600077 W-YANKEE 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.2111	GEN600099 W-YANKEE 4
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0319	131.2106	BALTA - MCHENRY 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.2057	GEN600149 W-J183 PROSEW10.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.1997	GEN600078 W-YANKEE 3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.1837	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.1816	GEN600150 W-J183 PROSEW20.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.1764	GEN303007 1-1BC2 U2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.1743	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.1731	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.17	GEN303006 1-1BC2 U1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.1676	PRAIRIE - RAMSEY 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.166	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.1644	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03203	131.1618	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03209	131.1563	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.1504	GEN681542 6-JP MADGETT
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03188	131.1466	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0318	131.1391	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03168	131.139	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03168	131.139	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03168	131.139	FT THOMPSON - OAHE 230KV CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03168	131.139	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03193	131.1231	GRAND FORKS - PICKERT 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03188	131.1231	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03168	131.1178	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03168	131.1178	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03168	131.1178	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03168	131.1178	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03268	131.1175	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03177	131.1122	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.0812	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.0804	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0318	131.068	EMMETE.TAP 7115.00 - ONEILL 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.0678	GEN303008 1-1BC2 U3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03171	131.0568	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03188	131.0399	AIRTECH - WEST FARIBAULT 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03237	131.0387	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.036	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.0346	GEN645025 5-NORTH OMAHA 5
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03188	131.0306	AIRTECH - FEP TAP 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03296	131.0227	HURON - WOONSOCKET 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.0219	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03268	131.0213	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.0213	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.0213	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03167	131.019	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03167	131.0174	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.0166	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03167	131.0164	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03237	131.014	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03237	131.0135	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.0105	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.0087	GEN652460 4-GARRISON
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	131.0086	GEN652461 5-GARRISON
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03173	131.004	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	131.0038	AS KING 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0318	130.973	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03193	130.97	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.9699	GENOA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	130.9579	GEN652459 3-GARRISON
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	130.9578	GEN652457 1-GARRISON
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	130.9578	GEN652458 2-GARRISON
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.9574	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.9562	LANGDON - LANGWIN7 115.00 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.9524	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03193	130.9485	JAMES TOWN - PICKERT 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	130.9302	GEN659274 1-GROTON
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.9284	GEN512688 2-GRDA1 GSU2 22
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03279	130.9193	MONTICELLO - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.9056	GEN635407 W-SHD415 W 0.6000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.9056	GEN635408 W-SHD425 W 0.6000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.904	GEN635409 W-SHD435 W 0.6000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03193	130.9019	FENTON 115/69KV TRANSFORMER CKT 5
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.8951	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03169	130.8839	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03185	130.871	BLUE LAKE - MCLEOD 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.868	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0317	130.8652	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	130.8647	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03189	130.863	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0317	130.8552	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.8528	GEN525561 1-TOLK GEN #1 24 KV
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.8526	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03189	130.8511	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.848	GEN532722 1-EVANS ENERGY CENTER UNIT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03191	130.8448	FORT RIDGELY - FRANKLIN 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.8385	GEN514806 1-SOONER UNIT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03185	130.8358	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03185	130.8358	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.8324	GEN514805 1-SOONER UNIT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.8297	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.8297	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0318	130.8252	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.8237	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03334	130.8226	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03334	130.8226	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.8225	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03166	130.8151	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03173	130.796	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03189	130.7899	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.7874	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0318	130.7787	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03173	130.7771	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03173	130.7771	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.7763	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.7757	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03178	130.7701	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
FDNSLock	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03334	130.7564	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03189	130.7542	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	130.7523	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03192	130.7508	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.7508	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03175	130.7404	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.734	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.732	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03189	130.7255	LAWERENCE CREEK - SHAEFER 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.7251	GEN515042 1-SEMINOLE 3G
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03206	130.718	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.032	130.7177	ELM CREEK - PARKERS LAKE 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.7056	RUNNING 230/118KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0316	130.7055	CHERRY CREEK - GRANT 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03185	130.6949	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0318	130.6947	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.6926	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03211	130.6856	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03189	130.6833	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.6821	GEN515041 1-SEMINOLE 2G
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.6802	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.6782	488489510526345.00 - J526 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.6782	J526 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03189	130.6727	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03196	130.6669	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.6632	GEN345756 H-1SIOUX 1 18.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.6628	GEN336446 1-MICHOUD UNIT #2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.6586	GEN334432 1-SABINE UNIT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.6585	GEN334431 1-SABINE UNIT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03265	130.6395	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03191	130.6376	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.6354	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03179	130.6342	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03189	130.632	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.6151	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.6151	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03168	130.6138	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03176	130.6125	EDGETOWN TAP - HOOT LAKE 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.6091	GEN345832 1-1TS G1 13.800
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.6088	GEN345841 2-1TS G2 13.800
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03187	130.6083	ARROWHEAD - FORBES 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03176	130.6055	PAYNESVILLE - WAKEFIELD 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.6016	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03296	130.5923	STORLA - WOONSOCKET 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.5843	GEN541151 3-SIBLEY GENERATING UNIT #3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03296	130.5832	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.5793	GEN336242 1-1NMIL ST1 18.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.569	GEN501823 1-TECHE UNIT 3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.5606	GEN629069 1-EMERY STEAM TURBINE 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.5489	FENTON 115/34.5KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.5423	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.5405	GEN336944 1-REX BROWN
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03197	130.5276	ARNOLD - HAZLETON 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03177	130.5188	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.5103	GEN338443 1-PANDA S1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.4957	GEN501970 1-EVANGELINE UNIT 7
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.4942	GEN334030 1-FRONTIER UNIT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.4907	GEN335612 1-WILLOW GLENN UNIT#2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.4905	GEN334031 1-FRONTIER UNIT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03179	130.481	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.4809	GRAND MEADOW - PLEASANT VALLEY 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.4787	GEN345156 H-1MER 4 18.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03186	130.4739	NOBLES () 345/115/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03186	130.4698	NOBLES () 345/115/34.5KV TRANSFORMER CKT 10
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03191	130.4656	FRANKLIN - REDWOOD FALLS 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.4632	GEN336240 1-1NMIL CT1 18.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.4632	GEN336241 1-1NMIL CT2 18.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.4595	GEN337430 1-PERYVILLE UNIT #3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.4592	GEN337428 1-PERYVILLE UNIT #1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03188	130.4591	LYON COUNTY 115/69KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03189	130.4528	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.442	GEN645042 2-CASS COUNTY 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.4393	GEN645041 1-CASS COUNTY 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03347	130.398	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03205	130.3731	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03205	130.3731	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03187	130.3708	PLEZIOZO1ARC
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03082	130.3688	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03082	130.3688	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.3646	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.3637	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03082	130.357	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.3518	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.3485	GEN659116 1-SPIRIT MOUND UNIT1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0322	130.3258	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.3219	HIPRAR_WF5 161.00 161/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03201	130.3201	BLUE LAKE - HAMPTON CORNER 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03176	130.3075	GRE-CHUBLAK3345.00 - HAMPTON CORNER 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03241	130.3054	GROTON - REDFIELD 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03171	130.3048	HELENA - SCOTTCO3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03241	130.3022	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03185	130.3022	CEDRSAUK B4 345.00 - EDG BUS2 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.2991	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03217	130.2919	LYON COUNTY (8779072) 345/115/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03222	130.2741	KOSSUTH 3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.2716	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	130.2516	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.25	GEN659117 2-SPIRIT MOUND UNIT2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	130.2336	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.215	GEN600112 W-G287 NOB2G W0.5750
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.1544	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.1395	FENTON 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	130.0691	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03168	130.0623	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	130.047	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	129.9404	GEN659141 1-K10215A
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03144	129.8736	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03144	129.8736	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03149	129.783	HAZEL CREEK - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	129.7529	GEN615010 1-STANTON4
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03537	129.6694	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0317	129.5892	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	129.5819	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03184	129.5581	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	129.5286	YANKEE 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	129.5229	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03269	129.5063	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.498	GEN600046 1-MECST

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	129.4834	YANKEE 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03153	129.471	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03189	129.4663	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03189	129.4663	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.4555	GEN600047 1-MECCT1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03184	129.4395	BROOKING COUNTY () 345/115/13.8KV TRANSFORMER CKT 10
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03149	129.4323	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.4321	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03149	129.4283	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03184	129.4163	BROOKING COUNTY () 345/115/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03107	129.3714	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	129.3692	BROOKING COUNTY - J432 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	129.3692	J432 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03176	129.3507	DIXONCO 230.00 - HOSKINS 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03185	129.3456	CARROLL COUNTY - VICTORY 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.3415	GEN681540 5-ALMA UNIT 5
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03188	129.2753	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03189	129.2692	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.251	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03184	129.2458	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03184	129.2458	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.2409	GEN615031 1-PLEASANT VALLEY
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.2378	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.2261	GEN619954 1-HUTCHINSON
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03184	129.226	COOPER - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03184	129.226	COOPER - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03186	129.1985	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03185	129.1967	BROOKING COUNTY - YANKEE 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03185	129.1967	BROOKING COUNTY - YANKEE 115KV CKT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03184	129.1935	COPSTJCPFRSJ
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03184	129.1935	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03184	129.1935	STMDSJFAFACO
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03186	129.1863	DENISON - EXIRA 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.1789	GEN652004 1-G13_001IS_3 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.1721	GEN600130 W-G586 - CWN 10.6000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.1707	GEN600131 W-G586 - CWN 20.6000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03257	129.1691	ELLSBORO - LAKE YANKTON 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03186	129.1665	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0319	129.1546	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.1529	GEN660003 3-HURON WEST PARK
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03257	129.1449	CHANARANBIE - ELLSBORO 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.1339	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.1268	GEN600081 W-BUFFALO RIDGE WIND GEN 4
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03759	129.1255	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	129.1209	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.1157	GEN600125 2-FEP ST G 13.800
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	129.1091	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.103	GRE-STNYCRK7115.00 (STNYCR115-69) 115/69/12.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0316	129.0994	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	129.0988	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03188	129.0872	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03185	129.0627	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.0576	GEN672371 2-COTEAU CREEK GENERATOR 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.0575	GEN672370 1-COTEAU CREEK GENERATOR 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.0575	GEN672372 3-COTEAU CREEK GENERATOR 3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03919	129.0276	FIELD SOUTH - WILMARTH 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.026	GEN600013 3-BLACK DOG GEN 3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.0181	GEN659289 1-DAYCNTYWND W0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.0157	GEN563312 1-G15097_3 0.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	129.0144	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	129.0144	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03211	129.0112	ELK - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	129.0092	GEN681522 3-GENOA 3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03185	128.9916	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.9907	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.9847	GEN659031 1-G12_014IS_4 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.9741	GEN672369 3-MERIDIAN GENERATOR 3 ST
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.9731	GEN603185 1-FIBROMINN GENERATION

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.9595	GEN620285 1-SOLWAY
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	128.9543	GEN587033 1-G16-004-GEN10.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03187	128.9505	EDEN 345 345.00 - HCKRYCK3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03919	128.9467	FIELD NORTH - FIELD SOUTH 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03171	128.9349	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.9149	GEN672384 1-CENTENNIAL WINDFARM
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03919	128.9088	FIELD NORTH - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.8982	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	128.8969	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.8858	GEN620115 1-HRDLKGEN 0.6000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03044	128.8858	SPLIT ROCK (SPLT 11) 345/115/13.8KV TRANSFORMER CKT 11
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.8837	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.8768	GEN659147 1-PIONEER 1G13.800
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.8768	GEN659158 2-PIONEER G213.800
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.8768	GEN659159 3-PIONEER G313.800
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.8734	GEN659417 1X-BEPCPKFT 1GX13.800
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.8734	GEN659418 2X-BEPCPKFT 2GX13.800
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.8734	GEN659419 3X-BEPCPKFT 3GX13.800
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.8667	H081 345.00 - H081-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.8667	H081 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03038	128.85	SPLIT ROCK (SPLT 10) 345/115/13.8KV TRANSFORMER CKT 10
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03209	128.8351	HILLS - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.8254	GEN620323 2-HOOT LAKE 2 GEN
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.8218	GEN652410 3-FT PECK
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	128.8132	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0319	128.8066	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.8056	GEN600050 1-FEP
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	128.8039	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.7891	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.789	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03186	128.7862	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.7787	GEN600056 W-BUFFALO RIDGE WIND GEN
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.7763	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.7623	GEN652414 4-FT PECK
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.7623	GEN652415 5-FT PECK
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.7552	GEN672358 1-CHAPLN1W 0.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	128.7476	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.7467	FRONTER4 230.00 (FRONTIER) 230/69/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.7345	WINGER (WINGER) 115/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03186	128.7344	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.7232	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.7049	THIEF RIVER FALLS (TRF) 115/69/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.6996	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.6996	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.6711	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.6711	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.6711	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.6646	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03172	128.6627	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03172	128.6627	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03186	128.6361	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03189	128.616	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.6104	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03186	128.6055	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03269	128.5869	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.5718	GEN659162 4-RED WLCK
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.5718	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.5695	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.5695	GEN659192 6-LYNN
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.5694	DONALDSON - DONALDSON PIPE 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.5609	GEN587603 1-J488&J489GN10.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.5563	GEN657964 1-ASH2GEN9 0.5750
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.5513	GEN659290 1-EDGECOL
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.5365	GEN 11143 1-J436GEN1 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.5365	GEN 11153 1-J437GEN1 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.5359	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03186	128.5351	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.5344	GEN672390 2-FUT-SW2X 13.800

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.531	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.5309	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.5188	GEN672357 2-FUT-WL2X 13.800
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03271	128.516	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03271	128.516	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.5138	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.4825	YANKEE 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03214	128.4751	DAN JUHL - SPLIT ROCK 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03214	128.4646	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.4575	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.4574	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	128.4529	GEN600006 1-AS KING
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.4317	GEN587663 1-H081-GEN1 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.4285	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03271	128.4094	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03271	128.4094	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.405	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.3821	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.3448	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03214	128.3359	DAN JUHL - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.3226	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.3226	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.3177	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.3175	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.3153	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.312	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.3093	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.3084	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.2848	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.2848	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.2735	GEN600017 C-LS POWER CT
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.2682	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.2373	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.234	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03176	128.2183	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.2136	GEN652556 2-OAHE
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.2136	GEN652557 4-OAHE
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.2136	GEN652558 6-OAHE
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03216	128.1813	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.1785	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03213	128.1752	LEHIGH - RAUN 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.172	GEN659270 1-WEST SW
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.1548	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03271	128.1022	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03176	128.0619	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.0581	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.0286	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.027	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	128.0079	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.9684	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03206	127.9609	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.9469	GEN652559 1-OAHE
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.9446	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.918	GEN681542 6-JP MADGETT
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.9179	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.9108	GEN657705 X-DRAYTON
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	127.9035	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	127.9027	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.899	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.899	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.8677	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.8192	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.7494	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.7321	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.7195	GEN652460 4-GARRISON
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.7195	GEN652461 5-GARRISON
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.6886	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.6886	GEN672304 4-BOUNDARY DAM GENERATOR 4

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.6886	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.6651	GEN600069 W-YANKEE 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.6459	GEN600077 W-YANKEE 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.6459	GEN600099 W-YANKEE 4
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.6369	GEN600078 W-YANKEE 3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.6284	GEN672356 1-FUT-WL1X 18.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.5798	GEN672389 1-FUT-SW1X 18.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.5678	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.5632	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.5053	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.4922	GEN652457 1-GARRISON
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.4922	GEN652458 2-GARRISON
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.4922	GEN652459 3-GARRISON
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	127.4598	GEN661015 1-COYOTE
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.4463	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.4273	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.359	GEN659274 1-GROTON
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	127.2399	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	127.1154	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	127.1154	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	127.0757	BASE CASE
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	126.8679	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	126.8214	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	126.5543	GEN659141 1-K10215A
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	126.4098	GEN600005 1-MONTICELLO
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	126.4097	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	126.2711	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	126.2579	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	126.2547	GEN615010 1-STANTON4
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	126.2527	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	126.2089	YANKEE 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	126.173	YANKEE 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	126.1386	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	126.0523	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	125.9932	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	125.9767	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	125.8653	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	125.8465	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	125.7454	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	125.7284	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	125.7283	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	125.7126	BROOKING COUNTY - J432 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	125.7126	J432 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	125.5882	GEN659125 1-COVEY
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	125.5786	GEN587033 1-G16-004-GEN10.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	125.5575	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	125.5411	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	125.5253	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	125.5253	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	125.4182	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	125.3471	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	125.1889	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	125.0446	GEN600006 1-AS KING
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03197	124.6817	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03197	124.6815	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	124.2862	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	124.2747	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	124.2727	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	123.9878	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	123.8611	GEN615001 1-COAL CREEK
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	123.7841	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	123.7841	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	123.7155	GEN615002 2-COAL CREEK
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	123.5955	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	123.5607	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	123.56	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	123.5566	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	123.5349	GEN600005 1-MONTICELLO

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02993	123.2762	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	123.2564	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02999	123.089	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	122.9973	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	122.9829	GEN 11133 1-J442-GEN1 0.6900
FDNSLock	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	122.9401	GEN661015 1-COYOTE
FDNSLock	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	122.932	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	122.7219	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	122.6905	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	122.6864	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	122.1909	GEN659125 1-COVEY
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03051	122.1237	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	122.0617	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	122.0617	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	121.9939	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	121.9936	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03051	121.9341	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03056	121.3188	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNSLock	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	121.083	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03753	121.0065	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	120.9619	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0299	120.9024	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03006	120.7137	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03006	120.7137	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	120.6576	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02977	120.6501	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02977	120.6501	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	120.601	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03003	120.5719	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03003	120.5432	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	120.4935	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	120.3522	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03123	120.2082	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03221	120.1991	AURORA - BROOKINGS 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03221	120.1991	AURORA - BROOKINGS 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03073	120.1585	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03073	120.1585	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	120.1576	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03079	120.1131	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02993	120.0262	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	119.9943	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	119.9884	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03096	119.6744	CHANARANBIE - FENTON 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03221	119.5778	AURORA - FLANDRU 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03221	119.5778	AURORA - FLANDRU 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03116	119.4706	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03034	119.4046	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03034	119.4046	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0432	119.2626	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0432	119.2407	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0432	119.2363	2810X2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	119.2259	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03098	119.1316	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0432	119.1237	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0432	119.1237	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0432	119.1172	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0432	119.1047	2801X
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	119.079	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03123	119.0148	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0432	119.0061	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03753	118.9927	FIELD SOUTH - WILMARTH 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03753	118.9509	FIELD NORTH - FIELD SOUTH 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03753	118.9285	FIELD NORTH - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03131	118.9242	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03197	118.9218	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02995	118.9201	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	118.799	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03197	118.7563	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03197	118.749	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03197	118.742	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNSLock	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	118.7371	GEN615001 1-COAL CREEK
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03007	118.7156	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03197	118.7149	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	118.6628	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	118.6355	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03544	118.6228	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	118.6163	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	118.5928	GEN336821 1-GRAND GULF UNIT
FDNSLock	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	118.5892	GEN615002 2-COAL CREEK
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03133	118.5381	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03007	118.4398	BROOKINGS - WHITE 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03007	118.4398	BROOKINGS - WHITE 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03039	118.3311	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03039	118.3186	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03665	118.267	HELENA - SHEAS LK3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03085	118.1934	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03142	118.171	PIPESTONE - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03073	118.1633	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	118.1355	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03123	118.0923	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03123	118.0923	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03121	118.0492	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03121	118.0492	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	118.0312	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.9981	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0313	117.9949	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.9945	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03062	117.9365	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03055	117.8884	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02959	117.856	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03121	117.8401	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03032	117.8084	MCLEOD - PANTHER 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.7512	LANGDON - LANGWIN7 115.00 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.7399	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.6947	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0308	117.6885	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0308	117.6885	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03056	117.6193	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.6179	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0307	117.5715	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.5176	BARNES 4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03056	117.4637	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03061	117.4279	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03038	117.3902	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03038	117.3902	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03156	117.3879	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03125	117.3368	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03125	117.3368	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.3365	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03023	117.3359	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03023	117.3359	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03056	117.3334	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.3142	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.3032	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03023	117.2943	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03023	117.2943	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.2909	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03015	117.2885	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03023	117.2717	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.2711	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03005	117.2621	GRACEVT7 - ORTONVILLE 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.198	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03013	117.1505	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03013	117.1505	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0304	117.1449	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03598	117.1318	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.1252	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.1252	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.1241	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.1078	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.1009	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.0964	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.0957	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.0942	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.0861	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0301	117.0727	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	117.0596	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03015	117.0426	BIG STONE - HIGHWAY 12 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03007	117.0395	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03394	117.0261	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0301	117.0242	PAYNSVILLE - WILLMAR 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0305	116.9372	FENTON - NOBLES 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03567	116.9166	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.8953	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.8949	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.8946	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03134	116.8865	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0299	116.8788	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0299	116.8788	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.8732	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03018	116.8698	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03567	116.8539	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03567	116.8539	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.853	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03196	116.8393	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03005	116.8375	GRACEVT7 - MORRIS 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03005	116.8375	GRACEVT7 - MORRIS 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.8354	MEC345 - WILMARTH 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.8339	MEC345 345/19.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03015	116.8325	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03125	116.8291	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03125	116.8291	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.8255	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.8246	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03567	116.8211	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.8193	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.8191	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03567	116.8152	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03567	116.8152	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.8114	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03582	116.8103	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03048	116.7818	FENTON - NOBLES 115KV CKT 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.7802	RGBYWND4 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.7752	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03567	116.7679	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03134	116.7481	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.7375	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.7331	MEC115 - WILMARTH 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.733	MEC115 115/15.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03056	116.7208	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03059	116.6895	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03096	116.6855	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03016	116.6671	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03016	116.6671	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03009	116.6647	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03206	116.6591	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0304	116.6563	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0304	116.6563	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03096	116.6552	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.6545	GEN600149 W-J183 PROSEW10.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.6505	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03035	116.641	BURR - CANBY 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.6385	NOBLES 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.6374	GEN600150 W-J183 PROSEW20.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.6275	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.6175	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.6132	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.5978	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.5848	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03016	116.5523	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.5512	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03221	116.5474	FLANDRU - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03394	116.5223	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03057	116.5197	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.5026	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.4724	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.4458	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03039	116.4418	AIRTECH - WEST FARIBAULT 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03054	116.4324	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.4322	GENOA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.4313	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03039	116.424	AIRTECH - FEP TAP 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.4173	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03052	116.4146	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.4045	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03044	116.4013	FENTON 115/69KV TRANSFORMER CKT 5
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03058	116.3923	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.3716	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03016	116.3686	CHERRY CREEK - GRANT 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03149	116.3644	HURON - WOONSOCKET 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.3632	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.3566	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03062	116.339	AUDUBON - HUBBARD 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02984	116.3326	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.3311	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.328	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.3279	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.3246	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03034	116.3083	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.3037	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0304	116.2933	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.2896	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.2842	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03034	116.2841	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0304	116.2776	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.2764	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.2699	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0304	116.2609	LAWERENCE CREEK - SHAEFER 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03049	116.2557	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03037	116.2552	BLUE LAKE - MCLEOD 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.2543	GEN303007 1-1BC2 U2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.2509	GEN303006 1-1BC2 U1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.2506	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03022	116.2493	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03023	116.2433	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03034	116.2402	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.2296	BURR - J493 115.00 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.2296	J493 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03149	116.2054	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.2048	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.1979	GEN303008 1-1BC2 U3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03034	116.1975	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03021	116.1974	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02963	116.1963	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03015	116.1949	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03043	116.1858	JAMES TOWN - PICKERT 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03049	116.185	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03042	116.1844	FORT RIDGELY - FRANKLIN 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0304	116.1805	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03037	116.1798	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0304	116.176	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03059	116.1748	FARGO - SHEYNNE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03059	116.1748	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.1704	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.1651	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0304	116.158	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03043	116.145	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.1292	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03049	116.127	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0305	116.1222	ELM CREEK - PARKERS LAKE 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.1128	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03039	116.112	LYON COUNTY 115/69KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03015	116.1049	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.0973	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03085	116.095	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03062	116.0851	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03116	116.0841	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03059	116.0832	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03059	116.0832	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.0815	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0305	116.0805	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03044	116.0801	AS KING - KOHLMAN LAKE 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.0647	FENTON 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.0632	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.0618	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.0574	GEN645025 5-NORTH OMAHA 5
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.0573	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.0566	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03062	116.0496	KARLSTAD - WINGER 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03052	116.0491	BLUE LAKE - HAMPTON CORNER 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.0479	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.0452	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.0437	AS KING 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03149	116.0418	STORLA - WOONSOCKET 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.0414	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03034	116.0403	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03042	116.0348	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0303	116.0312	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.0273	GEN659116 1-SPIRIT MOUND UNIT1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.0273	GEN659117 2-SPIRIT MOUND UNIT2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.0228	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03043	116.0214	GRAND FORKS - PICKERT 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.017	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	116.0155	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03042	116.0148	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03085	116.0123	GROTON - REDFIELD 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03043	116.0087	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.9965	GEN629992 1-G164_WF9 34.500
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.9921	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03019	115.9919	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.9914	GRAND MEADOW - PLEASANT VALLEY 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.9893	GEN345756 H-1SIOUX 1 18.000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.9874	GEN562517 1-G14_021_S2 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03029	115.9848	MAPLE RIVER - WINGER 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.9846	GEN541151 3-SIBLEY GENERATING UNIT #3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03043	115.9698	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.9661	GEN345832 1-1TS G1 13.800
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.9658	GEN345841 2-1TS G2 13.800
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0303	115.9643	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03053	115.95	WILMARTH () 161/115/13.8KV TRANSFORMER CKT 6
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.949	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.949	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.9489	GEN635407 W-SHD415 W 0.6000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.9489	GEN635408 W-SHD425 W 0.6000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.9489	GEN635409 W-SHD435 W 0.6000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03053	115.9456	BLUE EARTH TAP - WILMARTH 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.9432	TRIMONT WD 3345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03048	115.9427	ARNOLD - HAZLETON 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.9411	TRIMONT WD 3345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.9402	GEN562518 1-G14_021_N2 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.9397	GEN336242 1-1NMIL ST1 18.000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03034	115.9329	COON CREEK - KOHLMAN LAKE 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.9278	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03038	115.9134	NORTH ROCHESTER (NROC TR) 345/161/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.9128	GEN501823 1-TECHE UNIT 3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03037	115.9111	LANSING EAST TO POSTVILLE - LANSING WEST 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03028	115.9044	PAYNESVILLE - WAKEFIELD 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.4637	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03009	115.3996	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03381	115.1554	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0304	115.1377	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03041	115.1258	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03041	115.1258	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03036	115.1232	HAYES - POMEROY 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.1208	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03012	115.1198	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.1162	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.1129	GEN658020 W1-MARSHALL WIND
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02983	115.1128	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02983	115.1128	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03027	115.1119	DIXONCO 230.00 - HOSKINS 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.1079	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.1075	NEW MADRID 345/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.1032	NEW MADRID 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.1026	GEN600046 1-MECST
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.09	GEN681540 5-ALMA UNIT 5
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03052	115.0875	STORLA (KV1A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.0872	GEN672383 1-MLTC 1G 13.800
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03039	115.0721	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03039	115.0721	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03038	115.0654	EDEN 345 345.00 - HCKRYCK3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03035	115.0565	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.0564	GEN563302 1-G15096_3 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.0539	GEN672336 7-E B CAMPBELL GENERATOR 7
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.0539	GEN672337 8-E B CAMPBELL GENERATOR 8
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03036	115.0515	CARROLL COUNTY - VICTORY 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.0472	GEN672382 1-MEADOW LAKE GENERATOR 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.0465	GEN600056 W-BUFFALO RIDGE WIND GEN
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03369	115.0464	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03369	115.0464	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03369	115.0464	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03369	115.0464	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03037	115.0461	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.0403	KARLSTA7 115.00 (KARLSTAD) 115/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.04	GEN600047 1-MECCT1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03039	115.037	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03034	115.0362	COOPER - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03034	115.0362	COOPER - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03004	115.0284	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.0225	GEN652004 1-G13_001IS_3 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03036	115.0187	BROOKING COUNTY - YANKEE 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03036	115.0187	BROOKING COUNTY - YANKEE 115KV CKT 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03035	115.0108	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03035	115.0108	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.0095	GEN659159 3-PIONEER G313.800
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.0059	GEN672396 1-YHPS 1G 13.800
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	115.0059	GEN672397 2-YHPS 2G 13.800
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9992	GEN600130 W-G586 - CWN 10.6000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9981	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03039	114.9976	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9973	GEN600131 W-G586 - CWN 20.6000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9945	GEN659156 2-LONESMCRK 2G13.800
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9945	GEN659157 3-LONESMCRK 3G13.800
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03035	114.9939	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03035	114.9939	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9906	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.989	GEN659147 1-PIONEER 1G13.800
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.989	GEN659158 2-PIONEER G213.800

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0304	114.9887	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9876	GEN659289 1-DAYCNTYWND W0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9863	GEN563312 1-G15097_3 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9825	GEN659031 1-G12_014IS_4 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9618	GEN652410 3-FT PECK
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9571	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9496	GEN620115 1-HRDLKGEN 0.6000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9479	LAKOTA 115/69KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9463	YANKEE 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9457	GEN620857 1-LKPRSTN9 41.600
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.942	GEN672378 1-ERMINE GENERATOR 4
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.942	GEN672379 2-ERMINE2X 13.800
FDNSLock	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03035	114.9367	STMDSJFAFACO
FDNSLock	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03035	114.9366	COPSTJCPFRSJ
FDNSLock	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03035	114.9366	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.934	GEN672371 2-COTEAU CREEK GENERATOR 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.934	GEN672372 3-COTEAU CREEK GENERATOR 3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9339	GEN672370 1-COTEAU CREEK GENERATOR 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9325	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0306	114.9323	HILLS - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03037	114.9198	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03037	114.9177	DENISON - EXIRA 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03041	114.9156	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9114	GEN652414 4-FT PECK
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9114	GEN652415 5-FT PECK
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9112	GEN672369 3-MERIDIAN GENERATOR 3 ST
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.9052	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.8959	GEN672314 1-TNTLLN1X 13.800
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.8959	GEN672315 2-TNTLLN2X 13.800
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03026	114.8924	ALEXMRES3 345.00 () 345/115/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.8897	GEN600125 2-FEP ST G 13.800
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.8787	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.8786	GEN652559 1-OAHE
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.8351	GEN652558 6-OAHE
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.835	GEN652556 2-OAHE
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.8281	GEN652557 5-OAHE
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03022	114.8158	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.7988	GEN600013 3-BLACK DOG GEN 3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03119	114.7973	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.7959	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.02961	114.7829	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.7757	DONALDSON - DONALDSON PIPE 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.7658	GEN672384 1-CENTENNIAL WINDFARM
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03036	114.7584	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.7542	GEN659162 4-RED WLCK
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.7542	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.7536	GEN659192 6-LYNN
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.7529	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.7525	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.7237	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.7237	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03036	114.7005	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.6945	ULRICH (ULRICH) 115/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.6924	GEN620285 1-SOLWAY
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.6823	GEN603185 1-FIBROMINN GENERATION
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.6777	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.6743	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03037	114.6727	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.6631	GEN657600 1-L1GEN3 9 0.5750
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.6622	H081 345.00 - H081-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.6622	H081 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.6548	GEN659290 1-EDGECOL
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.6508	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03035	114.6444	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0306	114.6349	ELK - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.6315	THIEF RIVER FALLS (TRF) 115/69/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.6283	GEN672358 1-CHAPLN1W 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.6177	GEN657964 1-ASH2GEN9 0.5750

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.6158	GEN587603 1-J488&J489GN10.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.6072	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.5973	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.5861	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.5861	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.5608	GEN600050 1-FEP
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.5608	GEN681522 3-GENOA 3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03041	114.5528	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.5458	GEN 11143 1-J436GEN1 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.5458	GEN 11153 1-J437GEN1 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.5455	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.5455	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.5455	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.5368	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.5367	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.5249	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.498	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.4741	GEN620323 2-HOOT LAKE 2 GEN
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.4741	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.4618	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.4597	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.4597	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.4469	GEN659270 1-WEST SW
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.4339	FRONTER4 230.00 (FRONTIER) 230/69/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.4333	WINGER (WINGER) 115/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03067	114.3959	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03037	114.3906	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03037	114.3904	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.3855	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03032	114.3843	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.3743	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03021	114.3383	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.3363	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.3296	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03039	114.3157	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.3046	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03037	114.2984	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.2457	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.2346	GEN587663 1-H081-GEN1 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03037	114.2259	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03022	114.2036	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.1375	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.1372	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.1318	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.1318	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03062	114.1274	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03062	114.1266	DAN JUHL - SPLIT ROCK 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.1028	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.1026	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.0979	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.0946	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.0944	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.0826	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.0805	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.0734	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.0732	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.0681	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.0681	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03062	114.0573	DAN JUHL - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.0476	GEN600017 C-LS POWER CT
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.0198	GEN652460 4-GARRISON
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	114.0198	GEN652461 5-GARRISON
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.9955	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.9917	GEN652459 3-GARRISON
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.9916	GEN652457 1-GARRISON
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.9916	GEN652458 2-GARRISON
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.031	113.9869	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.031	113.9869	CARPENTER - WATERTOWN 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.9869	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.9379	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.9337	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.9179	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.031	113.917	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.031	113.917	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.8828	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.8823	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.8274	GEN657705 X-DRAYTON
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.8165	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03024	113.7998	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03063	113.7774	LEHIGH - RAUN 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.7574	GEN600077 W-YANKEE 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.7574	GEN600099 W-YANKEE 4
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.7552	GEN600078 W-YANKEE 3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.7336	GEN600069 W-YANKEE 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03056	113.6567	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.6001	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.5974	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.5974	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.5973	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.5838	GEN659274 1-GROTON
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.031	113.5821	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.5632	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03024	113.5267	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.496	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.4278	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.2673	GEN681542 6-JP MADGETT
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.2568	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	113.1589	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.052	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.0194	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	113.0095	GEN659141 1-K10215A
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	112.792	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	112.6844	GEN615010 1-STANTON4
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03001	112.4442	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03001	112.4442	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	112.4367	YANKEE 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	112.3875	YANKEE 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	112.2669	GEN587033 1-G16-004-GEN10.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	112.1333	BROOKING COUNTY - J432 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	112.1333	J432 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03026	111.8699	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03026	111.8699	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	111.7043	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	111.6824	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	111.6292	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	111.4236	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	111.3292	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	111.3292	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	111.3254	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	111.3023	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	111.2682	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	111.261	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	110.9466	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	110.9456	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_004	0	20SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03174	110.864	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	110.6376	GEN600006 1-AS KING
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	110.4708	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	110.0916	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	110.0916	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	109.8833	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	109.8833	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	109.4564	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	109.4503	GEN659125 1-COVEY
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	109.4475	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	109.3769	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	109.3377	GEN661015 1-COYOTE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	109.2451	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	108.9006	GEN600005 1-MONTICELLO
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	108.7483	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	108.4945	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	108.1175	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	107.038	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_004	0	25SP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03182	107.0094	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	106.9782	GEN615001 1-COAL CREEK
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	106.9589	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	106.8581	GEN615002 2-COAL CREEK
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	106.8062	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	106.4551	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03033	106.1375	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_004	0	20WP	G16_004	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03388	102.1751	NOBLES - SPLIT ROCK 345KV CKT 1
FDNSLock	16ALL_G16_004	2	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22395	162.0029	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNSLock	16ALL_G16_004	2	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22395	161.6059	2809X1
FDNSLock	16ALL_G16_004	2	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22395	161.5587	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_004	2	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21162	152.0211	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_004	2	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21162	152.0211	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_004	2	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21982	151.0671	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_004	2	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21982	150.8468	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_004	2	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21982	150.8347	2809X1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1049	146.7527	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1049	146.6493	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1049	146.5262	2809X1
FDNS	16ALL_G16_004	2	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21925	144.4499	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_004	2	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21925	144.2921	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_004	2	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21925	144.2767	2809X1
FDNS	16ALL_G16_004	2	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20768	142.6212	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_004	2	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20768	142.6212	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21992	142.1918	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21992	142.0372	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21992	142.0188	2809X1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09969	138.1457	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09969	138.1457	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_004	2	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20715	136.2382	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_004	2	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20715	136.2382	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_004	2	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22166	134.6224	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_004	2	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22166	134.5993	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_004	2	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22166	134.537	2809X1
FDNS	16ALL_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20784	133.758	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20784	133.758	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_004	2	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20954	126.313	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_004	2	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20954	126.313	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12491	122.9905	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12491	122.8504	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12491	122.8313	2809X1
FDNS	16ALL_G16_004	2	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13966	119.3894	BASE CASE
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0776	116.0298	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0776	116.0286	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0776	116.0031	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0776	116.0031	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0776	115.9856	2810X2
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0776	115.8328	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.11807	115.8071	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.11807	115.8071	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0776	115.6223	2801X
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0776	115.593	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_004	2	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13734	113.1629	BASE CASE
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	109.2722	BASE CASE
FDNS	16ALL_G16_004	2	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13694	109.0245	BASE CASE
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05994	107.7944	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0589	106.9599	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06382	106.2723	BISON - HETINGER 230KV CKT 1
FDNS	16ALL_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13704	106.1753	BASE CASE
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06382	105.8213	BISON - MAURINE 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05811	104.4623	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05811	104.3528	CHISAGO COUNTY - FORBES 500KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	2	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12341	104.2082	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_004	2	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12341	104.1113	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	2	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12341	104.0423	2809X1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06325	103.8475	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05843	103.7407	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06302	103.2304	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05848	103.1752	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06302	103.1669	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06302	103.1669	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06302	103.1355	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06302	103.1109	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06302	103.1108	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06325	102.97	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05723	102.9624	ELLENDALE - OAKES 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05723	102.9624	ELLENDALE - OAKES 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06302	102.9226	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0575	102.8802	BIG STONE - BLAIR 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0575	102.8802	BIG STONE - BLAIR 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0378	102.8673	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 2
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0378	102.8672	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05726	102.8661	FORMAN - OAKES 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05671	102.7227	CENTER - COYOTE 345KV CKT 1
FDNSLock	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05755	102.603	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05755	102.5999	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05786	102.4967	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_004	2	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12376	102.2724	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_004	2	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12376	102.1769	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	2	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12376	102.0936	2809X1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05953	101.7453	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05953	101.7453	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05899	101.7276	HESKETT - WISHEK 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05953	101.6736	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05843	101.5314	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05899	101.5308	MERRCRT4 230.00 - WISHEK 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05742	101.5161	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05616	101.3843	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05742	101.2136	ABERDEEN JCT - ELLENDALE 115KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05742	101.0011	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	100.9328	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	100.9092	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	100.9	2560-BRDLAND-LNX3345.00
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	100.9	2561-BRDLAND-LNX3345.00
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05742	100.8884	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1
FDNS	16ALL_G16_004	2	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13828	100.7425	BASE CASE
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05691	100.2505	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05691	100.2204	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06288	100.0709	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06288	100.0709	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	100.06	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05691	100.0581	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	100.0508	GEN542962 2-IATAN UNIT #2
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06025	100	BOWMAN - HETINGER 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05724	100	HESKETT - MANDAN 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05716	100	FARGO - MOOREHEAD 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05713	100	BALTA - MCHENRY 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05691	100	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05691	100	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0568	100	P12:115:UMZB:# 122 #: RUTH IN ND. RUTH TAP
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	100	GEN640009 1-COOPER NUCLEAR STATION
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	100	GEN645011 1-NEBRASKA CITY 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	100	GEN645012 2-NEBRASKA CITY 2
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05669	100	STORLA - WESSINGTON 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05819	99.9	LOGAN - MALLARD 115KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05819	99.9	LOGAN - MALLARD 115KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.058	99.9	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.058	99.9	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.058	99.9	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05737	99.9	GRANITE FALLS - MORRIS 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05737	99.9	GRANITE FALLS - MORRIS 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05697	99.9	AUDUBON - HUBBARD 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05691	99.9	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05687	99.9	ELM CREEK - PARKERS LAKE 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05683	99.9	NUNDRWD - PHILIP TAP 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05676	99.9	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05676	99.9	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05675	99.9	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	99.9	2562-GROTON-LNX3 345.00
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	99.9	2563-GROTON-LNX3 345.00
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	99.9	GEN542955 1-LACYGNE UNIT #1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	99.9	GEN542957 1-IATAN UNIT #1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	99.9	GROTON-LNX3 345.00 345KV SWITCHED SHUNT
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05657	99.9	NESET 4 230.00 - TANDE 4230.00 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05657	99.9	TANDE 3345.00 (TANDE KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05626	99.9	FT THOMPSON - OAHE 230KV CKT 3
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05626	99.9	FT THOMPSON - OAHE 230KV CKT 3
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05626	99.9	FT THOMPSON - OAHE 230KV CKT 4
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05626	99.9	FT THOMPSON - OAHE 230KV CKT 4
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05601	99.9	BLAISDELL 4230.00 - TIOGA 230KV CKT 1
FDNSLock	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	99.9	GROTON-LNX3 345.00 345KV SWITCHED SHUNT
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	99.8	GEN652173 1-G09_001IS_2 0.6900
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05636	99.8	SIDNEY - STEGALL 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05628	99.8	FT THOMPSON - OAHE 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05628	99.8	FT THOMPSON - OAHE 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05628	99.8	FT THOMPSON - OAHE 230KV CKT 2
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05628	99.8	FT THOMPSON - OAHE 230KV CKT 2
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05691	99.7	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05691	99.7	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05691	99.7	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05691	99.7	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05671	99.7	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05671	99.7	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05669	99.7	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05669	99.7	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05677	99.5	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05664	99.5	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_004	2	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04108	102.482	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	00NR_G16_004	2	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04108	102.385	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	00NR_G16_004	2	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04108	102.385	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	00NR_G16_004	2	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04108	102.3104	BISMARK - WASHBURN 230KV CKT 1
FDNS	00NR_G16_004	2	20SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.0433	99.6	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	00NR_G16_004	2	20SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.0433	99.5	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	00NR_G16_004	2	20SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.0433	99.5	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_004	2	17SP	G16_004	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.05742	105.2166	BASE CASE
FDNS	16ALL_G16_004	2	25SP	G16_004	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.0546	101.9486	BASE CASE
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.07813	105.7252	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.07813	105.2352	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.07813	105.2337	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.07813	105.2337	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.07813	105.2331	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.05906	102.5758	BASE CASE
FDNS	16ALL_G16_004	2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.15544	102.2999	BASE CASE
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.06072	100.5673	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.06079	100.3783	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.07744	100.225	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.07744	100.1314	2810X2
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.07744	99.9	2801X
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.07744	99.9	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.07744	99.9	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.07744	99.9	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.07744	99.9	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.07744	99.7	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	2	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.065	104.5493	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	2	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.065	104.5083	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.065	104.5083	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_004	2	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.065	104.4195	2810X2
FDNS	16NR_G16_004	2	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.065	104.3366	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16NR_G16_004	2	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.065	104.3197	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	2	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.065	104.115	2801X
FDNS	16NR_G16_004	2	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.065	104.0204	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07238	110.7972	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07238	109.444	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07238	108.0811	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07238	106.7113	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07746	102.8195	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07746	102.4081	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07746	102.4081	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07746	102.4066	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07746	102.3859	2801X
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07746	102.0016	2810X2
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07746	101.9189	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	2	17G	G16_004	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07746	101.8227	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_004	2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.15514	100.6542	BASE CASE
FDNS	00NR_G16_004	2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.05834	100.2828	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_004	2	17SP	G16_004	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.05834	100.2828	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_004	2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.15514	101.9089	BASE CASE
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.05834	100.9235	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_004	2	17SP	G16_004	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.05834	100.9235	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23696	172.8932	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23696	172.6873	2809X1
FDNS	16ALL_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23696	172.685	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22645	165.5513	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22645	165.5513	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_004	3	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2328	162.6418	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_004	3	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2328	162.4413	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_004	3	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2328	162.4369	2809X1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.10884	157.4154	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.10884	157.2551	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.10884	157.243	2809X1
FDNS	16ALL_G16_004	3	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23216	156.483	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_004	3	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23216	156.3161	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_004	3	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23216	156.304	2809X1
FDNS	16ALL_G16_004	3	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22237	155.7116	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_004	3	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22237	155.7116	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.233	152.9265	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.233	152.7852	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.233	152.7684	2809X1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.10427	150.1253	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.10427	150.1253	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_004	3	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22175	149.6316	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_004	3	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22175	149.6316	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22273	145.8403	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22273	145.8403	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_004	3	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23447	144.9076	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_004	3	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23447	144.8245	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_004	3	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23447	144.7729	2809X1
FDNS	16ALL_G16_004	3	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22415	137.9687	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_004	3	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22415	137.9687	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12799	134.7183	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12799	134.5887	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12799	134.5801	2809X1
FDNS	16ALL_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.15172	131.8651	BASE CASE
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12181	129.3024	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12181	129.3024	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08195	126.0727	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08195	125.9121	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08195	125.9062	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08195	125.9062	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08195	125.9038	2810X2
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08195	125.7377	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08195	125.5339	2801X
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08195	125.5285	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_004	3	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14918	124.6975	BASE CASE
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06384	122.1924	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	16ALL_G16_004	3	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14872	120.4264	BASE CASE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	119.7301	BASE CASE
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06393	117.9868	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06287	117.3837	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_004	3	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12655	116.6623	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_004	3	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12655	116.5603	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	3	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12655	116.5061	2809X1
FDNS	16ALL_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14914	116.3901	BASE CASE
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06777	115.7664	BISON - HETINGER 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06777	115.3367	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_004	3	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12692	114.6524	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06208	114.574	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_004	3	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12692	114.5458	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	3	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12692	114.4918	2809X1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06208	114.3834	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06239	113.5347	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06715	113.4535	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06147	113.4333	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06247	113.0126	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06692	112.8988	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06692	112.8371	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06692	112.8371	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06692	112.7688	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06692	112.7486	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06692	112.7486	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06116	112.7415	ELLENDALE - OAKES 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06116	112.7415	ELLENDALE - OAKES 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06119	112.7142	FORMAN - OAKES 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06056	112.6412	CENTER - COYOTE 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06715	112.5971	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06138	112.5788	BIG STONE - BLAIR 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06138	112.5788	BIG STONE - BLAIR 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06692	112.5628	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_004	3	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12043	112.3369	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_004	3	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12043	112.3369	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.04133	112.1647	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.04133	112.1644	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 2
FDNSLock	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06147	112.1556	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06177	112.1027	GARRISON - JAMES TOWN 230KV CKT 1
FDNSLock	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.07566	111.6481	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06344	111.3465	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06344	111.3465	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06344	111.2751	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06288	111.2601	HESKETT - WISHEK 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06131	111.1724	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06098	111.0887	BISMARK - HILKEN 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06288	111.0615	MERRCRT4 230.00 - WISHEK 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05999	111.0557	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06239	110.9648	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06131	110.8839	ABERDEEN JCT - ELLENDALE 115KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06115	110.7897	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	16ALL_G16_004	3	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.15016	110.7629	BASE CASE
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06115	110.7496	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06115	110.7494	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06127	110.7322	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06127	110.6968	JAMES TOWN - WEBER 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06127	110.6747	BISMARK - WEBER 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06131	110.6617	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06198	110.6591	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06733	110.652	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06733	110.652	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06733	110.5823	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06733	110.562	BISMARK - WASHBURN 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06099	110.5587	BALTA - RAMSEY 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06131	110.5538	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06416	110.4655	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	00NR_G16_004	3	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12078	110.4502	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_004	3	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12078	110.4502	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06085	110.4233	ARROWHEAD - ARROWHEAD 230 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06089	110.4212	FORMAN - HANKINSON 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06118	110.4129	FARGO - JAMES TOWN 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06117	110.3695	FARGO - JAMES TOWN 230KV CKT 2
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	110.3659	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06097	110.318	PRAIRIE - RAMSEY 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	110.2461	GEN635214 4-NEAL UNIT 4
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06211	110.2402	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0622	110.1481	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06115	110.1428	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06105	110.1358	PRAIRIE - WINGER 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06155	110.1105	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06155	110.1105	P12:230:UMZW:# 158 #: MH IN ND.
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06155	110.0809	MOOREHEAD - MORRIS 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05963	110.0628	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05963	110.0451	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05963	110.0385	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06077	109.9842	ELLENDALE - J316_SUB 230.00 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06115	109.9634	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06077	109.9293	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.9191	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.9164	GEN635024 4-WALTER SCOTT UNIT 4
FDNSLock	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.9102	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06049	109.9068	STORLA - WESSINGTON 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06115	109.9058	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06115	109.9042	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06115	109.9029	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.8582	GEN635213 3-NEAL UNIT 3
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06067	109.8423	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0609	109.8349	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06067	109.8085	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06098	109.7863	KARLSTAD - WINGER 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.7854	GEN542962 2-IATAN UNIT #2
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.7677	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.7551	GEN645012 2-NEBRASKA CITY 2
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.7469	GEN640009 1-COOPER NUCLEAR STATION
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.6983	GEN645011 1-NEBRASKA CITY 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05855	109.6933	FT THOMPSON - HURON 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05855	109.6933	FT THOMPSON - HURON 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05855	109.6933	FT THOMPSON - HURON 230KV CKT 2
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05855	109.6933	FT THOMPSON - HURON 230KV CKT 2
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.6448	GEN336821 1-GRAND GULF UNIT
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06077	109.6395	ELM CREEK - PARKERS LAKE 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.6234	GEN542957 1-IATAN UNIT #1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06103	109.5999	BALTA - MCHENRY 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.5913	GEN542955 1-LACYGNE UNIT #1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06105	109.5865	FARGO - MOOREHEAD 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06068	109.5691	P12:115:UMZB:# 122 #: RUTH IN ND. RUTH TAP
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06112	109.5211	HESKETT - MANDAN 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.4904	GEN620315 1-BIG STONE GEN
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.0917	GROTON-LNX3 345.00 345KV SWITCHED SHUNT
FDNSLock	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.0914	GROTON-LNX3 345.00 345KV SWITCHED SHUNT
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.0561	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.9355	WATERTN-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.9354	WATERTN-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.8042	2560-BRDLAND-LNX3345.00
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.8042	2561-BRDLAND-LNX3345.00
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.8042	2562-GROTON-LNX3 345.00
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.8042	2563-GROTON-LNX3 345.00
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.6638	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.6637	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.6357	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.6356	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.6074	GEN652556 2-OAHE
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.6059	GEN652557 5-OAHE
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.6055	GEN652558 6-OAHE
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06191	108.4877	ANTELOPE VALLEY - ROUNDUP 3345.00 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.3782	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06031	108.3236	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06031	108.3236	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.3083	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.2867	GEN672384 1-CENTENNIAL WINDFARM
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06161	108.279	ANTELOPE VALLEY - CHARLIE CREEK 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.2784	GEN657964 1-ASH2GEN9 0.5750
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0685	108.2603	GARRISON - LELAND OLDS 230KV CKT 1
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09482	108.2538	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.2481	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.248	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06036	108.2477	BRISTOL - GROTON 115KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.2423	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.2287	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.2237	GEN672339 16-QE 16G 13.800
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.2179	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.2179	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06055	108.2133	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06055	108.2133	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.2117	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.2117	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06053	108.202	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06053	108.202	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.1937	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 4
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.1937	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 5
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.1906	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.1873	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.1871	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.1871	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.1843	GEN600006 1-AS KING
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.1801	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09482	108.1642	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09482	108.1459	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09482	108.1459	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09482	108.1306	2810X2
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06063	108.1201	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06063	108.1201	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06067	108.1136	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06132	108.1086	DRAYTON - LETELLIER 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.1043	GEN672393 2-NBECST2G 13.800
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06085	108.1032	CULBERTSN E7115.00 - WILISTON 115KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.0788	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06063	108.0302	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06063	108.0302	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09482	108.0202	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.0181	GEN600005 1-MONTICELLO
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.9569	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0607	107.9351	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.9083	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.9079	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09482	107.8653	2801X
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09482	107.845	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.8384	GEN600001 2-SHERBURNE CNTY G2
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0607	107.6276	HANKINSON - WAHPETON 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05895	107.45	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.258	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05448	106.9828	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05448	106.9828	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05448	106.9804	BROADLAND - HURON 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.6115	GEN 10648 1-G830_GEN 0.6900
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.581	GEN652458 2-GARRISON
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.581	GEN652459 3-GARRISON
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.5809	GEN652457 1-GARRISON
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.5672	GEN910006 1-G12_012IS_3 0.6900
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.5207	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.4978	GEN672321 1-SHAND GENERATOR 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.4939	RGBYWND4 230.00 - RUGBY 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.4851	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.4747	GEN652460 4-GARRISON
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.4747	GEN652461 5-GARRISON

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.4201	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.383	GEN659018 1-G14_003IS_3 0.6900
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.28	GEN563252 1-G15091_3 0.6900
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.2652	GEN563342 1-G15098_3 0.6900
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.0624	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_004	3	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.11246	106.0565	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_004	3	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.11246	105.9827	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	3	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.11246	105.9064	2809X1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	105.8964	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	105.8951	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06074	105.4487	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	105.2974	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	105.2634	GEN563302 1-G15096_3 0.6900
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	104.7806	GEN615010 1-STANTON4
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05826	104.7196	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05826	104.7196	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05826	104.7057	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05826	104.6104	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	104.4243	GEN659453 1-GI1414GEN W0.6900
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05707	104.3483	2809X2
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05707	104.3136	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05707	104.3011	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	104.2508	GEN657749 1-YOUNG 1 GENERATOR
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	104.216	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05707	104.1437	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.07229	103.9113	BASE CASE
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	103.8782	GEN659141 1-K10215A
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	103.8657	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.07576	103.266	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	103.1757	GEN587033 1-G16-004-GEN10.6900
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.07464	102.4539	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.07379	102.2847	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	101.6643	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_004	3	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.10758	101.3174	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_004	3	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.10758	101.3174	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	100.7134	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	100.5524	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	100.5512	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	100.4332	GEN562872 1-G15046_3 0.6900
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	100.2649	GEN661015 1-COYOTE
FDNSLock	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.07881	100.0877	BISON - HETINGER 230KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	100	GEN657748 1-YOUNG 2 GENERATOR
FDNSLock	00NR_G16_004	3	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.07881	99.7	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_004	3	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04057	99.9	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	00NR_G16_004	3	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04057	99.8	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	00NR_G16_004	3	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04057	99.8	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	00NR_G16_004	3	17SP	G16_004	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.04057	99.7	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_004	3	17SP	G16_004	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.0555	102.2543	BASE CASE
FDNS	16ALL_G16_004	3	25SP	G16_004	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.05365	101.0154	BASE CASE
FDNS	00NR_G16_004	3	17SP	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08299	113.7849	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08285	109.854	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08285	107.8972	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_004	3	17SP	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13633	106.0101	BASE CASE
FDNS	00NR_G16_004	3	17SP	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08299	104.3806	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_004	3	20SP	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08153	103.7412	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_004	3	25SP	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08179	103.0438	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_004	3	25SP	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13378	100.5945	BASE CASE
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08757	100.4576	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08757	100.4369	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08757	100.403	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08757	100.403	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08757	100.3588	2810X2
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08757	100.3293	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08757	100.2322	2801X
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08757	100.1612	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_004	3	20SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342	342	0.03212	146.9983	BUFFALO - JAMESTOWN 345KV CKT 1
FDNSLock	00NR_G16_004	3	17SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342	342	0.03129	144.2995	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_004	3	25SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342	342	0.03216	121.1334	CENTER - JAMESTOWN 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_004	3	20SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342	342	0.03226	120.4089	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342	342	0.03135	113.83	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.07815	101.8612	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.07815	101.7342	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_004	3	17SP	G16_004	TO->FROM	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	717	789	0.23593	105.8608	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_004	3	17SP	G16_004	TO->FROM	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	717	789	0.23593	105.7209	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06508	104.7537	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06508	104.6777	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06508	104.6574	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06508	104.6574	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06508	104.5582	2810X2
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06508	104.5405	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06508	104.3717	2801X
FDNS	16NR_G16_004	3	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06508	104.2254	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.04231	104.5476	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.04231	104.3452	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.04231	104.3452	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.04231	104.3201	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.04231	103.1456	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.04231	103.1456	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.04231	103.1246	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_004	3	17SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.04231	102.9205	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23697	172.6299	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23697	172.4597	2809X1
FDNS	16ALL_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23697	172.4597	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22646	165.1495	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22646	165.1495	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock	16ALL_G16_004	4	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23281	162.5879	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_004	4	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23281	161.9608	2809X1
FDNS	16ALL_G16_004	4	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23281	161.9608	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNSLock	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.10884	158.06	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNSLock	16ALL_G16_004	4	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23216	157.2875	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.10884	156.8623	2809X1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.10884	156.8623	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_004	4	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23216	155.7183	2809X1
FDNS	16ALL_G16_004	4	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23216	155.7183	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_004	4	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22237	154.9886	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_004	4	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22237	154.9886	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock	16ALL_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.233	154.238	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.233	152.8808	2809X1
FDNS	16ALL_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.233	152.8808	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.10427	149.5515	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.10427	149.5515	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_004	4	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22176	149.3464	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_004	4	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22176	149.3464	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22273	145.2661	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22273	145.2661	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_004	4	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23448	144.9956	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_004	4	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23448	144.9343	2809X1
FDNS	16ALL_G16_004	4	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.23448	144.9343	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_004	4	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22415	137.375	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_004	4	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22415	137.375	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12799	136.4757	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12799	134.4234	2809X1
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12799	134.4234	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.15172	131.692	BASE CASE
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12181	129.1481	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12181	129.1481	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08195	125.934	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08195	125.9016	2810X2
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08195	125.9016	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08195	125.8943	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08195	125.8943	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08195	125.5691	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08195	125.3725	2801X
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08195	125.3725	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_004	4	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14918	124.3399	BASE CASE
FDNSLock	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06384	124.2459	BUFFALO - JAMESTOWN 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_004	4	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14872	120.5937	BASE CASE
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	119.8951	BASE CASE
FDNS	00NR_G16_004	4	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12655	117.5696	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	4	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12655	117.5007	2809X1
FDNS	00NR_G16_004	4	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12655	117.5007	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06393	117.3441	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06287	117.0171	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	16ALL_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14914	116.7448	BASE CASE
FDNS	00NR_G16_004	4	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12692	115.6623	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	4	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12692	115.5935	2809X1
FDNS	00NR_G16_004	4	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12692	115.5935	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06777	115.2791	BISON - HETINGER 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06777	114.8901	BISON - MAURINE 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06208	114.0533	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06208	113.8953	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06715	113.1925	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06239	113.0676	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06147	112.9736	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06692	112.6657	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06247	112.6529	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_004	4	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12043	112.6112	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_004	4	20SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12043	112.6112	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06692	112.6106	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06692	112.6106	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06056	112.5834	CENTER - COYOTE 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06692	112.5498	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06692	112.5321	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06692	112.532	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06715	112.3933	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06692	112.3666	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06119	112.2183	FORMAN - OAKES 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06138	112.2177	BIG STONE - BLAIR 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06138	112.2177	BIG STONE - BLAIR 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.04133	112.1912	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.04133	112.191	ANTELOPE VALLEY - LELAND OLDS 345KV CKT 2
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06116	112.1719	ELLENDALE - OAKES 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06116	112.1719	ELLENDALE - OAKES 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06177	111.9614	GARRISON - JAMES TOWN 230KV CKT 1
FDNSLock	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06147	111.8564	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06344	111.3228	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06344	111.3228	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06344	111.2582	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06131	111.1508	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06288	111.1319	HESKETT - WISHEK 230KV CKT 1
FDNS	16ALL_G16_004	4	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.15016	111.0517	BASE CASE
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05999	111.0337	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06098	110.9902	BISMARK - HILKEN 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06288	110.9513	MERRCRT4 230.00 - WISHEK 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06239	110.8951	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06131	110.8935	ABERDEEN JCT - ELLENDALE 115KV CKT 1
FDNS	00NR_G16_004	4	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12078	110.8055	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_004	4	25SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12078	110.8055	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06127	110.7106	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06131	110.7041	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06127	110.6795	JAMES TOWN - WEBER 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06127	110.6651	BISMARK - WEBER 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06198	110.6281	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06131	110.6088	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06733	110.5943	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06733	110.5943	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06099	110.5937	BALTA - RAMSEY 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06733	110.5326	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06733	110.5136	BISMARK - WASHBURN 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06416	110.4662	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06118	110.4362	FARGO - JAMES TOWN 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	110.4295	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06117	110.399	FARGO - JAMES TOWN 230KV CKT 2
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06115	110.3887	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06115	110.3887	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06115	110.3863	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06097	110.3743	PRAIRIE - RAMSEY 230KV CKT 1
FDNSLock	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06085	110.3424	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06211	110.2998	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	110.2865	GEN635214 4-NEAL UNIT 4
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06105	110.2786	PRAIRIE - WINGER 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06089	110.2482	FORMAN - HANKINSON 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0622	110.1869	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06155	110.135	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06155	110.135	P12:230:UMZW:# 158 #: MH IN ND.
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06077	110.1348	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05963	110.1219	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06155	110.1127	MOOREHEAD - MORRIS 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05963	110.1063	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05963	110.1022	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	110.0092	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06115	110.0028	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06115	110.0028	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06115	110.0028	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06115	110.0013	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06077	109.9807	ELLENDALE - J316_SUB 230.00 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.957	GEN635213 3-NEAL UNIT 3
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0609	109.9363	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06049	109.9352	STORLA - WESSINGTON 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06098	109.9057	KARLSTAD - WINGER 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.8806	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06067	109.8668	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.8624	GEN542962 2-IATAN UNIT #2
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06067	109.8452	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.839	GEN645012 2-NEBRASKA CITY 2
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.8364	GEN640009 1-COOPER NUCLEAR STATION
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06115	109.8144	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.7882	GEN645011 1-NEBRASKA CITY 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06077	109.7863	ELM CREEK - PARKERS LAKE 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06127	109.771	GRANITE FALLS - MORRIS 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06127	109.771	GRANITE FALLS - MORRIS 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0605	109.755	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0605	109.755	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06049	109.7448	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.7238	GEN542957 1-IATAN UNIT #1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.7195	GEN336821 1-GRAND GULF UNIT
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06087	109.7085	AUDUBON - HUBBARD 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05855	109.7032	FT THOMPSON - HURON 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05855	109.7032	FT THOMPSON - HURON 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05855	109.7032	FT THOMPSON - HURON 230KV CKT 2
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05855	109.7032	FT THOMPSON - HURON 230KV CKT 2
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.6973	GEN542955 1-LACYGNE UNIT #1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06103	109.6934	BALTA - MCHENRY 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06015	109.6738	SIDNEY - STEGALL 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.6659	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06105	109.6392	FARGO - MOOREHEAD 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06068	109.6379	P12:115:UMZB:# 122 #: RUTH IN ND. RUTH TAP
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.6285	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.6285	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.6258	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.6154	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06203	109.6142	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.6141	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05995	109.6132	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06203	109.6126	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06203	109.6106	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.6105	GEN542956 2-LACYGNE UNIT #2
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06112	109.5969	HESKETT - MANDAN 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.5914	GEN336153 1-WATERFORD UNIT#3
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06045	109.59	NESET 4 230.00 - TANDE 4230.00 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.5893	GEN620315 1-BIG STONE GEN
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06045	109.588	TANDE 3345.00 (TANDE KU1A) 345/230/13.8KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06075	109.5816	NUNDRWD - PHILIP TAP 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06091	109.5802	FARGO - SHEYNNE 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06091	109.5802	FARGO - SHEYNNE 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.5779	GEN542951 5-HAWTHORN UNIT #5
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06071	109.5718	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06071	109.5718	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.568	GEN509403 1-PIRKEY GENERATION
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05987	109.5594	BLAISDELL 4230.00 - TIOGA 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.5569	GEN300007 1-NEW MADRID UNIT 2
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.5537	GEN300006 1-NEW MADRID UNIT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.5496	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.5485	GEN509416 1-TURK GENERATION
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06212	109.5396	LOGAN - MALLARD 115KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06212	109.5396	LOGAN - MALLARD 115KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	109.523	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09482	108.4874	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09482	108.4674	2810X2
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09482	108.4674	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06161	108.4651	ANTELOPE VALLEY - CHARLIE CREEK 345KV CKT 1
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09482	108.46	LELAND03-FTTHOMP3-T-LINE-REACTOR-345KV CKT 1
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09482	108.46	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06093	108.4397	CHARLIE CREEK - ROUNDUP 3345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06077	108.4141	DGLASCRK-CP7115.00 - L8ORANG 115KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06077	108.411	GARRISON - L8ORANG 115KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0685	108.3757	GARRISON - LELAND OLDS 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06109	108.3606	BELFIELD - DAGLUM 4230.00 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06063	108.3601	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06063	108.3601	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06063	108.3305	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06063	108.3305	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06067	108.3222	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.3173	GEN672393 2-NBECST2G 13.800
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06085	108.3057	CULBERTSN E7115.00 - WILISTON 115KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06132	108.2934	DRAYTON - LETELLIER 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.2916	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0607	108.2708	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.2427	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.2276	GEN600005 1-MONTICELLO
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09482	108.2038	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.1944	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.1193	GEN600000 1-SHERBURNECNTY G1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.1085	GEN620115 4-HRDLKGEN 0.6000
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.0492	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09482	108.045	2801X
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09482	108.045	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.0442	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	108.0426	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.9474	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.9291	GEN672392 1-NBECGT1G 18.000
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.9275	GEN659273 2-GROTON SYNC COND
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.9275	GEN659294 1-WILTONCOL9
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.916	GEN600002 3-SHERBURNE CNTY G3
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.9071	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.8946	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.8836	GEN652410 3-FT PECK
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.8804	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.8804	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.8804	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0607	107.8694	HANKINSON - WAHPETON 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05448	107.8124	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05448	107.8124	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05448	107.8066	BROADLAND - HURON 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.7872	GEN652414 4-FT PECK
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.7872	GEN652415 5-FT PECK
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.763	GEN615015 1-GRE-SPRITWDG13.200
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.7441	GEN 11104 1-J262_GEN 0.6000
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.7441	GEN 11108 1-J263_GEN 0.6000
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05991	107.7223	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.6949	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05991	107.6571	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05991	107.6529	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05991	107.6529	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.6508	GEN 10572 2-J290_MK10 0.6900
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.643	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.643	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.5679	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0606	107.5676	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.5518	GEN657745 1-MPC02100GEN90.6900
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.5371	J290_SUB 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06109	107.5242	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05895	107.4338	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.4166	MPC02100TAP4230.00 - MPC2100WIND4230.00 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.4064	MPC2100WIND4230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06565	107.3857	BELFIELD - CHARLIE CREEK 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06109	107.2733	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.258	GEN659162 4-RED WLCK
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.258	GEN659163 5-BLACK WDCK
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.2439	GEN659192 6-LYNN
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06109	107.0491	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	107.0056	GEN659010 4-G07_027IS_2 0.6900
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.9985	GEN659366 3-WILTON 3 W0.6900
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.9811	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.9794	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.07566	106.889	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.8682	GEN 10648 1-G830_GEN 0.6900
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.8483	GEN652461 5-GARRISON
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.8481	GEN652460 4-GARRISON
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.8439	GEN652457 1-GARRISON
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.8438	GEN652458 2-GARRISON
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.8438	GEN652459 3-GARRISON
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.8316	GEN672321 1-SHAND GENERATOR 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.8034	GEN910006 1-G12_012IS_3 0.6900
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.776	RGBYWND4 230.00 - RUGBY 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.7676	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.67	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.6674	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.6398	GEN563252 1-G15091_3 0.6900
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.6231	GEN659018 1-G14_003IS_3 0.6900
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.6144	GEN563342 1-G15098_3 0.6900
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.3322	GEN659403 1-NDSUNFLWR W0.6900
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.2614	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	106.2561	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_004	4	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.11246	106.1639	2809X1
FDNS	00NR_G16_004	4	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.11246	106.1639	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06074	105.8076	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	105.5878	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	105.5365	GEN563302 1-G15096_3 0.6900
FDNS	00NR_G16_004	4	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.11246	105.4547	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	105.0641	GEN615010 1-STANTON4
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.07229	104.927	BASE CASE
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05826	104.881	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05826	104.8564	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05826	104.8564	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05826	104.8564	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	104.7229	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	104.7038	GEN659453 1-GI1414GEN W0.6900
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	104.6629	GEN657749 1-YOUNG 1 GENERATOR
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	104.191	GEN659141 1-K10215A
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	104.1695	GEN659110 1-LELAND OLDS UNIT1
FDNSLock	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05707	104.0577	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05707	103.9259	2809X2
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05707	103.9259	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05707	103.8685	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	103.5047	GEN587033 1-G16-004-GEN10.6900
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.07576	103.0352	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.07464	102.6903	BISON 3 345.00 - BUFFALO 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.07379	102.1543	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.07379	102.0064	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	102.003	GEN659407 1-ANTELPHILLSW0.6900
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	101.3813	GEN661015 1-COYOTE
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	101.1945	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	101.1012	GEN657748 1-YOUNG 2 GENERATOR
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	101.0356	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	101.0344	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.06062	100.9039	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_004	4	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.10758	100.8307	LELAND03-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_004	4	16WP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.10758	100.8307	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.07881	100.4816	BISON - HETINGER 230KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	100.1674	HURON - SPLIT ROCK 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.05674	100.1674	HURON - SPLIT ROCK 345KV CKT 1
FDNSLock	00NR_G16_004	4	17SP	G16_004	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.07881	100.1485	BISON - MAURINE 230KV CKT 1
FDNS	16ALL_G16_004	4	17SP	G16_004	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.05547	101.0069	BASE CASE
FDNS	16ALL_G16_004	4	25SP	G16_004	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.05363	99.5	BASE CASE
FDNS	00NR_G16_004	4	17SP	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08299	112.9548	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08285	109.16	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08285	107.8257	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_004	4	17SP	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13633	106.7182	BASE CASE
FDNS	00NR_G16_004	4	17SP	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08299	103.0827	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_004	4	20SP	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08153	102.0642	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08757	101.486	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08757	101.3435	2810X2
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08757	101.3435	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08757	101.3119	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08757	101.3119	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_004	4	25SP	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08179	101.2356	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08757	101.1683	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08757	101.074	2801X
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.08757	101.074	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_004	4	25SP	G16_004	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13378	101.0331	BASE CASE
FDNS	00NR_G16_004	4	20SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342	342	0.03212	142.606	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_004	4	25SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342	342	0.03202	142.4229	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342	342	0.03129	131.9331	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_004	4	20SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342	342	0.03226	117.7565	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_004	4	25SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342	342	0.03216	117.1172	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	FARGO - SHEYNNE 230KV CKT 1	342	342	0.03135	111.3922	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.07815	100.7925	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.07815	100.6396	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNSLock	16ALL_G16_004	4	17SP	G16_004	TO->FROM	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	717	789	0.23594	106.8228	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	16ALL_G16_004	4	17SP	G16_004	TO->FROM	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	717	789	0.23594	105.5819	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNSLock	16ALL_G16_004	4	25SP	G16_004	TO->FROM	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1	717	789	0.232	100.0775	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06508	104.0972	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06508	103.8838	2810X2
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06508	103.8838	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06508	103.8432	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06508	103.8432	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06508	103.6122	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06508	103.453	2801X
FDNS	16NR_G16_004	4	17G	G16_004	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.06508	103.453	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.04231	104.7786	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.04231	104.7091	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.04231	104.7091	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.04231	104.7091	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.04231	103.6707	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.04231	103.6121	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.04231	103.6121	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_004	4	17SP	G16_004	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.04231	103.6121	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_005	0	20SP	G16_005	-	Non-Converged Contingency	785	785	0.06817	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	00NR_G16_005	0	25SP	G16_005	-	Non-Converged Contingency	762.5	762.5	0.06989	-	MINGO - SETAB 345KV CKT 1
FDNSLock-Blown up	00NR_G16_005	0	25SP	G16_005	-	Non-Converged Contingency	785	785	0.06817	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	00_G16_007	0	16WP	G16_007	-	Non-Converged Contingency	1792	1792	0.06006	-	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNSLock-Blown up	18ALL_G16_007	0	16WP	G16_007	-	Non-Converged Contingency	1792	1792	0.06006	-	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNSLock-Blown up	00_G16_007	0	16WP	G16_007	-	Non-Converged Contingency	1792	1792	0.06006	-	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNSLock-Blown up	00_G16_007	0	16WP	G16_007	-	Non-Converged Contingency	0	0	0.03668	-	OVEXFRMCCOVE
FDNSLock-Blown up	18ALL_G16_007	0	16WP	G16_007	-	Non-Converged Contingency	0	0	0.03665	-	OVEXFRMCCOVE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	00_G16_007	0	16WP	G16_007	-	Non-Converged Contingency	1432	1493	0.02976	-	HAWTHORN - NASHUA 345KV CKT 1
FDNSLock-Blown up	18NR_G16_007	0	20L	G16_007	-	Non-Converged Contingency	80	88	0.63443	-	JAMES TOWN 115KV SWITCHED SHUNT
FDNSLock-Blown up	18ALL_G16_007	0	20L	G16_007	-	Non-Converged Contingency	80	88	0.62781	-	JAMES TOWN 115KV SWITCHED SHUNT
FDNSLock-Blown up	18NR_G16_007	0	20L	G16_007	-	Non-Converged Contingency	200	250	0.26774	-	JAMEST29 13.200 13KV SWITCHED SHUNT
FDNSLock-Blown up	18ALL_G16_007	0	20L	G16_007	-	Non-Converged Contingency	200	250	0.2621	-	JAMEST29 13.200 13KV SWITCHED SHUNT
FDNSLock-Blown up	00_G16_009	0	16WP	G16_009	-	Non-Converged Contingency	2075	2075	0.02984	-	LACYGNE - WEST GARDNER 345KV CKT 1
FDNSLock-Blown up	00_G16_012	0	16WP	G16_012	-	Non-Converged Contingency	2075	2075	0.19023	-	LACYGNE - WEST GARDNER 345KV CKT 1
FDNSLock-Blown up	08ALL_G16_012	0	16WP	G16_012	-	Non-Converged Contingency	1314	1314	0.11668	-	CRAIG - WEST GARDNER 345KV CKT 1
FDNSLock-Blown up	00NR_G16_012	0	17SP	G16_012	-	Non-Converged Contingency	721	721	0.07048	-	PECULIAR - PLEASANT HILL 345KV CKT 1
FDNSLock-Blown up	00NR_G16_012	0	17SP	G16_012	-	Non-Converged Contingency	1000	1136	0.03272	-	EASTOWN7 345.00 - ST JOE 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61986	113.2827	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61986	109.1506	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.63035	106.6265	RANCHRD7 345.00 - SOONER 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.70091	106.1599	BENTON - WOLF CREEK 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61297	105.9896	CLEVELAND - G15066_T 345.00 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.7013	105.7598	ROSE HILL - WOLF CREEK 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61178	105.468	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.60286	105.3808	SWISSVALE - WEST GARDNER 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61986	104.9984	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61297	104.9961	917X
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61297	104.4083	G15066_T 345.00 - SOONER 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.60971	104.212	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6124	104.1015	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	104.006	BASE CASE
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61294	103.7535	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61294	103.7535	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61262	103.4969	HOYT - STRANGER CREEK 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61601	102.4674	RENO COUNTY - WICHITA 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	102.4557	GEN542951 5-HAWTHORN UNIT #5
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61975	102.1483	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61178	102.0988	G14_001T 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61975	102.0556	P12:069:WERE:ATHE-WOLF_69::
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61975	102.0278	BURLINGTON JUNCTION - WOLF CREEK 69KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61975	101.8354	BURLINGTON JUNCTION - COFFEY COUNTY NO. 3 WESTPHALIA 69KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61975	101.8201	COFFEY COUNTY NO. 3 WESTPHALIA - GREEN 69KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61975	101.78	COFFEY COUNTY NO. 4 VERNON - GREEN 69KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61975	101.7643	ATHENS SWITCHING STATION - COFFEY COUNTY NO. 4 VERNON 69KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61539	101.7302	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61539	101.7264	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61539	101.72	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.63035	101.7171	OPENSKY7 345.00 - RANCHRD7 345.00 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61516	101.7167	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	101.6846	GEN640009 1-COOPER NUCLEAR STATION
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61665	101.584	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61454	101.2481	MINGO - RED WILLOW 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61454	101.2481	MINGO - RED WILLOW 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61516	100.9384	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	100.8417	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61349	100.8246	GRDA1 - GREC TAP5 345.00 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61457	100.7557	RENO COUNTY - SUMMIT 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.62009	100.7259	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	100.7152	GEN344225 1-1CAL G1 25.000
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	100.6332	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61451	100.6161	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	100.5846	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61451	100.5546	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61665	100.4533	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61388	100.4084	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61388	100.4058	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61388	100.4036	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	100.3412	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61388	100.3176	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61388	100.3159	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61388	100.3136	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	100.2824	GEN645012 2-NEBRASKA CITY 2
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61409	100.2352	MINGO - SETAB 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61409	100.2352	MINGO - SETAB 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61434	100.2272	P13:069-138:WERE:BUTL_TX-1::

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61434	100.2261	ALTOONA - BUTLER 138KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61382	100.2208	PITTSBURG - VALLIANT 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61382	100.2208	PITTSBURG - VALLIANT 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6147	100.2073	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61379	100.1694	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	100.1593	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61367	100.1571	BLUSTEM7 345.00 - SUMMIT 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	100.154	GEN636641 1-LOUISA UNIT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61379	100.1536	P12:138:OKGE:3TERM2
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61542	100.1509	P13:069-138:WERE:ALTO_TX-1OR3P::
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61379	100.1504	MORISNT4 138.00 - STILLWATER 138KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	100.1298	GEN635214 4-NEAL UNIT 4
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61341	100.12	MORRIS COUNTY - UNIONRG6 230.00 230KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	100.0918	GEN600002 3-SHERBURNE CNTY G3
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	100.0851	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61412	100.0689	CIMARRON - DRAPER LAKE 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61378	100.0599	PITTSBURG - SEMINOLE 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61378	100.0599	PITTSBURG - SEMINOLE 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61523	100	P12:069:WERE:ALLE-ATHE_69::
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61414	100	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	100	GEN300007 1-NEW MADRID UNIT 2
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	100	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	100	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61317	100	REDBUD - RIVERSIDE STATION 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61317	100	REDBUD - RIVERSIDE STATION 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61277	100	CENTERVILLE - G15-016T 161.00 161KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61523	99.9	ATHENS SWITCHING STATION - LEHIGH TAP 69KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61399	99.9	HOLCOMB - SETAB 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61399	99.9	HOLCOMB - SETAB 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61392	99.9	P12:069:WERE:ALLE-TIOG_69::
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.9	4SIOUX 2 138.00 138/18.0KV TRANSFORMER CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.9	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.9	GEN600000 1-SHERBURNECNTY G1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.9	GEN600001 2-SHERBURNE CNTY G2
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.9	GEN600005 1-MONTICELLO
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.9	GEN635213 3-NEAL UNIT 3
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.9	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.9	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61387	99.9	DELL 500 - INDEPENDENCE 500KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61382	99.9	FT SMITH - MUSKOGEE 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61379	99.9	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61349	99.9	GREC TAP5 345.00 - TULSA NORTH 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61277	99.9	CENTERVILLE - PAOLA 161KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61277	99.9	P12:161:WERE:MARM-KCPL_161::
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.64137	99.8	BENTON - WICHITA 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61778	99.8	RENFROW7 345.00 - VIOLA 7 345.00 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61558	99.8	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61558	99.8	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61523	99.8	ALLEN - LEHIGH TAP 69KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61449	99.8	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61449	99.8	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61432	99.8	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.8	GEN300002 1-THOMAS HILL UNIT 2
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.8	GEN300006 1-NEW MADRID UNIT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.8	GEN562694 1-G15_016_3 0.6900
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.8	GEN590010 1-ERCOT EQUIVALENCE
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.8	GEN590011 2-ERCOT EQUIVALENCE
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.8	GEN600003 1-PRAIRIE ISLAND G1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.8	GEN600004 2-PRAIRIE ISLAND G2
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.8	GEN615002 2-COAL CREEK
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61384	99.8	KEO EHV - WEST MEMPHIS 500 500KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61382	99.8	G16-063-TAP 345.00 - HUGO 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61382	99.8	G16-063-TAP 345.00 - SUNNYSIDE 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61382	99.8	LYDIA - VALLIANT 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61382	99.8	LYDIA - VALLIANT 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61382	99.8	SUNNYSD7-HUGO7-345kV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61378	99.8	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61345	99.8	MORRIS COUNTY - SWISSVALE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61312	99.8	STILWELL - WEST GARDNER 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61451	99.7	ARCADIA - NORTHWEST 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61394	99.7	P12:138:WERE:GORD-HALS_138::
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61392	99.7	P12:138:WERE:HARR-WEAV_138::
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61391	99.7	P12:138:WERE:BENT-NORT_138P::
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.7	AXTELL - PAULINE 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.7	GEN344894 1-1LAB G1 20.000
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.7	GEN505432 1-SIKESTON
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.7	GEN600006 1-AS KING
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.7	GEN620315 1-BIG STONE GEN
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.7	GEN659111 2-LELAND OLDS UNIT2
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.7	INDEPENDENCE 500/26.0KV TRANSFORMER CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61389	99.7	ARKANSAS NUCLEAR ONE - PLEASANT HILL 500KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61384	99.7	LYDIA - WELSH 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61384	99.7	LYDIA - WELSH 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61375	99.7	OSAGE - WEBB CITY TAP 138KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61375	99.7	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61371	99.7	DOMES - MOUND ROAD 138KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61371	99.7	DOMES - PAWHUSKA TAP 138KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61371	99.7	P12:138:AEPW:MOUNDRD4:SHIDLER4
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61371	99.7	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61371	99.7	SHIDLER - WEST PAWHUSKA 138KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61348	99.7	AUBURN ROAD - JEFFREY ENERGY CENTER 230KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61521	99.6	P12:138:WERE:CRSW-OGE_138::
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61476	99.6	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61476	99.6	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61476	99.6	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61476	99.6	THISTLE7 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61461	99.6	KILDARE4 - WHITE EAGLE 138KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.614	99.6	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.614	99.6	GRACEMONT - LAWTON EASTSIDE 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.614	99.6	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61398	99.6	P12:138:WFEC:MSL15
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.6	7CALAWY 1 345.00 345/25.0KV TRANSFORMER CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.6	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.6	BURLINGTON NO1 + NO 2 + NO 3 161/20.0KV TRANSFORMER CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.6	GEN542962 2X-IATAN UNIT #2
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.6	GEN563082 1-G15073_3 0.6900
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.6	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.6	P12:069:WERE:64TH-NORT_69F::
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.6139	99.6	THOMAS HILL 161/22.0KV TRANSFORMER CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61388	99.6	ARKANSAS NUCLEAR ONE - MABELVALE 500 500KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61388	99.6	MAYFLOWER 500 - PLEASANT HILL 500KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61385	99.6	8BHAM STEEL 500.00 - WEST MEMPHIS 500 500KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61383	99.6	MORISNT4 138.00 - SOONER 138KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61381	99.6	7JASPER 345.00 345/161KV TRANSFORMER CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61378	99.6	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61375	99.6	FAIRFAX TAP - SHIDLER 138KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61375	99.6	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
FDNS	08ALL_G16_012	0	20L	G16_012	FROM->TO	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1	1141	1195	0.61345	99.6	CHAMBER SPRINGS - CLARKSVILLE 345KV CKT 1
FDNS	00NR_G16_012	0	17SP	G16_012	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400	430	0.04418	102.4005	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_012	0	17SP	G16_012	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400	430	0.04418	100.5502	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	08NR_G16_012	0	17G	G16_012	FROM->TO	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	100	110	0.04176	107.8225	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
FDNS	08NR_G16_012	0	17G	G16_012	FROM->TO	WOLF CREEK (WOLF TX-6) 345/69/17.0KV TRANSFORMER CKT 1	100	110	0.04176	103.774	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
FDNS	00NR_G16_013	0	20WP	G16_013_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209	223	0.08156	107.4895	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
FDNS	00NR_G16_013	0	20WP	G16_013_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209	223	0.08156	107.4895	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
FDNS	00NR_G16_013	0	20WP	G16_013_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209	223	0.03552	105.1397	7JASPER 345.00 - BLACKBERRY 345KV CKT 1
FDNS	00NR_G16_013	0	20WP	G16_013_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209	223	0.03351	104.6826	BLACKBERRY - NEOSHO 345KV CKT 1
FDNS	00NR_G16_013	0	20WP	G16_013_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209	223	0.03351	104.6826	BLACKBERRY - NEOSHO 345KV CKT 1
FDNS	00NR_G16_014	0	20WP	G16_014_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209	223	0.08892	104.3357	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
FDNS	00NR_G16_014	0	20WP	G16_014_WP	FROM->TO	NEOSHO - SUB 452 - RIVERTON 161KV CKT 1	209	223	0.08892	104.3357	LITCHFIELD - SUB 349 - ASBURY 161KV CKT 1
FDNSLock-Blown up	06ALL_G16_015	0	20WP	G16_015	-	Non-Converged Contingency	987.16	1082.8	0.13244	-	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	06ALL_G16_015	0	20WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29656	152.404	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	20WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29396	151.197	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	20WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29656	149.8122	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	20WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29396	148.7177	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	20L	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.27549	147.7364	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	20L	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.26813	146.7959	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL_G16_015	0	17G	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28179	145.7252	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	17G	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28181	145.681	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	20L	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.27549	145.6112	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	20L	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.26813	144.7493	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	17G	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28179	143.7007	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	17G	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28181	143.66	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	16WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29016	137.5624	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	16WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29019	137.4338	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	16WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29016	136.3552	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	16WP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29019	136.2367	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	20SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29985	131.7055	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	20SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29884	131.1874	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	20SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29985	130.548	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	20SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29884	130.0646	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	17SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28936	129.6487	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	17SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28938	129.5968	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	17SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28936	129.0255	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	17SP	G16_015	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28938	128.9769	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	20L	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.32222	139.6023	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	17G	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.26972	137.7561	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	17G	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.26978	137.6085	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	20L	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.31585	136.001	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	20SP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.34295	135.5546	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	20SP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.34205	133.7024	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	17SP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.28612	129.5797	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	17SP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.28616	129.4092	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	20WP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.34003	125.4931	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	20WP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.33766	122.4032	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_015	0	16WP	G16_015	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.27771	110.9451	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_016	0	17SP	G16_016	-	Non-Converged Contingency	717	717	0.04336	-	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	00NR_G16_016	0	20SP	G16_016	-	Non-Converged Contingency	1073	1195	0.05009	-	GEN542951 5-HAWTHORN UNIT #5
FDNSLock-Blown up	00NR_G16_016	0	20SP	G16_016	-	Non-Converged Contingency	1073	1195	0.05009	-	GEN542955 1-LACYGNE UNIT #1
FDNSLock-Blown up	00NR_G16_016	0	20SP	G16_016	-	Non-Converged Contingency	1073	1195	0.05009	-	GEN542956 2-LACYGNE UNIT #2
FDNSLock-Blown up	00NR_G16_016	0	20SP	G16_016	-	Non-Converged Contingency	1073	1195	0.05009	-	GEN542957 1-IATAN UNIT #1
FDNSLock-Blown up	00NR_G16_016	0	20SP	G16_016	-	Non-Converged Contingency	1073	1195	0.05009	-	GEN542962 2-IATAN UNIT #2
FDNSLock-Blown up	00NR_G16_016	0	20SP	G16_016	-	Non-Converged Contingency	956.09	1051.7	0.0342	-	GEN525561 1-TOLK GEN #1 24 KV
FDNSLock-Blown up	00NR_G16_016	0	20SP	G16_016	-	Non-Converged Contingency	956.09	1051.7	0.0342	-	GEN525562 1-TOLK GEN #2 24 KV
FDNSLock-Blown up	00NR_G16_016	0	25SP	G16_016	-	Non-Converged Contingency	956	956	0.03663	-	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNSLock-Blown up	00NR_G16_016	0	25SP	G16_016	-	Non-Converged Contingency	956	956	0.0361	-	MCCOOL - MOORE 345KV CKT 1
FDNS	03NR_G16_016	0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	110	0.04045	110.4925	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 1
FDNS	03NR_G16_016	0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	110	0.04045	110.4925	G1524G1525 345.00 - THISTLE7 345.00 345KV CKT 2
FDNS	03NR_G16_016	0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	110	0.03538	103.4526	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	03NR_G16_016	0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	110	0.03642	102.8704	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	03ALL_G16_016	0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	110	0.03192	102.3364	BASE CASE
FDNS	03NR_G16_016	0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	110	0.03532	101.031	45TH ST4 138.00 - EVANS ENERGY CENTER SOUTH 138KV CKT 1
FDNS	03NR_G16_016	0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	110	0.03532	100.848	45TH ST4 138.00 - COWSKIN 138KV CKT 1
FDNS	03NR_G16_016	0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	110	0.03566	100.8223	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	03NR_G16_016	0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	110	0.03566	100.8013	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	03NR_G16_016	0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	110	0.03532	100.7855	P12:138:WERE:COWS-GECT_138::
FDNS	03NR_G16_016	0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	110	0.03566	100.457	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	03NR_G16_016	0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	110	0.03549	100.1615	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	03NR_G16_016	0	17G	G16_016	TO->FROM	CLEARWATER - MILAN TAP 138KV CKT 1	110	110	0.03541	99.5	EVANS ENERGY CENTER SOUTH - LAKERIDGE 138KV CKT 1
FDNS	03NR_G16_016	0	17G	G16_016	TO->FROM	KNOLL - N HAYS3 115.00 115KV CKT 1	83	99	0.03702	103.1267	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
FDNS	03NR_G16_016	0	17G	G16_016	TO->FROM	N HAYS3 115.00 - VINETAP3 115.00 115KV CKT 1	83	99	0.03702	110.2821	KNOLL 230 - POSTROCK6 230.00 230KV CKT 1
FDNS	00NR_G16_016	0	17SP	G16_016	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400	430	0.07662	102.5452	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_016	0	17SP	G16_016	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400	430	0.07662	100.6954	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	00NR_G16_017	0	16WP	G16_017	-	Non-Converged Contingency	720	720	0.12831	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	0	16WP	G16_017	-	Non-Converged Contingency	720	720	0.12831	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	17SP	G16_017	-	Non-Converged Contingency	0	0	0.9136	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	17SP	G16_017	-	Non-Converged Contingency	0	0	0.9136	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock-Blown up	00NR_G16_017	0	17SP	G16_017	-	Non-Converged Contingency	0	0	0.24628	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_017	0	17SP	G16_017	-	Non-Converged Contingency	720	720	0.12314	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	0	17SP	G16_017	-	Non-Converged Contingency	720	720	0.12314	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	17SP	G16_017	-	Non-Converged Contingency	720	720	0.12314	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	17SP	G16_017	-	Non-Converged Contingency	720	720	0.12314	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	0	17SP	G16_017	-	Non-Converged Contingency	0	0	0.08793	-	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNSLock-Blown up	00NR_G16_017	0	17SP	G16_017	-	Non-Converged Contingency	320	320	0.04879	-	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	17SP	G16_017	-	Non-Converged Contingency	320	320	0.04879	-	FT RANDAL - FT THOMPSON 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	00NR_G16_017	0	17SP	G16_017	-	Non-Converged Contingency	318.7	318.7	0.04788	-	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	17SP	G16_017	-	Non-Converged Contingency	352	352	0.04788	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	17SP	G16_017	-	Non-Converged Contingency	352	352	0.04788	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	17SP	G16_017	-	Non-Converged Contingency	480	493	0.04397	-	STORLA - WESSINGTON 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	17SP	G16_017	-	Non-Converged Contingency	478	493	0.0409	-	FT THOMPSON - LETCHER 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	17SP	G16_017	-	Non-Converged Contingency	478	493	0.0409	-	FT THOMPSON - LETCHER 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	17SP	G16_017	-	Non-Converged Contingency	480	493	0.02971	-	HANLON - STORLA 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	0	0	0.93168	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	0	0	0.93168	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	0	0	0.27211	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	720	720	0.13606	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	720	720	0.13606	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	720	720	0.13606	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	720	720	0.08616	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	720	720	0.08616	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	0	0	0.08481	-	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	1792	1792	0.0499	-	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	956	956	0.04678	-	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	320	320	0.0456	-	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	320	320	0.0456	-	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	318.7	318.7	0.04474	-	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	352	352	0.04474	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	352	352	0.04474	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	480	493	0.04241	-	STORLA - WESSINGTON 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	478	493	0.04	-	FT THOMPSON - LETCHER 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	20SP	G16_017	-	Non-Converged Contingency	478	493	0.04	-	FT THOMPSON - LETCHER 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	20WP	G16_017	-	Non-Converged Contingency	0	0	0.27708	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_017	0	20WP	G16_017	-	Non-Converged Contingency	720	720	0.13854	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	20WP	G16_017	-	Non-Converged Contingency	720	720	0.13854	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	0	0	0.93265	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	0	0	0.93265	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	0	0	0.40784	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	0	0	0.27189	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	0	0	0.27189	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	720	720	0.13595	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	720	720	0.13595	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	720	720	0.13595	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	720	720	0.13595	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	720	720	0.13595	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	720	720	0.08616	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	720	720	0.08616	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	0	0	0.08493	-	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	1792	1792	0.04978	-	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	956	956	0.04668	-	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	320	320	0.04557	-	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	320	320	0.04557	-	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	318.7	318.7	0.04472	-	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	352	352	0.04472	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	352	352	0.04472	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	480	493	0.04247	-	STORLA - WESSINGTON 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	478	493	0.04007	-	FT THOMPSON - LETCHER 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	478	493	0.04007	-	FT THOMPSON - LETCHER 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	0	25SP	G16_017	-	Non-Converged Contingency	956	956	0.02956	-	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	16WP	G16_017	-	Non-Converged Contingency	720	720	0.12854	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	2	16WP	G16_017	-	Non-Converged Contingency	720	720	0.12854	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	17SP	G16_017	-	Non-Converged Contingency	0	0	0.91602	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	17SP	G16_017	-	Non-Converged Contingency	0	0	0.91602	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock-Blown up	00NR_G16_017	2	17SP	G16_017	-	Non-Converged Contingency	0	0	0.24655	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_017	2	17SP	G16_017	-	Non-Converged Contingency	720	720	0.12328	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	2	17SP	G16_017	-	Non-Converged Contingency	720	720	0.12328	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	17SP	G16_017	-	Non-Converged Contingency	720	720	0.12328	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	17SP	G16_017	-	Non-Converged Contingency	720	720	0.12328	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	2	17SP	G16_017	-	Non-Converged Contingency	0	0	0.08816	-	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNSLock-Blown up	00NR_G16_017	2	17SP	G16_017	-	Non-Converged Contingency	320	320	0.04887	-	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	17SP	G16_017	-	Non-Converged Contingency	320	320	0.04887	-	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	17SP	G16_017	-	Non-Converged Contingency	480	493	0.04408	-	STORLA - WESSINGTON 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	17SP	G16_017	-	Non-Converged Contingency	478	493	0.04101	-	FT THOMPSON - LETCHER 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	17SP	G16_017	-	Non-Converged Contingency	478	493	0.04101	-	FT THOMPSON - LETCHER 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	00NR_G16_017	2	17SP	G16_017	-	Non-Converged Contingency	480	493	0.02978	-	HANLON - STORLA 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	0	0	0.934	-	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	0	0	0.934	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	0	0	0.27238	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	720	720	0.13619	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	720	720	0.13619	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	720	720	0.13619	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	720	720	0.08627	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	720	720	0.08627	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	0	0	0.08502	-	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	1792	1792	0.04992	-	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	956	956	0.04681	-	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	320	320	0.04567	-	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	320	320	0.04567	-	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	318.7	318.7	0.04481	-	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	352	352	0.04481	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	352	352	0.04481	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	480	493	0.04251	-	STORLA - WESSINGTON 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	478	493	0.0401	-	FT THOMPSON - LETCHER 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	478	493	0.0401	-	FT THOMPSON - LETCHER 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	20SP	G16_017	-	Non-Converged Contingency	956	956	0.02951	-	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	20WP	G16_017	-	Non-Converged Contingency	0	0	0.27738	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_017	2	20WP	G16_017	-	Non-Converged Contingency	720	720	0.13869	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	20WP	G16_017	-	Non-Converged Contingency	720	720	0.13869	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	0	0	0.93493	-	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	0	0	0.93493	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	0	0	0.40823	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	0	0	0.27216	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	0	0	0.27216	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	720	720	0.13608	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	720	720	0.13608	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	720	720	0.13608	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	720	720	0.13608	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	720	720	0.08627	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	720	720	0.08627	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	0	0	0.08514	-	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	1792	1792	0.04981	-	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	320	320	0.04564	-	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	320	320	0.04564	-	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	318.7	318.7	0.04478	-	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	352	352	0.04478	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	352	352	0.04478	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	480	493	0.04257	-	STORLA - WESSINGTON 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	478	493	0.04017	-	FT THOMPSON - LETCHER 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	478	493	0.04017	-	FT THOMPSON - LETCHER 230KV CKT 1
FDNSLock-Blown up	00NR_G16_017	2	25SP	G16_017	-	Non-Converged Contingency	956	956	0.02963	-	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	3	17SP	G16_017	-	Non-Converged Contingency	0	0	0.27518	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_017	3	17SP	G16_017	-	Non-Converged Contingency	720	720	0.13759	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	3	17SP	G16_017	-	Non-Converged Contingency	720	720	0.13759	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	3	17SP	G16_017	-	Non-Converged Contingency	720	720	0.08586	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	3	20SP	G16_017	-	Non-Converged Contingency	0	0	0.27147	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_017	3	20SP	G16_017	-	Non-Converged Contingency	720	720	0.13574	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	3	20SP	G16_017	-	Non-Converged Contingency	720	720	0.13574	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	3	20SP	G16_017	-	Non-Converged Contingency	720	720	0.08592	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	3	20SP	G16_017	-	Non-Converged Contingency	720	720	0.08592	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	3	25SP	G16_017	-	Non-Converged Contingency	0	0	0.27123	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_017	3	25SP	G16_017	-	Non-Converged Contingency	720	720	0.13561	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	3	25SP	G16_017	-	Non-Converged Contingency	720	720	0.13561	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	3	25SP	G16_017	-	Non-Converged Contingency	720	720	0.08591	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	3	25SP	G16_017	-	Non-Converged Contingency	720	720	0.08591	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	4	20SP	G16_017	-	Non-Converged Contingency	0	0	0.24237	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_017	4	20SP	G16_017	-	Non-Converged Contingency	956	956	0.12118	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	4	20SP	G16_017	-	Non-Converged Contingency	956	956	0.12118	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	4	20SP	G16_017	-	Non-Converged Contingency	956	956	0.07599	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	4	20SP	G16_017	-	Non-Converged Contingency	956	956	0.07599	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	4	25SP	G16_017	-	Non-Converged Contingency	0	0	0.2421	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_017	4	25SP	G16_017	-	Non-Converged Contingency	956	956	0.12105	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_017	4	25SP	G16_017	-	Non-Converged Contingency	956	956	0.12105	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	00NR_G16_017	4	25SP	G16_017	-	Non-Converged Contingency	956	956	0.07598	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_017	4	25SP	G16_017	-	Non-Converged Contingency	956	956	0.07598	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06252	109.1444	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06252	108.8812	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06252	108.8812	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06252	108.6721	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.0655	106.906	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.0655	106.8214	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.0655	106.8214	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.0655	106.8214	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.0655	106.6651	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.05132	102.548	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.05437	100.2501	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.05437	100.2501	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06135	104.9212	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06135	104.6723	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06135	104.6723	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06135	104.4815	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06427	103.1783	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06427	103.0961	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06427	103.0961	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06427	103.0961	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06427	102.9164	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	FT THOMPSON - LAKE PLATT 230KV CKT 1	352	352	0.06135	99.8	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	FT THOMPSON - LAKE PLATT 230KV CKT 1	352	352	0.06135	99.6	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	FT THOMPSON - LAKE PLATT 230KV CKT 1	352	352	0.06135	99.6	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35121	110.6184	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35121	110.0069	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35121	110.0041	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35121	108.1475	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35121	108.1446	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35121	108.1083	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35174	110.7855	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35174	110.1732	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35174	110.1704	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35174	108.311	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35174	108.3081	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35174	108.2717	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12605	165.7433	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12423	165.5978	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12256	164.0734	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	163.7447	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	163.5908	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	163.3871	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12291	163.261	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12291	163.261	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12282	163.2394	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12256	163.1317	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12256	162.9237	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12393	162.9186	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	162.7065	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.125	162.3587	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	162.3422	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	162.0017	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	161.973	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12385	161.8971	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12152	161.7108	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12301	161.3819	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12299	161.3087	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNSLock	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	161.2884	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12506	161.2743	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12506	161.2743	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12506	161.2703	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	161.2378	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12282	161.1747	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12342	161.1015	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	161.0614	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12342	161.017	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12342	161.017	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	160.9546	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12506	160.9284	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12506	160.9284	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12819	160.9007	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12819	160.9007	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	160.8597	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12342	160.8277	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12305	160.8206	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12537	160.6772	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12537	160.6647	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12537	160.6245	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12287	160.5301	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12292	160.4861	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12351	160.3508	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12305	160.3101	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12263	160.2673	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12325	160.1979	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	160.1464	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	160.1437	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	160.0692	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	160.0567	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12072	160.0396	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12463	159.9162	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12463	159.9162	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	159.9158	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12463	159.8089	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12315	159.7524	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12315	159.7524	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12325	159.66	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12354	159.6148	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12351	159.5648	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12283	159.5407	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12305	159.4802	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12271	159.4154	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	159.3449	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	159.3205	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12305	159.2861	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12337	159.264	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12316	159.2469	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1229	159.2267	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12305	159.1795	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12212	159.1773	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12354	159.1516	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12268	159.1365	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	159.1282	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	159.1087	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	159.0106	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	159.0022	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.9952	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.9904	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.99	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12835	158.9797	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12835	158.9797	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12835	158.9797	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12835	158.9797	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12307	158.97	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12212	158.9626	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12212	158.9622	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12212	158.9608	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12212	158.9607	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12212	158.9523	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12212	158.9522	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12409	158.9217	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12398	158.9213	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12398	158.9213	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.9126	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1228	158.8828	GARRISON - JAMES TOWN 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.882	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.882	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.8512	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12212	158.8485	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12294	158.8463	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12337	158.843	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12337	158.7867	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.7641	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.15546	158.7575	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.15537	158.7507	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.7303	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.7126	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.6879	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12291	158.6815	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12306	158.681	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1227	158.5837	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12298	158.532	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.5052	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12676	158.4845	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12299	158.4718	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12327	158.4702	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12327	158.4702	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12304	158.4397	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.4328	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12313	158.4291	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12704	158.4206	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12704	158.4206	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12325	158.4056	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12332	158.403	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12325	158.3892	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.3812	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12306	158.3639	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.3372	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.329	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12309	158.3184	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.3146	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.2994	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12306	158.2944	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.2926	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12306	158.2826	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12327	158.2537	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12327	158.2537	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12304	158.2504	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12325	158.2197	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.1925	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.1403	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.1398	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.1239	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12359	158.0916	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12359	158.0893	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12359	158.0893	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12309	158.0797	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12359	158.0776	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12359	158.0776	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12305	158.0741	PRAIRIE - WINGER 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12329	158.0724	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.066	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	158.0605	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12309	158.0506	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12344	158.0008	EAGLE - PHILIP 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.9932	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12332	157.9868	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.9868	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12309	157.952	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.9428	GEN303007 1-1BC2 U2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.9363	GEN303006 1-1BC2 U1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1232	157.9361	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1232	157.9361	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12306	157.8872	BALTA - MCHENRY 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12344	157.8805	EAGLE - MARTIN 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.8675	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.8569	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.8564	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12329	157.8559	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12309	157.8443	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.8398	GEN303008 1-1BC2 U3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1231	157.8355	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.8308	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12344	157.828	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12319	157.8175	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12319	157.8175	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12319	157.8087	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12309	157.7951	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12305	157.7846	AUDUBON - HUBBARD 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12388	157.7766	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12313	157.7407	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12302	157.739	KARLSTAD - WINGER 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12332	157.7352	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12309	157.7271	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.6904	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12308	157.6853	PRAIRIE - RAMSEY 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12318	157.6721	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1231	157.6637	PALXFRASBTHI
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12265	157.6587	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12265	157.6586	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12265	157.6586	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12329	157.6313	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12307	157.6237	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12296	157.6101	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12299	157.6082	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12289	157.6061	LELAND OLDS - STANTON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12359	157.5982	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1231	157.5968	7PALM TAP 345.00 - SUB T 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12263	157.5966	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12332	157.5716	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.5516	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12311	157.5466	GENOA 161 - SENECA 161 161KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.5429	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12312	157.534	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12318	157.5313	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12318	157.5313	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.5283	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12332	157.5238	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12313	157.5139	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12311	157.4899	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12311	157.4899	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12303	157.4752	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12303	157.4752	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12312	157.4707	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.4688	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12304	157.4647	ARNOLD - HAZLETON 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12312	157.4646	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12309	157.4573	JAMES TOWN - PICKERT 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12329	157.4567	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.123	157.4535	HIGHLND 3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12313	157.4471	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12313	157.4471	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12313	157.4466	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12301	157.4462	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12308	157.426	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12339	157.4226	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12295	157.4124	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12295	157.4124	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12309	157.4112	CENTER - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.3923	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12271	157.3691	OGALLALA - SIDNEY 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.3592	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.3592	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12305	157.3582	BISMARK - HILKEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12353	157.3465	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.3443	GEN345756 H-1SIOUX 1 18.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.3349	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.3335	BURR - CANBY 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12298	157.3301	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12299	157.3289	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.3287	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12299	157.3269	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.3192	GEN525561 1-TOLK GEN #1 24 KV
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12299	157.3136	P12:115:TSGT:COVALT7-SNAKECK7
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.2955	GEN336242 1-1NMIL ST1 18.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.2928	GEN334432 1-SABINE UNIT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.2927	GEN334431 1-SABINE UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12268	157.2919	FIELD NORTH - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.2867	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12313	157.2843	FRANKS - HUBEN 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12279	157.2747	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.2731	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.2604	RUNNING 230/118KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.2602	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1231	157.2532	CAYLER5 161.00 - WISDOM5 161.00 161KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.2511	GEN345832 1-1TS G1 13.800
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.2506	GEN345841 2-1TS G2 13.800
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.2502	GEN336446 1-MICHOUD UNIT #2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12296	157.2414	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.2407	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12316	157.2392	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12268	157.2342	FIELD SOUTH - WILMARTH 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12312	157.2279	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.2213	GEN501970 1-EVANGELINE UNIT 7
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1232	157.214	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12298	157.2138	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.2075	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.1958	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12299	157.1908	COVALT 7 115.00 - LYNN 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.1719	GEN334030 1-FRONTIER UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.1715	GEN334031 1-FRONTIER UNIT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12277	157.1668	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12277	157.1668	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.1578	GEN336240 1-1NMIL CT1 18.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.1578	GEN336241 1-1NMIL CT2 18.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.1548	P13:115-345:NPPD:NUCOR-2
FDNSLock	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12277	157.1395	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.1165	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12332	157.1078	P12:115:NPPD:1090:AINSWND7:THEDFRD7:BTB
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12332	157.102	AINSWORTH - CALAMUS 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12332	157.0921	CALAMUS - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12329	157.0875	ALIANCE - BOXBUTE7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12359	157.0874	GORDON - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.0862	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	157.0862	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12309	157.0573	NELIGH - PETERSBRG.N7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12297	157.0264	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12297	157.0065	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12297	157.0065	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12275	156.81	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12222	156.54	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12331	156.4972	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12317	156.4644	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12317	156.4644	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12329	156.4133	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	156.3914	2560-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	156.3914	2561-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	156.3914	BASE CASE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12323	156.3509	G15088_T 345.00 - PAULINE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12254	156.2765	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12279	156.1984	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12279	156.1984	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12305	156.1901	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12305	156.176	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12335	156.1648	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12306	156.0744	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12306	156.0744	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12306	156.0726	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12306	156.0726	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12309	155.9979	AURORA - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.9828	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.9779	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12281	155.9494	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12317	155.9338	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12317	155.9338	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12327	155.9292	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12327	155.9292	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12288	155.871	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12288	155.871	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12288	155.87	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12288	155.87	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12285	155.8131	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12285	155.8131	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12313	155.731	LOUP CITY - NORTH LOUP 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12321	155.7164	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.7044	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.123	155.682	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.6731	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.6699	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.6496	GEN652548 5-FT RANDAL
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.6496	GEN652549 7-FT RANDAL
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.6365	GEN652547 3-FT RANDAL
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12276	155.615	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12276	155.615	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNSLock	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12311	155.613	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12311	155.613	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12311	155.613	STMDSJFAFACO
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12306	155.6094	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12354	155.608	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12354	155.608	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.5923	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.5873	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.5829	GEN300006 1-NEW MADRID UNIT 1
FDNSLock	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.123	155.5687	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12317	155.5632	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12317	155.5632	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12335	155.5518	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12335	155.5518	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.5476	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.5344	GEN600020 2-ANGUS ANSON1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.5266	GEN620115 1-HRDLKGEN 0.6000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.5265	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.5264	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12312	155.4964	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12312	155.4762	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12409	155.4706	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12409	155.4706	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.47	GEN600021 3-ANGUS ANSON2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12409	155.4664	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.4592	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.4592	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12409	155.4401	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12409	155.4401	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.4398	GEN563302 1-G15096_3 0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.4364	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.4364	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.4364	GEN672352 3-NIPAWIN GENERATOR 3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12409	155.4339	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12409	155.43	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.4263	GEN660003 3-HURON WEST PARK
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12312	155.4256	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.4221	GEN657964 1-ASH2GEN9 0.5750
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.416	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.4149	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12222	155.4147	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.4062	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12318	155.3947	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12318	155.3947	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.3857	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12318	155.3814	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.3763	GEN659156 2-LONESMCRK 2G13.800
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.3763	GEN659157 3-LONESMCRK 3G13.800
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.3679	GEN659290 1-EDGECOL
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.3547	GEN659158 2-PIONEER G213.800
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.3547	GEN659159 3-PIONEER G313.800
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.3535	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.3518	GEN600045 4-ANSON
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1231	155.3067	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.2885	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.2885	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.2853	GEN600046 1-MECST
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.2771	GEN652410 3-FT PECK
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.2616	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.2135	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.2112	GEN600050 1-FEP
FDNSLock	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.1978	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.1848	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.1655	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.1594	GEN600047 1-MECCT1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.1577	GEN652414 4-FT PECK
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.1577	GEN652415 5-FT PECK
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.1027	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.0791	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.0791	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.0785	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.0785	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.0234	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.0188	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.0188	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.0145	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.0025	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	155.0025	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.9817	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.9329	GEN600017 C-LS POWER CT
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.9125	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.9124	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.8389	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.8295	GEN681522 3-GENOA 3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.8237	GEN659192 6-LYNN
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.823	GEN659162 4-RED WLCK
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.823	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.7716	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.7473	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.6384	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.6302	GEN659274 1-GROTON
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.5663	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12409	154.5592	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.559	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.5296	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12331	154.5188	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.5156	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.4767	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.4767	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.4625	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.423	GEN562872 1-G15046_3 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.4201	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.3981	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.398	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.3605	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.3115	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12323	154.2966	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12584	154.2743	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.225	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.1942	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.1896	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.1765	GEN659270 1-WEST SW
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.1522	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	154.1493	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12573	154.1379	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12584	154.0987	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12584	154.0626	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12584	154.0626	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	153.9978	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	153.9754	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12584	153.9726	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12584	153.9726	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12584	153.9558	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1194	153.9012	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	153.8495	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	153.8134	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	153.8131	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	153.5795	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	153.5787	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	153.5352	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	153.4202	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	153.4143	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	153.3945	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	153.3875	GEN652460 4-GARRISON
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	153.3875	GEN652461 5-GARRISON
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	153.3066	GEN652458 2-GARRISON
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	153.3066	GEN652459 3-GARRISON
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	153.3065	GEN652457 1-GARRISON
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1228	153.2037	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	153.1738	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1228	153.0799	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1228	153.0795	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	152.7372	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	152.4884	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	152.2041	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	152.1931	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	152.1866	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	152.1539	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	152.1538	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	152.0839	GEN615010 1-STANTON4
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	152.0641	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	151.9901	GEN652559 1-OAHE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	151.9745	GEN652556 2-OAHE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	151.9745	GEN652557 4-OAHE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	151.9745	GEN652558 6-OAHE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	151.9045	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	151.7263	GEN600006 1-AS KING
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	151.659	GEN659141 1-K10215A
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	151.6408	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	151.5898	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	151.3716	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	151.3443	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	151.1112	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	150.9557	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	150.9191	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.11857	150.0726	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	149.9828	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	148.8909	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	148.6739	GEN661015 1-COYOTE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	148.4601	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	148.2314	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	148.0878	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.17018	148.0426	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.17018	148.0108	2810X2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.17018	146.9406	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	146.1906	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	145.459	GEN659125 1-COVEY
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	145.4271	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	145.4271	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNSLock	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	144.0118	GEN615001 1-COAL CREEK
FDNSLock	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	143.8741	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	143.3259	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08604	142.1168	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08611	142.0769	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08614	141.9852	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08992	141.8808	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08992	141.8808	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08638	141.8676	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	141.8397	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08655	141.5285	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08644	141.4598	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0861	141.3726	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0855	141.3621	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08638	141.2529	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08725	141.2413	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08725	141.2413	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	141.2226	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	141.0853	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08635	141.0309	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08598	141.0087	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	141.0047	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08655	140.9979	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.9973	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.9973	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.9086	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	140.8939	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.8891	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.8853	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08611	140.8694	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08655	140.8598	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	140.8419	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08762	140.8294	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08762	140.8209	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08762	140.8209	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.7963	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	140.7929	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	140.7929	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08639	140.7875	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08644	140.7691	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08762	140.7132	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08762	140.7132	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08669	140.6804	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.6604	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.07983	140.6505	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08605	140.5734	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	140.5464	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.5127	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08604	140.4658	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08658	140.4545	WINNER - WITTEN 115KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08643	140.4462	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.4415	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08609	140.4408	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.4407	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.4405	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.4397	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	140.4381	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	140.4381	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.4311	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08598	140.4232	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08639	140.4195	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	140.4039	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	140.3984	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.3944	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	140.3656	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	140.3656	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08698	140.3596	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.3486	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.3362	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08635	140.3306	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.3115	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08635	140.2728	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	140.2583	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	140.2583	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0861	140.2513	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.236	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.1833	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	140.1766	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08614	140.1635	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08614	140.1635	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.1466	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08639	140.1248	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08639	140.0991	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	140.0887	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08587	140.0874	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08763	140.08	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	140.0781	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	140.0644	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0861	140.0499	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08618	140.0345	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08618	140.0345	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	140.0193	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08606	140.0079	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08606	140.0079	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	140.0073	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	139.9879	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	139.9803	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	139.9803	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	139.9648	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	139.9473	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08658	139.9284	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08658	139.9261	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0861	139.9114	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	139.9101	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	139.885	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08639	139.8792	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	139.8748	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	139.8675	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08594	139.8674	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08614	139.8375	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08609	139.8217	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08604	139.7856	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.086	139.7759	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08609	139.7708	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	139.757	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0861	139.7404	PRAIRIE - WINGER 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08604	139.7235	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	139.7111	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08605	139.6742	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08597	139.672	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08702	139.6705	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	139.6619	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	139.6506	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08702	139.5892	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	139.5711	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	139.5711	GEN338146 1-INDEPENDENCE UNIT #2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08663	139.5227	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08663	139.5198	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08663	139.5198	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08663	139.5165	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08663	139.5165	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	139.4861	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	139.4808	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08596	139.4624	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08596	139.4624	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	139.4436	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08639	139.4183	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	139.4062	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	139.4051	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08631	139.3642	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08553	139.359	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08614	139.3508	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08614	139.3508	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08611	139.3371	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08702	139.332	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	139.33	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08611	139.2989	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	139.2251	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08595	139.2127	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	139.2066	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	139.1914	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0861	139.174	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08734	139.1672	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	139.1544	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08991	139.1487	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08991	139.1487	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08689	139.1464	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	139.1368	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08595	139.1171	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08595	139.1171	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	139.117	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	139.0909	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	139.0762	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	139.0685	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	139.0652	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08604	139.0345	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08609	139.0151	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.9964	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.984	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08754	138.9826	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08754	138.9826	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	138.9816	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08639	138.9749	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.9594	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.9458	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.9392	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	138.9384	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	138.9384	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08638	138.9379	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	138.9378	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08689	138.9281	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08635	138.9193	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08667	138.9189	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08667	138.9188	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08689	138.8956	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08655	138.8931	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.8777	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.8771	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08667	138.8425	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08687	138.8389	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	138.8388	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.8378	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0861	138.8266	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.8241	KEARNEY 115KV SWITCHED SHUNT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.8178	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.8105	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.8104	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.8104	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.8091	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08655	138.7936	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08611	138.7783	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.7755	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08583	138.7636	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	138.7507	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	138.7507	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.724	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.7217	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.7166	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.7159	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08655	138.695	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.6814	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.6797	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08598	138.6735	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08702	138.6525	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	138.6403	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08514	138.6273	COLUMWEST - KELLY 230KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	138.6124	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.6099	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08614	138.5981	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08638	138.5609	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	138.5463	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08643	138.5456	RASMUSN - SIOUX CITY 230KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08687	138.5113	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	138.5106	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	138.5106	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.5029	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08669	138.4883	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08702	138.4809	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08635	138.4637	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08641	138.4629	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.4555	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.4444	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08744	138.405	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08762	138.4039	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08762	138.4039	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	138.3986	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.3892	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	138.3526	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	138.3474	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08609	138.3278	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08604	138.323	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08657	138.3129	WINNER - WITTEN 115KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08666	138.2991	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.2944	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08638	138.2872	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.2796	GEN335614 1-WILLOW GLENN UNIT#4
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08666	138.2775	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08635	138.2597	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.2522	SUB D - SUB I 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.252	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	138.2469	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.2468	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08638	138.2355	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	138.198	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08657	138.1799	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	138.1785	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	138.1785	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08604	138.1778	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0858	138.1722	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.1441	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08604	138.1436	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	138.1434	G16-049-TAP-POSTROCK7-345kV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08578	138.136	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08578	138.136	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	138.0897	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	138.0633	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	138.041	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	138.0264	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0861	138.0192	ALDA - SUB A 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08584	138.0173	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	138.0117	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	138.0087	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08702	137.9617	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	137.948	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08638	137.9452	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08584	137.9414	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08584	137.9414	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	137.9124	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	137.8866	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08614	137.8555	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08614	137.8555	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08698	137.8543	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	137.8439	1303-KEARNEY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	137.8439	BASE CASE
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08595	137.761	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08595	137.761	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	137.7296	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	137.7048	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	137.7048	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08657	137.6898	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	137.6749	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08584	137.6472	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08609	137.589	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	137.5573	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	137.5573	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	137.5563	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	137.5563	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08611	137.5333	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	137.5324	LOUP CITY - ST LIBORY 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	137.5312	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0861	137.5278	AURORA - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08529	137.485	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08646	137.4567	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08514	137.3794	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	137.3277	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	137.3051	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	137.3051	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08595	137.2749	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	137.2711	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	137.2711	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	137.2693	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	137.2693	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08595	137.2659	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08595	137.2659	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	137.2641	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	137.2559	GRAND ISLAND - HASTINGS 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.086	137.1919	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	137.1867	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	137.1867	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	137.1854	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	137.1854	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	137.1823	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	137.1772	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	137.1772	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	137.1452	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	137.1071	STMDSJFAFACO
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	137.107	COPSTJCPFRSJ
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	137.107	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	137.0992	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08611	137.0297	G15088_T 345.00 - MOORE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	137.0286	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	137.0276	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08666	137.0023	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	136.8981	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08575	136.8978	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08575	136.8978	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08515	136.8261	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08608	136.7549	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08587	136.6507	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	136.6311	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.6135	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.5995	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	136.591	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.5676	BASE CASE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.5651	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	136.545	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	136.5434	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	136.5325	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.5254	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	136.5114	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.5022	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.501	GEN659274 1-GROTON
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.4586	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.4443	GEN657705 X-DRAYTON
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.4403	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.4303	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.4293	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.4281	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.4172	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.4172	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0864	136.4103	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	136.4061	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.4044	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.4011	GEN672356 1-FUT-WL1X 18.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0858	136.3909	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	136.3887	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	136.3887	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.3652	GEN672389 1-FUT-SW1X 18.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.3495	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	136.3443	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.3426	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	136.325	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	136.3247	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	136.3247	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0858	136.2961	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08835	136.2961	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.2864	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.2864	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.2864	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.2653	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0861	136.2549	AURORA - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08578	136.251	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08578	136.251	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08528	136.2068	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.1849	GEN659270 1-WEST SW
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.1399	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.1374	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.1275	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1237	136.1018	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	136.0859	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08827	136.0756	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08835	136.0694	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08835	136.0469	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08835	136.0468	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	136.0184	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	136.0184	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	136.0161	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	136.0161	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08835	136.0155	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08835	136.0155	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.9905	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08584	135.9857	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08584	135.9857	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08835	135.9525	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	135.9486	GRAND ISLAND - HASTINGS 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.9065	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.8649	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	135.86	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	135.86	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	135.8586	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	135.8586	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	135.8469	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	135.8469	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08515	135.8261	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.086	135.8044	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.8009	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.795	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	135.7822	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	135.7822	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0858	135.7811	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0858	135.7696	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.7692	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.7211	GEN652457 1-GARRISON
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.7211	GEN652458 2-GARRISON
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.7211	GEN652459 3-GARRISON
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	135.7096	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	135.7096	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	135.7096	STMDSJFAFACO
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.6772	GEN652461 5-GARRISON
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.6771	GEN652460 4-GARRISON
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.6533	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.6527	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.6422	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.589	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.5753	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.5686	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08574	135.5469	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08574	135.5469	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	135.4644	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08611	135.4249	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.3203	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	135.3106	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	135.3004	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.2861	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.2851	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.2814	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.2357	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.2251	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.2206	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.2193	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	135.2155	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.1959	GEN659274 1-GROTON
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.1894	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.1702	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.1683	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	135.164	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.1533	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.1193	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.1105	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.1024	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.0816	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.0816	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.074	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.074	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.074	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.064	GEN615015 1-GRE-SPRITWDG13.200

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.0193	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.0153	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.0141	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.0073	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	135.0073	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.9917	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.9165	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.8745	GEN659270 1-WEST SW
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.868	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.8583	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.8374	GEN600006 1-AS KING
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.8294	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.7897	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.733	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.7309	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.7283	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.692	GEN652556 2-OAHE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.692	GEN652557 4-OAHE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.692	GEN652558 6-OAHE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.6753	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.6426	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08836	134.6405	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.5779	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.5638	GEN615010 1-STANTON4
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.5387	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08828	134.5126	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.5118	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.5063	GEN659141 1-K10215A
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08836	134.4923	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.4779	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.4516	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.4396	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.4391	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.4388	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.4355	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.4328	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08836	134.4288	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08836	134.4288	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.4228	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.4215	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.4102	GEN652460 4-GARRISON
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.4102	GEN652461 5-GARRISON
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08836	134.3774	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08836	134.3726	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08836	134.3726	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.3506	GEN652457 1-GARRISON
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.3506	GEN652458 2-GARRISON
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.3506	GEN652459 3-GARRISON
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0858	134.3172	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0858	134.2604	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.2298	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0858	134.2007	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.1358	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.1279	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.0681	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.0673	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.0602	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.0445	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	134.0197	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.9439	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.9253	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.8748	GEN652559 1-OAHE
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.8224	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.8174	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.8079	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.7679	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.7505	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.7451	GEN600003 1-PRAIRIE ISLAND G1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.7373	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.7247	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.7005	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.6223	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.5934	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.5706	GEN600006 1-AS KING
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.5583	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.5583	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12952	133.5366	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.5281	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.487	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.4311	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.3793	GEN615010 1-STANTON4
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.3747	GEN652556 2-OAHE
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.3747	GEN652557 4-OAHE
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.3747	GEN652558 6-OAHE
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.3172	GEN659141 1-K10215A
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.3088	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.0888	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.0489	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.0483	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	133.0189	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	132.8563	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13395	132.838	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	132.7952	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	132.6949	GEN652559 1-OAHE
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	132.5495	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	132.5377	GEN661015 1-COYOTE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	132.4506	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1214	132.3948	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1214	132.3566	2810X2
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	132.3493	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	132.3323	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	132.2997	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	132.2602	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13374	131.9316	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	131.6389	GEN661015 1-COYOTE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1214	131.5542	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	131.3084	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	131.2596	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	131.1756	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	131.1023	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12144	130.9578	2810X2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	130.9391	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	130.9246	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12144	130.8059	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	130.689	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	130.5007	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	130.4517	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13201	130.4457	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12144	130.4147	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	130.1181	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	130.0629	GEN659125 1-COVEY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	130.0194	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	130.0194	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13402	129.9047	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13402	129.9047	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	129.8647	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	129.7094	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12897	129.4585	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	129.2574	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	129.2574	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	129.2434	GEN659125 1-COVEY
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12897	129.2145	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12897	129.1976	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12897	129.1976	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	129.0333	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12732	128.9178	G09_001IST 345.00 - WATERTOWN 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	128.8311	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	128.7444	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1352	128.6175	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1352	128.6175	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	128.5859	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13503	128.5369	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13503	128.5369	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	128.5039	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13214	128.4431	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13503	128.2043	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12692	128.1423	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12692	128.1423	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	127.8917	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12463	127.8879	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12952	127.8747	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12463	127.811	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13152	127.8072	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12812	127.7973	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12812	127.7973	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12463	127.782	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	127.6166	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12799	127.612	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.11318	127.5142	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12764	127.4492	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12784	127.4015	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	127.3294	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	127.2622	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12708	127.0758	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13302	127.0464	P13:230-345:NPPD:STEGALL3:KV3A
FDNSLock	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13302	127.0388	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12914	127.0174	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12818	126.9964	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	126.9788	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12708	126.9669	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12708	126.9529	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12708	126.9529	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12708	126.9497	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12708	126.9487	2809X2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12708	126.9435	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12708	126.9416	2809X1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12811	126.88	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	126.8299	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12775	126.7971	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12775	126.7971	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	126.7629	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12775	126.7179	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	126.6979	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12775	126.6801	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12799	126.6343	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13037	126.6025	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	126.5768	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12812	126.4924	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12812	126.4924	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12732	126.4304	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12811	126.4255	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12656	126.3864	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	126.3853	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	126.3666	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNSLock	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12813	126.2449	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12571	126.2383	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12914	126.2315	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12804	126.2155	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12785	126.211	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13374	126.1847	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13374	126.1847	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12817	126.1559	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12871	126.1531	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12774	126.1499	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.16	126.108	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.15991	126.1025	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12827	126.0027	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.9855	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12813	125.9728	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13028	125.9718	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.9253	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.8875	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12826	125.8841	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.8836	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13028	125.8698	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13028	125.8698	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12785	125.8512	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12868	125.8439	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12846	125.8021	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13028	125.7832	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13028	125.7832	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12871	125.764	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12832	125.7574	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.737	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12832	125.7125	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12826	125.7028	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12868	125.6414	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.6392	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.6339	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.6169	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12832	125.6146	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12789	125.6056	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12813	125.5903	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12837	125.5537	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12832	125.5386	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.5329	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12862	125.5016	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12862	125.5016	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.123	125.4959	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13362	125.4909	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13362	125.4909	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13362	125.4909	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13362	125.4909	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.4859	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12808	125.4568	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12862	125.4537	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12789	125.4495	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.3382	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12862	125.3368	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.3236	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12842	125.3225	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12842	125.3225	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1309	125.3065	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1309	125.3023	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1309	125.3012	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12809	125.2802	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12832	125.2358	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12808	125.2203	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.2186	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12836	125.2079	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12836	125.2079	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12767	125.1924	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.1823	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.1799	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.1797	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12722	125.1511	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12722	125.1491	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12826	125.1487	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12826	125.1479	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.1436	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12722	125.1395	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12722	125.1354	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12722	125.1347	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12722	125.1346	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12722	125.1317	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.1072	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.1071	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1283	125.1032	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12863	125.0873	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12845	125.0863	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12845	125.0758	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.0724	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12722	125.0617	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12793	125.061	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12792	125.0435	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12822	125.0403	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	125.0273	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12845	125.0249	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12863	124.9824	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.9604	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12825	124.9476	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.9353	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12863	124.928	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12821	124.8988	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12835	124.8979	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12835	124.8979	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12826	124.8956	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12825	124.8928	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.8866	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12835	124.8733	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12821	124.8699	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12825	124.8532	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12821	124.8522	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.8468	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1278	124.8417	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.8282	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.8179	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12821	124.8131	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1285	124.8097	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1285	124.8097	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12823	124.7973	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12815	124.7941	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	2SSP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	124.7915	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	2SSP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	124.7915	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.7827	GEN303007 1-1BC2 U2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.7826	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.7807	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.7785	GEN303006 1-1BC2 U1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12815	124.7732	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.7293	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.7278	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.725	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.7229	GEN303008 1-1BC2 U3
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.7227	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.7213	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.7203	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1285	124.7161	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1285	124.7161	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.7135	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.7096	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12827	124.7093	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12851	124.7019	P12:115:NPPD:1090:AINSWND7:THEDFRD7:BTB
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12851	124.7008	AINSWORTH - CALAMUS 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.6942	GEN642067 1-PLATTE
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12851	124.6937	CALAMUS - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12825	124.6918	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12792	124.6877	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.6855	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12868	124.6832	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.6789	GEN501811 1-RODEMACHER UNIT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12826	124.6725	JAMES TOWN - PICKERT 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12824	124.666	PRAIRIE - RAMSEY 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12797	124.6648	HELENA - SHEAS LK3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12826	124.6539	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.6525	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12827	124.652	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12849	124.6498	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12829	124.6337	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12822	124.6247	BALTA - MCHENRY 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.6239	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12799	124.6194	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.6151	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.615	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.61	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.6092	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12829	124.5922	GENOA 161 - SENECA 161 161KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12829	124.5917	NORTH LA CROSSE (10008630_001) 345/161/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12824	124.5891	BALTA - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.5881	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1322	124.5866	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12825	124.5847	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.582	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12828	124.5715	COAL CREEK - UNDERWOOD 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12827	124.5714	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12851	124.5639	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12778	124.5584	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12825	124.5579	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.55	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12825	124.5484	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12825	124.5371	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.5337	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12779	124.5337	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.5285	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12858	124.5248	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12858	124.5248	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1325	124.5224	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1325	124.5224	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12877	124.5138	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.5092	WHITE BLUFF 500/26.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.5087	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12834	124.5067	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12779	124.5027	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12779	124.5016	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12834	124.4991	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.4973	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12834	124.4964	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.4959	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.4959	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.4889	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.4879	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12767	124.0417	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.9995	BASE CASE
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12813	123.9847	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12813	123.9847	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12813	123.9189	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12813	123.9136	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12813	123.9136	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12849	123.7863	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12738	123.7679	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	123.7248	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	123.7248	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12826	123.6587	AURORA - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12826	123.6268	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12836	123.5979	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12969	123.5755	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12824	123.5463	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12824	123.5463	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12825	123.5425	CRETE - FRIEND 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1283	123.5206	LOUP CITY - NORTH LOUP 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.5198	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.4974	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.4926	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.4818	GEN659116 1-SPIRIT MOUND UNIT1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.4818	GEN659117 2-SPIRIT MOUND UNIT2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12935	123.4781	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12847	123.4675	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12847	123.4675	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12791	123.4659	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12791	123.4659	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.4543	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.4508	GEN672369 3-MERIDIAN GENERATOR 3 ST
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.4476	CLKREACT5 161.00 - CRYSTLK5 161.00 161KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.4389	GEN620285 1-SOLWAY
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.4287	GEN652546 1-FT RANDAL
FDNSLock	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12828	123.4249	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12828	123.4249	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12828	123.4249	STMDSJFAFACO
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.4147	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.4119	GEN600013 3-BLACK DOG GEN 3
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12801	123.4112	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.4106	GEN620323 2-HOOT LAKE 2 GEN
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12829	123.4101	7MAYWOOD 345.00 - 7SPENCER 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12817	123.4091	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12838	123.408	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12829	123.4075	7MONTGMRY 345.00 - 7SPENCER 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.4051	GEN600125 2-FEP ST G 13.800
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.4033	GEN620115 1-HRDLKGEN 0.6000
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.3977	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.3964	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.3931	GEN652548 5-FT RANDAL
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.3931	GEN652549 7-FT RANDAL
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.3893	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.3784	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.3759	GEN563302 1-G15096_3 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.3687	GEN652547 3-FT RANDAL
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.3604	GEN672384 1-CENTENNIAL WINDFARM
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.339	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.3258	GEN657964 1-ASH2GEN9 0.5750
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12823	123.313	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.3091	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.3087	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.3057	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.2944	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.2913	GEN659290 1-EDGECOL
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12843	123.2695	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12827	123.2669	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.2619	GEN652410 3-FT PECK
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.2419	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.2341	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.231	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12825	123.2215	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.2145	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.2145	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.2093	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.2083	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.2083	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.2082	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.2048	GEN657600 1-L1GEN3 9 0.5750
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.203	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.1949	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.1939	GEN652414 4-FT PECK
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.1939	GEN652415 5-FT PECK
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.1897	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12855	123.1791	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.175	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.1645	GEN615032 2-PLEASANT VALLEY

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.15	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13116	123.1305	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.1221	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.1221	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.1218	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13105	123.1144	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.1096	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.1096	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12856	123.0953	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12856	123.0953	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12798	123.0642	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12798	123.0642	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.0636	GEN600050 1-FEP
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12823	123.056	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12818	123.0554	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12818	123.0554	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.0374	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.0367	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13116	123.0305	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13116	123.03	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13116	123.0291	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.0166	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.0163	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	123.0163	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13116	122.9999	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13116	122.9999	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12802	122.9893	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12802	122.9893	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12799	122.9782	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.9753	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.9671	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.9671	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13116	122.9518	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.9228	GEN659192 6-LYNN
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.9216	GEN659162 4-RED WLCK
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.9216	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.9165	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.9139	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.8868	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.8857	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.8758	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.875	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.8721	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.872	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.8712	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.8566	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.8412	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12818	122.8383	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.7987	GEN600017 C-LS POWER CT
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.7836	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.7611	GEN681522 3-GENOA 3
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.7596	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.7416	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.7336	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.7336	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.7153	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.7074	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.689	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.6806	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.6587	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12877	122.6003	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12877	122.6003	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.5402	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.5388	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.5169	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12738	122.5144	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.5111	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.4797	GEN587623 1-J493-GEN1 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.4709	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.432	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.3846	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.3846	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.3845	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.1506	GEN652460 4-GARRISON
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.1504	GEN652461 5-GARRISON
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.1277	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.114	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.11	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.1043	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.1002	GEN652459 3-GARRISON
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.1001	GEN652457 1-GARRISON
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.1001	GEN652458 2-GARRISON
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.0419	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12798	122.039	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	122.0243	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08849	122.0135	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12798	122.0061	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12798	121.9971	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	121.994	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12853	121.9623	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	121.8729	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	121.794	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	121.6042	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	121.6023	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	121.6016	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	121.4229	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	121.4096	GEN652559 1-OAHE
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	121.3593	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	121.354	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	121.3535	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12843	121.3108	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	121.1862	GEN652558 6-OAHE
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	121.1861	GEN652556 2-OAHE
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	121.1568	GEN652557 5-OAHE
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	121.0977	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	120.9702	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	120.9439	GEN615010 1-STANTON4
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	120.891	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	120.7422	GEN659141 1-K10215A
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	120.6471	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	120.6206	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	120.5334	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	120.5334	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	120.5075	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.17628	120.4462	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.17628	120.432	2810X2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	120.4267	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	120.4215	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	120.3598	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	120.1193	GEN600006 1-AS KING
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	120.0011	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09153	119.8852	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.17628	119.8783	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	119.6645	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	119.5079	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08563	119.3638	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09136	119.1903	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	119.0636	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	118.7581	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	118.6564	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0902	118.4172	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	118.2438	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0861	118.0889	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	118.0352	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09164	117.9924	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09164	117.9924	FT THOMPSON - LETCHER 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08699	117.8123	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	117.6621	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08849	117.6405	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	117.5795	GEN661015 1-COYOTE
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	117.4353	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08721	117.419	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08721	117.419	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	117.2385	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	117.19	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.092	117.1881	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.092	117.1881	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	117.1796	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	117.1796	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09188	117.1325	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09188	117.1325	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12454	117.0724	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08748	117.0541	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08748	117.0541	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	116.9892	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09188	116.9315	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0869	116.833	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0869	116.7917	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	116.7791	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0869	116.7544	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	116.684	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08736	116.6787	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08981	116.6524	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08635	116.6455	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08751	116.6284	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	116.5831	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08736	116.5514	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.17628	116.51	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.17628	116.51	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08093	116.4442	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08679	116.4066	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNSLock	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08739	116.4061	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08714	116.2942	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08821	116.2689	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08728	116.2444	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08698	116.0999	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	116.0198	GEN659125 1-COVEY
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	116.0151	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08753	116.0096	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08759	115.9949	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08737	115.9531	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.9516	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.9351	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08759	115.9257	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08759	115.9077	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08759	115.9077	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08736	115.8424	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08902	115.8288	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.8133	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08774	115.783	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.7495	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.7173	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08824	115.7037	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.6785	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.6785	MINGO - SETAB 345KV CKT 1
FDNSLock	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08735	115.6773	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.675	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08728	115.6609	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.5763	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.5705	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.5091	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.4846	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08779	115.4721	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.4677	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08774	115.4442	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNSLock	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08636	115.4248	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09136	115.4034	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09136	115.4034	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08851	115.3852	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08735	115.3826	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNSLock	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08636	115.3769	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0879	115.3219	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0874	115.3132	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0879	115.3098	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08731	115.3037	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08779	115.3015	RASMUSN - SIOUX CITY 230KV CKT 1
FDNSLock	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08636	115.2977	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.2667	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0879	115.2583	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08635	115.2005	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.1877	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08733	115.1404	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08744	115.1304	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.1256	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	115.1158	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	115.1034	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0875	115.096	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0875	115.096	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	115.0926	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.0646	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.061	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08714	115.0562	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	115.0457	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.0333	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.0329	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08707	115.0215	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08687	115.0147	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08687	115.0147	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12368	115.0105	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.9901	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.9901	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08687	114.9883	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08738	114.9795	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	114.9593	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0873	114.9502	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08817	114.9496	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08733	114.9434	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0874	114.9406	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08687	114.9221	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08687	114.9199	2809X2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08687	114.9163	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08687	114.9156	2809X1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08687	114.909	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.8956	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.8687	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08902	114.8672	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.8598	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08741	114.8558	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0876	114.8439	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08718	114.835	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.8297	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.829	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.8287	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.8285	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.8249	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.8248	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.8248	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08745	114.8185	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.8049	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.8041	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08752	114.8029	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08717	114.7977	CHISAGO COUNTY - FORBES 500KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08717	114.7956	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0875	114.7872	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0875	114.7872	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	114.7861	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08902	114.7811	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08902	114.7811	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.7772	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.7772	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08733	114.7738	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	114.7727	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	114.7687	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.7669	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08747	114.7665	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08747	114.7665	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.7472	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.744	GEN642067 1-PLATTE
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08769	114.7423	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.7403	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08902	114.7275	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08902	114.7275	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.7182	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	114.7092	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08795	114.7047	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.6791	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	114.6774	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08756	114.6739	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08756	114.6739	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08769	114.669	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08742	114.6461	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	114.6461	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.6445	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.6421	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.6292	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.6183	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08759	114.6172	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08759	114.6172	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08769	114.6153	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.6015	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	114.5977	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08742	114.5926	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.5907	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.5897	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08752	114.5892	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08756	114.5855	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08799	114.576	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08736	114.5738	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08708	114.5732	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08817	114.5726	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08718	114.5702	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09151	114.5524	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09151	114.5524	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09151	114.5524	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09151	114.5524	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08748	114.5479	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08742	114.5463	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08759	114.5453	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08759	114.5453	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08756	114.5444	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.5395	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08748	114.5357	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.5339	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08882	114.5314	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08742	114.5302	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08795	114.5285	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.5283	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08742	114.5267	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08716	114.5246	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08744	114.5214	FORMAN - HANKINSON 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08795	114.5162	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.5123	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08708	114.4957	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08708	114.4951	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08708	114.4946	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.4944	GEN563212 1-G15087_3 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08708	114.4941	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08708	114.4939	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08708	114.4919	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08901	114.4878	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08901	114.4878	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08802	114.4867	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.4856	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08748	114.4836	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.4823	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.4761	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.4752	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.467	GEN303007 1-1BC2 U2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08802	114.4665	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08802	114.4652	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.4645	GEN303006 1-1BC2 U1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08844	114.461	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08742	114.4483	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08765	114.4433	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08725	114.4406	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	114.4372	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0875	114.2061	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.9319	BASE CASE
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08729	113.7953	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08729	113.7953	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08657	113.7777	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08728	113.694	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08728	113.6913	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08728	113.6913	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08744	113.5385	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08734	113.5028	CENTRAL CITY - CLARKS 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08743	113.4857	CRETE - FRIEND 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08818	113.4573	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08818	113.4573	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08818	113.4563	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08818	113.4539	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08818	113.4531	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08818	113.453	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08818	113.453	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08755	113.4057	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08755	113.4057	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08745	113.3848	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.3832	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.3832	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.3832	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08818	113.3829	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.3776	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.3776	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.3776	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.3758	GEN652414 4-FT PECK
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.3758	GEN652415 5-FT PECK
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.363	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.3428	GEN600046 1-MECST
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.3418	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.3335	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.3335	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.3334	GEN600047 1-MECCT1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0874	113.313	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.299	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.299	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08745	113.2953	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.2792	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08734	113.2748	CENTRAL CITY - GRAND ISLAND 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.2691	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.2681	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.2681	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.263	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.2618	GEN659162 4-RED WLCK
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.2618	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.2614	GEN659192 6-LYNN
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0874	113.2614	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.2598	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.258	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.2579	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.2482	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.2259	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.222	GEN600017 C-LS POWER CT
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08746	113.1883	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08977	113.1845	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.1656	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.1613	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08734	113.1594	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08968	113.1502	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.143	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.1415	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08743	113.1366	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08707	113.131	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08707	113.131	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.1148	GEN681522 3-GENOA 3
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.1132	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.1064	GEN659274 1-GROTON
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08712	113.1038	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08712	113.1038	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08977	113.0995	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08977	113.0992	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08977	113.0981	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.0759	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.0752	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNSLock	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08745	113.0702	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08745	113.0702	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08745	113.0702	STMDSJFAFACO
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.067	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.0648	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.0564	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.0564	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08977	113.0395	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08977	113.0395	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08977	113.0321	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.0226	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	113.0173	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0874	113.0028	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.9847	GEN659270 1-WEST SW
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.9681	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.9651	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08734	112.9584	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08717	112.935	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08717	112.935	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.9333	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.9143	GEN657705 X-DRAYTON
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.898	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08745	112.8594	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.8313	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.8068	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.8068	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.8068	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08745	112.7923	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08745	112.7912	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.7309	GEN652460 4-GARRISON
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.7309	GEN652461 5-GARRISON
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.7158	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08651	112.7072	COLUMWEST - GRAND ISLAND 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08745	112.7022	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.6969	GEN652457 1-GARRISON
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.6969	GEN652458 2-GARRISON
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.6969	GEN652459 3-GARRISON
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08713	112.6875	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.6653	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.665	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.6602	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.6539	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.6295	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.6293	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.6221	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.5849	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.5811	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.5248	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.4501	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.4469	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.405	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.3442	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.3232	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.3127	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.2368	GEN652559 1-OAHE
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.1806	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.1695	GEN652907 1-G09_007IS_3 0.6900
FDNSLock	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.0523	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	112.0287	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.9651	GEN652556 2-OAHE
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.9651	GEN652558 6-OAHE
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.9446	GEN652557 5-OAHE
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.88	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08713	111.8311	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08713	111.8042	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08713	111.8008	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.7845	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.7777	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.7739	GEN659141 1-K10215A
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.7682	GEN615010 1-STANTON4
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.7445	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.7409	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.6268	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.513	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.5054	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.5019	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.4669	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.4256	GEN600006 1-AS KING
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.4158	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.4158	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.4126	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.3886	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12321	111.1395	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12321	111.1329	2810X2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	111.1193	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12321	110.9179	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNSLock	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	110.7336	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	110.6825	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	110.2422	GEN659118 1-LARAMIE RIVER UNIT1
FDNSLock	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	110.0838	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	109.6471	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	109.5555	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	109.4472	GEN661015 1-COYOTE
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	109.2168	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	109.2168	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	109.1282	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	109.1282	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	109.0674	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	108.6861	GEN659125 1-COVEY
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12321	108.6579	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12321	108.6579	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	107.6507	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	107.5662	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	107.4425	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08344	105.4016	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	103.3143	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	103.0625	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	103.0625	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08254	102.1405	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12605	167.9151	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12256	166.2068	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	165.8859	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	165.6955	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	165.534	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12282	165.3543	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12256	165.2123	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12256	164.9983	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12393	164.9669	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	164.787	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	164.4149	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.125	164.4109	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	164.0421	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	163.9919	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12385	163.9233	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12152	163.762	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12301	163.4099	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12299	163.3322	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNSLock	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	163.3261	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12506	163.306	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12506	163.306	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12506	163.3015	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12282	163.19	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	162.9655	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12506	162.9466	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12506	162.9466	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	162.8607	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12305	162.8178	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12287	162.5268	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12292	162.5243	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12263	162.2984	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12221	161.8527	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12283	161.4731	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12271	161.3858	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12268	161.088	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	161.0427	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1228	160.8273	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12294	160.8083	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	160.7688	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	160.7666	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.15546	160.7265	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.15537	160.7191	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12245	160.6887	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12284	160.1972	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	160.08	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	160.0653	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	160.012	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	160.0115	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	159.9809	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	159.8777	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12332	159.8636	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12304	159.8471	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12304	159.8471	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	159.7484	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	159.5867	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	159.5662	GEN642067 1-PLATTE
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12247	159.5404	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12318	159.4191	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12318	159.4191	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	159.3839	GEN542957 1-IATAN UNIT #1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12295	159.2531	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12295	159.2531	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12275	159.2109	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12423	159.0653	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12423	159.0653	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12423	159.0653	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12423	159.0653	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12428	158.9353	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12428	158.9353	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12428	158.9353	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12428	158.9353	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12297	158.8644	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12297	158.8416	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12297	158.8416	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12313	158.6515	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12313	158.6515	P12:115:UMZB:# 119 #: IN NE.
FDNSLock	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	158.4861	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	158.4575	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12222	158.3241	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12331	158.3147	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12317	158.2849	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12317	158.2849	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12329	158.2421	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	158.2162	1303-KEARNEY
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	158.2162	2560-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	158.2162	2561-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	158.2162	BASE CASE
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12323	158.1627	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12254	158.0724	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12279	158.0061	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12279	158.0061	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12335	157.9411	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12306	157.869	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12306	157.869	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12306	157.867	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12306	157.867	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	157.8005	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	157.7971	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12281	157.7427	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12327	157.72	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12327	157.72	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12288	157.6667	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12288	157.6667	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12288	157.6656	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12288	157.6656	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12285	157.605	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12285	157.605	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12276	157.3981	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12276	157.3981	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12354	157.3787	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12354	157.3787	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12317	157.3527	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12317	157.3527	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	157.3232	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	157.3232	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	157.3188	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12335	157.3177	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12335	157.3177	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	157.2896	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	157.2896	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	157.2832	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	157.279	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12222	157.1968	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12318	157.1748	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12318	157.1748	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12318	157.1582	P12:345:SPS:J07.1.FINN.HITCH
FDNSLock	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	156.928	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	156.917	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	156.3454	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12331	156.2375	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12323	156.0196	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	155.5751	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1194	155.5497	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1228	154.9073	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1228	154.7842	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1228	154.7835	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	151.5665	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11857	151.5662	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	150.4413	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	149.9906	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	149.7505	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17018	149.5725	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17018	149.5385	2810X2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	147.5681	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	146.8008	GEN659125 1-COVEY
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	146.7669	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	146.7669	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNSLock	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	145.2822	GEN615001 1-COAL CREEK
FDNSLock	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	145.1387	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	144.6195	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07986	144.3162	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08611	143.7287	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08604	143.725	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08614	143.625	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08992	143.4692	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08992	143.4692	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08655	143.1362	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08644	143.0409	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0855	142.9855	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	142.8836	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	142.8836	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08725	142.8689	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08725	142.8689	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	142.8294	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	142.7517	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	142.7317	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	142.6709	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08635	142.6499	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	142.6493	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	142.6493	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08598	142.5914	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	142.5908	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	142.5044	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	142.493	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	142.4614	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	142.4582	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08611	142.4535	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08589	142.4492	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	142.4244	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08762	142.3956	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08762	142.3886	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08762	142.3886	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	142.3875	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	142.3785	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	142.3779	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08625	142.3509	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08625	142.3509	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	142.2884	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08762	142.2839	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08762	142.2839	CARPENTER - WATERTOWN 230KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08643	142.2349	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	142.2266	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07983	142.1493	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08605	142.1236	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	142.1224	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08669	142.0923	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	142.0602	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08658	142.015	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08625	141.9928	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08625	141.9928	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.9915	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.991	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.9908	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08598	141.9904	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08609	141.99	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.9899	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08639	141.9845	EMMETE.TAP 7115.00 - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.9743	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	141.9429	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08698	141.9303	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	141.9123	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	141.9123	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	141.9082	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08635	141.898	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.8929	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.8754	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	141.8449	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	141.8449	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.8202	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08599	141.8194	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08635	141.8177	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	141.8049	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	141.7865	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	141.7865	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.7702	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.7659	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.7196	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	141.6983	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	141.6694	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08594	141.6375	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	141.6341	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	141.6276	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.6014	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	141.5963	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	141.5843	P12:115:NPPD:TSGT5:OGALALA7:ELSIETP7:BTB
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08609	141.573	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	141.5729	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.5579	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08606	141.549	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08606	141.549	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.528	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.5201	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	141.5123	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.5088	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.4968	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.4932	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08604	141.4911	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	141.4792	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	141.471	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	141.457	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	141.4564	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08658	141.4558	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08658	141.4557	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08597	141.4553	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.4544	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.4523	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	141.4515	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	141.4224	BALTA - RAMSEY 230KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.4043	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08618	141.3996	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08618	141.3996	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	141.3741	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	141.3733	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	141.3733	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.3617	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.3616	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08609	141.3539	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08604	141.3157	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08538	141.2786	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	141.2699	PRAIRIE - WINGER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	141.2664	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	141.2664	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.2586	GEN642067 1-PLATTE
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.2315	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.2303	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	141.228	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	141.2275	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	141.2275	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.2121	GEN525561 1-TOLK GEN #1 24 KV
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.2117	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	141.1995	P12:115:TSGT:BSPRGS7-WHORSE7
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08605	141.1987	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	141.1943	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08609	141.1792	AUDUBON - HUBBARD 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	141.153	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08614	141.1457	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08614	141.1457	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	141.1438	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.1305	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08611	141.1268	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.1097	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08611	141.1022	PRAIRIE - RAMSEY 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	141.0988	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.0975	GEN303006 1-1BC2 U1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.0968	GEN303007 1-1BC2 U2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.0927	GEN532722 1-EVANS ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	141.0843	P12:115:TSGT:COVALT7-SNAKECK7
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08611	141.064	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.0209	GEN514805 1-SOONER UNIT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.0199	GEN514806 1-SOONER UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	141.0055	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	141.0002	BURR - CANBY 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	140.9964	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.9947	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.9914	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.9913	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.9822	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.9662	GEN303008 1-1BC2 U3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.9641	GEN512688 2-GRDA1 GSU2 22
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	140.9454	P12:115:NPPD:TSGT2:W.HORSE7:B.SPRGS7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08596	140.9186	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08596	140.9186	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08611	140.8915	BALTA - RUGBY 230KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.8915	FARGO 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	140.8906	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.8499	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.8236	GEN515042 1-SEMINOLE 3G
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.8227	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.8201	FARGO 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	140.7802	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.7783	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08604	140.7763	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	140.7715	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.7593	GEN515041 1-SEMINOLE 2G
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.7411	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	140.7371	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.7356	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	140.7296	BLUE CREEK - W.HORSE7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	140.7131	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.7064	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.7064	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.6977	GEN501813 1-RODEMACHER UNIT 3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	140.6884	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	140.6884	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.6827	GEN515040 1-SEMINOLE 1G
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.6788	ONEILL 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.6745	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.6733	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08635	140.6696	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08595	140.6693	KELLY - SHELL CREEK 230KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08687	140.6658	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.638	GEN515225 1-MUSKOGEE 5G
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08609	140.6331	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.6311	GEN515226 1-MUSKOGEE 6G
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.626	GEN509394 1-FLINT CREEK
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.6198	GEN515223 1-MUSKOGEE 4G
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.6178	ONEILL 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	140.5986	COVALT 7 115.00 - LYNN 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08672	140.5973	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08672	140.5973	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08672	140.5973	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08672	140.5973	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08595	140.5811	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08595	140.5811	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.574	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	140.5724	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.5685	WATERTOWN 230KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.5647	GEN511840 1-NORTHEASTERN STATION #3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.5628	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08674	140.5626	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08674	140.5626	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08674	140.5626	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08674	140.5626	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.5601	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.5594	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.5594	WATERTOWN 230KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.5436	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.5335	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.5334	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.5334	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.5077	GEN509416 1-TURK GENERATION
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08583	140.5055	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.494	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.4933	GEN527903 1-HOBBS PLANT #3 (ST)
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.4896	GEN530690 1-PRWINDG1 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08611	140.4884	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.4877	GEN511843 1-RIVERSIDE STATION #2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.4818	GEN511842 1-RIVERSIDE STATION #1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	140.4779	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	140.4712	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	140.4712	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.086	140.4696	COLUMBUS - SILVER CREEK 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.4517	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.4493	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.4479	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.4442	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.4435	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	140.4354	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	140.4354	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.4311	488489510526345.00 - J510 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.4311	J510 345.00 345/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08702	140.4192	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.4176	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08598	140.4162	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.4124	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	140.405	ALBION - SPALDING 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	140.3993	FRANKS - HUBEN 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.3872	GEN523972 1-HARRINGTON GEN #2 24 KV
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.3872	GEN523973 1-HARRINGTON GEN #3 24 KV
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.3871	GEN523971 1-HARRINGTON GEN #1 24 KV

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.3805	GEN514939 1-HORSESHOE LAKE 8G
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	140.373	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	140.373	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	140.3685	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.3584	GEN528501 1-G14_012 24.000
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08599	140.352	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.3329	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08614	140.3295	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	140.3282	BIG SPRINGS - BLUE CREEK 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	140.3282	BIG SPRINGS - BLUE CREEK 115KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08687	140.3125	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.294	GEN511848 1-SOUTHWESTERN STATION #3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.2927	GEN526333 1-JONES GEN #3 21 KV
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.2759	GEN525844 1-ELK_1 118.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.2758	GEN525845 1-ELK_2 1 18.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.2719	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.2659	GEN526334 1-JONES_4 116.500
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.2623	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08599	140.2559	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.2414	GEN527166 1-MUSTANG_6 118.000
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08702	140.2318	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08744	140.1849	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08762	140.18	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08762	140.18	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.1755	ALBION 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08635	140.175	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.1718	ALBION 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.1681	GEN539670 4-JUDSON LARGE GENERATOR
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.1614	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.1534	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08589	140.1442	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08589	140.1442	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	140.1147	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.1078	GEN527901 1-HOBBS PLANT #1 (CT)
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.1078	GEN527902 1-HOBBS PLANT #2 (CT)
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11028	140.0973	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11021	140.0951	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.0942	GEN336464 1-MICHOUD UNIT #3
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08666	140.0847	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08577	140.0805	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.0703	OGALLALA (OGALLALA T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.0686	CALLAWAY 69KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08666	140.0616	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	140.0524	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.0509	CALLAWAY 69KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08514	140.0509	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08604	140.043	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08669	140.0417	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	140.0408	ANTELOPE 3345.00 - HOSKINS 345KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.0349	BROKEN BOW 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08609	140.0342	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	140.0191	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.986	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.9747	BROKEN BOW 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08641	139.9667	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	139.9557	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	139.9549	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.9494	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.9001	BYPASS - NORTH HASTINGS 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	139.8965	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08604	139.8933	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	139.8543	BROKEN BOW - CROOKED CREEK 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.8375	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08579	139.7996	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.7935	BLUSTEM7 345.00 - JEFFREY ENERGY CENTER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	139.7901	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	139.76	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	139.7561	HENNING - INMANN 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.7264	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.7264	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.7248	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	139.7001	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.6986	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.6983	SUB D - SUB I 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08609	139.6877	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	139.684	CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	139.684	CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	139.6661	KARLSTAD - WINGER 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	139.6217	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	139.6216	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	139.6185	G16-055-TAP 115.00 - HILDRETH 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	139.5977	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0858	139.5963	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08609	139.5961	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.596	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.5959	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	139.5922	HILDRTH7-PAULINE7-115kV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	139.5755	NW68TH & HOLDREGE - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	139.5755	NW68TH & HOLDREGE - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	139.5749	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08609	139.5637	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08609	139.5591	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08578	139.5437	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08578	139.5437	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	139.5187	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.5162	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	139.5051	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08606	139.4937	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08606	139.4937	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.487	SUB A - SUB I 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	139.4788	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	139.4681	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	139.4584	ALDA - SUB A 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	139.4489	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	139.4468	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08665	139.4325	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	139.4274	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	139.4112	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	139.404	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	139.404	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08614	139.3993	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08614	139.3993	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08595	139.3851	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08595	139.3851	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	139.3805	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.3572	GEN514806 1-SOONER UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08584	139.3497	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08584	139.3497	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	139.3334	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	139.3215	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.2718	1222-AINSWORTH WIND
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.2718	1273-CALLAWAY
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.2718	1291-ALBION
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.2718	1292-BROKEN BOW
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.2718	1303-KEARNEY
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.2718	1310-ONEILL
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.2718	2367-REDWLCK7 115.00
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.2718	2543-FARGO
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.2718	2560-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.2718	2561-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.2718	BASE CASE
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.2675	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	139.2557	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	139.2557	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	139.2323	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	139.2082	HOLCOMB - SETAB 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	139.2082	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.1999	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.1884	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	139.1817	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	139.1817	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08609	139.1796	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.1734	GEN525561 1-TOLK GEN #1 24 KV
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.1656	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08611	139.159	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	139.1379	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	139.1379	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	139.1309	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	139.1309	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	139.1244	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.0598	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08614	139.0473	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08614	139.0473	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	139.0331	ANSON - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	138.9785	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	138.9785	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	138.9775	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	138.9775	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08671	138.9726	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08671	138.9726	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08671	138.9726	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08671	138.9726	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08529	138.9031	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08595	138.8904	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08595	138.885	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08595	138.885	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08673	138.8638	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08673	138.8638	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08673	138.8638	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08673	138.8638	FT THOMPSON - OAHE 230KV CKT 4
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	138.8529	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11025	138.8448	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11019	138.8431	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08629	138.8112	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08514	138.7665	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	138.7297	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	138.7297	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	138.7175	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	138.7175	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	138.7161	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	138.7161	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	138.7116	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	138.6584	GRAND ISLAND - HASTINGS 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.086	138.5994	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	138.5974	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	138.5974	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	138.5875	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	138.5875	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	138.5861	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	138.5861	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	138.5839	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	138.5748	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08611	138.5551	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	138.5262	COPSTJCPFRSJ
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	138.5262	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	138.5262	STMDSJFAFACO
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	138.5233	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	138.453	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	138.4511	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	138.4189	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	138.4189	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08515	138.403	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	138.3881	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	138.3206	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	138.3206	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08575	138.2908	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08575	138.2908	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	138.2176	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	138.2114	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	138.181	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	138.1638	1222-AINSWORTH WIND
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	138.1638	1303-KEARNEY
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	138.1638	2560-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	138.1638	2561-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	138.1638	BASE CASE
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	138.1514	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	138.1306	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	138.126	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	138.1117	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	138.0883	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	138.0698	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	138.0515	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	138.0515	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0864	138.033	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	137.9991	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	137.9755	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	137.9751	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	137.9751	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0858	137.873	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08578	137.8108	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08578	137.8108	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08528	137.7952	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0858	137.755	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	137.6004	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	137.6004	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	137.5981	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	137.5981	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	137.5377	GRAND ISLAND - HASTINGS 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08584	137.5298	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08584	137.5298	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	137.4346	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	137.4346	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	137.4331	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	137.4331	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	137.3985	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	137.3985	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08515	137.3937	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.086	137.3719	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	137.3698	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	137.3698	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	137.3266	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	137.3265	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	137.2913	STMDSJFAFACO
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	137.2912	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	137.2912	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	137.1886	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	137.1813	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0858	137.1271	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08574	137.1154	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08574	137.1154	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0858	137.1131	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08611	137.0099	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	136.8878	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	136.8764	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	136.7915	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	136.4792	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	136.476	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	136.3345	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0858	135.8095	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0858	135.7583	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0858	135.6909	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	135.6286	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1237	135.2295	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1214	133.6149	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1214	133.574	2810X2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12952	132.6998	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12144	132.348	2810X2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12144	132.1864	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	132.1255	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	132.0752	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13395	132.0107	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	131.8212	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12144	131.6637	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	131.5776	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13374	131.1091	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	130.9311	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	130.4554	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	130.4554	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	130.4467	GEN659125 1-COVEY
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	129.8123	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	129.7846	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	129.7464	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	129.6989	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13201	129.619	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	129.0964	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13402	129.076	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13402	129.076	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12897	128.643	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	128.5664	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	128.491	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12897	128.397	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12897	128.38	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12897	128.38	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12732	128.1179	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1352	127.8005	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1352	127.8005	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13503	127.7209	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13503	127.7209	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13214	127.63	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13503	127.385	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12692	127.3326	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12692	127.3326	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12463	127.0705	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12952	127.0527	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12463	126.9941	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13152	126.981	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12463	126.9677	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12812	126.9664	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12812	126.9664	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12799	126.7906	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11318	126.6827	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12764	126.6416	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12784	126.5933	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	126.4414	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	126.37	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	126.37	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12708	126.2752	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13302	126.2342	P13:230-345:NPPD:STEGALL3:KV3A
FDNSLock	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13302	126.2266	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12914	126.1929	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12818	126.1769	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12708	126.166	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	126.1567	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12708	126.1508	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12708	126.1508	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12708	126.1475	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12708	126.1467	2809X2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12708	126.1414	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12708	126.1395	2809X1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12811	126.063	ARROWHEAD - ARROWHEAD 230 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	126.0101	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12775	125.9765	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12775	125.9765	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	125.943	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12775	125.8968	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	125.8787	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12775	125.8593	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12799	125.8154	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13037	125.7838	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	125.7563	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12812	125.6852	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12812	125.6852	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12732	125.6234	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12811	125.6194	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12656	125.5734	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	125.567	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	125.5481	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	125.4945	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	125.4945	GEN562715 1-G15_023_5 0.6900
FDNSLock	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12813	125.4351	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12571	125.426	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12914	125.4106	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12785	125.401	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12804	125.398	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13374	125.3689	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13374	125.3689	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12774	125.3396	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12817	125.3379	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12871	125.3323	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.16	125.3117	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.15991	125.3062	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12827	125.1813	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	125.1746	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12813	125.1623	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13028	125.1567	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	125.1164	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	125.0704	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12826	125.0663	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	125.0649	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13028	125.0563	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13028	125.0563	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12785	125.041	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12868	125.0237	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12846	124.9813	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13028	124.9694	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13028	124.9694	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12832	124.9499	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12871	124.9445	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.9204	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12832	124.9	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12826	124.8855	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.8228	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12868	124.8204	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.8175	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12832	124.8024	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.7977	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12789	124.7952	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12813	124.7801	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12837	124.7402	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12832	124.7321	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.7188	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12862	124.6861	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12862	124.6861	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13362	124.6786	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13362	124.6786	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13362	124.6786	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13362	124.6786	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.6689	GEN501813 1-RODEMACHER UNIT 3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12808	124.6415	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12789	124.6391	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12862	124.6384	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.123	124.6221	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12862	124.5219	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.5219	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12842	124.5065	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12842	124.5065	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.5063	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1309	124.4944	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1309	124.4903	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1309	124.4892	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12809	124.4698	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12832	124.4237	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12808	124.4053	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.4025	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12836	124.394	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12836	124.394	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12767	124.3776	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.367	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.3647	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.3645	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12722	124.3372	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12722	124.3358	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12826	124.3315	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12826	124.3305	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.3277	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12722	124.3263	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12722	124.3221	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12722	124.3214	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12722	124.3213	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12722	124.3185	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.2923	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.2921	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1283	124.2904	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12863	124.2754	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12845	124.2716	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12845	124.2611	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.257	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12793	124.2511	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12722	124.2492	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12792	124.2282	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12822	124.2263	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.212	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12845	124.2103	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12863	124.1705	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.146	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12825	124.1314	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.1209	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12863	124.1159	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12821	124.0874	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12825	124.0812	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12826	124.0809	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12835	124.079	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12835	124.079	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.0717	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12821	124.059	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12835	124.0568	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12825	124.0422	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12821	124.0411	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.0339	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1278	124.0303	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.0125	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.002	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12821	124.0015	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1285	123.9952	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1285	123.9952	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12823	123.9832	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.9682	GEN303007 1-1BC2 U2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.9681	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.9663	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.9641	GEN303006 1-1BC2 U1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.9151	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.9123	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.9108	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.9087	GEN303008 1-1BC2 U3
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.9071	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1285	123.9016	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1285	123.9016	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.8993	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.8954	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12851	123.8893	P12:115:NPPD:1090:AINSWND7:THEDFRD7:BTB
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12851	123.8883	AINSWORTH - CALAMUS 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.8824	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12851	123.8811	CALAMUS - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.8793	GEN642067 1-PLATTE
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12792	123.8727	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.8648	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.839	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12849	123.8355	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.796	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12767	123.2169	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.1878	BASE CASE
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.9701	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.9679	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12948	122.9528	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12948	122.9528	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12948	122.9528	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12948	122.9528	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12935	122.9498	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12935	122.9498	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12935	122.9482	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12935	122.9391	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12935	122.9376	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12935	122.9375	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12935	122.9375	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12953	122.9099	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12953	122.9099	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12953	122.9099	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12953	122.9099	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.7664	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.7606	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12825	122.73	CRETE - FRIEND 115KV CKT 1
FDNSLock	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.7188	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.7171	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12935	122.6754	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12847	122.6535	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12847	122.6535	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12791	122.6522	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12791	122.6522	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.6494	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12838	122.5988	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12817	122.5988	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.5871	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.5856	GEN652548 5-FT RANDAL
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.5856	GEN652549 7-FT RANDAL
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.567	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.5609	GEN652547 3-FT RANDAL
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.529	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12823	122.5032	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.5019	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.4991	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.499	GEN590011 2-ERCOT EQUIVALENCE
FDNSLock	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.4987	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.4949	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.4917	GEN635214 4-NEAL UNIT 4

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.481	GEN659290 1-EDGECOL
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12827	122.4578	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12843	122.4562	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.4509	GEN652410 3-FT PECK
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.4322	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.4249	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.423	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12825	122.4128	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.4043	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.4043	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.3995	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.3981	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.3981	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.398	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.3956	GEN657600 1-L1GEN3 9 0.5750
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.393	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.3858	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.383	GEN652414 4-FT PECK
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.383	GEN652415 5-FT PECK
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.3781	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.3652	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12855	122.3611	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.3556	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.3405	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13116	122.3204	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.3121	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.312	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.3118	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13105	122.3043	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.2996	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.2996	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12856	122.2795	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12856	122.2795	MINGO - SETAB 345KV CKT 1
FDNSLock	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.2744	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.2714	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.255	GEN600050 1-FEP
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12798	122.2549	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12798	122.2549	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12823	122.248	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12818	122.2474	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12818	122.2474	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.2285	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.2242	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13116	122.2207	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13116	122.2202	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13116	122.2193	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.2083	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.2056	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.2056	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13116	122.1902	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13116	122.1902	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12802	122.1757	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12802	122.1757	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.1656	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12799	122.1638	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.1585	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.1585	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13116	122.1421	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.1122	GEN659192 6-LYNN
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.111	GEN659162 4-RED WLCK
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.111	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.1081	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.104	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.075	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.0739	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.0677	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.0667	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.0638	GEN600070 9-RIVER SIDE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.0637	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.063	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.0483	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	122.0334	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12818	122.031	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.9907	GEN600017 C-LS POWER CT
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.9767	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.9535	GEN681522 3-GENOA 3
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.9514	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.9343	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.9236	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.9236	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.9092	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.9002	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.8786	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.8707	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.8534	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12877	121.7793	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12877	121.7793	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.729	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.7276	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.7068	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12738	121.7024	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.6993	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.672	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.6635	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.6218	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.576	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.576	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.576	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.341	GEN652460 4-GARRISON
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.3408	GEN652461 5-GARRISON
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.3197	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.3105	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.2993	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.2988	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.2905	GEN652458 2-GARRISON
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.2905	GEN652459 3-GARRISON
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.2904	GEN652457 1-GARRISON
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.2325	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12798	121.2272	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08849	121.215	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.2149	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12798	121.197	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12798	121.188	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.1848	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12853	121.1427	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	121.0637	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	120.9893	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	120.793	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	120.6205	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	120.6018	GEN652559 1-OAHE
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	120.6002	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	120.552	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	120.5497	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	120.5464	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12843	120.4918	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	120.3786	GEN652556 2-OAHE
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	120.3786	GEN652558 6-OAHE
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	120.3492	GEN652557 5-OAHE
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	120.2935	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	120.162	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	120.1359	GEN615010 1-STANTON4
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	120.0826	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	119.9344	GEN659141 1-K10215A
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	119.8445	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	119.8162	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	119.7811	GEN652353 2-GR PRAIRIEG 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	119.7293	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	119.7293	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	119.7034	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17628	119.6633	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17628	119.6489	2810X2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	119.6265	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	119.6213	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	119.5519	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	119.3193	GEN600006 1-AS KING
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	119.1943	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09153	119.0999	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17628	119.0561	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	118.7094	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08563	118.501	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09136	118.4063	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	118.2932	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	117.9625	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0902	117.6256	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	117.4497	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	117.2535	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	117.2429	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09164	117.1989	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09164	117.1989	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08699	117.0359	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	116.862	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08849	116.8514	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	116.7854	GEN661015 1-COYOTE
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	116.6489	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08721	116.6159	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08721	116.6159	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	116.4318	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.092	116.4046	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.092	116.4046	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	116.4039	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	116.3824	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	116.3824	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09188	116.3497	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09188	116.3497	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12454	116.2344	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	116.1991	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08748	116.1739	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08748	116.1739	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09188	116.1471	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0869	116.0423	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0869	116.0009	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	115.9753	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0869	115.9634	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	115.9027	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08736	115.8932	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08635	115.8727	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08981	115.8589	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08751	115.7786	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08736	115.7642	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	115.7551	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17628	115.731	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17628	115.731	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08739	115.6201	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08679	115.5879	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08714	115.5136	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08821	115.4733	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08728	115.458	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08698	115.3186	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	115.2342	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	115.2334	GEN659125 1-COVEY
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08753	115.2165	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08759	115.2101	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	115.1637	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08737	115.1604	GRIMES - LEHIGH 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08759	115.1391	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	115.1361	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08759	115.121	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08759	115.121	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08736	115.0573	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08902	115.0388	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	115.0068	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08774	114.9901	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.9691	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.9364	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08824	114.9106	FT RANDAL - UTICA JCT 230KV CKT 1
FDNSLock	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08735	114.8945	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08728	114.8746	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.8617	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.8384	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.8384	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.7781	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.7649	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.7277	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.695	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.6865	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08779	114.6792	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08774	114.6522	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08851	114.6215	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09136	114.6148	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09136	114.6148	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08735	114.5993	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0879	114.5298	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0874	114.5263	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0879	114.5178	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08731	114.5164	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08779	114.5086	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0879	114.4664	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.4607	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08635	114.4189	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.4053	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08733	114.351	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.3443	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08744	114.343	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	114.3283	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0875	114.3104	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0875	114.3104	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	114.2978	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08772	114.2973	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.2768	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08714	114.2714	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.2618	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.2484	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.2479	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08707	114.2361	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08687	114.2332	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08687	114.2332	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08687	114.2074	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08738	114.1906	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	114.1856	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.1713	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.1713	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0873	114.1653	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12368	114.164	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08733	114.1563	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0874	114.1538	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08817	114.1516	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08687	114.1414	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08687	114.138	2809X2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08687	114.1343	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08687	114.1336	2809X1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08687	114.127	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.1116	GEN501813 1-RODEMACHER UNIT 3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.0818	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08902	114.0803	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08741	114.0644	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.0607	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0876	114.0537	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08718	114.0459	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.0454	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.0414	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.0411	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.0409	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08745	114.0297	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.0284	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.0284	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.0283	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.0167	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08752	114.0156	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08717	114.012	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08717	114.0101	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.005	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08902	113.9953	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08902	113.9953	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0875	113.9929	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0875	113.9929	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08772	113.9909	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	113.9901	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	113.99	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08733	113.9866	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08772	113.9765	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	113.9753	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08772	113.9742	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	113.9627	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08747	113.9601	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08747	113.9601	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08769	113.9566	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	113.9531	GEN642067 1-PLATTE
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	113.9427	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08902	113.9414	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08902	113.9414	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	113.9333	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08795	113.9184	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08772	113.9148	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	113.8941	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08772	113.8832	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08769	113.8832	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08742	113.8588	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08769	113.8291	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08759	113.8291	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08759	113.8291	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	113.8108	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	113.7997	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	113.7995	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08752	113.7985	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08742	113.7972	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08718	113.782	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08736	113.7795	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08799	113.7793	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08817	113.7775	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	113.7041	GEN563212 1-G15087_3 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	113.6632	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08742	113.6555	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNSLock	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	113.1618	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	113.1497	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	113.145	BASE CASE
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08657	112.9708	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.9566	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.9475	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08818	112.9275	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08728	112.8998	KELLY - SHELL CREEK 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08728	112.8972	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08728	112.8972	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.849	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.8477	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.7449	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.7414	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08818	112.6782	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08818	112.6782	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08818	112.6772	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08818	112.6744	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08818	112.6735	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08818	112.6735	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08818	112.6735	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08734	112.4881	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0874	112.4774	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08745	112.4605	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08746	112.4083	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08977	112.3977	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.3783	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08734	112.3758	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.3741	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08968	112.3634	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.3545	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08743	112.3532	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.3529	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08707	112.348	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08707	112.348	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.3264	GEN681522 3-GENOA 3
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.3239	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08712	112.319	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08712	112.319	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.317	GEN659274 1-GROTON
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08977	112.3127	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08977	112.3124	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08977	112.3114	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNSLock	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08745	112.291	STMDSJFAFACO
FDNSLock	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08745	112.2909	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08745	112.2909	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.2903	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.2864	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.2777	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.2773	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.2681	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.2681	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08977	112.2527	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08977	112.2527	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08977	112.2453	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.2344	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.2328	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0874	112.2199	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.1948	GEN659270 1-WEST SW
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.1808	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.1777	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08734	112.1749	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.1457	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08717	112.1445	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08717	112.1445	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.1261	GEN657705 X-DRAYTON
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.108	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08745	112.0841	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.0424	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.0186	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.0186	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	112.0186	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08745	112.0159	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08745	112.0153	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.9398	GEN652460 4-GARRISON
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.9398	GEN652461 5-GARRISON

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.9275	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08745	111.9268	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08651	111.9173	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.9057	GEN652458 2-GARRISON
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.9057	GEN652459 3-GARRISON
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.9056	GEN652457 1-GARRISON
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08713	111.8982	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.8796	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.8738	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.8736	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.8653	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.8626	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.844	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.8438	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.8308	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.7927	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.7335	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.6619	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.6587	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.6181	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.6085	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.5581	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.5216	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.447	GEN652559 1-OAHE
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.3936	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.3837	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.1744	GEN652556 2-OAHE
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.1744	GEN652558 6-OAHE
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.1538	GEN652557 5-OAHE
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	111.0873	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08713	111.0414	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08713	111.0185	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08713	111.0152	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	110.9919	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	110.9838	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	110.9806	GEN659141 1-K10215A
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	110.9781	GEN615010 1-STANTON4
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	110.9562	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	110.9527	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	110.8408	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	110.7259	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	110.7221	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	110.718	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	110.6803	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	110.6399	GEN600006 1-AS KING
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	110.6292	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	110.6292	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	110.6266	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	110.6019	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12321	110.3698	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12321	110.3632	2810X2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	110.3316	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12321	110.1226	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNSLock	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	109.9458	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	109.898	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	109.5349	GEN659118 1-LARAMIE RIVER UNIT1
FDNSLock	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	109.2994	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	108.872	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	108.7729	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	108.6719	GEN661015 1-COYOTE
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	108.542	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	108.542	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	108.4366	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	108.4366	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	108.2952	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	107.9101	GEN659125 1-COVEY
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12321	107.8933	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12321	107.8933	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	106.8951	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	106.8113	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	106.6765	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08344	104.5842	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	102.6602	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	102.4617	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	102.4617	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08254	101.313	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	133.1934	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	132.4541	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	132.2094	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	132.208	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	131.3232	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	131.3232	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	129.964	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	129.964	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	129.9001	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	129.9001	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	129.7801	GEN335831 1-RIVERBEND UNIT#1
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13826	129.6629	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	129.575	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13562	129.4002	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13826	129.3989	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1364	129.2002	RASMUSN - UTICA JCT 230KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	128.8555	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13585	128.8332	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	128.8312	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	128.8147	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	128.743	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	128.7428	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	128.7133	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	128.7084	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	128.6786	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1358	128.5493	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	128.3545	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13598	128.2316	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	128.2119	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14107	128.1817	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14107	128.1817	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	128.1732	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13599	128.1616	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	128.16	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	128.16	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13593	128.0078	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13634	127.8404	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13798	127.8335	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13798	127.8335	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13631	127.818	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.136	127.7958	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	127.7124	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13828	127.611	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	127.5963	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	127.5954	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13567	127.5027	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13583	127.3917	CENTER - COYOTE 345KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13584	127.3782	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	127.3677	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	127.3592	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	127.3502	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13483	127.3317	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13578	127.2605	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13601	127.198	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	127.1921	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13588	127.1192	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	127.0984	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13572	127.0776	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	127.0744	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13592	127.0351	FORMAN - OAKES 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13569	127.0007	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13575	126.971	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13575	126.971	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	126.96	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.9431	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13601	126.9302	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13622	126.8735	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13643	126.8593	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13629	126.7785	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	126.7216	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13548	126.6855	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.6649	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.6643	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.5853	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13819	126.5852	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1373	126.5515	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1373	126.5515	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	126.5479	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13492	126.5145	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	126.5023	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13622	126.4967	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.4866	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1362	126.4665	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13819	126.4653	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	126.4358	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13819	126.4265	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	126.4031	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13556	126.4019	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1357	126.3942	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.3817	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.3811	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	126.3515	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13814	126.3439	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	126.3303	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.3224	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13587	126.3129	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13596	126.3031	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13596	126.3031	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13751	126.2997	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13751	126.2996	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13587	126.2919	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13787	126.2915	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	126.2848	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13787	126.2844	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13787	126.2844	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.2429	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.2196	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.2196	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13836	126.2097	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.2067	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.1989	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13787	126.1928	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13787	126.1928	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13751	126.1862	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13559	126.1767	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13814	126.1728	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13613	126.1569	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13613	126.1569	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.1254	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1371	126.1139	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.1021	GEN525561 1-TOLK GEN #1 24 KV
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.0741	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13615	126.067	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.0626	GEN642067 1-PLATTE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	126.0616	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13579	126.0478	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	126.0436	ANSON - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	126.0145	GEN334440 1-SABINE UNIT 4

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13587	126.0006	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13587	126.0006	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13681	125.9751	GORDON - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.9747	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13899	125.9684	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13814	125.9566	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.9543	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.9543	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.936	GEN514806 1-SOONER UNIT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.927	GEN514805 1-SOONER UNIT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13584	125.927	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.9125	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.9116	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.9115	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.911	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.8916	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.8873	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.8862	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1362	125.8842	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17139	125.8713	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1713	125.8699	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13622	125.8657	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	125.8477	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	125.8477	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13588	125.8436	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1362	125.8293	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.8263	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.8225	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.8078	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.8036	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.7931	GEN530690 1-PRWINDG1 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	125.7854	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	125.7829	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	125.7829	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.7825	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.7814	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.777	GEN515042 1-SEMINOLE 3G
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.7746	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.7643	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.7563	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.747	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13943	125.74	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13943	125.74	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13573	125.7374	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.7265	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13716	125.6954	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13716	125.6954	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13716	125.6954	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13716	125.6954	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	125.6928	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	125.6549	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13582	125.5903	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13632	125.5896	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.5886	GEN511840 1-NORTHEASTERN STATION #3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.5881	GEN511843 1-RIVERSIDE STATION #2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1372	125.5868	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1372	125.5868	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1372	125.5868	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1372	125.5868	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.5855	GEN511842 1-RIVERSIDE STATION #1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.5803	GEN515226 1-MUSKOGEE 6G
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.5794	GEN515225 1-MUSKOGEE 5G
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.577	GEN515223 1-MUSKOGEE 4G
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.5768	GEN512688 2-GRDA1 GSU2 22
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.5707	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.5651	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.565	GEN509394 1-FLINT CREEK
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.5594	GEN511839 1-NORTHEASTERN STATION #2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.5556	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	125.5525	P12:115:NPPD:TSGT5:OGALALA7:ELSIETP7:BTB
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	125.5471	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.5449	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	125.542	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.5401	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13615	125.5318	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.5311	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.5268	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	125.5138	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13549	125.5061	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.5013	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	125.4957	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13581	125.4827	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13581	125.4827	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13611	125.4787	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.4785	GEN513601 1-GRECCTG_1 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13592	125.4601	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	125.4601	HENNING - INMANN 230KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.4589	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13549	125.4498	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.4466	GEN541151 3-SIBLEY GENERATING UNIT #3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13592	125.435	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13615	125.4215	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	125.3836	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	125.3801	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.3779	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13592	125.3741	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13592	125.3741	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13822	125.3436	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13612	125.3417	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13585	125.339	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13607	125.3337	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.3212	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13579	125.3126	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13573	125.2909	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.2744	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	125.2498	PRAIRIE - WINGER 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13511	125.2376	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	125.2296	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.2292	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.2234	GEN509416 1-TURK GENERATION
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.2221	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.2166	GOTHENBURG - JEFFREY 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.2124	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13579	125.206	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13539	125.2015	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	125.1999	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.1943	1222-AINSWORTH WIND
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.1943	1303-KEARNEY
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.1943	2367-REDWLCK7 115.00
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.1943	2560-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.1943	2561-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.1943	BASE CASE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13585	125.174	AUDUBON - HUBBARD 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.1726	GEN509404 1-WELSH #1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.1726	GEN509406 1-WELSH #3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13482	125.172	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13632	125.1686	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13583	125.1683	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	125.1542	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13539	125.147	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13539	125.147	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	125.1453	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	125.1343	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13632	125.1328	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	125.1268	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.1008	GEN640009 1-COOPER NUCLEAR STATION

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	125.096	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.0927	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.0927	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13588	125.0894	PRAIRIE - RAMSEY 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13545	125.082	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	125.0776	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.0705	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13757	125.0648	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.0559	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.0553	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.0548	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.0492	GEN509403 1-PIRKEY GENERATION
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	125.0482	EMMETE.TAP 7115.00 - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	125.0476	P12:115:NPPD:1142:JEFFREY7:COZAD 7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	125.0468	GEN303008 1-1BC2 U3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13671	125.0269	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	125.0158	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	125.0158	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	125.0032	BURR - CANBY 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13514	124.9928	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	124.9922	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	124.982	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	124.9655	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13597	124.9553	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	124.9484	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13597	124.9413	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	124.9326	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13627	124.929	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	124.922	P12:115:TSGT:COVALT7-SNAKECK7
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13588	124.9061	BALTA - RUGBY 230KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.8968	FARGO 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13597	124.8853	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	124.8837	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13627	124.8787	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13585	124.8726	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13585	124.8726	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13597	124.8649	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.8624	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13587	124.8591	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13597	124.8493	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	124.8473	GEN300002 1-THOMAS HILL UNIT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13604	124.8433	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13604	124.8433	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13601	124.843	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13601	124.843	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.136	124.8417	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.136	124.8417	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.8383	FARGO 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.8264	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.8263	GEN525561 1-TOLK GEN #1 24 KV
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13612	124.8202	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1371	124.8146	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13597	124.8024	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1371	124.7971	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1371	124.7971	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	124.7819	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13591	124.7789	CENTER - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1371	124.7488	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13607	124.7409	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13607	124.7409	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.7364	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1371	124.7253	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1371	124.7249	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1371	124.7249	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	124.7185	COVALT 7 115.00 - LYNN 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13566	124.7148	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13566	124.7148	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.7041	GEN645012 2-NEBRASKA CITY 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	124.6871	COOPER - MOORE 345KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.6778	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	124.6734	P12:115:TSGT:BSPRGS7-WHORSE7
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.6519	GEN642067 1-PLATTE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	124.651	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.625	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.6188	WATERTOWN 230KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	124.6172	ALBION - PETERSBURG 115KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.6123	WATERTOWN 230KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13612	124.6038	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13583	124.6032	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13583	124.6032	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.5867	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.5721	GEN532722 1-EVANS ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	124.5705	BLUE CREEK - W.HORSE7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	124.562	P12:115:NPPD:TSGT2:W.HORSE7:B.SPRGS7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.5272	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.5162	ONEILL 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	124.511	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	124.511	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.505	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.4843	ONEILL 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.4607	GEN514806 1-SOONER UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.4594	GEN514805 1-SOONER UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13607	124.4577	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13607	124.4577	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	124.4464	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	124.4463	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13511	124.4376	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.43	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13592	124.4261	P12:115:NPPD:TSGT5:OGALALA7:ELSIETP7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.4242	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13592	124.4186	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	124.4181	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	124.4177	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13573	124.3901	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13573	124.3901	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	124.3884	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13592	124.3775	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13578	124.3745	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.367	488489510526345.00 - J510 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.367	J510 345.00 345/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.3602	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.3542	GEN527903 1-HOBBS PLANT #3 (ST)
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13578	124.3465	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13578	124.3465	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	124.3459	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	124.3459	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.3448	ANSON - SPLIT ROCK 115KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.3422	ANSON 115/17.5KV TRANSFORMER CKT 4
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.3172	GEN515042 1-SEMINOLE 3G
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.3167	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.3061	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	124.2966	BIG SPRINGS - BLUE CREEK 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	124.2966	BIG SPRINGS - BLUE CREEK 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.296	GEN530690 1-PRWINDG1 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.2901	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.285	ANSON - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.2845	GEN515041 1-SEMINOLE 2G
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13579	124.2845	COLUMBUS - SILVER CREEK 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17132	124.2835	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17122	124.2818	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.2693	GEN528501 1-G14_012 24.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.2663	GEN523971 1-HARRINGTON GEN #1 24 KV
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.2663	GEN523972 1-HARRINGTON GEN #2 24 KV
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.2663	GEN523973 1-HARRINGTON GEN #3 24 KV
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.25	GEN515040 1-SEMINOLE 1G
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.2344	GEN512688 2-GRDA1 GSU2 22

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	124.2305	ALBION - SPALDING 115KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	124.2303	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	124.2232	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.2195	GEN539670 4-JUDSON LARGE GENERATOR
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.2128	GEN526333 1-JONES GEN #3 21 KV
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.202	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.1971	GEN526334 1-JONES_4 116.500
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13588	124.1952	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.1938	GEN527166 1-MUSTANG_6 118.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	124.1881	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	124.1881	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.1815	GEN525844 1-ELK_1 118.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.1815	GEN525845 1-ELK_2 1 18.000
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13743	124.1747	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13592	124.1684	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13592	124.1684	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1371	124.1551	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1371	124.1551	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1371	124.1551	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1371	124.1551	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	124.1332	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.1266	GEN514939 1-HORSESHOE LAKE 8G
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.1228	GEN511840 1-NORTHEASTERN STATION #3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	124.1189	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	124.1161	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13593	124.1159	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13593	124.1159	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	124.1156	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.1126	GEN515225 1-MUSKOGEE 5G
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.1106	GEN515226 1-MUSKOGEE 6G
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.1072	GEN527901 1-HOBBS PLANT #1 (CT)
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.1072	GEN527902 1-HOBBS PLANT #2 (CT)
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	124.1068	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.1068	GEN515223 1-MUSKOGEE 4G
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13545	124.1068	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13545	124.1068	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.0957	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.0956	GEN511848 1-SOUTHWESTERN STATION #3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	124.0926	ANTELOPE 3345.00 - HOSKINS 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.0841	GEN526331 1-JONES GEN #1 22 KV
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.084	GEN526332 1-JONES GEN #2 21 KV
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.0768	GEN509394 1-FLINT CREEK
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13596	124.0753	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.0711	GEN511839 1-NORTHEASTERN STATION #2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.0692	GEN511843 1-RIVERSIDE STATION #2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	124.068	BLUSTEM7 345.00 - JEFFREY ENERGY CENTER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.0668	GEN511842 1-RIVERSIDE STATION #1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.0656	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.0539	ALBION 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.0434	GEN524023 1-NICHOLS GEN #3 22 KV
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	124.0285	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.0283	GEN562026 1-G11_019_3 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.0253	GEN563162 1-G15081_3 0.6900
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.0211	ALBION 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124.0006	AINSWORTH 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	124	GEN562023 1-G11_020_3 0.6900
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.9852	AINSWORTH 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13545	123.9834	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.969	GEN563082 1-G15073_3 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.9649	GEN640028 1-COLUMCOGENERATION
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.9631	GEN513601 1-GRECCTG_1 20.000
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.9629	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.9388	COLUMBUS 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13541	123.9385	BISON - HETINGER 230KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.9341	STEGALL 230KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.9156	GEN541151 3-SIBLEY GENERATING UNIT #3
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.9119	COLUMBUS 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.9108	KEARNEY 115KV SWITCHED SHUNT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.9088	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.9014	STEGALL 230KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.8868	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.8865	GEN520947 1-HUGO1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.8863	GEN514936 1-HORSESHOE LAKE 7S
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13499	123.8749	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	123.8727	BYPASS - NORTH HASTINGS 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.8674	GOTHENBURG - JEFFREY 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.8533	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.8517	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.8447	RED WILLOW (RD.WILLOW T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.8447	RED WILLOW (RD.WILLOW T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13592	123.8443	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.834	GEN509416 1-TURK GENERATION
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13597	123.8297	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.8284	CALLAWAY 69KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.8239	CALLAWAY 69KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.8214	BROKEN BOW 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13597	123.8201	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.8186	BROKEN BOW 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	123.8181	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.8158	INTERSTE 8 69.000 69KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.8093	OGALLALA (OGALLALA T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13591	123.8054	SUB 3454 - SUB 3455 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13591	123.8054	SUB 3454 - SUB 3455 345KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7999	INTERSTE 8 69.000 69KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7933	JOHNSON LAKE - JOHNSON NO 1 115KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7925	NORTH LOUP 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7877	SUB D - SUB I 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7876	W.HORSE7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7874	COZAD 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7863	GRANTNB7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7843	LAMAR 7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7801	LOUP CITY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7739	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7705	GRANTNB7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7703	COZAD 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7697	W.HORSE7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7689	INTERST7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7688	INTERST7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.768	LAMAR 7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7658	LOUP CITY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7627	CANADAY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7621	LAMAR 7 115.00 - SPCREEK7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	123.7584	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7546	CANADAY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7524	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	123.7514	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7438	G16-055-TAP 115.00 - HILDRETH 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7408	BROKEN BOW - CROOKED CREEK 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7379	NORTH PLATTE (N.PLATTE T8) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7379	NORTH PLATTE (N.PLATTE T8) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7379	NORTH PLATTE (N.PLATTE T9) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7379	NORTH PLATTE (N.PLATTE T9) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7357	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7357	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 2
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13541	123.7347	BISON - MAURINE 230KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7336	MCCOOK 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7333	MCCOOK 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7328	MALONEY 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7315	HILDRTH7-PAULINE7-115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7286	ENDERS - GRANTNB7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7281	GRANTNB7 115.00 - OGALALA7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7281	GRANTNB7 115.00 - OGALALA7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7228	P12:115:NPPD:TSGT3:LAMAR 7:GRANTNB7:BTB
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7226	BROKEN BOW 69KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.7127	HOLDREGE 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.6977	CENTRAL CITY 115KV SWITCHED SHUNT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.6957	GEN509406 1-WELSH #3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.6955	GEN509404 1-WELSH #1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	123.687	CANADAY - CROOKED CREEK 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.685	NORTH LOUP 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.6829	BEVERLY 69KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.6822	BROKEN BOW 69KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.6791	BEVERLY 69KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	123.6786	ALDA - SUB A 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13604	123.678	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13604	123.678	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.6756	CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.6756	CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13591	123.6696	NW68TH & HOLDREGE - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13591	123.6696	NW68TH & HOLDREGE - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.663	SUB A - SUB I 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.6609	HOLDREGE 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.6502	GEN509403 1-PIRKEY GENERATION
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	123.6465	NORTH PLATTE - STOCKVILLE 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.6419	MALONEY 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.641	CENTRAL CITY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.6345	COZAD - GOTHENBURG 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	123.6295	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	123.6295	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	123.6134	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.6028	HOLCOMB (HOLCOMB) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.6028	HOLCOMB (HOLCOMB) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	123.6011	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	123.6011	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.5968	P12:115:NPPD:1142:JEFFREY7:COZAD 7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.5949	GEN509409 1-WILKES #3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	123.592	CANADAY (CANADAY T4) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	123.592	CANADAY (CANADAY T4) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.5901	GEN509398 1-KNOXLEE #5
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1222-AINSWORTH WIND
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1250-MALONEY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1271-BEVERLY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1272-BROKEN BOW
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1273-CALLAWAY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1290-AINSWORTH
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1291-ALBION
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1292-BROKEN BOW
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1293-CANADAY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1294-CENTRAL CITY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1295-COLUMBUS
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1296-COZAD
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1302-HOLDREGE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1303-KEARNEY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1304-LOUP CITY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1305-MCCOOK
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1306-NORTH LOUP
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	1310-ONEILL
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	2363-GRANTNB7 115.00
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	2364-INTERST7 115.00
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	2367-REDWLCK7 115.00
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	2368-LAMAR 7 115.00
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	2369-INTERSTE 8 69.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	2543-FARGO
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.568	BASE CASE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13597	123.5613	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.5582	SHUNT-640270
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.5582	SHUNT-640270
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	123.5521	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	123.5359	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.4886	COLBY - MINGO 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.4886	COLBY - MINGO 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	123.4842	NORTH LOUP - SPALDING 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1371	123.47	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13593	123.4303	SUB 3455 - SUB 3740 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13593	123.4303	SUB 3455 - SUB 3740 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13555	123.4158	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13555	123.4158	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13596	123.4107	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13596	123.4107	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	123.4107	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	123.3732	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	123.346	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	123.346	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	123.3451	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	123.3451	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	123.3342	P12:115:NPPD:1131B:REDWILO7:STOCKVL7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13698	123.3154	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	123.3066	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	123.2972	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	123.2699	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	123.2622	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13601	123.2617	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13601	123.2617	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13698	123.2375	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13601	123.2333	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13563	123.2263	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	123.2081	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	123.2058	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13562	123.1889	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13562	123.1889	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	123.1833	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13596	123.1794	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13596	123.1794	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1358	123.1681	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1358	123.1681	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1358	123.1673	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1358	123.1673	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13604	123.1334	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13604	123.1334	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13593	123.1292	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	123.0255	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	123.0023	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13572	122.9968	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13572	122.9968	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	122.9924	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	122.9781	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13499	122.9583	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13579	122.8563	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	122.7979	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	122.7808	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	122.7742	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13698	122.7081	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13698	122.7081	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13698	122.7032	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13698	122.7032	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13698	122.6983	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	122.6655	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	122.6546	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	122.654	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	122.6172	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13583	122.61	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	122.5891	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13729	122.5792	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13698	122.3301	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1355	122.0529	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13564	121.9675	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13591	121.938	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13591	121.938	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13564	121.9218	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	121.8662	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	121.8357	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	121.8284	GEN600003 1-PRAIRIE ISLAND G1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13564	121.8251	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	121.7328	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13593	121.6656	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13593	121.6656	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	121.4157	GEN600006 1-AS KING
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13591	121.389	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13591	121.389	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	121.3814	GEN652556 2-OAHE
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	121.3814	GEN652557 4-OAHE
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	121.3814	GEN652558 6-OAHE
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	121.2586	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	121.2161	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	121.158	GEN659141 1-K10215A
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	121.0805	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	121.0799	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	120.9897	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	120.8924	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	120.8924	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	120.8732	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	120.786	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	120.7617	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	120.6517	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	120.6067	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	120.5876	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	120.5875	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	120.5776	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	120.5502	GEN652559 1-OAHE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	120.3353	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	120.1766	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	120.1743	GEN600006 1-AS KING
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13553	120.0955	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	120.0241	GEN652556 2-OAHE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	120.0241	GEN652557 4-OAHE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	120.0241	GEN652558 6-OAHE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	119.9593	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13553	119.8727	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	119.8537	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13553	119.8357	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	119.7004	GEN659141 1-K10215A
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	119.5233	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	119.5191	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	119.319	GEN661015 1-COYOTE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	119.2481	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	119.2274	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	119.2222	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	119.1586	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	119.1393	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	119.124	GEN652559 1-OAHE
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	118.9175	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	118.5861	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	118.3297	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	118.2944	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	118.1817	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.18618	117.8683	2810X2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	117.8512	GEN661015 1-COYOTE
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.18618	117.6915	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	117.637	GEN620315 1-BIG STONE GEN
FDNSLock	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	117.5779	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	117.2203	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.18618	117.0956	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.18598	116.8536	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.18598	116.8154	2810X2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	116.3889	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	116.3889	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	116.2161	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	116.1049	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.18598	116.0739	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	115.9529	GEN659111 2-LELAND OLDS UNIT2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	115.4632	GEN659125 1-COVEY
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	115.2877	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	115.2877	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	115.2874	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	115.1792	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12605	115.1001	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	114.8691	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	114.2239	GEN659125 1-COVEY
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	114.1057	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	114.1057	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	114.0132	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12256	113.9433	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	113.7445	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	113.6217	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	113.545	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	113.5368	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12256	113.4527	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	113.319	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12282	113.3162	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	113.2538	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12393	113.2236	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	113.1641	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	113.045	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.125	112.9095	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	112.797	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	112.6582	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	112.6014	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	112.6	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12385	112.4913	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	112.384	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12301	112.1942	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12506	112.0844	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12506	112.0564	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12506	112.0564	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12282	112.0485	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNSLock	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	112.0318	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12506	111.8632	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12506	111.8632	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	111.6852	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12292	111.4634	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12263	111.3485	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12271	110.7857	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12283	110.6932	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12221	110.5742	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1228	110.4117	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.15546	110.2866	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.15537	110.2828	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	110.2508	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12245	110.0694	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	110.0634	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	109.8593	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	109.8123	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	109.812	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12332	109.7279	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	109.7051	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	109.6884	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12284	109.6721	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	109.6649	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	109.6554	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	109.5306	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12247	109.5017	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	109.4897	GEN642067 1-PLATTE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	109.4895	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12318	109.4188	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12318	109.4188	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	109.3934	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	109.2346	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12275	109.1182	CROOKED CREEK - RIVERDALE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12295	109.1138	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12295	109.1138	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12423	108.9472	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12423	108.9472	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12423	108.9472	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12423	108.9472	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12297	108.8788	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12428	108.8741	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12428	108.8741	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12428	108.8741	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12428	108.8741	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12297	108.869	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12297	108.869	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12313	108.8673	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12313	108.8673	P12:115:UMZB:# 119 #: IN NE.
FDNSLock	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	108.7675	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	108.7547	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	108.7404	1303-KEARNEY
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	108.7404	2560-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	108.7404	2561-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	108.7404	BASE CASE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12331	108.5954	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12317	108.5936	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12317	108.5936	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12222	108.5721	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12329	108.5184	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12323	108.488	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12254	108.4165	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12279	108.3849	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12279	108.3849	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12306	108.3156	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12306	108.3156	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12306	108.3132	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12306	108.3132	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	108.2366	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12288	108.1851	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12288	108.1851	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12288	108.184	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12288	108.184	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12327	108.1376	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12327	108.1376	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12281	108.0326	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12285	108.0227	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12285	108.0227	103RD & ROKEBY - MOORE 345KV CKT 1
FDNSLock	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	108.0138	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	108.0066	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12317	107.9608	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12317	107.9608	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12276	107.9197	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12276	107.9197	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	107.8341	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	107.8341	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	107.8316	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	107.8193	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	107.8193	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	107.8141	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	107.8117	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12318	107.7996	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12318	107.7996	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12318	107.7826	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12222	107.7567	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12335	107.5953	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12335	107.5772	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12335	107.5772	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12409	107.2729	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12354	106.8786	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12354	106.8786	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	106.7309	GEN652545 7-BIG BEND

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13969	106.6583	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12323	106.537	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12331	106.1999	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1228	105.9872	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1228	105.9741	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1228	105.9722	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14391	105.0337	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	104.6083	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1437	104.1754	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	103.8693	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13685	103.731	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1194	103.3125	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13854	103.1807	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13854	103.1807	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14208	103.0371	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	103.0251	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	102.6893	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14402	102.5326	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14402	102.5326	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	102.5087	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1379	102.1952	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17018	102.1795	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17018	102.157	2810X2
FDNSLock	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13412	101.9988	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13412	101.9133	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13412	101.905	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14461	101.6244	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14461	101.6244	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13969	101.5793	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14446	101.5597	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14446	101.5597	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13819	101.3938	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13819	101.3938	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14179	101.2915	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14446	101.2851	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13854	101.0266	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	100.9935	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13836	100.8539	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13781	100.8463	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13781	100.793	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14159	100.7732	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13708	100.7465	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13781	100.7433	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13854	100.7299	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13836	100.6841	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNSLock	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1384	100.6573	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	100.6085	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13854	100.5792	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	100.4073	GEN659125 1-COVEY
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	100.3814	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12314	100.3814	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13825	100.3614	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13854	100.3559	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1391	100.31	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1391	100.2753	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13809	100.2636	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13854	100.2324	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13854	100.2	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13944	100.1284	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13854	100.124	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1391	100.1116	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1391	100	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13859	100	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13854	100	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13854	100	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13789	100	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13646	100	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13526	100	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11857	99.9	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13866	99.9	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13866	99.8	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13866	99.8	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13866	99.8	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13854	99.8	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13838	99.8	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13836	99.8	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14053	99.7	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13885	99.6	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13854	99.6	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13825	99.6	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13595	99.6	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13854	99.5	GEN501801 1-DOLET HILLS UNIT1
FDNSLock	00NR_G16_017	0	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13836	99.5	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	133.1946	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	132.4536	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	132.2098	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	132.2082	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	131.3232	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	131.3232	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	129.9642	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	129.9642	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	129.9006	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	129.9006	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	129.7797	GEN335831 1-RIVERBEND UNIT#1
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13826	129.6626	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	129.5747	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13562	129.4004	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13826	129.3987	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1364	129.1998	RASMUSN - UTICA JCT 230KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	128.8549	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13585	128.8328	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	128.8306	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	128.8149	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	128.7437	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	128.7426	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	128.713	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	128.7081	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	128.6785	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1358	128.5495	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	128.3546	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13598	128.2312	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	128.2119	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14107	128.1803	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14107	128.1803	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	128.1732	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13599	128.1617	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	128.16	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	128.16	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13593	128.0071	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13634	127.8416	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13798	127.8335	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13798	127.8335	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13631	127.8184	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.136	127.7964	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	127.7127	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13828	127.6105	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	127.5967	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	127.596	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13567	127.5016	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13583	127.3916	CENTER - COYOTE 345KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13584	127.3769	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	127.3678	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	127.3596	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	127.3505	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13483	127.332	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13578	127.2249	GRIMES - LEHIGH 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13601	127.1981	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	127.1923	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13588	127.1136	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	127.0984	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13572	127.0776	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	127.0745	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13592	127.0339	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13569	127.0012	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13575	126.9718	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13575	126.9718	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	126.9598	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.9426	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13601	126.9304	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13622	126.8745	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13643	126.8595	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13629	126.7422	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	126.6902	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13548	126.6856	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.6644	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.6643	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.586	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13819	126.5845	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	126.5477	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1373	126.5325	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1373	126.5325	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13492	126.5147	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13622	126.4974	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.4871	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	126.4756	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13819	126.4648	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1362	126.4507	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13819	126.4259	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	126.4077	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13556	126.4022	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.3814	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.3807	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	126.3739	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1357	126.3694	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13814	126.3446	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	126.3239	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.3232	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	126.3042	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13596	126.3032	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13596	126.3032	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13751	126.3	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13751	126.2999	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13587	126.2918	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13587	126.2829	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13787	126.2717	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13589	126.268	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13787	126.2646	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13787	126.2646	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.243	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13836	126.2104	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.2056	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.2006	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.2006	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.1988	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13751	126.1885	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13814	126.171	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13787	126.171	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13787	126.171	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13559	126.166	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13613	126.156	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13613	126.156	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.1256	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1371	126.1155	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.1025	GEN525561 1-TOLK GEN #1 24 KV

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.0728	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.0635	GEN642067 1-PLATTE
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	126.0431	ANSON - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13615	126.0379	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	126.0334	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13579	126.0233	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13587	126.0005	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13587	126.0005	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.986	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13681	125.9758	GORDON - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.9747	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13899	125.9681	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13814	125.9503	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.9362	GEN514806 1-SOONER UNIT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.9271	GEN514805 1-SOONER UNIT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13584	125.8998	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.8894	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.8888	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.8879	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.8878	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.8873	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.8872	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.8869	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.17139	125.8697	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1713	125.8683	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1362	125.8669	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13622	125.8649	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	125.8259	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	125.8259	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1362	125.8156	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13588	125.8147	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.8078	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.7988	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.7984	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.7932	GEN530690 1-PRWINDG1 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13589	125.786	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13589	125.783	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13589	125.783	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.7826	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.781	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.7797	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.7772	GEN515042 1-SEMINOLE 3G
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.7641	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.7477	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13943	125.7372	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13943	125.7372	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.7315	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13573	125.7211	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.701	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13716	125.6956	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13716	125.6956	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13716	125.6956	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13716	125.6956	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	125.6927	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.6847	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	125.6407	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.5892	GEN511840 1-NORTHEASTERN STATION #3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.5887	GEN511843 1-RIVERSIDE STATION #2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1372	125.587	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1372	125.587	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1372	125.587	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1372	125.587	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.5861	GEN511842 1-RIVERSIDE STATION #1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.5807	GEN515226 1-MUSKOGEE 6G
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.5802	GEN515225 1-MUSKOGEE 5G
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.5773	GEN515223 1-MUSKOGEE 4G
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.5759	GEN512688 2-GRDA1 GSU2 22
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.5692	REDWLCK7 115.00 115KV SWITCHED SHUNT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.5659	GEN509394 1-FLINT CREEK
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13632	125.5658	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13582	125.5647	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.5594	GEN511839 1-NORTHEASTERN STATION #2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	125.5537	P12:115:NPPD:TSGT5:OGALALA7:ELSIETP7:BTB
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	125.5472	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.5447	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.5376	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.5276	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	125.519	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	125.514	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.5134	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13549	125.5051	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.5046	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.4995	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13615	125.4981	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13611	125.4791	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	125.479	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.4789	GEN513601 1-GRECCTG_1 20.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.4754	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13581	125.4646	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13581	125.4646	FARGO - SHEYNNE 230KV CKT 1
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.4584	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13549	125.4495	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.4467	GEN541151 3-SIBLEY GENERATING UNIT #3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	125.442	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13592	125.4356	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13615	125.3875	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.3766	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13589	125.3658	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	125.3609	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13592	125.3401	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13592	125.3401	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13607	125.3319	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13585	125.3197	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13822	125.3127	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13612	125.2969	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13579	125.2954	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.2929	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.2746	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13511	125.2379	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	125.2315	PRAIRIE - WINGER 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	125.2294	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.2293	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.2226	GEN509416 1-TURK GENERATION
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.2169	GOTHENBURG - JEFFREY 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.2123	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.1942	1222-AINSWORTH WIND
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.1942	1303-KEARNEY
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.1942	2367-REDWLCK7 115.00
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.1942	2560-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.1942	2561-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.1942	BASE CASE
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.1941	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13579	125.1878	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13589	125.1761	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.1729	GEN509404 1-WELSH #1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.1729	GEN509406 1-WELSH #3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13583	125.167	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13539	125.1596	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13585	125.1545	AUDUBON - HUBBARD 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	125.1526	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	125.1443	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13632	125.1414	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	125.1354	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	125.127	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13539	125.1105	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13539	125.1104	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13482	125.1081	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13632	125.1063	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	125.0956	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	125.078	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13588	125.0672	PRAIRIE - RAMSEY 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.0654	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13757	125.0652	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.0484	GEN509403 1-PIRKEY GENERATION
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	125.0469	P12:115:NPPD:1142:JEFFREY7:COZAD 7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13545	125.034	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.0307	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.0281	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.0191	GEN303008 1-1BC2 U3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13671	125.0173	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.0156	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	125.0152	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	124.9851	BURR - CANBY 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	124.9833	EMMETE.TAP 7115.00 - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	124.9825	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	124.9809	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	124.9809	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	124.9601	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13597	124.9555	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13514	124.9523	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13597	124.9406	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	124.9319	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	124.9144	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	124.8899	P12:115:TSGT:COVALT7-SNAKECK7
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13597	124.885	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13588	124.8844	BALTA - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	124.884	BASSETT 7115.00 - STUART 115KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.8758	FARGO 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13597	124.865	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13587	124.858	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13597	124.8489	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	124.8473	GEN300002 1-THOMAS HILL UNIT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13604	124.8436	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13604	124.8436	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13601	124.8417	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13601	124.8417	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.136	124.8404	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.136	124.8404	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13585	124.829	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13585	124.829	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.8154	FARGO 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1371	124.8151	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13612	124.8112	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13597	124.803	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1371	124.7977	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1371	124.7977	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.7859	GEN525561 1-TOLK GEN #1 24 KV
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.7857	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13591	124.7558	CENTER - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1371	124.7495	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	124.7422	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13607	124.7401	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13607	124.7401	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.7288	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1371	124.7262	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1371	124.7258	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1371	124.7258	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13566	124.7163	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13566	124.7163	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	124.6863	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.6754	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	124.636	P12:115:TSGT:BSPRGS7-WHORSE7
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.6337	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	124.6145	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.6045	GEN642067 1-PLATTE
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13583	124.6026	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13583	124.6026	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.5989	WATERTOWN 230KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.5924	WATERTOWN 230KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.5916	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	124.5793	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.5607	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	124.5375	BLUE CREEK - W.HORSE7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.5329	GEN532722 1-EVANS ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	124.5262	P12:115:NPPD:TSGT2:W.HORSE7:B.SPRGS7:BTB
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	124.5114	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	124.5114	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.4839	ONEILL 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.4618	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13607	124.4585	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13607	124.4585	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.4524	ONEILL 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	124.4468	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	124.4467	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13511	124.4366	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.4221	GEN514806 1-SOONER UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.4207	GEN514805 1-SOONER UNIT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	124.4184	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	124.4184	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.3936	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.3916	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13573	124.3898	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13573	124.3898	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	124.3887	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13592	124.3749	P12:115:NPPD:TSGT5:OGALALA7:ELSIETP7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13592	124.3579	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.3364	488489510526345.00 - J510 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.3364	J510 345.00 345/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13578	124.3298	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13592	124.3296	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.3282	ANSON - SPLIT ROCK 115KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.3273	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.3255	ANSON 115/17.5KV TRANSFORMER CKT 4
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.3186	GEN527903 1-HOBBS PLANT #3 (ST)
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13578	124.3044	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13578	124.3044	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	124.2893	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	124.2893	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.17132	124.2835	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.17122	124.2818	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.2802	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.2796	GEN515042 1-SEMINOLE 3G
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.2736	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.2685	ANSON - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	124.2635	BIG SPRINGS - BLUE CREEK 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	124.2635	BIG SPRINGS - BLUE CREEK 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.2596	GEN530690 1-PRWINDG1 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.2483	GEN515041 1-SEMINOLE 2G
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13579	124.2435	COLUMBUS - SILVER CREEK 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.2345	GEN528501 1-G14_012 24.000
FDNSLock	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	124.2302	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.2301	GEN523972 1-HARRINGTON GEN #2 24 KV
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.2301	GEN523973 1-HARRINGTON GEN #3 24 KV
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.23	GEN523971 1-HARRINGTON GEN #1 24 KV
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	124.2234	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.2127	GEN515040 1-SEMINOLE 1G
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.1976	GEN512688 2-GRDA1 GSU2 22
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13706	124.1909	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13706	124.1909	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13706	124.1909	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13706	124.1909	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	124.1881	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	124.1881	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	124.1877	ALBION - SPALDING 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.1855	GEN539670 4-JUDSON LARGE GENERATOR
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.1774	GEN526333 1-JONES GEN #3 21 KV
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13743	124.1732	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.1684	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.1624	GEN526334 1-JONES_4 116.500
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.1595	GEN527166 1-MUSTANG_6 118.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1371	124.156	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1371	124.156	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1371	124.156	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1371	124.156	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13588	124.1538	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.147	GEN525844 1-ELK_1 118.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.147	GEN525845 1-ELK_2 1 18.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13592	124.1285	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13592	124.1285	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	124.1189	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	124.1159	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	124.1071	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13545	124.0928	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13545	124.0928	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.0916	GEN514939 1-HORSESHOE LAKE 8G
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	124.0872	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.087	GEN511840 1-NORTHEASTERN STATION #3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.0761	GEN515225 1-MUSKOGEE 5G
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.0743	GEN527901 1-HOBBS PLANT #1 (CT)
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.0743	GEN527902 1-HOBBS PLANT #2 (CT)
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.0737	GEN515226 1-MUSKOGEE 6G
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.0699	GEN515223 1-MUSKOGEE 4G
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.061	GEN511848 1-SOUTHWESTERN STATION #3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	124.0588	ANTELOPE 3345.00 - HOSKINS 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13593	124.0537	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13593	124.0537	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.0507	GEN526331 1-JONES GEN #1 22 KV
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.0506	GEN526332 1-JONES GEN #2 21 KV
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.0469	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	124.0433	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.0411	GEN509394 1-FLINT CREEK
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.0362	GEN511839 1-NORTHEASTERN STATION #2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.0342	GEN511843 1-RIVERSIDE STATION #2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.0319	GEN511842 1-RIVERSIDE STATION #1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13596	124.0258	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.0184	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.0134	ALBION 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	124.0108	GEN524023 1-NICHOLS GEN #3 22 KV
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.9965	GEN562026 1-G11_019_3 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.9937	GEN563162 1-G15081_3 0.6900
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.9824	ALBION 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	123.9715	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13545	123.9697	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.9684	GEN562023 1-G11_020_3 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.9655	AINSWORTH 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.9507	AINSWORTH 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13541	123.938	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.9293	GEN513601 1-GRECCTG_1 20.000
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.9157	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.9037	COLUMBUS 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.8967	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.887	GEN541151 3-SIBLEY GENERATING UNIT #3
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.8767	COLUMBUS 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.8667	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.8533	GEN520947 1-HUGO1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.8453	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	123.834	BYPASS - NORTH HASTINGS 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13499	123.8288	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.8264	GOTHENBURG - JEFFREY 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.8123	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.811	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.8107	RED WILLOW (RD.WILLOW T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.8107	RED WILLOW (RD.WILLOW T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13592	123.807	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7963	GEN509416 1-TURK GENERATION
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7893	CALLAWAY 69KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7842	CALLAWAY 69KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7818	BROKEN BOW 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7796	BROKEN BOW 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7786	INTERSTE 8 69.000 69KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	123.7746	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7688	OGALLALA (OGALLALA T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7628	INTERSTE 8 69.000 69KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13597	123.7586	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13597	123.7555	CALLAWAY - MAXWELL 115KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7555	NORTH LOUP 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7533	W.HORSE7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7531	JOHNSON LAKE - JOHNSON NO 1 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7498	SUB D - SUB I 115KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7483	COZAD 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.748	GRANTNB7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7466	LAMAR 7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7424	LOUP CITY 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7353	W.HORSE7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7342	INTERST7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7332	GRANTNB7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.733	INTERST7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7317	COZAD 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13541	123.731	BISON - MAURINE 230KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7306	LAMAR 7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7291	LOUP CITY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7268	LAMAR 7 115.00 - SPCREEK7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7242	CANADAY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7238	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7179	G16-055-TAP 115.00 - PAULINE 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	123.717	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7165	CANADAY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	123.7135	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7092	G16-055-TAP 115.00 - HILDRETH 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7033	BROKEN BOW - CROOKED CREEK 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7002	NORTH PLATTE (N.PLATTE T8) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7002	NORTH PLATTE (N.PLATTE T8) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7002	NORTH PLATTE (N.PLATTE T9) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.7002	NORTH PLATTE (N.PLATTE T9) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6985	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6985	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6976	HILDRTH7-PAULINE7-115KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6974	MALONEY 34KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6964	MCCOOK 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6962	MCCOOK 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6939	GRANTNB7 115.00 - OGALALA7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6939	GRANTNB7 115.00 - OGALALA7 115.00 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6931	ENDERS - GRANTNB7 115.00 115KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6893	BROKEN BOW 69KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6857	P12:115:NPPD:TSGT3:LAMAR 7:GRANTNB7:BTB
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13604	123.679	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13604	123.679	HOLCOMB - SETAB 345KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6785	HOLDREGE 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6604	GEN509406 1-WELSH #3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6601	GEN509404 1-WELSH #1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6528	NORTH LOUP 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	123.6499	CANADAY - CROOKED CREEK 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6492	BROKEN BOW 69KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	123.6436	ALDA - SUB A 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.641	CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.641	CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13591	123.6337	NW68TH & HOLDREGE - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13591	123.6337	NW68TH & HOLDREGE - WAGENER 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6298	SUB A - SUB I 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	123.6295	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	123.6295	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6274	HOLDREGE 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6126	GEN509403 1-PIRKEY GENERATION
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6111	MALONEY 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	123.6107	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	123.6089	NORTH PLATTE - STOCKVILLE 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.6035	COZAD - GOTHENBURG 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	123.5687	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	123.5687	KEYSTONE (KEYSTONE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5664	HOLCOMB (HOLCOMB) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5664	HOLCOMB (HOLCOMB) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5641	GEN509409 1-WILKES #3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5592	GEN509398 1-KNOXLEE #5
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5575	P12:115:NPPD:1142:JEFFREY7:COZAD 7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	1222-AINSWORTH WIND
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	1250-MALONEY
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	1272-BROKEN BOW
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	1273-CALLAWAY
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	1290-AINSWORTH
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	1291-ALBION
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	1292-BROKEN BOW
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	1293-CANADAY
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	1295-COLUMBUS
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	1296-COZAD
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	1302-HOLDREGE
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	1303-KEARNEY
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	1304-LOUP CITY
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	1305-MCCOOK
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	1306-NORTH LOUP
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	1310-ONEILL
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	2363-GRANTNB7 115.00
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	2364-INTERST7 115.00
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	2367-REDWLCK7 115.00
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	2368-LAMAR 7 115.00
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	2369-INTERSTE 8 69.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	2543-FARGO
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	2560-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	2561-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5414	BASE CASE
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5317	SHUNT-640270
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.5317	SHUNT-640270
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13597	123.5228	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	123.5095	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	123.4972	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1371	123.4696	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.4538	COLBY - MINGO 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	123.4538	COLBY - MINGO 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	123.4518	NORTH LOUP - SPALDING 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13593	123.3992	SUB 3455 - SUB 3740 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13593	123.3992	SUB 3455 - SUB 3740 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	123.3783	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13596	123.375	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13596	123.375	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13555	123.3727	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13555	123.3727	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	123.331	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13698	123.3099	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	123.306	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	123.306	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	123.305	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	123.305	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	123.299	P12:115:NPPD:1131B:REDWILO7:STOCKVL7:BTB
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	123.2751	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13601	123.262	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13601	123.262	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	123.2511	G16-049-TAP-POSTROCK7-345kV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13601	123.2339	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13698	123.2333	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	123.2239	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	123.2172	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13563	123.164	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	123.1603	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	123.1584	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13596	123.1434	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13596	123.1434	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13562	123.1404	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13562	123.1404	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	123.1382	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1358	123.1349	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1358	123.1349	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1358	123.1341	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1358	123.1341	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13604	123.1338	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13604	123.1338	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13593	123.0883	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	122.9788	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	122.9716	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13572	122.9594	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13572	122.9594	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	122.9471	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	122.9299	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13499	122.9212	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13579	122.8218	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	122.7978	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	122.7497	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	122.7431	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13698	122.699	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13698	122.699	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13698	122.6946	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13698	122.6946	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13698	122.6897	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	122.6655	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	122.6546	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	122.654	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13583	122.6084	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	122.5862	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	122.558	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	122.5502	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13729	122.5365	MISSION - WITTEN 115KV CKT 1
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	122.5174	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13698	122.3069	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1355	121.9882	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13564	121.9672	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13564	121.9226	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13591	121.905	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13591	121.905	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	121.8663	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	121.8357	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	121.8284	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13564	121.8242	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	121.7327	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13593	121.5987	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13593	121.5987	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	121.4158	GEN600006 1-AS KING
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	121.3813	GEN652556 2-OAHE
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	121.3813	GEN652557 4-OAHE
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	121.3813	GEN652558 6-OAHE
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13591	121.3539	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13591	121.3539	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	121.2584	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	121.1852	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	121.1584	GEN659141 1-K10215A
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	121.0448	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	121.0442	GEN652542 1-BIG BEND

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	120.9896	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	120.852	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	120.852	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	120.8324	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	120.7859	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	120.7614	GEN657749 1-YOUNG_1 GENERATOR
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	120.6515	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	120.5872	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	120.5774	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	120.5729	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	120.5539	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	120.5487	GEN652559 1-OAHE
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	120.294	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	120.1765	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	120.1377	GEN600006 1-AS KING
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13553	120.0057	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	119.9739	GEN652556 2-OAHE
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	119.9739	GEN652557 4-OAHE
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	119.9739	GEN652558 6-OAHE
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	119.9038	GEN659453 1-GI1414GEN_W0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	119.8536	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13553	119.7938	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13553	119.7548	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	119.6435	GEN659141 1-K10215A
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	119.4728	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	119.4617	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	119.3176	GEN661015 1-COYOTE
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	119.2076	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	119.1579	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	119.0997	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	119.0755	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	119.0678	GEN652559 1-OAHE
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	118.8755	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	118.5862	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	118.3295	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	118.2944	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	118.1302	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.18618	117.8681	2810X2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	117.7782	GEN661015 1-COYOTE
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.18618	117.6915	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	117.637	GEN620315 1-BIG STONE GEN
FDNSLock	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	117.5436	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	117.1677	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.18618	117.0958	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.18598	116.8058	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.18598	116.7671	2810X2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	116.2604	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	116.2604	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	116.125	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	116.0341	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.18598	115.9625	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	115.9528	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	115.4632	GEN659125 1-COVEY
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	115.2877	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	115.2877	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	115.2874	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12423	115.2655	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	115.1791	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12605	114.8314	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	114.7682	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	114.1195	GEN659125 1-COVEY
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	113.9993	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	113.9993	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	113.9399	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12256	113.6742	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	113.6318	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	113.5368	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	113.4364	GEN615002 2-COAL CREEK

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	113.3539	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	113.2538	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	113.0619	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12282	113.0495	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	112.9254	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	112.7717	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	112.5334	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	112.3308	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	112.3289	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	112.2847	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12385	112.2052	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12506	111.8118	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12506	111.7865	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12506	111.7865	HURON - WATERTOWN 230KV CKT 2
FDNSLock	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	111.7655	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	111.5891	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12292	111.1982	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12263	111.0759	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12283	110.3908	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12221	110.2572	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.15546	110.0219	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.15537	110.018	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	109.9611	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	109.7665	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12245	109.7599	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	109.5671	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	109.5198	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	109.5195	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12409	109.4896	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12332	109.4469	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	109.4114	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	109.393	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	109.3618	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12284	109.3589	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	109.2524	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	109.1958	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	109.1851	GEN642067 1-PLATTE
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12318	109.1434	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12318	109.1434	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	108.9594	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12275	108.8073	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12295	108.8013	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12295	108.8013	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12423	108.6882	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12423	108.6882	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12423	108.6882	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12423	108.6882	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12428	108.615	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12428	108.615	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12428	108.615	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12428	108.615	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12297	108.5712	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12313	108.5678	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12313	108.5678	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12297	108.5618	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12297	108.5618	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	108.4444	2560-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	108.4444	2561-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	108.4444	BASE CASE
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12317	108.2898	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12317	108.2898	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12331	108.2897	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12222	108.2627	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12329	108.214	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12323	108.1822	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12254	108.109	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12279	108.0796	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12279	108.0796	SUB 3454 - WAGENER 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12306	108.0106	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12306	108.0106	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12306	108.0082	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12306	108.0082	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	107.9407	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12288	107.8808	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12288	107.8808	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12288	107.8796	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12288	107.8796	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12327	107.8325	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12327	107.8325	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	107.7216	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12281	107.7188	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	107.7147	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12285	107.7136	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12285	107.7136	103RD & ROKEBY - MOORE 345KV CKT 1
FDNSLock	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	107.6954	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	107.6877	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12317	107.6586	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12317	107.6586	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12276	107.6116	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12276	107.6116	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12409	107.5633	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12409	107.5633	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12409	107.5607	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12409	107.5475	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12409	107.5475	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12409	107.5428	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12409	107.5403	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12318	107.4962	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12318	107.4962	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12318	107.4793	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12222	107.4495	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12335	107.2624	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12335	107.2616	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12335	107.2616	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12409	106.9863	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13969	106.62	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12354	106.5362	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12354	106.5362	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	106.4374	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12323	106.2187	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12331	105.8582	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1228	105.674	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1228	105.6651	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1228	105.6632	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	105.4843	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	105.2706	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	105.2655	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14391	104.9792	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	104.9182	GEN600006 1-AS KING
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	104.8377	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	104.2998	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1437	104.1197	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13685	103.641	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	103.5587	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13854	103.0828	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13854	103.0828	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14208	102.9943	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1194	102.8767	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	102.7128	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14402	102.4955	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14402	102.4955	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	102.3746	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	102.2094	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	102.1936	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1379	102.1189	BUFFALO - JAMESTOWN 345KV CKT 1
FDNSLock	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13412	101.9387	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.17018	101.8687	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13412	101.8526	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.17018	101.8457	2810X2
FDNSLock	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13412	101.8401	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14461	101.5704	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14461	101.5704	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13969	101.5354	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14446	101.5047	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14446	101.5047	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13819	101.3685	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13819	101.3685	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.17018	101.3014	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14446	101.2336	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14179	101.2212	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13854	100.9516	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13781	100.8023	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13836	100.8018	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13781	100.7494	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14159	100.739	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13781	100.7006	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13854	100.6845	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13708	100.6654	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	100.6397	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13836	100.6361	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	100.609	GEN652353 2-GR PRAIRIEG 0.6900
FDNSLock	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1384	100.6059	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13854	100.5293	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13825	100.3139	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13854	100.3094	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1391	100.2402	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1391	100.2066	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13809	100.2007	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13854	100.2	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13854	100.1854	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	100.1	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	100.1	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13944	100.0962	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13854	100.084	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	0	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12314	100	GEN659125 1-COVEY
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1391	100	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13854	100	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13646	100	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13526	100	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1391	99.9	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13866	99.9	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13859	99.9	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13854	99.9	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13789	99.9	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13866	99.8	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13866	99.8	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13866	99.8	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13854	99.8	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13838	99.8	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14053	99.7	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13836	99.7	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13885	99.6	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13595	99.6	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13854	99.5	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13825	99.5	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.10187	104.4669	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.10187	104.4659	2801X
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.10187	104.4659	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.10187	101.4396	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.10187	101.4332	2801X
FDNS	00NR_G16_017	0	17SP	G16_017	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.10187	101.4332	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04638	138.2016	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04638	138.1566	2801X
FDNS	00NR_G16_017	0	20SP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04638	137.923	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04646	135.2405	2801X
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04646	135.2405	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	25SP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04646	135.2341	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	15ALL_G16_017	0	20SP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04611	125.7888	BASE CASE
FDNS	15ALL_G16_017	0	25SP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04703	124.1194	BASE CASE
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04454	119.4742	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04454	119.3281	2801X
FDNS	00NR_G16_017	0	20WP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04454	119.3241	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	15ALL_G16_017	0	20WP	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04168	117.9332	BASE CASE
FDNS	15ALL_G16_017	0	20L	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.04071	116.7754	BASE CASE
FDNS	15NR_G16_017	0	20L	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.05737	115.0822	2801X
FDNS	15NR_G16_017	0	20L	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.05737	114.3378	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	15NR_G16_017	0	20L	G16_017	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.05737	114.2439	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06593	131.6697	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06593	131.6697	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06593	128.9007	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06258	108.624	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06258	108.612	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06258	108.612	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06258	107.8722	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06252	107.6434	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06556	106.1213	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06556	106.0395	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06556	106.0395	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06556	106.0395	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06556	105.5372	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.0514	100.7966	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06141	104.4287	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06141	104.4156	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06141	104.4156	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06141	103.703	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06135	103.2764	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06434	102.4184	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06434	102.3307	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06434	102.3307	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06434	102.3307	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06434	101.821	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35162	109.2079	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35162	108.3916	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35162	108.3912	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35162	106.7954	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35162	106.5901	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35162	106.5897	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35216	109.3729	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35216	108.5555	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35216	108.555	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35216	106.9568	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35216	106.7512	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35216	106.7508	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12934	166.2044	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12934	166.2044	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.11985	164.8196	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12934	164.7304	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12437	163.675	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.11985	163.3959	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12619	163.1621	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12268	162.148	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12268	162.148	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	161.8062	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12304	161.7704	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12304	161.7704	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12268	161.7008	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12308	161.6375	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12327	161.5325	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12268	161.5219	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12327	161.518	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	161.4494	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12295	161.3432	HAZLETON - MITCHLCO3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12406	161.1523	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	161.0391	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12306	161.0243	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12327	160.9181	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12514	160.6546	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	160.6477	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12306	160.6013	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12306	160.6013	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	160.5655	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	160.527	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12327	160.4796	HARMONY - VALENTINE 115KV CKT 1
FDNSLock	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12313	160.2398	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12399	160.2111	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12166	160.2047	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12315	160.0908	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12317	159.9397	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	159.888	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12317	159.8494	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12311	159.828	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	159.729	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12355	159.6983	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12295	159.6979	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	159.6899	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12355	159.6791	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12355	159.6791	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	159.5555	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12327	159.4679	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12355	159.4233	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12832	159.3831	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12832	159.3831	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12519	159.3667	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12305	159.288	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12519	159.2798	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12519	159.2798	HURON - WATERTOWN 230KV CKT 2
FDNSLock	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12311	159.1624	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12551	159.1285	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12519	159.1251	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12519	159.1251	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12551	159.1138	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.123	159.113	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12551	159.0922	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12365	158.9914	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12338	158.8962	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	158.8275	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	158.8253	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12286	158.7767	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12278	158.7507	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	158.7312	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	158.7028	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12086	158.6328	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	158.6093	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12329	158.5819	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12329	158.3358	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12329	158.3358	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12338	158.3235	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12338	158.3235	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12297	158.2822	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12297	158.2822	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12365	158.2714	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12477	158.2698	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12477	158.2698	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12368	158.2484	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12477	158.2407	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12317	158.2123	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12286	158.0618	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	158.0518	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	158.0307	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12318	157.9928	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12304	157.886	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12318	157.8711	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1235	157.8582	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.8514	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.8334	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12368	157.8174	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12282	157.7677	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12225	157.76	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.7427	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.7322	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12321	157.7318	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.7194	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.7146	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.7145	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.6333	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.6112	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.6105	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12225	157.5771	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12225	157.5771	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12225	157.5748	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12411	157.5745	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12411	157.5745	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12225	157.5744	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12225	157.5671	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12225	157.567	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.5472	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.5139	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1235	157.5081	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12848	157.499	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12848	157.499	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12848	157.499	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12848	157.499	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12225	157.4873	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.4815	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.4557	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1235	157.4546	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.4527	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12308	157.4423	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12304	157.4001	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12295	157.3949	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1232	157.3475	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12283	157.3427	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12327	157.3195	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.15558	157.3147	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.15549	157.3088	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.267	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1234	157.2519	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1234	157.2519	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12689	157.2294	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.146	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.1414	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12345	157.1379	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12717	157.1354	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12717	157.1354	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12312	157.1346	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12318	157.1227	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.0997	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.0863	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12313	157.0821	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.0797	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.0664	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	157.0583	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12339	157.0551	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12339	157.0509	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1234	157.0455	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1234	157.0455	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1232	156.9411	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.923	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1232	156.9112	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12339	156.9073	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.9047	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.9042	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12323	156.897	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12318	156.8902	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1232	156.8787	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12319	156.8684	PRAIRIE - WINGER 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.8585	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12322	156.8341	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.8278	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12373	156.8067	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12373	156.8042	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12373	156.8042	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12343	156.7934	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12373	156.7931	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12373	156.7931	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.7876	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.7823	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12322	156.7698	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1232	156.7627	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.7518	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.7443	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12322	156.7372	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.7319	GEN303007 1-1BC2 U2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.7256	GEN303006 1-1BC2 U1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12334	156.72	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12334	156.72	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12358	156.7143	EAGLE - PHILIP 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12358	156.6745	EAGLE - MARTIN 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	156.6476	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.6419	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.6416	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12323	156.6359	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12346	156.6268	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.6238	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.6173	GEN303008 1-1BC2 U3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12322	156.5948	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12343	156.5858	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12358	156.5852	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12323	156.5832	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12319	156.5748	BALTA - MCHENRY 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12333	156.5526	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12333	156.5523	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12333	156.546	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12326	156.5359	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12326	156.5359	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12401	156.5033	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12322	156.4974	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12318	156.486	AUDUBON - HUBBARD 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12332	156.4741	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.4681	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.4671	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12316	156.4541	KARLSTAD - WINGER 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12324	156.4539	PALXFRASBTHI
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12346	156.4418	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12315	156.4328	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12315	156.4328	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12278	156.4188	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12278	156.4188	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12278	156.4187	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12321	156.4169	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12322	156.4075	PRAIRIE - RAMSEY 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.3997	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12324	156.3953	7PALM TAP 345.00 - SUB T 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12309	156.3888	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	156.3853	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12343	156.3778	CHADRON - DUNLAP 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12312	156.3676	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12277	156.3567	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12373	156.3428	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12325	156.3421	GENOA 161 - SENECA 161 161KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12326	156.3347	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12346	156.3206	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12326	156.3086	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12325	156.3039	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12325	156.298	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12325	156.298	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12325	156.2977	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12323	156.2912	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12346	156.2859	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.283	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.2753	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	156.2707	2809X2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12313	156.2704	HIGHLND 3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12326	156.2641	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12317	156.2629	ARNOLD - HAZLETON 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.2565	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12316	156.2546	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12316	156.2546	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12314	156.2474	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12352	156.2437	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12352	156.2437	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12326	156.243	NORTH LA CROSSE (10008630_001) 345/161/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12343	156.227	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12305	156.2199	LELAND OLDS - STANTON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12305	156.2199	LELAND OLDS - STANTON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12322	156.2153	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12322	156.2047	JAMES TOWN - PICKERT 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.1963	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12355	156.1834	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12355	156.1834	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12327	156.1821	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12327	156.1821	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12323	156.1707	CENTER - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.1483	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12284	156.1475	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12309	156.1295	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12309	156.1295	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.1287	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12325	156.1287	COAL CREEK - UNDERWOOD 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.1136	GEN525561 1-TOLK GEN #1 24 KV
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.1134	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.1121	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12312	156.1111	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12313	156.0992	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12313	156.0891	P12:115:TSGT:COVALT7-SNAKECK7
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12327	156.0888	FRANKS - HUBEN 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.0875	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.0875	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12309	156.0813	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.0775	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.0704	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12326	156.0696	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12329	156.0664	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.066	GENOA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.0622	GEN345756 H-1SIOUX 1 18.000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.0615	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.049	RUNNING 230/118KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.0459	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.0428	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12333	156.03	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12333	156.03	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.0273	GEN334432 1-SABINE UNIT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.0267	GEN334431 1-SABINE UNIT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.0206	GEN336242 1-1NMIL ST1 18.000

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	156.0198	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12312	156.0016	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	155.9936	GEN334030 1-FRONTIER UNIT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	155.9932	GEN334031 1-FRONTIER UNIT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	155.9875	GEN345832 1-1TS G1 13.800
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	155.987	GEN345841 2-1TS G2 13.800
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	155.9833	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	155.9811	GEN336446 1-MICHOUD UNIT #2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	155.9568	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12292	155.9443	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12292	155.9443	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12346	155.9117	AINSWORTH - CALAMUS 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12346	155.911	P12:115:NPPD:1090:AINSWND7:THEDFRD7:BTB
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	155.9091	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
FDNSLock	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12292	155.9022	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12346	155.8942	CALAMUS - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12323	155.8764	NELIGH - PETERSBRG.N7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	155.849	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	155.849	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1231	155.7717	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1231	155.7548	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1231	155.7548	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12236	155.3598	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12344	155.3029	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12342	155.2986	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1233	155.2658	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1233	155.2658	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	155.2292	2560-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	155.2292	2561-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	155.2292	BASE CASE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12336	155.1426	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12267	155.093	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12319	155.0187	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12319	154.993	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12319	154.9844	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12292	154.9808	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12292	154.9808	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12319	154.9113	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12319	154.9113	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12319	154.9095	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12319	154.9095	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.8722	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12322	154.838	AURORA - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12348	154.7996	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.7837	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1233	154.7484	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1233	154.7484	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12295	154.7479	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12341	154.739	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12341	154.739	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12302	154.7119	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12302	154.7119	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12302	154.7109	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12302	154.7109	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1243	154.684	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1243	154.684	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1243	154.6801	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1243	154.6379	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1243	154.6341	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1243	154.634	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1243	154.634	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12298	154.6101	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12298	154.6101	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12327	154.5576	LOUP CITY - NORTH LOUP 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.5343	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.5249	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12335	154.5232	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.5027	GEN590011 2-ERCOT EQUIVALENCE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.4802	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.4802	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12325	154.4665	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12325	154.4665	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12325	154.4664	STMDSJFAFACO
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.4568	GEN652548 5-FT RANDAL
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.4568	GEN652549 7-FT RANDAL
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12289	154.4544	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12289	154.4544	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.4489	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12319	154.448	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.443	GEN615031 1-PLEASANT VALLEY
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.436	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.4265	GEN652547 3-FT RANDAL
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.4154	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.4061	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.4014	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12313	154.397	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1233	154.3955	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1233	154.3955	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.3954	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.3953	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12349	154.3936	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12349	154.3936	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.3782	GEN600020 2-ANGUS ANSON1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12326	154.3602	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.344	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12327	154.3399	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12326	154.3384	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.3338	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.3338	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.3176	GEN600021 3-ANGUS ANSON2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.3168	GEN563302 1-G15096_3 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.3099	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.3099	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.3098	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.2948	GEN657964 1-ASH2GEN9 0.5750
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12367	154.2944	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12367	154.2944	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.2884	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12326	154.2875	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12236	154.2694	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.2583	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12305	154.2583	DRAYTON - LETELLIER 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.2384	GEN660003 3-HURON WEST PARK
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12331	154.2374	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12331	154.2374	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.233	GEN659158 2-PIONEER G213.800
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.233	GEN659159 3-PIONEER G313.800
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.2309	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.2303	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.2256	GEN659156 2-LONESMCRK 2G13.800
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.2256	GEN659157 3-LONESMCRK 3G13.800
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.2208	GEN659290 1-EDGECOL
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12331	154.2206	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.2173	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.1763	GEN600045 4-ANSON
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.1635	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.1635	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.1552	GEN652410 3-FT PECK
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.1433	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.1383	GEN600046 1-MECST
FDNSLock	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.1374	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12324	154.1349	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.1131	EMERY 161/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.1124	GEN600047 1-MECCT1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.0998	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.0652	GEN600050 1-FEP

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.0634	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.0532	GEN652414 4-FT PECK
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.0532	GEN652415 5-FT PECK
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.0454	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	154.0137	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.9572	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.934	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.934	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.9319	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.9319	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.8814	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.8777	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.8777	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.8699	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.8616	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.8613	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.841	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.7986	GEN600017 C-LS POWER CT
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.7915	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.7915	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1243	153.772	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.7011	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.6982	GEN659192 6-LYNN
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.6975	GEN659162 4-RED WLCK
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.6975	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.684	GEN681522 3-GENOA 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.6401	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.6244	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.588	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.5843	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.5828	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.4784	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.4701	GEN659274 1-GROTON
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.4415	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.4171	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.3928	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.3928	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.3609	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.36	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.3585	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.33	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.3263	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.3182	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.317	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.3135	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.2973	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.287	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.287	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12344	153.2449	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.2422	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12599	153.2359	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.1769	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.1356	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12336	153.1223	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12588	153.0993	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.0987	GEN659270 1-WEST SW
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.0949	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	153.0788	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12599	153.0479	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12599	153.009	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12599	153.0088	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12599	152.956	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12599	152.956	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12599	152.9171	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	152.9146	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	152.8768	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	152.8336	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	152.6955	GEN652545 7-BIG BEND

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	152.6867	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1112	152.4939	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	152.4892	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	152.4884	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	152.4484	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	152.4464	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	152.4296	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	152.427	GEN652460 4-GARRISON
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	152.427	GEN652461 5-GARRISON
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	152.403	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	152.3407	GEN652459 3-GARRISON
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	152.3406	GEN652457 1-GARRISON
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	152.3406	GEN652458 2-GARRISON
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	152.2053	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12293	152.0807	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12293	151.9666	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12293	151.9659	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.11953	151.7448	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	151.7005	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	151.6283	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	151.5688	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	151.4427	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	151.2802	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	151.2484	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	151.2484	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	151.2038	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	151.1795	GEN652559 1-OAHE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	151.1643	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	151.1184	GEN615010 1-STANTON4
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	151.0623	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	151.0555	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	150.9622	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	150.9202	GEN652556 2-OAHE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	150.9202	GEN652557 4-OAHE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	150.9202	GEN652558 6-OAHE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	150.7298	GEN659141 1-K10215A
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	150.687	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	150.6129	GEN600006 1-AS KING
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	150.4915	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	150.4627	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	150.4239	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	150.1154	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	150.1118	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	149.8534	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	148.8974	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	148.0217	GEN661015 1-COYOTE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	147.9375	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.11869	147.9254	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	147.576	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	147.5272	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1703	147.4922	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1703	147.4614	2810X2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	147.28	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1703	146.4511	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	145.3925	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08452	145.2055	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	145.1079	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	144.8143	GEN659125 1-COVEY
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	144.684	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	144.684	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	144.5053	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08495	143.6389	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNSLock	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	143.1335	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	142.7468	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	142.7374	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08596	142.4204	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08596	142.4204	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08633	142.1184	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08633	142.1184	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08774	141.7388	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08649	141.4569	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08633	141.2588	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	141.1436	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08606	141.1235	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08614	141.1	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0861	141.0348	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	140.9982	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	140.9982	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09003	140.938	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09003	140.938	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	140.8873	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	140.8262	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	140.713	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	140.6909	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0862	140.6731	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08561	140.6728	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	140.6454	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08609	140.5669	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	140.5601	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	140.5502	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08654	140.5437	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	140.5171	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	140.504	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08605	140.4664	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08649	140.4385	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	140.3742	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08636	140.3378	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08666	140.2954	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08773	140.273	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08636	140.2723	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08636	140.2723	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08666	140.2501	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	140.2389	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	140.2001	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	140.188	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	140.1747	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	140.166	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08633	140.1589	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	140.1582	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	140.1456	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08666	140.1219	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	140.1161	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08621	140.1113	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	140.0955	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	140.0955	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.07994	140.0816	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0865	140.0566	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0862	140.0315	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	140.0206	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	140.0199	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08646	140.0169	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08735	139.9792	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08735	139.9792	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.978	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08624	139.9671	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.9664	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.9657	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.9652	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	139.9239	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	139.9012	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08654	139.891	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08636	139.8783	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08636	139.8783	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08628	139.864	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08628	139.864	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.8607	BLAIR - GRANITE FALLS 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.8607	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	139.8311	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.8039	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0865	139.7852	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.7744	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	139.7659	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	139.7594	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	139.7594	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08624	139.7586	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.7545	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08624	139.7287	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0868	139.726	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.7129	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08597	139.6237	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.086	139.6086	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	139.6045	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	139.6045	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.6042	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	139.5972	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.5858	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.087	139.5809	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0865	139.5776	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	139.5676	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.5616	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	139.5567	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	139.5567	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.5566	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08646	139.538	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.528	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.5253	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.5252	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.525	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	139.4853	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08624	139.4676	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08609	139.4494	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08668	139.4469	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.4295	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.4215	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08626	139.4198	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	139.413	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08626	139.4073	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	139.403	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0862	139.4017	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08649	139.4005	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08646	139.395	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.395	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08605	139.3949	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.3854	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08708	139.3811	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08621	139.3772	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.3699	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.3404	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.3352	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	139.3124	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08621	139.3103	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08618	139.3025	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0865	139.2949	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08693	139.2818	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	139.2714	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	139.2714	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08611	139.2518	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	139.2445	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.2149	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	139.2086	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.1923	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	139.1798	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08624	139.1557	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08621	139.1327	BISMARK - JAMES TOWN 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08636	139.0679	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	139.0594	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08668	139.0497	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08628	139.0319	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08628	139.0319	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	139.0244	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08632	139.0114	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08668	138.9984	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0862	138.9876	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0861	138.981	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08621	138.9764	PRAIRIE - WINGER 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.9743	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.9564	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.9556	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08674	138.9548	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08674	138.9548	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.9454	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.9305	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08712	138.9103	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08595	138.8775	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	138.8558	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	138.8461	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08621	138.8265	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08611	138.8202	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08712	138.8188	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.7944	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	138.7944	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08608	138.7885	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNSLock	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.086	138.7762	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08594	138.7745	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0862	138.7599	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08614	138.7582	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	138.7374	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.7282	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0862	138.7077	AUDUBON - HUBBARD 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08594	138.7076	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.086	138.6847	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08563	138.668	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09002	138.6667	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09002	138.6667	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0865	138.6664	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08606	138.632	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08606	138.632	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08712	138.625	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.6244	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08649	138.62	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08744	138.5865	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.5845	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08626	138.5635	MCLEOD - PANTHER 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.5554	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08642	138.5478	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08674	138.5449	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08674	138.5292	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08674	138.5292	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	138.5226	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08633	138.513	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNSLock	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	138.4702	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08626	138.458	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08635	138.4568	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08635	138.4568	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0862	138.4449	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08632	138.4302	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08632	138.4302	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.4269	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.4179	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.4128	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.3942	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08699	138.3867	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08654	138.368	RASMUSN - UTICA JCT 230KV CKT 1
FDNSLock	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	138.3648	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.3588	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.351	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.3464	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08595	138.3278	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08649	138.3231	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08632	138.3182	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.3015	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.3007	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.3002	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.2667	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08666	138.2579	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08693	138.2454	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08765	138.2395	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08765	138.2395	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08605	138.2192	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.2046	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0862	138.203	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08605	138.2019	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08605	138.2019	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08646	138.182	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08699	138.1803	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08699	138.1779	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.1718	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.1717	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.1716	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.1712	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08677	138.1695	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08735	138.1679	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08735	138.1679	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08677	138.1661	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08677	138.1614	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08654	138.1158	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	138.0967	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.0959	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.0932	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	138.052	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	138.0465	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	138.0465	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	138.0439	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	138.0439	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.0266	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.0249	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.0226	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	138.0147	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08649	138.0113	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08632	137.9973	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08666	137.9966	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08618	137.9823	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.9642	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	137.9594	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	137.9594	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08626	137.9384	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08626	137.9384	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08621	137.9368	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	137.9234	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	137.9234	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0861	137.8882	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.8809	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08666	137.8805	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08524	137.8547	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08649	137.8441	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.8331	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0868	137.8294	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.7865	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.7839	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08692	137.7774	STAPLETON - THEDFORD 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08646	137.774	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.7666	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.7396	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08621	137.7343	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	137.6812	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	137.6785	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	137.6611	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08649	137.6361	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.6143	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08651	137.5933	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.5812	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.581	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08594	137.577	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08609	137.5764	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	137.5737	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	137.5737	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.086	137.5708	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.5661	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.5602	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08713	137.5224	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08614	137.5192	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.4543	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08635	137.4508	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08635	137.4508	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08646	137.432	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	137.4084	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	137.3983	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.3813	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08713	137.3794	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	137.3772	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	137.359	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	137.3572	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08773	137.3473	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08773	137.3473	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	137.3411	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	137.3411	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	137.3371	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0862	137.332	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	137.3282	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	137.3268	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	137.3268	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08624	137.3242	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08624	137.311	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	137.3061	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08597	137.3051	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	137.3048	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.2971	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08595	137.2795	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08754	137.2744	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08713	137.2675	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	137.2633	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0861	137.2592	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08625	137.2529	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08668	137.2484	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08649	137.233	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.2193	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	137.2117	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08668	137.1915	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.1884	BASE CASE
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08668	137.1656	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08709	137.1406	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08628	137.1389	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08628	137.1389	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08594	137.1197	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08594	137.1197	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0862	137.1034	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08595	137.0182	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08698	136.9301	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08674	136.93	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08674	136.93	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08642	136.9296	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08674	136.9291	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08674	136.928	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08674	136.928	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08692	136.907	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08621	136.8721	AURORA - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08606	136.8691	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08606	136.8691	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08609	136.8637	LOUP CITY - ST LIBORY 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	136.8146	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	136.8146	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	136.8131	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	136.8131	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08698	136.7952	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08698	136.7927	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	136.7737	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08539	136.7575	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	136.6885	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08524	136.6717	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08624	136.6476	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08624	136.6476	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08676	136.6084	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	136.6	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08676	136.5991	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	136.5824	GRAND ISLAND - HASTINGS 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08676	136.5646	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	136.5268	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	136.5268	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	136.4766	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	136.4766	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	136.4751	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	136.4751	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	136.4645	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	136.4539	COPSTJCPFRSJ
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	136.4539	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	136.4539	STMDSJFAFACO
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08611	136.4428	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08605	136.4351	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08605	136.4329	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08605	136.4329	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	136.378	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	136.3168	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	136.3004	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	136.2144	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	136.2144	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08525	136.1905	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08618	136.1869	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08698	136.1349	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	136.1237	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08597	136.0664	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	136.0468	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	136.0348	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	136.0276	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	136.0184	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	135.9992	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	135.9963	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	135.9774	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.9586	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.9586	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.9586	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.9537	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.9497	BASE CASE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.9447	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.9372	GEN657705 X-DRAYTON
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.9327	GEN659274 1-GROTON
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08846	135.9296	OAHE - SULLEY BUTTE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.9198	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.9131	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.8964	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.8952	GEN672356 1-FUT-WL1X 18.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.8848	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.8761	GEN672389 1-FUT-SW1X 18.000
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12383	135.8544	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.8402	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08651	135.8324	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.8281	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.8241	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.8241	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.8181	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.7952	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.7937	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	135.7747	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	135.7747	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.7372	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08846	135.7132	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.7079	GEN659270 1-WEST SW
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08846	135.6922	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08846	135.6921	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08838	135.6697	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08846	135.6498	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08846	135.6498	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.6468	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.6447	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08621	135.6354	AURORA - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08609	135.61	LOUP CITY - ST LIBORY 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08538	135.6036	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	135.5939	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08846	135.5879	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08594	135.5193	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08594	135.5193	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	135.516	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	135.516	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	135.5082	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	135.5082	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.4743	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.4719	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.4616	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	135.4319	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.4007	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.3757	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08699	135.342	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08699	135.342	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08699	135.3415	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	135.3341	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08525	135.3275	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08598	135.3139	GRAND ISLAND - HASTINGS 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.3004	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.2999	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	135.2968	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	135.267	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	135.267	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	135.2656	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	135.2656	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.265	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08699	135.2523	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08699	135.2464	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08699	135.2461	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08699	135.2461	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.2409	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0861	135.2331	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.2242	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08624	135.219	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08624	135.219	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.218	GEN659194 1-NDPRAIRWND1W0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.2099	GEN652460 4-GARRISON
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.2099	GEN652461 5-GARRISON
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.1504	GEN652459 3-GARRISON
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.1503	GEN652457 1-GARRISON
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.1503	GEN652458 2-GARRISON
FDNSLock	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	135.0831	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	135.0831	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	135.0831	STMDSJFAFACO
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.0328	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	134.9501	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	134.9501	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08618	134.9469	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.9191	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.9093	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	134.89	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	134.7808	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.7672	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	134.7591	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.7295	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.7258	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.7104	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.6991	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	134.6881	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.6656	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.656	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.656	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.6487	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.6477	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.6228	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.6206	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.6158	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.6142	GEN659274 1-GROTON
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.5951	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.5845	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.5636	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08699	134.5606	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.5508	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.5508	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.5508	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.5268	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.5096	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.4886	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.4542	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.4292	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.4247	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.4247	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.4125	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08848	134.3763	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.347	GEN659270 1-WEST SW
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.3344	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.3132	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.3021	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.2651	GEN600006 1-AS KING
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.2615	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.2453	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.2432	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08839	134.2327	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08848	134.2114	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08848	134.1938	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08848	134.1938	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.1767	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.1544	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08848	134.1499	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08848	134.1499	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.1144	GEN652556 2-OAHE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.1144	GEN652557 4-OAHE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.1144	GEN652558 6-OAHE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.1087	STANTON 230/18.0KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08848	134.1004	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.0912	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.0151	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	134.0104	GEN615010 1-STANTON4
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.9943	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.9905	GEN659141 1-K10215A
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.9822	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.9596	GEN652461 5-GARRISON
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.9595	GEN652460 4-GARRISON
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.9185	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.918	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.9153	GEN652457 1-GARRISON
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.9153	GEN652458 2-GARRISON
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.9153	GEN652459 3-GARRISON
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.9048	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.9025	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.8657	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.7993	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	133.7509	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.7493	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	133.7478	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.7457	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	133.6768	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.6322	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.6261	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.6215	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.6157	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.6058	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.5897	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.571	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.5553	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.5316	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.5257	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.5251	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.464	GEN652559 1-OAHE
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.4401	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.3866	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.3579	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.3037	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.2329	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.166	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.1063	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.0863	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.082	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.082	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.0695	GEN615010 1-STANTON4
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.0667	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.0656	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.0588	GEN600006 1-AS KING
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.0477	GEN652556 2-OAHE
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.0477	GEN652557 4-OAHE
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.0477	GEN652558 6-OAHE
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	133.0019	GEN659141 1-K10215A
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	132.962	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12975	132.9161	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	132.7318	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	132.5619	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	132.5573	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	132.5422	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	132.5258	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	132.3372	GEN652559 1-OAHE
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	132.3224	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	132.2854	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	132.1602	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13419	132.1165	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	132.0878	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12152	132.0484	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	132.0316	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	132.0264	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12152	132.0097	2810X2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	131.9994	GEN661015 1-COYOTE
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	131.9767	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	131.9364	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	131.8331	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12152	131.3065	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	131.2952	GEN661015 1-COYOTE
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13398	131.2925	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	131.0007	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	130.7818	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	130.7289	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	130.7188	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12156	130.5311	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12156	130.5304	2810X2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	130.4972	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	130.2062	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	130.2034	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12156	130.105	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	130.0854	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	130.0538	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13224	129.7964	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	129.7168	GEN659125 1-COVEY
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	129.7008	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	129.5517	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	129.5517	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	129.3832	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	129.3463	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13426	129.2446	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13426	129.2446	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12911	129.126	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	129.0238	GEN659125 1-COVEY
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	128.9398	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	128.9398	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12911	128.8914	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12911	128.8753	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12911	128.8753	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12737	128.8251	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	128.5403	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	128.2455	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	128.2164	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	128.1102	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13544	128.0074	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13544	128.0074	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13526	127.9325	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13526	127.9325	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13239	127.7828	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12711	127.6848	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12711	127.6848	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13526	127.5988	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	127.5006	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12834	127.3517	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12834	127.3517	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12975	127.3307	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12487	127.3078	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12487	127.2307	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	127.2042	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13175	127.203	LETCHER - SIOUX FALLS 230KV CKT 1
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	127.193	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.11331	127.1857	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12487	127.1842	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12822	127.0787	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12809	127.0341	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	127.0212	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12708	126.9277	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12708	126.9063	LELAND03-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12708	126.9063	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12708	126.9035	2809X1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12708	126.8886	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1279	126.8174	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	126.7211	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12938	126.4686	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12841	126.4664	AS KING - EAU CLAIRE 345KV CKT 1
FDNSLock	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13326	126.4345	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	126.4341	GEN635024 4-WALTER SCOTT UNIT 4
FDNSLock	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13326	126.4296	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12835	126.3352	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12796	126.3286	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12796	126.3286	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	126.2981	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12737	126.2752	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12796	126.267	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	126.219	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12796	126.2143	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	126.1623	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12822	126.1122	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	126.0342	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1306	126.0238	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	125.8713	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	125.8564	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12835	125.8354	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12835	125.8354	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1268	125.8199	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12835	125.7555	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12827	125.7059	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12595	125.6773	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12937	125.6706	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12894	125.6436	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1284	125.6421	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13398	125.6039	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13398	125.6039	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNSLock	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12836	125.5677	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.16022	125.5164	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.16014	125.5112	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12849	125.5065	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1281	125.5018	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12799	125.4971	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	125.4837	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12836	125.4747	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	125.4245	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12847	125.4064	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	125.4012	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	125.3679	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12891	125.3205	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12869	125.3171	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13052	125.3052	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12894	125.2516	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12855	125.2358	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12847	125.2202	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1281	125.2196	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13052	125.2182	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13052	125.2182	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	125.2171	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	125.1577	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12855	125.156	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13052	125.1485	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13052	125.1485	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12891	125.1202	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	125.1136	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	125.094	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12855	125.0588	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12836	125.0225	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	125.0221	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12859	125.0078	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12813	125.0067	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12855	124.9832	HARMONY - VALENTINE 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.9696	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12885	124.9605	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12885	124.9605	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.9373	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12323	124.9369	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12885	124.9129	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13385	124.8926	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13385	124.8926	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13385	124.8926	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13385	124.8926	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12813	124.8571	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.8264	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12864	124.8003	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12864	124.8003	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12885	124.7979	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.7725	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13114	124.7332	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13114	124.7294	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13114	124.7276	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12833	124.7242	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.7053	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.7019	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12859	124.6931	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12859	124.6931	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12789	124.6865	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12855	124.6819	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.6645	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.6621	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.662	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12849	124.6501	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12849	124.6493	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.6239	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12745	124.621	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12745	124.6133	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12745	124.6052	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12745	124.5949	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12745	124.5942	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12745	124.5941	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12745	124.5915	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12853	124.5905	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.5878	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.5877	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12886	124.5593	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.5591	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12868	124.5451	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12868	124.5351	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12845	124.522	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12745	124.5218	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.5142	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12815	124.5132	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12868	124.4887	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12886	124.469	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	124.4604	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	124.4604	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12817	124.4478	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.4474	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12848	124.4452	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.4236	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12847	124.4185	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12886	124.4049	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12858	124.3914	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12858	124.3914	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12858	124.3838	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.3744	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.3571	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12848	124.3375	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.3284	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12872	124.3209	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12872	124.3209	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.318	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12845	124.3066	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12846	124.2965	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12845	124.2842	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12845	124.2761	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.2717	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.2712	GEN303007 1-1BC2 U2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.2693	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.2671	GEN303006 1-1BC2 U1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12849	124.2649	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12804	124.2612	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12844	124.2569	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.2276	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12838	124.2216	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.2181	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.2139	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.2119	GEN303008 1-1BC2 U3
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.2102	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12872	124.2081	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12872	124.2081	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.2024	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12839	124.1997	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.1992	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.1973	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.1951	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12847	124.1877	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.1854	GEN642067 1-PLATTE
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.1852	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12874	124.1746	AINSWORTH - CALAMUS 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12874	124.174	P12:115:NPPD:1090:AINSWND7:THEDFRD7:BTB
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12815	124.1736	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12849	124.1722	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.1686	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12874	124.1637	CALAMUS - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12872	124.1577	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.154	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12891	124.1458	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1282	124.139	HELENA - SHEAS LK3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12852	124.1328	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12849	124.1214	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12849	124.1197	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.1142	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12822	124.1096	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12849	124.1079	JAMES TOWN - PICKERT 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.1053	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.1005	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.0995	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12848	124.099	PRAIRIE - RAMSEY 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12851	124.095	GENOA 161 - SENECA 161 161KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12852	124.094	NORTH LA CROSSE (10008630_001) 345/161/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12831	124.0931	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13242	124.0866	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.0772	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.0722	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12847	124.0603	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12845	124.0558	BALTA - MCHENRY 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12848	124.0547	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12848	124.0532	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12849	124.0468	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12801	124.0438	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.0412	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.0404	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12882	124.0391	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12882	124.0391	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.0346	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12848	124.032	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12847	124.031	BALTA - RUGBY 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13273	124.0287	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13273	124.0287	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.0248	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.0186	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12802	124.0145	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12874	124.0123	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.0099	WHITE BLUFF 500/26.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	124.0004	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	123.9997	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12857	123.9942	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12857	123.9909	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12857	123.9908	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.129	123.9889	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	123.9865	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	123.9865	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12853	123.9824	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12853	123.9824	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12802	123.9796	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	123.9792	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12802	123.9783	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	123.9782	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1279	123.51	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	123.4927	BASE CASE
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12835	123.4764	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12835	123.4764	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	123.3764	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	123.3764	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12836	123.3629	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12836	123.3585	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12836	123.3585	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12872	123.2777	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1276	123.2663	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12859	123.092	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12846	123.0432	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12846	123.0432	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12848	123.0372	CRETE - FRIEND 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12853	123.0174	LOUP CITY - NORTH LOUP 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	123.0149	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.9866	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.9791	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.975	GEN659116 1-SPIRIT MOUND UNIT1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.975	GEN659117 2-SPIRIT MOUND UNIT2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12814	122.9606	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12814	122.9606	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1287	122.9576	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1287	122.9576	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.9527	GEN672369 3-MERIDIAN GENERATOR 3 ST
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12851	122.9472	7MAYWOOD 345.00 - 7SPENCER 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12851	122.945	7MONTGMRY 345.00 - 7SPENCER 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.9425	CLKREACT5 161.00 - CRYSTLK5 161.00 161KV CKT 1
FDNSLock	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12851	122.9224	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12851	122.9224	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12851	122.9224	STMDSJFAFACO
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12824	122.9141	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.9114	GEN620115 1-HRDLKGEN 0.6000
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.9113	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12861	122.9103	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.9071	GEN652546 1-FT RANDAL
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.9059	GEN600013 3-BLACK DOG GEN 3
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12839	122.9035	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.9034	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.9014	GEN620323 2-HOOT LAKE 2 GEN
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.8933	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.8926	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.8925	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12966	122.8913	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.8837	GEN563302 1-G15096_3 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.8768	GEN600125 2-FEP ST G 13.800

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.8721	GEN652548 5-FT RANDAL
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.8721	GEN652549 7-FT RANDAL
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.8636	GEN672384 1-CENTENNIAL WINDFARM
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.8604	GEN652547 3-FT RANDAL
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.8347	GEN657964 1-ASH2GEN9 0.5750
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.8331	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.8222	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12846	122.8191	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.8035	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.7988	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.7916	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.7895	GEN659290 1-EDGECOL
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.7713	GEN652410 3-FT PECK
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1285	122.7613	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12866	122.7589	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.7467	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.7358	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.7187	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.7187	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12848	122.7183	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.7157	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.715	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.7129	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.7125	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.7124	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.7124	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.7047	GEN652414 4-FT PECK
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.7047	GEN652415 5-FT PECK
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.689	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.6887	GEN657600 1-L1GEN3 9 0.5750
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.6805	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.6744	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.6685	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1314	122.6679	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.6572	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12878	122.6489	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.6465	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.13128	122.6444	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.6267	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.6267	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.626	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.6138	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.6138	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.6038	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12878	122.5678	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12878	122.5678	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1282	122.5608	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1282	122.5608	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1314	122.5607	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1314	122.5581	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1314	122.5574	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.5565	GEN600050 1-FEP
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12846	122.5549	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12841	122.5502	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12841	122.5502	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1314	122.5294	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1314	122.5294	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.5281	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.528	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.5274	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.5078	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1314	122.4814	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12825	122.481	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12825	122.481	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.4807	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12822	122.472	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.4622	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.4622	GEN600066 8-HIGH BRIDGE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.4362	GEN659192 6-LYNN
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.435	GEN659162 4-RED WLCK
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.435	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.4245	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.4241	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.4217	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.4128	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.3698	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.3698	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.3672	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.3671	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.365	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.352	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.3479	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12841	122.3293	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.2929	GEN600017 C-LS POWER CT
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.2818	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.2578	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.2531	GEN681522 3-GENOA 3
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.2478	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.2478	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.2465	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.2324	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.2313	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.2149	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.2142	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.2046	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.1932	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.1416	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.0797	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12899	122.0579	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12899	122.0579	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	122.0335	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1276	122.0147	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.9821	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.9684	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.953	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.8932	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.8932	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.8932	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08861	121.7461	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.6706	GEN652460 4-GARRISON
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.6705	GEN652461 5-GARRISON
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.6643	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.638	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.6234	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.6213	GEN652458 2-GARRISON
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.6213	GEN652459 3-GARRISON
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.6211	GEN652457 1-GARRISON
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.5907	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.5622	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.5451	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12821	121.5275	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.5153	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12821	121.4982	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12821	121.4926	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12875	121.425	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.3946	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.2856	GEN681542 6-JP MADGETT
FDNSLock	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.1269	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.1192	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	121.0803	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.9907	GEN652559 1-OAHE
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.9745	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.8989	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.8829	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.8473	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12866	120.7747	G15088_T 345.00 - MOORE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.7015	GEN652556 2-OAHE
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.7015	GEN652558 6-OAHE
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.6724	GEN652557 5-OAHE
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.6027	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.5007	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.4797	GEN615010 1-STANTON4
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.4679	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.3249	GEN659141 1-K10215A
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.17642	120.2158	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.17642	120.2025	2810X2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.1356	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.105	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.0584	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.0584	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	120.023	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	119.9171	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	119.9117	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	119.9002	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.17642	119.6615	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09164	119.6422	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	119.6143	GEN600006 1-AS KING
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	119.5542	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08711	119.2586	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	119.2057	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08575	119.1143	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	119.0036	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09147	118.9702	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	118.9043	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08622	118.9043	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	118.2908	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	118.2507	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09032	118.2307	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08621	117.8467	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09176	117.7707	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09176	117.7707	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	117.7482	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	117.5429	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08713	117.5264	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08861	117.3879	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	117.2638	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08732	117.1954	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08732	117.1954	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	117.1779	GEN661015 1-COYOTE
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	117.0175	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09211	117.0145	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09211	117.0145	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	116.9542	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.092	116.9113	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.092	116.9113	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08759	116.8639	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08759	116.8639	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	116.7566	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	116.7565	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	116.7231	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.092	116.67	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08635	116.6286	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08701	116.6168	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08701	116.6168	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	116.6133	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08747	116.6131	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08701	116.5951	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	116.5588	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08701	116.5392	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12475	116.5205	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08747	116.5085	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08993	116.4077	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08763	116.3792	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	116.3401	GEN640009 1-COOPER NUCLEAR STATION

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.17642	116.2893	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.17642	116.2893	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	116.2148	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08691	116.1849	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNSLock	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08751	116.166	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08833	116.0185	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0874	116.0079	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08727	115.9225	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08766	115.8901	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	115.8693	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08766	115.8269	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	115.8244	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08765	115.8217	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08766	115.8139	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08766	115.8139	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08712	115.8084	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08747	115.7511	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	115.7224	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	115.7081	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	115.6357	GEN659125 1-COVEY
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08747	115.6313	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	115.5903	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08914	115.5695	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08785	115.5453	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	115.5139	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	115.4811	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08836	115.4532	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	115.437	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	115.437	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	115.4333	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0874	115.4202	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNSLock	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08748	115.3732	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	115.3412	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	115.3349	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08635	115.2996	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	115.2736	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	115.2449	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	115.2449	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	115.2328	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08791	115.2287	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08785	115.2167	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08863	115.1959	NUNDRWD - WAYSIDE 230KV CKT 1
FDNSLock	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08648	115.1735	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08727	115.1515	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09147	115.1459	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09147	115.1459	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNSLock	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08648	115.1233	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08748	115.0864	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08751	115.0813	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08802	115.078	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08802	115.0698	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08742	115.0627	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08791	115.0589	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	115.0245	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08802	115.0134	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08687	114.9973	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08687	114.9922	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08687	114.9922	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08687	114.991	2809X1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08719	114.9878	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08687	114.9847	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08744	114.9487	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.9456	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	114.9353	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08755	114.896	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.8844	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08694	114.8785	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.8681	BLAIR - GRANITE FALLS 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.8681	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.8588	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08784	114.8575	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	114.8541	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.8269	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.7984	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.7983	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08694	114.7893	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08727	114.7761	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08753	114.7651	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.755	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.755	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08829	114.739	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.7307	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08744	114.7139	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08743	114.6985	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08752	114.6969	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.6901	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	114.6568	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0876	114.6413	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.6263	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.6261	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.6259	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08752	114.6242	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.622	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08763	114.6084	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0873	114.5999	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.5978	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.5915	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.5885	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.5884	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.5884	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08913	114.5879	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08756	114.5874	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08784	114.5683	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.5678	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.5536	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.5536	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08745	114.5489	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.5387	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.5387	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08729	114.5349	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08729	114.5345	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08784	114.533	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08784	114.5296	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.5273	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08759	114.5269	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08759	114.5269	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.5127	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.5114	GEN642067 1-PLATTE
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.5109	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.5031	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08913	114.5014	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08913	114.5014	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08781	114.489	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.4737	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08784	114.4664	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08806	114.4628	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08913	114.4488	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08913	114.4488	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12389	114.4475	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0877	114.4467	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0877	114.4467	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.4366	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08781	114.4352	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08784	114.4343	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08767	114.4343	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08767	114.4343	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08754	114.4216	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.4067	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08781	114.4023	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.399	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08734	114.3975	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08733	114.383	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.3812	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08756	114.3781	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.3754	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0877	114.3748	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0877	114.3748	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.3684	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.3572	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08753	114.3561	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08763	114.356	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08829	114.3515	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08767	114.342	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08811	114.3397	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08748	114.3381	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08727	114.3301	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	114.3276	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08759	114.3213	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0873	114.3208	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08757	114.308	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08757	114.308	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.3053	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08759	114.3043	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08767	114.3036	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.3033	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.2951	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08893	114.2937	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09162	114.2926	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09162	114.2926	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09162	114.2926	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09162	114.2926	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08754	114.2911	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08806	114.2871	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08754	114.2778	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08806	114.2761	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08754	114.2755	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.2749	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	114.2701	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	114.2693	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.2606	GEN563212 1-G15087_3 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	114.2603	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	114.2599	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08913	114.2563	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08913	114.2563	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	114.2521	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	114.2518	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.2489	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08749	114.248	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.2457	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08814	114.2419	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.2395	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.2379	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.2298	GEN303007 1-1BC2 U2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.2273	GEN303006 1-1BC2 U1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08814	114.2226	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08814	114.2214	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08753	114.2117	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08736	114.2056	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08856	114.2042	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08777	114.204	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	114.0259	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	114.0052	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.6972	BASE CASE
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0874	113.5575	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0874	113.5575	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08669	113.5422	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08739	113.4541	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08739	113.4519	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08739	113.4519	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08756	113.3044	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08745	113.2694	CENTRAL CITY - CLARKS 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08754	113.2515	CRETE - FRIEND 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.1514	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.1514	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.1514	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.1462	GEN652414 4-FT PECK
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.1462	GEN652415 5-FT PECK
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.1453	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.1453	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08757	113.1417	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.1316	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.1316	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08836	113.1289	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.1238	GEN600046 1-MECST
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.114	GEN600047 1-MECCT1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.1099	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.1016	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.1016	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08752	113.0811	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.0741	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.07	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.07	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.0544	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08757	113.0513	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.0437	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08745	113.041	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.0409	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.0339	GEN659162 4-RED WLCK
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.0339	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.0336	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.0335	GEN659192 6-LYNN
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.033	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.033	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.0272	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08752	113.0267	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.0229	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.0228	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.013	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0899	113.0128	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.9943	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08758	112.989	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08758	112.989	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.9867	GEN600017 C-LS POWER CT
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0898	112.97	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.9631	GEN681522 3-GENOA 3
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.9314	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0899	112.9286	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.927	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0899	112.9256	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0899	112.9247	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08746	112.9163	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08746	112.9163	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.9151	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.9129	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08754	112.8996	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08719	112.8978	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08719	112.8978	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0899	112.8977	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0899	112.8977	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.8699	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08723	112.8688	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08723	112.8688	SUB 3454 - WAGENER 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.868	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.8677	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.8631	GEN659274 1-GROTON
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0899	112.8572	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.8413	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.8404	GEN662101 1-WESSINGTON190.5750
FDNSLock	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08757	112.8361	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08757	112.8361	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08757	112.8361	STMDSJFAFACO
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.8321	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.8297	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.8297	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.7953	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.7934	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.7848	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08752	112.7682	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.7605	GEN659270 1-WEST SW
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.7598	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.7567	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08746	112.7253	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08729	112.7013	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08729	112.7013	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.6974	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.686	GEN657705 X-DRAYTON
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.6753	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08756	112.63	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.6122	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.6063	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.6063	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.6063	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08757	112.558	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08757	112.5563	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.5114	GEN652460 4-GARRISON
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.5114	GEN652461 5-GARRISON
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.4931	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.4926	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.4919	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.4902	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.4779	GEN652457 1-GARRISON
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.4779	GEN652458 2-GARRISON
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.4779	GEN652459 3-GARRISON
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08662	112.4774	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08757	112.4683	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08725	112.4524	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.4453	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.4343	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.4197	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.4035	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.3988	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.3987	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.3739	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.3464	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.3071	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.2163	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.2132	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.1995	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.1255	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.1207	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.0913	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.0889	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.0882	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	112.027	GEN652559 1-OAHE
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.9491	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.947	GEN652907 1-G09_007IS_3 0.6900
FDNSLock	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.8306	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.8074	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.7414	GEN652556 2-OAHE
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.7414	GEN652558 6-OAHE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.7211	GEN652557 5-OAHE
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.668	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08724	111.5986	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08724	111.5729	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.571	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08724	111.5694	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.5647	GEN659141 1-K10215A
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.5436	GEN615010 1-STANTON4
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.5192	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.4932	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.4896	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.3953	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.3284	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.3043	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.293	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.2922	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.2486	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.1977	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.1977	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.1945	GEN600006 1-AS KING
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.185	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	111.1707	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12333	111.0486	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12333	111.0407	2810X2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	110.9257	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12333	110.8258	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNSLock	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	110.499	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	110.4636	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	110.0437	GEN659118 1-LARAMIE RIVER UNIT1
FDNSLock	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	109.855	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	109.4569	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	109.4306	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	109.3876	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	109.272	GEN661015 1-COYOTE
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	109.0482	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	109.0482	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	108.8935	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	108.6635	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	108.6635	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	108.6451	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12333	108.5758	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12333	108.5758	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	108.5245	GEN659125 1-COVEY
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	107.9743	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	107.4917	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	107.4074	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	107.2475	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08355	105.2071	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12854	102.9134	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	102.8382	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	102.8382	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08264	101.9575	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12934	168.4157	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12934	168.4157	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11985	166.9973	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12437	165.7616	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11985	165.5033	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	163.8216	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12308	163.678	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12327	163.5884	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12327	163.5822	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	163.4547	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12295	163.3604	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12306	163.1152	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	163.0175	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12327	162.9443	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12306	162.6591	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12306	162.6591	ELLENDALE - OAKES 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	162.62	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12327	162.4799	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12311	161.8156	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	161.6322	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	161.4861	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12305	161.2463	FORMAN - HANKINSON 230KV CKT 1
FDNSLock	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12311	161.1112	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12286	160.7098	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12278	160.6865	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12235	160.3391	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12297	160.1447	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12297	160.1447	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	159.3983	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	159.3904	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12259	159.2827	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.15558	159.207	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.15549	159.2006	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12297	158.8435	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	158.7477	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	158.7266	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	158.7261	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	158.6521	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	158.6418	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	158.5274	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	158.434	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1226	158.4057	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	158.391	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	158.2854	GEN642067 1-PLATTE
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	158.2818	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12289	157.92	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12309	157.8806	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12309	157.8806	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12437	157.6114	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12437	157.6114	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12437	157.6114	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12437	157.6114	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1231	157.5529	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1231	157.5354	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1231	157.5354	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12441	157.5341	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12441	157.5341	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12441	157.5341	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12441	157.5341	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12326	157.3998	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12326	157.3998	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12236	157.0961	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12342	157.0672	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12344	157.0435	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1233	157.0234	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1233	157.0234	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	156.9923	2560-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	156.9923	2561-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	156.9923	BASE CASE
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12336	156.8807	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12267	156.8208	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12292	156.7155	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12292	156.7155	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12319	156.6456	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12319	156.6456	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12319	156.6437	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12319	156.6437	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	156.6335	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	156.5351	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12348	156.5133	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	156.4919	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	156.4919	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	156.4877	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12295	156.4761	COOPER - MOORE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12341	156.4686	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12341	156.4686	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12302	156.4459	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12302	156.4459	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	156.4451	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12302	156.4448	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12302	156.4448	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	156.4409	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	156.4409	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	156.4409	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12298	156.3291	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12298	156.3291	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12289	156.1763	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12289	156.1763	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1233	156.1236	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1233	156.1236	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12349	156.0977	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12349	156.0977	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12367	155.9996	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12367	155.9996	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12236	155.989	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12331	155.958	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12331	155.958	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12331	155.9363	P12:345:SPS:J07.1.FINN.HITCH
FDNSLock	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	155.8173	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	155.7751	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	155.5046	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12344	154.9062	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12336	154.7839	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1112	154.4736	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	154.3879	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12293	153.7237	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12293	153.6108	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12293	153.6096	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11953	153.2649	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	152.2035	GEN600006 1-AS KING
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	152.0395	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	151.4175	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	150.427	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	149.4332	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11869	149.2723	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	149.056	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	149.0086	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1703	148.9926	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1703	148.9597	2810X2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08452	146.82	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	146.7279	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	146.4901	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	146.1215	GEN659125 1-COVEY
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	145.9843	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	145.9843	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	145.8548	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08495	145.2922	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	144.7535	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08633	144.5682	FT RANDAL - SPENCER 115KV CKT 1
FDNSLock	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	144.3573	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08596	144.227	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08596	144.227	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	143.9998	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08633	143.789	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08633	143.789	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08774	143.3357	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08633	142.9177	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08606	142.6837	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	142.6697	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08614	142.6553	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	142.6037	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	142.3983	GEN337652 1-WHITE BLUFF UNIT #1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	142.3767	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	142.2752	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	142.2528	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08605	142.2479	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08561	142.2425	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	142.2006	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08609	142.1191	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	142.1161	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	142.0924	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	142.0627	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08773	142.0621	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	142.0474	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	142.0383	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.9912	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.9785	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	141.9745	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.9196	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08636	141.8674	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08636	141.8136	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08636	141.8136	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08625	141.808	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08666	141.7956	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.7243	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.6559	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.6559	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08633	141.6545	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.6501	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08625	141.6463	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08625	141.6463	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.6192	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.601	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0862	141.561	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08646	141.5557	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.55	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.5488	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.5447	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07994	141.5293	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08735	141.508	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08735	141.508	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08597	141.5056	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08624	141.4939	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08626	141.4664	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08626	141.4664	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08623	141.4558	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.4439	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.4433	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.4401	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	141.4259	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08636	141.3915	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08636	141.3915	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0865	141.2965	EMMETE.TAP 7115.00 - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08772	141.2669	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08772	141.2669	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08624	141.2639	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08624	141.2423	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	141.2129	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08628	141.197	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08628	141.197	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	141.1833	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	141.171	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	141.1694	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	141.1685	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.1498	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08605	141.1433	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.086	141.1301	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.1063	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0868	141.0727	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.0645	GEN334440 1-SABINE UNIT 4

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.025	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.0204	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.0175	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.0174	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	141.0172	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08597	141.0038	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08597	141.0038	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	140.9935	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	140.9935	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08624	140.9777	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08609	140.9568	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08597	140.9544	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08623	140.9406	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	140.9297	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.9152	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	140.9135	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0862	140.9111	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.907	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.8882	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.883	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08621	140.8813	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.8662	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08601	140.8633	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08626	140.8603	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.8356	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	140.8183	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08621	140.8019	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08636	140.7932	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08632	140.788	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.7701	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08626	140.7366	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08626	140.7366	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.7166	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	140.7108	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	140.7004	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08693	140.6907	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.6839	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.6805	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.6658	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.6566	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.6549	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.6441	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.6416	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.6372	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.6191	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08621	140.5587	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.54	GEN336222 1-LITTLE GYPSY UNIT#2
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.086	140.5302	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08594	140.5182	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08608	140.5022	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08623	140.4859	P12:115:NPPD:TSGT5:OGALALA7:ELSIETP7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08628	140.4786	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08628	140.4786	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0862	140.469	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.4589	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08594	140.4384	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	140.3896	G15088_T 345.00 - MOORE 345KV CKT 1
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.3838	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.3739	GEN525561 1-TOLK GEN #1 24 KV
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.3612	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.3508	GEN642067 1-PLATTE
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.303	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.303	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.2682	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08625	140.2627	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0862	140.2557	P12:115:TSGT:BSPRGS7-WHORSE7
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.2507	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.2327	AINSWORTH - VALENTINE 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	140.2162	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	140.2162	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08626	140.2053	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	140.1942	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08623	140.1911	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.1833	GEN303007 1-1BC2 U2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.1782	GEN532722 1-EVANS ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.177	GEN303006 1-1BC2 U1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0862	140.1749	P12:115:TSGT:COVALT7-SNAKECK7
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08632	140.1719	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08632	140.1719	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.1622	GEN514806 1-SOONER UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08635	140.1566	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08635	140.1566	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.132	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.128	GEN514805 1-SOONER UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.1136	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.1133	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.113	GEN512688 2-GRDA1 GSU2 22
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.0976	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08621	140.0841	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	140.0807	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08632	140.0513	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08606	140.0493	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08606	140.0493	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0862	140.0473	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0862	140.0405	P12:115:NPPD:TSGT2:W.HORSE7:B.SPRGS7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	140.0361	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.9691	GEN515042 1-SEMINOLE 3G
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.964	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08649	139.9246	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.9222	GEN515041 1-SEMINOLE 2G
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08666	139.8932	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08646	139.8796	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0862	139.8506	BLUE CREEK - W.HORSE7 115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.086	139.8489	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.086	139.8489	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.8476	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.8475	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.8474	GEN344896 3-1LAB G3 20.000
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.8468	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.8459	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08735	139.8443	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08735	139.8443	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.8204	GEN515040 1-SEMINOLE 1G
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.8022	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.8013	GEN635214 4-NEAL UNIT 4
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.7604	ONEILL 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0862	139.7594	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.7511	ONEILL 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08625	139.7371	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08625	139.7371	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.6945	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08683	139.6928	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08683	139.6928	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08683	139.6928	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08683	139.6928	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.6834	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.675	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.6434	GEN527903 1-HOBBS PLANT #3 (ST)
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.6376	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08693	139.6376	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	139.6366	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08611	139.6364	COLUMBUS - SILVER CREEK 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08605	139.6315	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	139.6235	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08621	139.6214	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08666	139.6149	CLEARWATER - ONEILL 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08605	139.6126	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08605	139.6126	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08685	139.602	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08685	139.602	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08685	139.602	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08685	139.602	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.524	GEN523972 1-HARRINGTON GEN #2 24 KV
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.524	GEN523973 1-HARRINGTON GEN #3 24 KV
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.5239	GEN523971 1-HARRINGTON GEN #1 24 KV
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.5139	GEN528501 1-G14_012 24.000
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.5055	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.4934	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.4782	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08625	139.4781	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08625	139.4781	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08624	139.4765	ALBION - SPALDING 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.4458	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08624	139.4399	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08624	139.4399	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	139.4396	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	139.4396	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.4321	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08649	139.4319	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.3804	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0868	139.3458	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08692	139.3396	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08524	139.2392	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.2381	OGALLALA (OGALLALA T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08625	139.2245	ANTELOPE 3345.00 - HOSKINS 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11036	139.2207	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1103	139.2182	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08649	139.2167	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08596	139.0728	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	139.0614	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08651	139.0399	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.0089	BROKEN BOW - CROOKED CREEK 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08601	138.985	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	138.97	BLUSTEM7 345.00 - JEFFREY ENERGY CENTER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	138.959	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08699	138.9115	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08626	138.8797	SUB D - SUB I 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	138.8729	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	138.8729	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08597	138.8571	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08597	138.8571	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08625	138.8366	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08625	138.8366	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08597	138.8139	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	138.7845	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	138.7693	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08628	138.7663	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	138.7451	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	138.7415	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08589	138.7177	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08589	138.7177	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	138.7162	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08628	138.691	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08628	138.691	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0862	138.6683	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	138.6514	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0862	138.638	ALDA - SUB A 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08628	138.6043	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08628	138.6043	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	138.5823	1222-AINSWORTH WIND
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	138.5823	1303-KEARNEY
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	138.5823	1310-ONEILL
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	138.5823	2367-REDWLCK7 115.00
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	138.5823	BASE CASE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08675	138.5545	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08628	138.5434	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08628	138.5434	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08628	138.5429	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08628	138.5429	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	138.5184	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08625	138.4901	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08625	138.4901	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08594	138.4838	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08594	138.4838	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08692	138.4563	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08606	138.4235	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08606	138.4235	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	138.4029	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08698	138.3626	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08698	138.3626	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08698	138.3486	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	138.3272	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08698	138.3179	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08698	138.3132	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08698	138.3131	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08698	138.3131	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	138.1926	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	138.1926	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	138.1911	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	138.1911	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11028	138.1832	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11034	138.1653	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08539	138.1402	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	138.1036	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	138.1036	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	138.1036	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	138.1036	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08684	138.0676	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08684	138.0676	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08684	138.0676	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08684	138.0676	FT THOMPSON - OAHE 230KV CKT 4
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	138.0469	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08624	138.0343	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08624	138.0343	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08524	138.0282	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08605	137.9927	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08605	137.9915	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08605	137.9915	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08599	137.9507	GRAND ISLAND - HASTINGS 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	137.9413	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08599	137.9091	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08599	137.9091	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	137.857	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08628	137.8438	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08628	137.8438	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08599	137.8368	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08599	137.8368	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08599	137.8353	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08599	137.8353	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08623	137.8331	COPSTJCPFRSJ
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08623	137.8331	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08623	137.8331	STMDSJFAFACO
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08628	137.8313	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08611	137.8087	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08623	137.758	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	137.748	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	137.748	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08623	137.6948	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08623	137.6786	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	137.5973	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	137.5768	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	137.574	G13-010T 345.00 - POST ROCK 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08585	137.5732	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08585	137.5732	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	137.5652	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	137.5487	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	137.5448	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	137.5275	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	137.5091	1303-KEARNEY
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	137.5091	BASE CASE
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08651	137.414	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08589	137.3046	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08589	137.3046	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08538	137.1469	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	137.1124	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	137.0575	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	137.0575	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	137.0574	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	137.0574	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08594	137.0428	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08594	137.0428	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08699	136.9319	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08699	136.9319	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08699	136.9297	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08598	136.8686	GRAND ISLAND - HASTINGS 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08525	136.8563	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08699	136.8341	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08699	136.8276	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08699	136.8274	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08699	136.8274	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	136.8181	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	136.8177	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08599	136.7974	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08599	136.7974	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08599	136.796	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08599	136.796	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08624	136.7697	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08624	136.7697	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0861	136.7662	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	136.7555	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	136.7554	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	136.7466	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	136.6491	POSTROCK7-AXTELL3-345kV CKT 1
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08623	136.6302	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08623	136.6302	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08623	136.6301	STMDSJFAFACO
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	136.6115	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08585	136.4711	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08585	136.4711	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	136.4423	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08623	136.3232	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08623	136.3018	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08623	136.2295	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	135.5642	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	135.5504	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	135.5093	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	135.2129	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	135.2088	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	135.1341	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12383	134.9825	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	134.9306	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12152	133.2477	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12152	133.2062	2810X2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	132.3408	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	132.1131	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12975	132.0775	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12156	131.8903	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12156	131.8885	2810X2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	131.8276	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	131.703	GEN659118 1-LARAMIE RIVER UNIT1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	131.3761	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12156	131.3414	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	131.3122	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13419	131.29	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	131.1338	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	130.587	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13398	130.4686	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	130.3822	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	130.211	GEN659125 1-COVEY
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	130.1226	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	130.1226	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	129.5103	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	129.3928	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	129.2829	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	129.2152	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13224	128.9682	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	128.6819	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13426	128.4147	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13426	128.4147	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12911	128.3086	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	128.1607	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	128.1321	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12911	128.0723	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12911	128.0558	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12911	128.0558	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12737	128.0245	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13544	127.1888	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13544	127.1888	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13526	127.1147	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13526	127.1147	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13239	126.9682	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12711	126.8736	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12711	126.8736	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13526	126.7799	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12834	126.5194	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12834	126.5194	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12975	126.5071	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12487	126.4902	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12487	126.4121	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13175	126.3752	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12487	126.3684	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11331	126.3539	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12822	126.2557	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12809	126.224	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12708	126.1266	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12708	126.1039	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12708	126.1039	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12708	126.1009	2809X1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12708	126.086	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	126.0122	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	126.0122	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1279	126.0075	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	125.8986	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12841	125.6452	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12938	125.6424	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNSLock	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13326	125.6206	P13:230-345:NPPD:STEGALL3:KV3A
FDNSLock	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13326	125.6157	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	125.6103	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12835	125.5164	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12796	125.5066	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12796	125.5066	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	125.4767	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12737	125.467	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12796	125.4444	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	125.3974	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12796	125.3905	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	125.3415	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12822	125.2917	ADAMS - MITCHLCO3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	125.2118	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1306	125.2033	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	125.1117	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	125.1117	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	125.0514	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	125.0364	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12835	125.0253	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12835	125.0253	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1268	125.0042	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12835	124.9454	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12827	124.8868	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12595	124.8634	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12937	124.8481	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1284	124.8226	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12894	124.8211	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13398	124.7865	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13398	124.7865	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNSLock	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12836	124.7556	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.16022	124.7187	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.16014	124.7134	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1281	124.6896	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12799	124.6845	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12849	124.6838	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	124.6716	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12836	124.6623	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	124.6144	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12847	124.587	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	124.5826	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	124.548	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12891	124.4988	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12869	124.495	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13052	124.489	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12894	124.431	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12855	124.4261	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1281	124.4071	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13052	124.403	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13052	124.403	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12847	124.4013	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	124.3979	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12855	124.3417	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	124.3397	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13052	124.333	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13052	124.333	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12891	124.299	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	124.2947	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	124.2739	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12855	124.2448	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12836	124.2102	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	124.2066	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12813	124.1941	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12859	124.1927	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12855	124.1746	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	124.1513	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12885	124.1433	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12885	124.1433	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	124.1204	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12885	124.0959	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13385	124.0788	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13385	124.0788	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13385	124.0788	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13385	124.0788	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12323	124.0616	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12813	124.0447	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	124.0086	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12864	123.9827	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12864	123.9827	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12885	123.9814	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.9535	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13114	123.9194	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13114	123.9156	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13114	123.9139	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12833	123.912	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.8879	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12831	123.8856	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12859	123.8776	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12859	123.8776	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12789	123.8701	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12855	123.8677	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.8477	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.8454	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.8452	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12849	123.8316	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12849	123.8308	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.8066	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12745	123.8052	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12745	123.7962	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12745	123.7906	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12745	123.7798	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12745	123.7791	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12745	123.7791	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12745	123.7765	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12853	123.7761	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.7713	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.7712	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12886	123.7458	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.7423	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12868	123.7287	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12868	123.7186	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12745	123.7078	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12845	123.7064	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.6976	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12815	123.6964	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12868	123.6723	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12886	123.6557	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12817	123.6359	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.6315	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12848	123.6276	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.6078	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12847	123.6023	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12886	123.5911	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12858	123.5711	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12858	123.5711	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12858	123.5657	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.5582	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.5425	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12848	123.5238	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.5113	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12872	123.505	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12872	123.505	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.5006	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12845	123.4937	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12846	123.4809	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12845	123.4712	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12845	123.4631	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.4559	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.4554	GEN303007 1-1BC2 U2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.4534	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.4513	GEN303006 1-1BC2 U1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12804	123.4477	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12844	123.4435	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.4107	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.4025	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.3983	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.3962	GEN303008 1-1BC2 U3
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.3946	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12872	123.3926	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12872	123.3926	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.3868	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.3836	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.3834	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12847	123.3723	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.3692	GEN642067 1-PLATTE
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12874	123.3605	AINSWORTH - CALAMUS 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12874	123.3588	P12:115:NPPD:1090:AINSWND7:THEDFRD7:BTB
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12815	123.3571	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.3531	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12874	123.3487	CALAMUS - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12872	123.342	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.339	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	123.2849	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12966	123.0362	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1279	122.6834	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	122.6796	BASE CASE
FDNSLock	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	122.4695	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	122.4279	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12971	122.4037	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12971	122.4037	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12971	122.4037	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12971	122.4037	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12976	122.3633	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12976	122.3633	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12976	122.3633	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12976	122.3633	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12966	122.3281	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12966	122.327	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12966	122.327	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12966	122.316	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12966	122.3153	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12966	122.3118	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12966	122.3118	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	122.2781	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	122.2647	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	122.2271	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	122.2263	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12848	122.2233	CRETE - FRIEND 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12814	122.1455	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12814	122.1455	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1287	122.142	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1287	122.142	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	122.1045	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12861	122.0995	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12839	122.0914	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12966	122.086	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	122.0806	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	122.0632	GEN652548 5-FT RANDAL
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	122.0632	GEN652549 7-FT RANDAL
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	122.0516	GEN652547 3-FT RANDAL
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	122.0514	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	122.0503	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	122.0199	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	122.0105	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.9926	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.9865	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.98	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.9779	GEN659290 1-EDGECOL
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.959	GEN652410 3-FT PECK
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1285	121.9508	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12866	121.944	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.9421	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.925	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12848	121.9081	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.9071	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.9071	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.9049	GEN660001 2-ABERDEEN SIEBRECHT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.9032	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.9021	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.9009	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.9009	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.9009	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.8931	GEN652414 4-FT PECK
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.8931	GEN652415 5-FT PECK
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.8784	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.8768	GEN657600 1-L1GEN3 9 0.5750
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.8689	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.8628	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.8584	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1314	121.8562	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.8468	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.8379	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.8374	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.8358	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13128	121.8328	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12878	121.8291	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.8154	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.8154	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.8146	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.8025	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.8025	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.7895	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12878	121.7502	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12878	121.7502	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1282	121.75	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1282	121.75	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1314	121.7493	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1314	121.7468	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.7465	GEN600050 1-FEP
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1314	121.746	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12846	121.7453	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12841	121.7407	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12841	121.7407	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1314	121.7182	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1314	121.7182	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.7176	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.7161	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.7161	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.6981	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1314	121.6702	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.6697	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12825	121.6659	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12825	121.6659	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12822	121.6561	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.6522	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.6522	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.6244	GEN659192 6-LYNN
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.6232	GEN659162 4-RED WLCK
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.6232	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.6134	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.611	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.6086	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.6031	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.5602	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.5601	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.5574	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.5573	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.5554	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.5423	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.5389	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12841	121.5201	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.4835	GEN600017 C-LS POWER CT
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.4734	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.4481	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.4441	GEN681522 3-GENOA 3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.4379	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.4365	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.4365	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.4209	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.4198	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.4067	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.4064	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.393	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.382	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.3344	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.2669	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12899	121.2352	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12899	121.2352	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.2222	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1276	121.2013	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.173	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.1596	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.1416	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.0834	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.0834	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	121.0834	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08861	120.9466	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.8598	GEN652460 4-GARRISON
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.8597	GEN652461 5-GARRISON
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.8519	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.8287	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.8186	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.8104	GEN652458 2-GARRISON
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.8104	GEN652459 3-GARRISON
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.8103	GEN652457 1-GARRISON
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.7843	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.7516	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.7345	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12821	120.7142	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.7048	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12821	120.6877	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12821	120.6821	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12875	120.6038	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.5841	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.4796	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.3095	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.1814	GEN652559 1-OAHE
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.1708	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	120.1062	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.0909	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.0747	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	120.0416	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12866	119.9537	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	119.8925	GEN652556 2-OAHE
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	119.8925	GEN652558 6-OAHE
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	119.8634	GEN652557 5-OAHE
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	119.7969	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	119.6914	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	119.6706	GEN615010 1-STANTON4
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	119.6581	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	119.5161	GEN659141 1-K10215A
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17642	119.4315	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17642	119.418	2810X2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	119.3905	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	119.3299	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	119.3008	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	119.2529	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	119.2528	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	119.2176	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	119.1154	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	119.11	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	119.0912	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09164	118.8556	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17642	118.8398	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	118.8128	GEN600006 1-AS KING
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	118.7463	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08711	118.4843	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08575	118.2505	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	118.2037	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09147	118.185	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	118.1332	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08622	118.1332	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	117.4535	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09032	117.4384	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08621	117.0102	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09176	116.9762	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09176	116.9762	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	116.9539	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	116.7508	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08713	116.7483	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08861	116.5977	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	116.4656	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08732	116.3911	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08732	116.3911	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	116.3856	GEN661015 1-COYOTE
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09211	116.23	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09211	116.23	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	116.2102	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	116.1692	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.092	116.1272	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.092	116.1272	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08759	115.9829	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08759	115.9829	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	115.9645	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	115.9645	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	115.9389	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.092	115.8844	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08635	115.8556	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08747	115.8262	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	115.826	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08701	115.825	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08701	115.825	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08701	115.8036	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	115.7544	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08701	115.7471	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08747	115.722	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12475	115.6838	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08993	115.6166	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08763	115.5286	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	115.5108	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17642	115.5103	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17642	115.5103	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	115.4361	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08751	115.3787	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08691	115.3646	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08833	115.2218	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0874	115.2203	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08727	115.1398	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08766	115.1038	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	115.0879	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08766	115.0398	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	115.0362	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08766	115.0261	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08766	115.0261	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08712	115.0258	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08765	115.0255	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08747	114.9653	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	114.9285	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.9068	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	114.8513	GEN659125 1-COVEY
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08747	114.846	ARROWHEAD - ARROWHEAD 230 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.7812	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08914	114.7787	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08785	114.7512	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.7323	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.6991	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08836	114.6592	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0874	114.6313	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.6188	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.5958	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.5958	MINGO - SETAB 345KV CKT 1
FDNSLock	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08748	114.5889	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.5477	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.5223	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08635	114.5178	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.491	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.4526	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.4526	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.4505	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08791	114.4346	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08863	114.4314	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08785	114.4236	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08727	114.3662	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09147	114.3563	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09147	114.3563	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08748	114.3003	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08751	114.2933	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08802	114.2847	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08802	114.2766	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08742	114.2742	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08791	114.2648	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08802	114.2204	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.2172	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08687	114.2166	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08687	114.2104	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08687	114.2104	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08687	114.2091	2809X1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08687	114.2028	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08719	114.2017	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	114.163	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.1607	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08744	114.1582	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08755	114.1075	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.1006	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	114.0826	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.0813	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.0813	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.0736	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08784	114.0609	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08694	114.0593	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.023	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.0125	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	114.0123	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08727	113.9901	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08753	113.9769	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08829	113.9407	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08749	113.9406	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.9352	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.9352	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08744	113.9257	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08743	113.9123	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08752	113.909	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.9049	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08772	113.8655	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0876	113.8531	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.8377	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.8374	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.8373	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08752	113.8316	COLUMEAST - SHELL CREEK 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.8218	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08763	113.82	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0873	113.8095	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.8091	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.806	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08913	113.7998	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08756	113.7974	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.7909	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.7909	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.7908	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08784	113.7724	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.7668	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08745	113.7606	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.7582	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.7582	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.7503	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.7502	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08729	113.7479	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08729	113.7477	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08784	113.7358	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.7346	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08784	113.7338	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.7266	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.7251	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.7191	GEN642067 1-PLATTE
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08759	113.7191	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08759	113.7191	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08913	113.7144	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08913	113.7144	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.7044	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08781	113.7022	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.6874	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08806	113.6754	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08784	113.6687	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08913	113.6614	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08913	113.6614	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0877	113.6578	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0877	113.6578	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.6502	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08781	113.6488	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08784	113.6368	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08754	113.6332	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08781	113.6152	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08734	113.6077	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.6074	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12389	113.6006	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0877	113.5854	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0877	113.5854	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.5765	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.5647	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08763	113.5641	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08753	113.5596	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08829	113.5546	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08748	113.5427	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08811	113.5419	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	113.4688	GEN563212 1-G15087_3 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08753	113.4179	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	113.255	GEN587133 1-G16-017-GEN10.6900
FDNSLock	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.9275	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.9158	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.9091	BASE CASE
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08836	112.7665	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08669	112.7341	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.733	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.7209	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08739	112.6586	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08739	112.6566	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08739	112.6566	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.6326	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.6166	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.5319	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.5311	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08745	112.2532	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08752	112.2416	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08757	112.2169	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08758	112.2079	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08758	112.2079	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0898	112.1821	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.143	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0899	112.1406	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.1386	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0899	112.1377	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0899	112.1368	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08746	112.1313	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08746	112.1313	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.1253	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.1232	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08754	112.115	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08719	112.1136	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08719	112.1136	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0899	112.1106	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0899	112.1106	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08723	112.0827	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08723	112.0827	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.0794	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.0782	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.0778	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.0725	GEN659274 1-GROTON
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0899	112.0696	GLENHAM - WHITLOK 230KV CKT 1
FDNSLock	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08757	112.0556	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08757	112.0556	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08757	112.0556	STMDSJFAFACO
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.0536	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.0505	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.0438	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.0403	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.0403	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.006	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.0054	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.9991	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08752	111.984	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.9714	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.9694	GEN659270 1-WEST SW
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.9683	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08746	111.9406	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08729	111.9095	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08729	111.9095	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.9086	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.8966	GEN657705 X-DRAYTON
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.8843	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08756	111.8535	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.8225	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.8171	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.8171	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.817	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08757	111.7809	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08757	111.7787	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.7193	GEN652460 4-GARRISON
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.7193	GEN652461 5-GARRISON
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.7065	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.706	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.7052	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.7008	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08757	111.6917	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08662	111.6863	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.6857	GEN652457 1-GARRISON

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.6857	GEN652458 2-GARRISON
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.6857	GEN652459 3-GARRISON
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08725	111.6619	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.6531	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.6421	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.6318	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.6256	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.6122	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.612	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.6114	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.5845	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.5149	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.4271	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.424	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.4118	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.3723	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.3376	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.3335	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.2994	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.2993	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.2362	GEN652559 1-OAHE
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.1609	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	111.1601	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.9496	GEN652556 2-OAHE
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.9496	GEN652558 6-OAHE
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.9292	GEN652557 5-OAHE
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.8744	GEN659453 1-Gi1414GEN W0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08724	110.8076	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08724	110.7859	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08724	110.7826	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.7763	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.7705	GEN659141 1-K10215A
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.7556	GEN615010 1-STANTON4
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.7254	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.7068	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.7032	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.6084	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.5412	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.5239	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.5123	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.4993	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.4611	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.4102	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.4102	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.4079	GEN600006 1-AS KING
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.3981	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.3832	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12333	110.2785	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12333	110.2705	2810X2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	110.1385	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12333	110.0307	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNSLock	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	109.7117	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	109.6797	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	109.3357	GEN659118 1-LARAMIE RIVER UNIT1
FDNSLock	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	109.0717	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	108.6821	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	108.6569	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	108.6062	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	108.4978	GEN661015 1-COYOTE
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	108.2691	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	108.2691	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	108.1225	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	108.0755	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	108.0755	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	107.8767	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12333	107.8112	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12333	107.8112	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	107.7497	GEN659125 1-COVEY

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	107.2172	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	106.7372	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	106.6536	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	106.4827	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08355	104.3876	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12854	102.2621	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	102.237	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	102.237	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08264	101.1282	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	132.282	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.136	131.6656	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	131.5541	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	131.4861	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	131.4839	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	130.6908	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	130.6908	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13669	129.8987	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	129.7243	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	129.6548	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	129.6163	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1364	129.509	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	129.4035	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	129.3283	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	129.3283	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	129.1769	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	129.0883	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	129.06	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	129.0386	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13629	128.9886	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1364	128.9879	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1364	128.9879	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1364	128.8523	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13658	128.8304	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	128.7315	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	128.7315	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13629	128.5989	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13629	128.5989	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	128.3809	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13648	128.2889	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	128.2663	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13497	128.0216	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13629	128.0012	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13497	127.99	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13497	127.9878	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13497	127.9871	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13497	127.8558	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13497	127.8557	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14121	127.6553	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14121	127.6553	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13577	127.579	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNSLock	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13584	127.5284	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13577	127.4914	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13648	127.49	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1384	127.4855	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1384	127.4306	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1384	127.4269	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13616	127.3117	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.138	127.2127	HANLON - SIOUX FALLS 230KV CKT 1
FDNSLock	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13604	127.2034	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13618	127.1741	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13841	127.1654	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13989	127.1068	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13989	127.1068	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13653	127.1068	RASMUSN - UTICA JCT 230KV CKT 1
FDNSLock	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13604	127.0936	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13949	127.0512	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13297	127.0015	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13773	126.9482	STEGALL - STEGALL TRANSFORMER 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13841	126.9444	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13773	126.9435	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13773	126.9006	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13653	126.8613	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13841	126.8137	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13617	126.7811	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13617	126.7811	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13588	126.7352	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13588	126.7352	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	126.633	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1358	126.4903	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13591	126.4416	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	126.3581	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13587	126.3574	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	126.3407	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	126.2917	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	126.2428	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	126.2318	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	126.1805	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	126.1366	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	126.1326	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	126.0666	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13562	126.0358	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13695	126.0275	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13583	126.0113	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.136	125.9784	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	125.9298	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13506	125.9213	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.8444	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1362	125.8328	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13833	125.782	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.7813	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.7813	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	125.7749	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13636	125.7733	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.7714	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.758	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.7576	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13636	125.7317	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	125.7107	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	125.6952	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13833	125.6803	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13833	125.6771	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13609	125.6768	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13609	125.6768	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1357	125.6618	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	125.6311	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1373	125.6274	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13828	125.6224	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	125.6085	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13633	125.598	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	125.5814	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	125.5814	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13597	125.5634	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13764	125.5523	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13764	125.5487	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13764	125.5436	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13744	125.4929	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13744	125.4929	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.4905	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13604	125.4663	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13828	125.4463	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13631	125.4382	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13602	125.4326	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13628	125.4095	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13632	125.372	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13601	125.3715	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13695	125.3531	GORDON - SHANNON 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.3445	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	125.3359	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13912	125.3222	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.2938	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13604	125.2848	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13828	125.272	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.2689	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	125.2638	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	125.2283	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	125.2277	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17141	125.1895	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17151	125.1712	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.1471	GEN514806 1-SOONER UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.1449	GEN514805 1-SOONER UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.1277	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13573	125.1272	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.1267	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.1145	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	125.1126	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	125.1102	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	125.11	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	125.1099	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1357	125.0859	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1357	125.0859	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNSLock	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.082	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.136	125.0707	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.136	125.0707	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	125.0555	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.0458	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.0445	GEN515042 1-SEMINOLE 3G
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13628	125.0409	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	125.031	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	125.0286	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	125.0282	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	125.0144	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13956	125.0139	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13956	125.0139	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	124.994	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13627	124.9919	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13627	124.9919	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13616	124.9823	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	124.9503	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	124.9503	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13593	124.9422	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13598	124.9418	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	124.9403	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.933	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	124.9217	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13551	124.9217	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13599	124.91	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13628	124.9086	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.8986	GEN512688 2-GRDA1 GSU2 22
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13602	124.8983	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13602	124.8978	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13602	124.8978	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.136	124.894	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.8874	GEN511840 1-NORTHEASTERN STATION #3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	124.8741	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13616	124.8732	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13593	124.8661	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.8626	GEN515226 1-MUSKOGEE 6G
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.861	GEN515223 1-MUSKOGEE 4G
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.8601	GEN515225 1-MUSKOGEE 5G
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13729	124.8467	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13729	124.8467	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13729	124.8467	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13729	124.8467	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13616	124.8419	P12:115:NPPD:TSGT5:OGALALA7:ELSIETP7:BTB

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.8318	GEN509394 1-FLINT CREEK
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.136	124.8305	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13734	124.7975	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13734	124.7975	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13734	124.7975	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13734	124.7975	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13624	124.7946	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	124.7942	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13553	124.7752	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13553	124.7751	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13602	124.7601	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13628	124.7564	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13553	124.748	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.7322	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13565	124.728	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13645	124.7261	WINNER - WITTEN 115KV CKT 1
FDNSLock	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.724	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	124.7064	GEN336222 1-LITTLE GYPSY UNIT#2
FDNSLock	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.6601	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1362	124.6523	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13618	124.6391	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13618	124.6391	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.6355	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.6302	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.6302	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.6216	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13599	124.6069	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13565	124.6036	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.5835	GOTHENBURG - JEFFREY 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.5779	GEN509416 1-TURK GENERATION
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13524	124.5475	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13588	124.5454	EMMETE.TAP 7115.00 - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.5363	1222-AINSWORTH WIND
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.5363	1303-KEARNEY
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.5363	2367-REDWLCK7 115.00
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.5363	BASE CASE
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.5175	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.5066	GEN509406 1-WELSH #3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.5065	GEN509404 1-WELSH #1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	124.4941	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13625	124.486	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13835	124.4858	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13618	124.4776	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13599	124.4581	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.4448	P12:115:NPPD:1142:JEFFREY7:COZAD 7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13621	124.4409	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	124.429	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.4253	GEN509403 1-PIRKEY GENERATION
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13645	124.4169	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13599	124.4019	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13621	124.3877	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13599	124.3726	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13495	124.3596	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1361	124.3563	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.3524	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13684	124.3501	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1361	124.3353	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13596	124.3353	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1361	124.334	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13645	124.33	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	124.3213	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	124.319	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	124.3186	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1377	124.3087	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13621	124.2957	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13614	124.2804	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13614	124.2804	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13527	124.2765	HOSKINS - SHELL CREEK 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13559	124.2762	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13614	124.276	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13614	124.276	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1361	124.2743	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1361	124.2722	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1361	124.2598	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13599	124.2467	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.136	124.2385	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	124.2301	GENOA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	124.2075	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.2056	GEN300002 1-THOMAS HILL UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	124.1933	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1358	124.1825	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1358	124.1825	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	124.1687	P12:115:TSGT:COVALT7-SNAKECK7
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1362	124.1655	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1362	124.1655	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13625	124.1613	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	124.1603	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13621	124.1174	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	124.0986	GEN525561 1-TOLK GEN #1 24 KV
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	124.0932	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13598	124.0643	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13598	124.0643	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13599	124.0419	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13599	123.9912	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.9884	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13597	123.9497	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13597	123.9497	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13599	123.9254	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.9251	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13588	123.9244	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.9212	GEN642067 1-PLATTE
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	123.9043	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	123.904	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	123.8993	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.899	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	123.8965	P12:115:TSGT:BSPRGS7-WHORSE7
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1362	123.8903	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1362	123.8903	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.8869	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	123.8865	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	123.8865	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.88	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13524	123.8732	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.8687	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	123.8448	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	123.8438	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	123.8366	BLUE CREEK - W.HORSE7 115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.8331	GEN532722 1-EVANS ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	123.8101	P12:115:NPPD:TSGT2:W.HORSE7:B.SPRGS7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	123.8028	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.7908	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	123.7784	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.7777	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.7667	GEN542956 2-LACYGNE UNIT #2
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.7645	ONEILL 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.7615	ONEILL 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	123.7513	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.747	GEN514806 1-SOONER UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.7275	GEN514805 1-SOONER UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1373	123.6815	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1373	123.6815	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1373	123.6792	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.6511	GEN527903 1-HOBBS PLANT #3 (ST)
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	123.6282	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	123.6282	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.6246	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.6163	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	123.5989	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.5975	GEN515042 1-SEMINOLE 3G
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13584	123.5921	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13592	123.5891	COLUMBUS - SILVER CREEK 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.5872	GEN530690 1-PRWINDG1 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1373	123.5866	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	123.5854	P12:115:NPPD:TSGT5:OGALALA7:ELSIETP7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1373	123.5801	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1373	123.5799	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1373	123.5799	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.5769	GEN515041 1-SEMINOLE 2G
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13616	123.5765	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13616	123.5765	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	123.5706	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.566	GEN528501 1-G14_012 24.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13591	123.5603	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13591	123.5497	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13591	123.5497	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.5482	GEN523972 1-HARRINGTON GEN #2 24 KV
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.5481	GEN523971 1-HARRINGTON GEN #1 24 KV
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.5481	GEN523973 1-HARRINGTON GEN #3 24 KV
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.5229	GEN515040 1-SEMINOLE 1G
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.5185	GEN512688 2-GRDA1 GSU2 22
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.5069	GEN526333 1-JONES GEN #3 21 KV
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13756	123.5063	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.4937	GEN527166 1-MUSTANG_6 118.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.4934	GEN526334 1-JONES_4 116.500
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13599	123.4916	ALBION - SPALDING 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	123.4873	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13588	123.4835	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	123.4802	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.4689	GEN525844 1-ELK_1 118.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.4688	GEN525845 1-ELK_2 1 18.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13719	123.4509	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13719	123.4509	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13719	123.4509	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13719	123.4509	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13559	123.438	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13559	123.438	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13559	123.4326	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13602	123.4312	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13607	123.4178	ANTELOPE 3345.00 - HOSKINS 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.4126	GEN514939 1-HORSESHOE LAKE 8G
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	123.4035	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	123.4035	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.3915	GEN511848 1-SOUTHWESTERN STATION #3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.3886	GEN515226 1-MUSKOGEE 6G
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.3872	GEN515223 1-MUSKOGEE 4G
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.3869	GEN515225 1-MUSKOGEE 5G
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.3761	GEN511840 1-NORTHEASTERN STATION #3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13724	123.3744	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13724	123.3744	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13724	123.3744	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13724	123.3744	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.3696	GEN511843 1-RIVERSIDE STATION #2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.3674	GEN511842 1-RIVERSIDE STATION #1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.3547	GEN511839 1-NORTHEASTERN STATION #2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.3499	GEN509394 1-FLINT CREEK
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.3454	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.3384	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1361	123.3176	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13609	123.3071	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13556	123.3027	BISON - HETINGER 230KV CKT 1
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.3014	ALBION 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.2935	ALBION 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.2704	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1361	123.2661	CALLAWAY - MAXWELL 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13607	123.2499	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.2487	GEN513601 1-GRECCTG_1 20.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13607	123.2399	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13607	123.2399	P12:115:UMZB:# 119 #: IN NE.
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.2201	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.2113	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13588	123.2097	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13512	123.1936	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.1871	GEN520947 1-HUGO1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	123.1741	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.166	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.1428	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.1423	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.1336	GOTHENBURG - JEFFREY 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.1278	INTERSTE 8 69.000 69KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13556	123.1219	BISON - MAURINE 230KV CKT 1
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.1114	BROKEN BOW 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.1106	GEN509416 1-TURK GENERATION
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.1102	CALLAWAY 69KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.1092	OGALLALA (OGALLALA T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.1066	INTERSTE 8 69.000 69KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.1058	GRANTNB7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.1047	BROKEN BOW 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.1034	CALLAWAY 69KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13607	123.1012	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0975	LOUP CITY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0955	LAMAR 7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0943	SUB D - SUB I 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0873	JOHNSON LAKE - JOHNSON NO 1 115KV CKT 1
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0809	COZAD 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0786	GRANTNB7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.076	LAMAR 7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0721	CANADAY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.07	COZAD 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13617	123.0663	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13617	123.0663	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0646	CANADAY 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0567	MCCOOK 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0451	NORTH PLATTE (N.PLATTE T8) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0451	NORTH PLATTE (N.PLATTE T8) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0451	NORTH PLATTE (N.PLATTE T9) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0451	NORTH PLATTE (N.PLATTE T9) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13616	123.0427	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13616	123.0427	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0418	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0418	G15088_1 345.00 345/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13588	123.0381	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0351	BROKEN BOW - CROOKED CREEK 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0281	P12:115:NPPD:TSGT3:LAMAR 7:GRANTNB7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13588	123.0069	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0056	LOUP CITY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0048	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0013	MCCOOK 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0008	CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.0008	CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9897	CANADAY - CROOKED CREEK 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9897	GEN509404 1-WELSH #1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9897	GEN509406 1-WELSH #3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9816	ALDA - SUB A 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	122.9617	P12:115:NPPD:TSGT6:SUTHLND7:ELSIETP7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9516	NORTH PLATTE - STOCKVILLE 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9365	GEN509403 1-PIRKEY GENERATION
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	122.9214	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9194	HOLCOMB (HOLCOMB) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9194	HOLCOMB (HOLCOMB) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9191	1222-AINSWORTH WIND
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9191	1273-CALLAWAY
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9191	1291-ALBION

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9191	1292-BROKEN BOW
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9191	1293-CANADAY
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9191	1296-COZAD
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9191	1303-KEARNEY
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9191	1304-LOUP CITY
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9191	1305-MCCOOK
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9191	1310-ONEILL
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9191	2363-GRANTNB7 115.00
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9191	2367-REDWLCK7 115.00
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9191	2368-LAMAR 7 115.00
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9191	2369-INTERSTE 8 69.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9191	BASE CASE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.9035	P12:115:NPPD:1142:JEFFREY7:COZAD 7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1361	122.8889	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13588	122.8562	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1373	122.8077	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	122.7841	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	122.7834	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	122.7824	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	122.7468	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13609	122.7395	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13609	122.7395	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13568	122.732	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13568	122.732	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.7004	P12:115:NPPD:1131B:REDWILO7:STOCKVL7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13589	122.696	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13588	122.6914	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	122.679	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	122.679	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	122.6778	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	122.6778	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13614	122.6677	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13614	122.6677	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13614	122.6474	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13599	122.6191	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13599	122.6146	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13599	122.6056	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13599	122.5484	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13599	122.5465	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13599	122.5243	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13607	122.5151	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13609	122.5053	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13609	122.5053	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13593	122.4832	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13593	122.4832	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13593	122.4823	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13593	122.4823	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13575	122.4721	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13575	122.4721	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13607	122.3772	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13718	122.3661	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13718	122.3661	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13718	122.3546	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	122.3542	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	122.3542	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13607	122.3389	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13607	122.3353	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13718	122.3331	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13718	122.3288	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13718	122.3287	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13718	122.3287	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13512	122.3167	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.3005	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	122.1941	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13592	122.1689	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.0974	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	122.091	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	122.0564	GEN652544 5-BIG BEND

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	122.0544	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	122.0539	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13742	122.0433	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13617	121.9726	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13617	121.9726	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	121.9477	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	121.9196	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12727	121.8492	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13596	121.6761	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13718	121.5582	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	121.4413	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13577	121.4169	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	121.4144	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	121.3797	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	121.3797	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	121.3711	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	121.3639	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13577	121.3621	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	121.3586	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	121.3586	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13563	121.2377	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13577	121.2197	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	121.2028	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	121.1294	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	121.103	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	121.103	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	121.0809	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	121.0076	GEN615010 1-STANTON4
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13584	120.9731	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	120.835	GEN600006 1-AS KING
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	120.797	GEN652556 2-OAHE
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	120.797	GEN652557 4-OAHE
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	120.797	GEN652558 6-OAHE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	120.7934	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13605	120.7934	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	120.7765	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	120.7502	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	120.6383	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	120.6222	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	120.6218	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	120.6155	GEN659141 1-K10215A
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	120.5362	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	120.3448	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	120.3306	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	120.3306	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	120.2989	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	120.1976	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	120.1206	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	120.1073	GEN652559 1-OAHE
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	120.0402	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	120.0392	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	120.0315	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	120.0301	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	119.9577	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	119.9495	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	119.8966	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	119.8115	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	119.8115	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	119.8115	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	119.7255	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	119.7041	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	119.6888	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	119.5575	GEN600006 1-AS KING
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13566	119.4348	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13566	119.4343	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	119.4139	GEN652556 2-OAHE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	119.4139	GEN652557 4-OAHE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	119.4139	GEN652558 6-OAHE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	119.3739	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	119.3601	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13566	119.3126	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	119.1674	GEN659141 1-K10215A
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	118.9274	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	118.8948	GEN661015 1-COYOTE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	118.8359	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	118.7072	GEN652559 1-OAHE
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	118.6697	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	118.6369	GEN587633 1-J510-GEN1 18.000
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	118.6346	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	118.5579	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	118.5576	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	118.2329	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	118.1003	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	117.852	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	117.8032	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	117.6656	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.18628	117.3928	2810X2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.18628	117.3928	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	117.2627	GEN661015 1-COYOTE
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	117.1253	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.18628	116.8323	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	116.7646	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	116.5361	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.18608	116.5316	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.18608	116.4908	2810X2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.18608	115.8402	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	115.6345	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12934	115.6143	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12934	115.6143	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	115.5512	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	115.5512	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	115.5021	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	115.4987	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	115.0805	GEN659125 1-COVEY
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	114.9224	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	114.9224	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	114.8171	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	114.679	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12437	114.397	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	114.346	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11985	114.2794	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	113.857	GEN659125 1-COVEY
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	113.5867	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	113.5867	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	113.4563	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	113.2177	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	113.0602	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	112.8803	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12308	112.3783	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNSLock	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	112.2877	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12327	112.2434	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12327	112.2399	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	112.1271	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	111.9593	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12327	111.8754	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	111.8406	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12306	111.7815	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	111.7458	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	111.6152	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12327	111.5936	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12306	111.5264	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12306	111.5264	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	111.2348	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12311	111.0708	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12305	110.7238	FORMAN - HANKINSON 230KV CKT 1
FDNSLock	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12311	110.6395	CENTER - CNTSHNT3 345.00 345KV CKT Z1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12286	110.3882	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12297	109.8867	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12297	109.8867	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12235	109.6773	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	109.3999	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.15558	109.3382	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.15549	109.3347	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	109.2216	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12259	109.2116	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	108.8674	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12297	108.8312	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	108.8091	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	108.7934	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	108.7031	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	108.691	GEN642067 1-PLATTE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	108.6653	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	108.437	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	108.3402	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12289	108.2969	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12309	108.2554	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12309	108.2554	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12326	108.0596	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12326	108.0596	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1231	108.0446	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12437	108.0404	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12437	108.0404	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12437	108.0404	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12437	108.0404	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1231	108.037	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1231	108.037	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12441	107.9954	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12441	107.9954	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12441	107.9954	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12441	107.9954	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	107.9416	2560-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	107.9416	2561-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	107.9416	BASE CASE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12236	107.7837	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1233	107.7817	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1233	107.7817	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12344	107.7813	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12342	107.771	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12336	107.6689	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12267	107.6127	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12292	107.5562	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12292	107.5562	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12319	107.5217	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12319	107.5217	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12319	107.5194	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12319	107.5194	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	107.4177	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12302	107.3918	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12302	107.3918	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12302	107.3906	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12302	107.3906	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12341	107.3273	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12341	107.3273	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	107.314	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	107.314	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	107.3115	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	107.2882	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	107.2858	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	107.2858	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	107.2858	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	107.2703	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	107.2444	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12295	107.2199	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	107.2048	GEN300007 1-NEW MADRID UNIT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12298	107.1981	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12298	107.1981	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	107.1979	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1233	107.1537	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1233	107.1537	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12289	107.1269	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12289	107.1269	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12331	107.0025	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12331	107.0025	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12331	106.9815	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12236	106.9717	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12349	106.7937	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12349	106.7937	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1243	106.7402	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12348	106.7181	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13984	106.317	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12367	106.0221	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12367	106.0221	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	105.9375	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12336	105.7259	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12344	105.3548	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12293	105.1967	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12293	105.1869	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12293	105.1848	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	105.0363	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	104.7574	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	104.7521	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14406	104.7218	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	104.4145	GEN600006 1-AS KING
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	104.2926	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13804	104.146	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14385	103.8933	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	103.8191	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13697	103.526	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13697	103.526	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	103.0796	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13869	102.8781	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13869	102.8781	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14223	102.8013	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	102.5177	GEN661015 1-COYOTE
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	102.3108	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14417	102.2484	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14417	102.2484	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11953	102.2097	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	102.0277	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	101.9743	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	101.9479	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13808	101.827	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1703	101.7805	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1703	101.7586	2810X2
FDNSLock	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13428	101.669	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13428	101.5816	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14476	101.4028	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14476	101.4028	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1703	101.3095	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14461	101.2763	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14461	101.2763	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13984	101.2569	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13833	101.1057	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13833	101.1057	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14196	101.0375	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14461	100.9492	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1385	100.7719	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13869	100.727	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13708	100.7239	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1385	100.6359	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13794	100.5681	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13794	100.5681	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13869	100.5456	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13794	100.5435	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13794	100.4665	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14174	100.4626	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	100.366	GEN659111 2-LELAND OLDS UNIT2
FDNSLock	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13855	100.3483	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13869	100.2794	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	100.1373	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13869	100.1	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1384	100.0574	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13869	100.055	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	100	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13925	100	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13869	100	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	99.9	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	99.9	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	99.9	GEN659125 1-COVEY
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13925	99.9	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13869	99.9	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13959	99.8	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13925	99.8	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13876	99.8	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13825	99.8	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13925	99.7	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13876	99.7	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13876	99.7	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13876	99.7	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13874	99.7	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13869	99.7	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13869	99.7	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1385	99.7	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13661	99.7	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13542	99.7	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	99.6	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13849	99.6	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13806	99.6	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13869	99.5	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	2	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13853	99.5	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	132.282	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.136	131.6656	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	131.5539	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	131.4852	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	131.4835	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	130.6917	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	130.6917	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13669	129.899	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	129.7238	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	129.6542	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	129.6158	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1364	129.5096	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13589	129.4052	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	129.3281	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	129.3281	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	129.1767	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	129.0879	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	129.0604	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	129.0386	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1364	128.9874	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1364	128.9874	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13629	128.9651	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1364	128.852	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13658	128.8288	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	128.7316	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	128.7316	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13629	128.5747	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13629	128.5747	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	128.3797	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13648	128.2874	PAHOJA - SIOUX FALLS 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13589	128.2667	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13497	128.0213	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13497	127.9896	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13497	127.9875	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13497	127.9867	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13497	127.8573	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13497	127.8573	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14121	127.655	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14121	127.655	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13577	127.5793	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13584	127.5282	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13577	127.4916	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13648	127.4903	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1384	127.4866	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1384	127.4318	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1384	127.4281	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13616	127.311	FORMAN - OAKES 230KV CKT 1
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13604	127.2033	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.138	127.1843	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13618	127.1734	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13841	127.1667	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13653	127.107	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13989	127.1068	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13989	127.1068	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13604	127.0936	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13949	127.051	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13297	126.9751	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13773	126.9495	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13841	126.9444	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13773	126.9439	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13773	126.9017	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13653	126.8616	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13841	126.8144	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13617	126.7812	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13617	126.7812	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13588	126.7347	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13588	126.7347	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	126.633	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1358	126.4625	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13591	126.4002	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	126.3402	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13587	126.3241	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	126.3224	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	126.2917	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	126.2091	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	126.1983	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	126.1454	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	126.1356	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	126.098	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	126.0369	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13562	126.0354	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13695	126.0269	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13583	125.9829	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.136	125.9467	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13506	125.9209	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	125.8969	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.8444	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1362	125.8018	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13833	125.7818	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13636	125.7753	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.7721	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.7588	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.7583	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.7558	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.7558	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	125.7422	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13636	125.7323	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13833	125.6794	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	125.6778	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13833	125.6761	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13609	125.6759	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13609	125.6759	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	125.6757	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1357	125.6612	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1373	125.6279	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13828	125.6183	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	125.5971	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13633	125.5779	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	125.5753	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	125.563	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	125.563	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13764	125.5515	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13764	125.5479	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13764	125.5428	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13597	125.5307	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.4901	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13744	125.4694	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13744	125.4694	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13604	125.44	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13828	125.4398	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13631	125.4391	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13602	125.4098	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13628	125.4092	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13632	125.371	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13695	125.3545	GORDON - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13601	125.3503	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.3451	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	125.3358	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13912	125.3123	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.294	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.269	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13604	125.2608	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13828	125.2589	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	125.2313	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	125.2038	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	125.1951	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.17141	125.1874	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.17151	125.17	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.1475	GEN514806 1-SOONER UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.145	GEN514805 1-SOONER UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.1281	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.1262	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.1144	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13573	125.1076	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1357	125.0877	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1357	125.0877	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.0812	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.136	125.0708	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.136	125.0708	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.0462	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.0451	GEN515042 1-SEMINOLE 3G
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	125.0298	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	125.0216	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13956	125.0047	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13956	125.0047	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13628	125.0017	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13627	124.9917	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13627	124.9917	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	124.9891	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13616	124.9815	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	124.9458	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.9317	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13593	124.9191	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13598	124.9171	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	124.9124	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	124.9124	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13599	124.9088	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.8989	GEN512688 2-GRDA1 GSU2 22
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	124.8985	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13602	124.8981	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13602	124.8975	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13602	124.8975	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	124.8938	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.8877	GEN511840 1-NORTHEASTERN STATION #3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13616	124.8726	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13628	124.8711	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.136	124.8702	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.8627	GEN515226 1-MUSKOGEE 6G
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.8611	GEN515223 1-MUSKOGEE 4G
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.8603	GEN515225 1-MUSKOGEE 5G
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13551	124.8596	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13729	124.8461	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13729	124.8461	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13729	124.8461	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13729	124.8461	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13593	124.8428	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13616	124.8423	P12:115:NPPD:TSGT5:OGALALA7:ELSIETP7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.8325	GEN509394 1-FLINT CREEK
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.136	124.8087	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13734	124.7972	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13734	124.7972	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13734	124.7972	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13734	124.7972	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13624	124.7946	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	124.7597	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13602	124.7352	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13553	124.7327	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13553	124.7327	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.7325	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13565	124.7284	BISON - MAURINE 230KV CKT 1
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.7234	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13628	124.7123	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13553	124.7044	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13645	124.6935	WINNER - WITTEN 115KV CKT 1
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.6599	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1362	124.6522	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13618	124.6375	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13618	124.6375	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.6351	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.6295	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.6295	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.6222	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13599	124.6073	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13565	124.6046	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.5836	GOTHENBURG - JEFFREY 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.5781	GEN509416 1-TURK GENERATION
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13524	124.5492	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.5364	1222-AINSWORTH WIND
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.5364	1303-KEARNEY
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.5364	2367-REDWLCK7 115.00
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.5364	BASE CASE
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.5188	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.5074	GEN509406 1-WELSH #3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.5072	GEN509404 1-WELSH #1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13618	124.4788	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13588	124.477	EMMETE.TAP 7115.00 - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13599	124.4577	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	124.4526	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13835	124.4501	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.445	P12:115:NPPD:1142:JEFFREY7:COZAD 7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13621	124.4399	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13625	124.4385	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.4254	GEN509403 1-PIRKEY GENERATION
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13599	124.4015	AINSWORTH - BASSETT 7115.00 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	124.4006	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13621	124.3875	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13599	124.3715	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1361	124.3554	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.3526	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1361	124.3355	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13596	124.3344	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1361	124.3341	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13684	124.3334	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1377	124.3081	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13645	124.2958	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13621	124.2953	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13495	124.2845	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13614	124.2799	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13614	124.2799	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	124.2766	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1361	124.2741	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	124.274	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13614	124.2738	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13614	124.2738	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	124.2736	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1361	124.272	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1361	124.2598	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13599	124.2489	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.136	124.2378	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13527	124.2301	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13559	124.2184	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.2061	GEN300002 1-THOMAS HILL UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	124.1848	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1358	124.1831	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1358	124.1831	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1362	124.1643	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1362	124.1643	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13625	124.1442	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13589	124.1307	P12:115:TSGT:COVALT7-SNAKECK7
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13589	124.1203	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13621	124.092	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	124.0505	GEN525561 1-TOLK GEN #1 24 KV
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	124.0452	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13598	124.0177	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13598	124.0177	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13599	123.9959	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.9539	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13597	123.9515	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13597	123.9515	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13588	123.9245	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.9105	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	123.9044	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	123.9042	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1362	123.8915	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1362	123.8915	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	123.8862	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	123.8862	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13524	123.8726	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.8687	GEN642067 1-PLATTE
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.8567	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13589	123.8539	P12:115:TSGT:BSPRGS7-WHORSE7
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.8471	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.846	GEN645011 1-NEBRASKA CITY 1
FDNSLock	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	123.8451	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	123.844	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	123.8372	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.8191	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	123.803	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13589	123.796	BLUE CREEK - W.HORSE7 115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.7891	GEN532722 1-EVANS ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	123.7794	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13589	123.7691	P12:115:NPPD:TSGT2:W.HORSE7:B.SPRGS7:BTB

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	123.752	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.7394	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.735	GEN542957 1-IATAN UNIT #1
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.7274	ONEILL 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.7253	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.7239	ONEILL 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.7028	GEN514806 1-SOONER UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.684	GEN514805 1-SOONER UNIT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1373	123.6813	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1373	123.6813	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1373	123.6792	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.6095	GEN527903 1-HOBBS PLANT #3 (ST)
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.5874	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1373	123.5862	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1373	123.5798	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1373	123.5795	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1373	123.5795	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.5793	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13616	123.5767	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13616	123.5767	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	123.571	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13589	123.5649	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13589	123.5649	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.5542	GEN515042 1-SEMINOLE 3G
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	123.5462	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.5449	GEN530690 1-PRWINDG1 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13592	123.5419	COLUMBUS - SILVER CREEK 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.5331	GEN515041 1-SEMINOLE 2G
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	123.5289	P12:115:NPPD:TSGT5:OGALALA7:ELSIETP7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.5255	GEN528501 1-G14_012 24.000
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13584	123.5181	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13591	123.5109	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.17143	123.5086	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.5073	GEN523972 1-HARRINGTON GEN #2 24 KV
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.5072	GEN523971 1-HARRINGTON GEN #1 24 KV
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.5072	GEN523973 1-HARRINGTON GEN #3 24 KV
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.17133	123.5065	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13756	123.505	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13591	123.5003	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13591	123.5003	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	123.4866	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.4805	GEN515040 1-SEMINOLE 1G
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	123.4794	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.4749	GEN512688 2-GRDA1 GSU2 22
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.4662	GEN526333 1-JONES GEN #3 21 KV
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.453	GEN526334 1-JONES_4 116.500
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13719	123.4455	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13719	123.4455	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13719	123.4455	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13719	123.4455	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13599	123.4447	ALBION - SPALDING 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13588	123.4305	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.4295	GEN525844 1-ELK_1 118.000
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.4295	GEN525845 1-ELK_2 1 18.000
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13559	123.4184	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13559	123.4184	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13559	123.412	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13602	123.3858	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.3729	GEN514939 1-HORSESHOE LAKE 8G
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13724	123.368	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13724	123.368	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13724	123.368	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13724	123.368	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	123.3578	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	123.3578	AXTELL (AXTELL T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.3511	GEN511848 1-SOUTHWESTERN STATION #3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.3465	GEN515226 1-MUSKOGEE 6G
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.3451	GEN515223 1-MUSKOGEE 4G

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.345	GEN515225 1-MUSKOGEE 5G
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.3362	GEN511840 1-NORTHEASTERN STATION #3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.3293	GEN511843 1-RIVERSIDE STATION #2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.3271	GEN511842 1-RIVERSIDE STATION #1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.3144	GEN511839 1-NORTHEASTERN STATION #2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.3092	GEN509394 1-FLINT CREEK
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13556	123.2958	BISON - HETINGER 230KV CKT 1
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.2919	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.2844	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.2573	ALBION 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13609	123.2512	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.251	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.2497	ALBION 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1361	123.2463	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.2101	GEN513601 1-GRECCTG_1 20.000
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1361	123.2004	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13607	123.1868	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13607	123.173	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13607	123.173	P12:115:UMZB:# 119 #: IN NE.
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.1667	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13588	123.1625	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.1581	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.1482	GEN520947 1-HUGO1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13512	123.1414	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	123.1304	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.1167	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 1
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13556	123.1101	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0946	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0942	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0867	GOTHENBURG - JEFFREY 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13617	123.0685	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13617	123.0685	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0681	GEN509416 1-TURK GENERATION
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0664	BROKEN BOW 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0652	CALLAWAY 69KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0631	GRANTNB7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.062	OGALLALA (OGALLALA T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0611	BROKEN BOW 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.059	CALLAWAY 69KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0527	LAMAR 7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13607	123.052	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0491	SUB D - SUB I 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13616	123.0432	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13616	123.0432	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0418	JOHNSON LAKE - JOHNSON NO 1 115KV CKT 1
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0361	COZAD 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0355	GRANTNB7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0329	LAMAR 7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0288	CANADAY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0269	COZAD 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0217	CANADAY 115KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0019	NORTH PLATTE (N.PLATTE T8) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0019	NORTH PLATTE (N.PLATTE T8) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0019	NORTH PLATTE (N.PLATTE T9) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.0019	NORTH PLATTE (N.PLATTE T9) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13588	122.9925	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.9913	BROKEN BOW - CROOKED CREEK 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.9851	P12:115:NPPD:TSGT3:LAMAR 7:GRANTNB7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.9574	CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.9574	CROOKED CREEK (CR.CREEK T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13588	122.9568	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.9498	GEN509404 1-WELSH #1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.9498	GEN509406 1-WELSH #3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.9482	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.9471	CANADAY - CROOKED CREEK 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.9405	ALDA - SUB A 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	122.9185	P12:115:NPPD:TSGT6:SUTHLND7:ELSIETP7:BTB
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	122.9184	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.9083	NORTH PLATTE - STOCKVILLE 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.8942	GEN509403 1-PIRKEY GENERATION
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.8845	1222-AINSWORTH WIND
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.8845	1273-CALLAWAY
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.8845	1291-ALBION
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.8845	1292-BROKEN BOW
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.8845	1293-CANADAY
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.8845	1296-COZAD
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.8845	1303-KEARNEY
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.8845	1310-ONEILL
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.8845	2363-GRANTNB7 115.00
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.8845	2367-REDWLCK7 115.00
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.8845	2368-LAMAR 7 115.00
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.8845	BASE CASE
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.8774	HOLCOMB (HOLCOMB) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.8774	HOLCOMB (HOLCOMB) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.8612	P12:115:NPPD:1142:JEFFREY7:COZAD 7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1361	122.8444	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13588	122.8116	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1373	122.8076	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	122.7833	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	122.7823	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	122.7188	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13609	122.6974	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13609	122.6974	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13568	122.6816	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13568	122.6816	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13614	122.6682	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13614	122.6682	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.6593	P12:115:NPPD:1131B:REDWILO7:STOCKVL7:BTB
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13588	122.652	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13614	122.6479	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13589	122.6469	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	122.6336	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	122.6336	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	122.6324	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	122.6324	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13599	122.5688	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13599	122.5631	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13599	122.5552	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13599	122.4967	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13599	122.4923	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13599	122.4727	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13607	122.4685	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13609	122.4625	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13609	122.4625	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13593	122.4437	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13593	122.4437	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13593	122.4428	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13593	122.4428	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13575	122.4186	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13575	122.4186	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13718	122.3486	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13718	122.3486	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13718	122.3376	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13607	122.3257	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13718	122.3157	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13718	122.3114	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13718	122.3113	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13718	122.3113	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	122.3096	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	122.3096	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13607	122.2893	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13607	122.2831	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13512	122.2721	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.2627	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	122.1938	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13592	122.1285	CENTRAL CITY - GRAND ISLAND 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.0594	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	122.0564	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	122.0543	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	122.0538	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	122.053	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13742	121.9919	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13617	121.9722	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13617	121.9722	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	121.909	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	121.8808	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12727	121.6917	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13596	121.6754	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13718	121.5237	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	121.4414	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13577	121.4178	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	121.4135	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	121.3742	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	121.3671	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13577	121.3632	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	121.3189	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	121.3189	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	121.3072	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	121.3072	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13577	121.2185	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	121.2028	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13563	121.1716	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	121.1295	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	121.103	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	121.103	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	121.0809	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	121.0072	GEN615010 1-STANTON4
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13584	120.8738	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	120.8347	GEN600006 1-AS KING
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	120.7984	GEN652556 2-OAHE
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	120.7984	GEN652557 4-OAHE
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	120.7984	GEN652558 6-OAHE
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	120.7764	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	120.7507	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13605	120.7507	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	120.7096	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	120.6154	GEN659141 1-K10215A
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	120.591	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	120.5759	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	120.5754	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	120.5363	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	120.3464	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	120.2829	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	120.2829	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	120.2505	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	120.1973	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	120.1204	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	120.1075	GEN652559 1-OAHE
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	120.0394	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	120.0324	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	120.0288	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	119.9844	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	119.9159	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	119.9076	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	119.8505	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	119.7559	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	119.7559	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	119.7559	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	119.6888	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	119.6766	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	119.6478	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	119.5102	GEN600006 1-AS KING
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	119.3739	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	119.3552	GEN652556 2-OAHE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	119.3552	GEN652557 4-OAHE
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	119.3552	GEN652558 6-OAHE
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13566	119.3499	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13566	119.3488	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	119.299	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13566	119.2187	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	119.1027	GEN659141 1-K10215A
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	118.8943	GEN661015 1-COYOTE
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	118.8598	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	118.7764	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	118.6447	GEN652559 1-OAHE
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	118.5959	GEN659407 1-ANTELPHILLSW0.6900
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	118.5942	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	118.5723	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	118.5079	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	118.487	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	118.1841	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	118.1002	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	117.8518	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	117.8032	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	117.6038	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.18628	117.3928	2810X2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.18628	117.3928	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	117.1825	GEN661015 1-COYOTE
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	117.1253	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.18628	116.8321	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	116.7005	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.18608	116.4801	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	116.4713	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.18608	116.4385	2810X2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.18608	115.7244	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	115.5369	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	115.4987	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	115.4198	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	115.4111	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	115.4111	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12934	115.357	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12934	115.357	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	115.0805	GEN659125 1-COVEY
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	114.9224	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	114.9224	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	114.8171	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	114.6788	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	114.2399	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12437	114.1176	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.11985	114.0207	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	113.7485	GEN659125 1-COVEY
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	113.474	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	113.474	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	113.3757	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	113.1026	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	113.06	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	112.8805	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	112.1861	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12308	112.0985	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12327	111.9734	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12327	111.9722	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	111.8389	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	111.7316	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	111.6849	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12327	111.6004	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12306	111.5199	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	111.4658	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	111.3243	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12306	111.26	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12306	111.26	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	2	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	111.1302	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12311	110.795	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12832	110.7913	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12832	110.7913	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12365	110.4639	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12305	110.4443	FORMAN - HANKINSON 230KV CKT 1
FDNSLock	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12311	110.3589	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12365	109.9481	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12297	109.571	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12297	109.571	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12235	109.3469	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	109.0973	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.15558	109.0601	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.15549	109.0565	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	108.9118	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12259	108.8907	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	108.5614	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	108.5082	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12297	108.5054	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	108.5034	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	108.4124	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	108.3597	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	108.1515	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1243	108.096	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12289	107.974	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12309	107.9344	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12309	107.9344	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12437	107.7668	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12437	107.7668	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12437	107.7668	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12437	107.7668	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12326	107.7471	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12326	107.7471	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1231	107.7249	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12441	107.7207	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12441	107.7207	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12441	107.7207	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12441	107.7207	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1231	107.7174	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1231	107.7174	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	107.6342	2560-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	107.6342	2561-BRDLAND-LNX3345.00
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	107.6342	BASE CASE
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1233	107.4667	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1233	107.4667	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12344	107.4651	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12236	107.4617	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12342	107.4557	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12336	107.3526	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12267	107.2947	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12292	107.2401	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12292	107.2401	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12319	107.2052	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12319	107.2052	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12319	107.2029	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12319	107.2029	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	107.1101	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12302	107.0763	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12302	107.0763	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12302	107.0751	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12302	107.0751	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1243	107.0331	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1243	107.0331	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1243	107.0306	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12341	107.0106	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12341	107.0106	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1243	107.0063	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1243	107.0038	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1243	107.0037	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1243	107.0037	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	106.9407	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	106.9147	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	106.8967	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12295	106.8951	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	106.8898	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12298	106.8782	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12298	106.8782	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1233	106.8399	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1233	106.8399	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12289	106.8076	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12289	106.8076	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12331	106.6875	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12331	106.6875	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12331	106.6664	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12236	106.6534	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12349	106.4662	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12349	106.4662	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1243	106.4426	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12348	106.3734	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13984	106.2819	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12367	105.6655	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12367	105.6655	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	105.6334	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	105.5246	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	105.5243	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12336	105.3951	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12344	104.9986	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12293	104.8722	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12293	104.8667	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12293	104.8646	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	104.7205	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14406	104.6704	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	104.6142	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	104.443	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	104.4377	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	104.0975	GEN600006 1-AS KING
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13804	104.067	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	103.9696	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14385	103.8405	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	103.7574	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	103.499	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13697	103.4381	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13697	103.4381	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13869	102.7826	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13869	102.7826	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14223	102.7603	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	102.7586	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14417	102.214	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14417	102.214	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	102.1694	GEN661015 1-COYOTE
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	101.9878	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.11953	101.7556	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13808	101.7553	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	101.7024	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	101.6502	GEN600002 3-SHERBURNE CNTY G3
FDNSLock	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13428	101.6124	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	101.5963	GEN657748 1-YOUNG 2 GENERATOR
FDNSLock	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13428	101.5243	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1703	101.462	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1703	101.4396	2810X2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14476	101.3514	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14476	101.3514	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14461	101.2244	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14461	101.2244	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13984	101.2163	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13833	101.0835	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13833	101.0835	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14196	100.9693	NUNDRWD - WAYSIDE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1703	100.9252	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14461	100.9009	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1385	100.723	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13869	100.655	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13708	100.6434	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1385	100.5863	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13794	100.5272	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13794	100.5272	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13794	100.5019	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13869	100.5017	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14174	100.4309	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13794	100.4269	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNSLock	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13855	100.3003	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13869	100.2325	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	2	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	100.1375	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	100.1	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13869	100.1	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13869	100	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1384	100	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13925	99.9	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13925	99.9	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13869	99.9	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13869	99.9	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13959	99.8	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	99.7	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13925	99.7	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13876	99.7	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13876	99.7	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13874	99.7	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13869	99.7	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13825	99.7	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13661	99.7	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13542	99.7	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	99.6	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	99.6	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13925	99.6	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13876	99.6	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13876	99.6	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13869	99.6	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1385	99.6	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13806	99.6	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12328	99.5	GEN659125 1-COVEY
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13869	99.5	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13853	99.5	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	2	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13849	99.5	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0964	100.2135	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0964	100.2132	2801X
FDNS	00NR_G16_017	2	17SP	G16_017	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.0964	100.2132	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06031	110.5162	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06031	110.5162	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06026	109.4207	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06026	109.4207	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06031	108.5124	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06026	107.3281	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06292	106.1391	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06292	106.1391	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	320	320	0.06292	104.2609	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.05956	106.4675	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.05956	106.4675	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.05951	105.323	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.05951	105.323	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06214	102.338	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06214	102.338	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	FT THOMPSON - LAKE PLATT 230KV CKT 1	352	352	0.05956	100.63	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	FT THOMPSON - LAKE PLATT 230KV CKT 1	352	352	0.05956	100.63	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	FT THOMPSON - LAKE PLATT 230KV CKT 1	352	352	0.05951	99.8	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	FT THOMPSON - LAKE PLATT 230KV CKT 1	352	352	0.05951	99.8	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35146	110.5543	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35146	109.4648	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35146	109.4639	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35444	108.4847	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35146	108.0988	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35146	107.5866	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35146	107.5857	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35444	107.4387	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35444	107.4383	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35444	106.1289	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35444	105.6392	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35444	105.6388	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35199	110.7214	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35199	109.6303	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35199	109.6293	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35498	108.6487	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35199	108.2622	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35199	107.7492	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35199	107.7484	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35498	107.6011	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35498	107.6007	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35498	106.2893	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35498	105.7989	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1	250	313	0.35498	105.7985	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12117	156.9167	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12108	155.3192	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1227	145.2311	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.11078	141.5543	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08681	140.1779	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.11072	140.0349	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	139.063	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08418	137.8086	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	137.7285	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	137.7285	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.7115	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	137.7115	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08955	137.2309	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08577	136.9476	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08945	136.6915	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08698	136.5134	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08564	136.2669	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08461	136.2244	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08597	136.219	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08528	135.9502	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08528	135.9502	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.8614	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08627	135.8614	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08528	135.7903	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08416	135.7387	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08528	135.6682	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08955	135.6035	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08577	135.429	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08699	135.3661	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08529	135.0011	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08529	135.0011	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08945	134.9034	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08577	134.8982	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0882	134.8982	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0855	134.8847	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08529	134.7221	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08961	134.7066	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08961	134.7066	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08561	134.7032	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08561	134.7032	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08681	134.6649	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08529	134.5928	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08488	134.5924	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08577	134.4945	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08515	134.4846	SPLIT ROCK - WHITE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08515	134.4846	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	134.3397	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	134.3397	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08598	134.2831	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0846	134.0459	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNSLock	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08562	133.8984	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09001	133.8897	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09001	133.8897	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08549	133.8135	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08595	133.8086	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08562	133.8038	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	133.7705	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08564	133.7456	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08526	133.7402	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08991	133.6598	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08991	133.6598	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08682	133.6583	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08564	133.6217	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0882	133.3863	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08991	133.326	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08577	133.2933	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	133.2679	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08562	133.2634	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08562	133.2634	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08961	133.2507	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08961	133.2507	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08515	133.1453	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08515	133.1453	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	133.141	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	133.0097	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.07961	132.9892	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	132.9388	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08489	132.9114	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08593	132.8873	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08593	132.8873	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08489	132.8815	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.11089	132.8566	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08488	132.8174	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	132.7554	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	132.7397	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09002	132.6545	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09002	132.6545	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08564	132.5352	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08992	132.4551	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08992	132.4551	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08555	132.4217	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08571	132.4076	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08606	132.3939	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08655	132.3746	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	132.3693	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	132.3562	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08614	132.3382	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08789	132.3196	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	132.3194	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08578	132.2996	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08526	132.2434	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	132.1935	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	132.1854	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	132.1854	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08992	132.1747	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	132.1286	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08581	132.0118	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0849	131.9344	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08579	131.9221	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.8835	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08488	131.8381	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08579	131.808	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	131.7978	GEN344225 1-1CAL G1 25.000

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.7869	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08549	131.7245	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08614	131.7164	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.715	GEN337652 1-WHITE BLUFF UNIT #1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08579	131.714	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0849	131.7095	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08571	131.6829	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.6607	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	131.6566	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.6547	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.6515	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08529	131.6495	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0853	131.6103	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08593	131.6073	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08574	131.5927	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.585	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.5754	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08562	131.5591	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08644	131.536	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.5196	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.5033	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08683	131.5	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	131.4698	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08532	131.4694	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08607	131.4688	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	131.4638	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08532	131.4615	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08532	131.4615	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	131.4558	GEN336153 1-WATERFORD UNIT#3
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	131.4516	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08532	131.4506	2809X1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08657	131.4501	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08532	131.444	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.4418	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	131.4226	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	131.4226	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	131.4171	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	131.3809	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0849	131.3732	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.3261	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.3261	BLAIR - GRANITE FALLS 230KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08579	131.3244	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08681	131.3105	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	131.2968	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08578	131.2963	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	131.2834	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.2785	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.2785	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.2769	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08655	131.2641	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0857	131.2393	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	131.2385	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08789	131.2195	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.1902	GEN336251 1-NINEMILE POINT UNIT#4
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	131.1869	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.1868	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08656	131.18	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08945	131.1694	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08945	131.1694	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08555	131.1584	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	131.1541	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	131.148	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.1475	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08564	131.1365	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08564	131.1365	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09041	131.1095	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09041	131.1095	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09041	131.1095	FT THOMPSON - HURON 230KV CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09041	131.1095	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08573	131.1084	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	131.0984	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.0937	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.0898	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.0865	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.0861	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	131.0834	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	131.0785	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08596	131.0756	ONEILL - SPENCER 115KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08584	131.0678	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08529	131.0628	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	131.0526	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	131.0477	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08562	131.0435	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08629	131.0279	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08557	131.0208	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	130.9962	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	130.9962	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08629	130.9901	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08529	130.9887	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08529	130.9887	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.9815	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.9496	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	130.9475	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08596	130.9445	FT RANDAL - SPENCER 115KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08579	130.9246	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.9224	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	130.9216	BASSETT 7115.00 - STUART 115KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08587	130.9196	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.9043	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.9008	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.9008	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	130.9003	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	130.9003	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08596	130.8978	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08596	130.8978	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.8908	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.8892	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.8892	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.8891	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08587	130.8729	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08587	130.8729	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.8716	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08512	130.8715	HOSKINS - SHELL CREEK 345KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	130.8571	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08593	130.8539	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08593	130.8539	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.8511	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.8461	GEN345670 1-1RUSH G1 18.000
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	130.846	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	130.833	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	130.8274	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	130.818	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08597	130.8087	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08561	130.7738	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.7651	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.7537	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.743	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08608	130.7405	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.7215	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	130.7099	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08598	130.7073	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08598	130.7073	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08488	130.7035	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	130.6726	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	130.6699	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.6615	GEN542951 5-HAWTHORN UNIT #5

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0856	130.6603	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.6422	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	130.6379	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.624	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08528	130.6133	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08629	130.6109	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.6086	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.6081	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.6047	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08575	130.6037	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.5949	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.5933	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08598	130.5931	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08598	130.5931	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08529	130.5904	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08695	130.5878	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08695	130.5878	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	130.5863	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08579	130.5729	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08608	130.5656	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.5366	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	130.5309	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.528	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08568	130.525	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.5192	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08608	130.5119	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.503	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	130.4869	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08584	130.473	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0858	130.4701	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.4678	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08575	130.4664	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.462	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	130.4616	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0858	130.4604	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08671	130.459	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.4562	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0857	130.455	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08581	130.4429	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	130.4402	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08631	130.4401	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	130.4395	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	130.4395	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	130.4382	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.4328	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08575	130.4307	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08671	130.4144	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.4108	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.4076	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08564	130.3941	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08866	130.3794	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08532	130.3768	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08532	130.3756	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08532	130.3756	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08657	130.3708	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08532	130.366	2809X1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.3656	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08532	130.3588	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	130.3522	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	130.3454	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08594	130.3451	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	130.3363	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.3227	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08671	130.3179	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08656	130.3011	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0853	130.2951	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.2926	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	130.2869	AINSWORTH - AINSWORTH 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08864	130.2858	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	130.2844	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08864	130.2832	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08864	130.2832	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08631	130.2804	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08631	130.2625	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0856	130.2421	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.2411	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08671	130.2292	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.213	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.213	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	130.1772	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.1663	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08558	130.1652	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08531	130.1627	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	130.1339	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08564	130.133	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08564	130.133	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.1289	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0858	130.1281	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08645	130.1279	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.1215	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	130.1052	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0858	130.1042	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08573	130.0891	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.0882	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08705	130.0818	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.0715	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08617	130.064	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.0639	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.0536	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08657	130.0526	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	130.0375	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.0281	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.0269	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08725	130.0139	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08725	130.0139	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.0138	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.0084	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.0068	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.0067	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	130.0066	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08945	130.0006	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08945	130.0006	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08629	129.9969	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.9964	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.9961	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.995	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	129.9931	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	129.9746	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08659	129.9673	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08562	129.9668	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08629	129.9654	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08587	129.9615	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0857	129.9559	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0857	129.9559	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.9471	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	129.9435	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.9422	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	129.9422	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09042	129.9362	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09042	129.9362	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09042	129.9362	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09042	129.9362	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.881	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08564	129.8741	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08597	129.8714	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08597	129.8714	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.8508	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08639	129.8372	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08639	129.8371	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	129.8371	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08639	129.8335	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08659	129.8333	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08659	129.8323	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.8075	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08597	129.8066	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08562	129.8042	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08513	129.7921	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.7805	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08583	129.7632	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	129.758	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.7559	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	129.7479	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	129.7479	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08597	129.7466	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	129.7415	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08528	129.7398	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08597	129.7377	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.7316	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.7241	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	129.7009	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	129.7009	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08629	129.6909	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	129.6904	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	129.6886	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.6867	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.6851	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	129.6823	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	129.6823	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08593	129.6769	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08593	129.6769	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.6764	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.6743	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.6741	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.6723	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	129.6687	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	129.6687	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	129.6647	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0853	129.6472	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0853	129.6472	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	129.646	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08587	129.6439	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	129.6407	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	129.6387	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0853	129.6339	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0856	129.6311	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.6265	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08579	129.6145	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08609	129.6123	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	129.6116	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	129.6116	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12328	129.6094	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08569	129.5852	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	129.577	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08569	129.5742	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08569	129.5742	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	129.5737	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	129.5604	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	129.5604	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08575	129.5545	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.5533	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.5494	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.5426	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	129.5191	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08696	129.517	GAVINS POINT - YANKON JCT 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08696	129.517	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.4925	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.4925	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.49	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.4832	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08554	129.4781	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	129.4732	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08599	129.4732	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08609	129.4727	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08554	129.4697	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08609	129.4521	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	129.4517	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.4491	GEN642067 1-PLATTE
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	129.4444	BASE CASE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0853	129.4315	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.4124	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.4101	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.41	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08673	129.4005	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08568	129.4005	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	129.397	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	129.3943	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	129.371	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.3703	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08562	129.369	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	129.3688	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08594	129.3629	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.3629	GEN303007 1-1BC2 U2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08576	129.3613	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.3592	GEN303006 1-1BC2 U1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08657	129.3583	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	129.3577	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08576	129.3502	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08673	129.3461	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	129.342	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	129.3415	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	129.3415	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08631	129.34	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	129.3369	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08866	129.327	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08581	129.3197	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.3168	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.3128	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08659	129.3108	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.2993	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08581	129.2978	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.295	GEN303008 1-1BC2 U3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08866	129.2946	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08866	129.2946	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08673	129.2924	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	129.2902	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08554	129.278	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08659	129.269	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08716	129.2685	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08659	129.2681	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	129.2515	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	129.2509	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08638	129.2434	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08638	129.2434	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08638	129.243	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08553	129.2404	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08553	129.2404	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0856	129.2383	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08638	129.2374	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08638	129.2374	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	129.2232	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.2208	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.2197	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08631	129.2175	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.2133	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.1999	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08631	129.1981	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08638	129.1923	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08669	129.1832	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	129.1826	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08638	129.1818	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08638	129.1818	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08734	129.1767	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08734	129.1767	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	129.1754	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	129.1685	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	129.1518	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	129.1416	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	129.1393	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	129.1229	AURORA - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	129.1141	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08555	129.0852	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08573	129.0411	LOUP CITY - ST LIBORY 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08558	129.0133	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08558	129.0133	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08489	128.9377	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08571	128.9252	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08571	128.9252	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	128.9218	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	128.9218	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	128.9189	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	128.9189	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08503	128.9174	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	128.8308	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	128.8308	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08563	128.7991	GRAND ISLAND - HASTINGS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08563	128.7384	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08563	128.7384	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08563	128.7316	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08563	128.7316	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08563	128.7301	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08563	128.7301	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08576	128.7082	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	128.6854	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08387	128.6832	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08575	128.6773	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08587	128.6542	STMDSJFAFACO
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08587	128.6541	COPSTJCPFRSJ
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08587	128.6541	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	128.64	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	128.64	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08583	128.5981	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08587	128.5872	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08587	128.5229	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08587	128.5032	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	128.479	BASE CASE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0857	128.4548	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0857	128.4548	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08587	128.4504	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.4496	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0857	128.4465	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08561	128.4152	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0855	128.3892	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0855	128.3892	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.3774	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.3774	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.3749	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.3667	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.3667	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.3515	GEN659274 1-GROTON
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.3469	GEN657705 X-DRAYTON

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.3418	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.3399	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08587	128.2878	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.2872	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.2726	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.2664	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.2664	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.2664	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.2596	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.2542	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	128.2454	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	128.2431	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08959	128.2381	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	128.2379	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.2339	GEN672356 1-FUT-WL1X 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	128.2255	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08613	128.2255	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.1975	GEN672389 1-FUT-SW1X 18.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08554	128.1922	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08554	128.1922	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.1871	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08574	128.171	LOUP CITY - ST LIBORY 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08616	128.1516	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.1337	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.1328	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.1326	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.123	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.1196	GEN659270 1-WEST SW
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.1084	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0881	128.0759	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08503	128.0363	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	128.004	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0881	127.9152	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0881	127.9111	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0881	127.911	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08801	127.9062	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	127.9031	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	127.9031	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08559	127.9031	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08559	127.9031	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	127.8998	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	127.8998	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0849	127.8833	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0881	127.8779	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0881	127.8779	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.8397	GEN652559 1-OAHE
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0881	127.8182	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08556	127.8139	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.7977	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08564	127.7696	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08564	127.7696	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08564	127.7681	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08564	127.7681	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.7674	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08951	127.7666	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.7658	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.7526	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.743	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.7408	GEN652461 5-GARRISON
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08576	127.738	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	127.7367	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	127.7367	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.727	GEN652460 4-GARRISON
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.7101	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.7097	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.7059	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.6873	GEN652457 1-GARRISON
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.6873	GEN652458 2-GARRISON

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.6873	GEN652459 3-GARRISON
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08869	127.6868	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08869	127.6868	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	127.6106	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	127.6106	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	127.6106	STMDSJFAFACO
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.6071	GEN659274 1-GROTON
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.5947	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.592	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.592	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.5865	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.5864	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.5849	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.5734	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.5656	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.5652	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.5617	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.5534	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.5511	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.5435	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.5435	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.5435	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08684	127.5277	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.4959	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.4921	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.4817	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.4817	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.4613	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.4532	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.4528	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0855	127.4301	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0855	127.4301	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.4235	GEN659270 1-WEST SW
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.4111	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.4025	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	127.3927	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08587	127.3909	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	127.3872	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.332	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08588	127.3068	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.3017	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08812	127.283	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.2179	GEN652559 1-OAHE
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.203	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08803	127.1807	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08812	127.1574	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08812	127.1496	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08812	127.1496	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.1398	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08812	127.128	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08812	127.128	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.1242	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	127.1126	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08461	127.1087	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.0963	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.0864	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.0838	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.0812	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08812	127.0789	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.0769	GEN652460 4-GARRISON
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.0769	GEN652461 5-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08437	127.0752	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.0604	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.0351	GEN652459 3-GARRISON
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.035	GEN652457 1-GARRISON
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.035	GEN652458 2-GARRISON
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.0301	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.0281	GEN652543 3-BIG BEND

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	127.0279	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.9787	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.9752	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.9689	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.9653	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.9299	GEN615010 1-STANTON4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.9191	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.9132	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.8932	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.8932	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.8423	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.7856	GEN659141 1-K10215A
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.7596	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.7412	GEN652556 2-OAHE
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.7412	GEN652557 4-OAHE
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.7412	GEN652558 6-OAHE
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08554	126.7269	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.6913	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.6618	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.6468	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08542	126.6432	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.6304	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08578	126.6208	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08578	126.6208	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.5628	GEN600006 1-AS KING
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.5148	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08554	126.5058	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.5036	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.499	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08554	126.4725	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.4655	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.4421	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08814	126.421	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.4168	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.4119	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.4118	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.4072	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08961	126.4013	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08961	126.4013	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.3985	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08527	126.3848	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08527	126.3848	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.3753	GEN615010 1-STANTON4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.3519	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08671	126.3284	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.3166	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.2713	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.2661	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08527	126.2314	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNSLock	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08556	126.2265	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.2257	GEN652556 2-OAHE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.2256	GEN652557 4-OAHE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.2256	GEN652558 6-OAHE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.2174	GEN600006 1-AS KING
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.2126	GEN659141 1-K10215A
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08583	126.1976	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	126.1907	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08527	126.1801	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.0629	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	126.0511	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08555	126.008	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08559	126.0079	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08559	126.0079	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08555	125.9831	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08555	125.9804	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	125.9483	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	125.9257	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	125.9064	GEN659407 1-ANTELPHILLSW0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09031	125.8547	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09031	125.8547	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	125.8252	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	125.8076	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	125.732	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0902	125.7192	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0902	125.7192	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	125.7168	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	125.7114	GEN600005 1-MONTICELLO
FDNSLock	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08556	125.6945	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	125.6878	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	125.6683	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08184	125.6497	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08571	125.6496	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	125.6029	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.07913	125.6005	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	125.584	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	125.5809	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	125.5177	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	125.4964	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0902	125.496	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08571	125.4935	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08571	125.4771	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08571	125.4771	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	125.4724	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08512	125.3546	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	125.2939	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	125.2872	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	125.2763	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	125.193	GEN661015 1-COYOTE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	125.1477	GEN661015 1-COYOTE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08554	125.0022	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08461	124.984	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08542	124.8572	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	124.8133	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	124.7925	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08596	124.7233	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08559	124.6873	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08786	124.599	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08571	124.5542	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	124.5447	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	124.5141	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	124.4627	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	124.449	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08521	124.4311	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08521	124.4311	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08521	124.43	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08521	124.4253	2809X1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08521	124.4211	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12176	124.4044	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08644	124.3927	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08688	124.3924	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12176	124.3869	2810X2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	124.3536	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	124.3234	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	124.3062	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	124.2578	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08614	124.2257	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08575	124.1975	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08583	124.186	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08583	124.186	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08576	124.1781	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0851	124.0871	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0851	124.0871	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	124.0817	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	124.0817	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08576	124.0698	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	124.0654	GEN335831 1-RIVERBEND UNIT#1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	124.0416	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12176	124.0405	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08574	124.0327	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	124.0207	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08545	124.012	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.9953	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08559	123.992	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	123.9379	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.9291	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12182	123.9161	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.9081	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12182	123.9046	2810X2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0857	123.9014	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0857	123.9014	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08614	123.8683	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0857	123.8259	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08516	123.8251	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.8163	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.7994	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08714	123.7921	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0905	123.7916	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0905	123.7916	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0905	123.7916	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0905	123.7916	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.7294	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0867	123.7262	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08563	123.7252	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12182	123.725	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08638	123.7211	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08556	123.6466	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08556	123.6466	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08951	123.6339	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08951	123.6339	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.6331	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.6323	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08605	123.6283	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	123.6182	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.6165	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.6156	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08577	123.5533	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08577	123.5517	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08574	123.536	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08578	123.5323	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0848	123.5215	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	123.5022	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0848	123.4586	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.4567	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08608	123.4517	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08577	123.4483	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08648	123.4321	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08569	123.4293	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	123.4202	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08608	123.4105	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.3797	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.3794	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.3778	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.3733	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	123.361	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0848	123.3326	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	123.3296	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.3142	GEN336252 1-NINEMILE POINT UNIT#5
FDNSLock	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08574	123.2866	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.2825	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.2802	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.28	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08576	123.278	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08514	123.2453	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.2432	GEN501813 1-RODEMACHER UNIT 3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08516	123.2385	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08516	123.2385	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08516	123.2361	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.2315	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08521	123.2285	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	123.2231	GEN659125 1-COVEY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.2216	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.2183	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.2179	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.2156	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08566	123.2122	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.2011	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	123.1835	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.1829	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.1812	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08548	123.1744	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08584	123.1722	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08584	123.1722	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08608	123.1446	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08587	123.1436	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08555	123.1431	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.1244	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	123.1198	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	123.1198	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08583	123.1123	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08583	123.1123	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	123.1121	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	123.1121	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	123.1101	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	123.0656	GEN659125 1-COVEY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08545	123.0592	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08518	123.0589	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08653	123.0545	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08653	123.0545	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.0457	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.0457	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	123.0372	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	123.0372	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.0338	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	123.0335	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	123.0335	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	123.0201	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08602	123.0171	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08572	123.0171	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08566	123.0019	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08585	122.9872	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.9779	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0858	122.9773	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	122.9699	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08571	122.9542	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.9536	GEN642067 1-PLATTE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.9372	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08516	122.9334	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.9324	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	122.9313	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08602	122.924	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	122.9103	AINSWORTH - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08602	122.9083	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08555	122.907	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.9029	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08578	122.9023	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.8697	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.8605	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0858	122.8589	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.8567	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.8494	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.8479	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.8262	GEN542956 2-LACYGNE UNIT #2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08581	122.8219	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08589	122.8214	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.8149	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08648	122.8107	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0862	122.8099	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0862	122.8095	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0862	122.8095	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0862	122.806	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0862	122.806	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0858	122.7989	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	122.7947	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.7935	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.7836	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08569	122.7832	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08562	122.7757	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.7647	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08695	122.7574	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08552	122.7572	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.10982	122.7507	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.10975	122.7491	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08547	122.749	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08547	122.749	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.7274	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.7265	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08695	122.7242	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08695	122.7242	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.7181	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.7162	GEN303007 1-1BC2 U2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.7135	GEN303006 1-1BC2 U1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.7123	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.7091	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08654	122.706	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08577	122.7014	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08603	122.6994	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08593	122.6993	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08593	122.6993	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08583	122.6982	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08583	122.6982	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08581	122.6976	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08695	122.6962	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08695	122.6962	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08574	122.6902	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08654	122.6844	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08654	122.6838	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.6758	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.6755	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08575	122.6738	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.6689	GEN303008 1-1BC2 U3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.6682	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08572	122.6654	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08578	122.6572	BROKEN BOW - LOUP CITY 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.622	GEN563212 1-G15087_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08633	122.6204	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08868	122.6192	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08868	122.6188	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08868	122.6188	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.6185	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08633	122.6163	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08633	122.6161	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0859	122.6068	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.5731	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.5714	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08186	122.5567	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	122.5321	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12176	122.3473	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12176	122.3473	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	122.0814	BASE CASE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08566	121.936	KELLY - SHELL CREEK 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08566	121.9357	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08566	121.9357	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	121.852	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	121.7825	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	121.7648	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08583	121.7379	G15088_T 345.00 - MOORE 345KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	121.7263	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	121.6895	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08612	121.6823	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	121.6361	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0849	121.6083	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08568	121.6022	LOUP CITY - ST LIBORY 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.11279	121.5592	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	121.5273	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08577	121.4957	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08577	121.4957	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08577	121.4924	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08577	121.4924	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12182	121.4876	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12182	121.4876	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.4532	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.4532	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.4468	GEN600047 1-MECCT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.439	GEN659162 4-RED WLCK
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.439	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.4383	GEN659192 6-LYNN
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	121.4376	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08556	121.4218	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08556	121.4218	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.4203	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.4078	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.4077	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	121.4066	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.4051	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.4051	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.3865	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.3865	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08583	121.3846	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08583	121.3846	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.3797	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.3775	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.3769	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.3768	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08558	121.3718	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08558	121.3718	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNSLock	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08572	121.3712	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08558	121.3704	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08558	121.3704	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08093	121.3682	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.361	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08552	121.3506	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.3476	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.3375	GEN600017 C-LS POWER CT
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.321	GEN600045 4-ANSON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.2993	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.2964	GEN659274 1-GROTON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.2912	GEN681522 3-GENOA 3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.2844	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.2789	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.2784	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.277	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.2702	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.2672	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.2666	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.2579	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.2579	GEN 11108 1-J263_GEN 0.6000
FDNSLock	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	121.2438	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	121.2438	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	121.2438	STMDSJFAFACO
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08495	121.2359	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.2116	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.2049	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.2027	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.1666	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.1666	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.166	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.1606	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.1603	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.157	GEN659270 1-WEST SW
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.1506	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.1475	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.1078	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.0994	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.0915	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.0896	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	121.0849	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08581	121.053	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08545	121.02	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08545	121.02	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08809	120.9465	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	120.9459	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	120.9439	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.088	120.8873	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	120.8585	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.8517	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.844	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08809	120.8437	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.8405	GEN652460 4-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.8405	GEN652461 5-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.8405	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08809	120.8385	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08809	120.8385	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.8189	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08809	120.8104	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08809	120.8104	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.8043	GEN652459 3-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.8042	GEN652457 1-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.8042	GEN652458 2-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.796	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.7891	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.7846	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08809	120.7761	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.7511	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.7509	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.7418	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.7351	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.6452	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.6326	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.4844	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.4313	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.3091	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.2456	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.162	GEN659453 1-Gi1414GEN W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.1572	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.1479	GEN615010 1-STANTON4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.1429	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.1428	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.1125	GEN659141 1-K10215A
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.0917	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.0797	GEN652556 2-OAHE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.0797	GEN652557 4-OAHE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	120.0797	GEN652558 6-OAHE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	119.9933	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	119.9766	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	119.9737	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	119.9477	GEN652173 1-G09_001IS_2 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	119.839	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	119.8272	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08552	119.7698	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	119.7594	GEN600006 1-AS KING
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	119.7209	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08552	119.717	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08552	119.7134	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	119.7127	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	119.3601	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	118.8907	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	118.8857	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	118.8847	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	118.5935	GEN661015 1-COYOTE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	118.3534	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	118.3409	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	118.3083	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12773	118.283	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08096	118.238	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	118.0931	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	117.7619	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12215	117.5755	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12215	117.5627	2810X2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	117.5261	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12215	117.4985	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	117.2328	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	117.2328	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	117.2053	GEN659125 1-COVEY
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	117.1613	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	117.1613	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	117.0947	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	117.0946	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08819	116.9852	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	116.806	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	116.806	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	116.4149	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	116.3255	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08202	115.88	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	115.6174	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12215	115.2688	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12215	115.2688	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08536	114.6386	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09097	114.3611	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09086	113.9916	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08676	113.8872	FORBES - ROSEAU 500KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.6814	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	113.6814	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08582	113.4092	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08836	113.2784	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0866	113.2643	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0866	113.2643	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0866	113.2274	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0866	113.1745	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08693	113.1628	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08693	113.1628	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08959	112.8773	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08591	112.8601	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08819	112.7577	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09102	112.6144	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09102	112.6144	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08679	112.6105	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08592	112.5883	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	112.5296	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	112.4891	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	112.4891	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08729	112.3889	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08708	112.2125	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09147	112.1972	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09147	112.1972	FT RANDAL - FT THOMPSON 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09136	112.1554	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09136	112.1554	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08708	112.1089	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	112.1025	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08724	111.9941	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08715	111.9601	BROOKING COUNTY - BSSOUTH3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09136	111.9363	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	111.9101	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.11538	111.8789	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08115	111.8622	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08643	111.8018	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08643	111.8018	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08652	111.7978	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	111.7183	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08701	111.5913	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0871	111.5323	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	111.5129	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08788	111.4675	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	111.4605	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08712	111.4382	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08927	111.4087	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	111.3745	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08708	111.3568	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08691	111.3107	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08747	111.3062	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08678	111.2893	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08724	111.2751	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08724	111.2751	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	111.183	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	111.1785	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	111.139	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08708	111.1256	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	111.0965	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	111.0965	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	111.0565	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	111.0518	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08701	111.0432	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08739	111.0428	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08747	110.9845	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.9657	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.9401	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.9083	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	110.8994	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	110.8994	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08788	110.7854	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0875	110.7767	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0871	110.7184	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08855	110.7057	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08712	110.6998	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08704	110.6988	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNSLock	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0871	110.6754	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.6571	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08705	110.6555	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08691	110.6514	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0875	110.6384	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.6356	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	110.6111	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	110.5993	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09183	110.5822	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09183	110.5822	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09183	110.5822	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09183	110.5822	FT THOMPSON - HURON 230KV CKT 2
FDNSLock	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	110.5813	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.5781	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08716	110.5714	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08684	110.5703	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08655	110.5549	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08818	110.5545	NUNDRWD - WAYSIDE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.5518	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08761	110.5472	CLEARWATER - NELIGH 115KV CKT 1
FDNSLock	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	110.5372	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	110.5283	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.5243	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0871	110.5211	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.5124	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08744	110.5032	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08657	110.503	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.4995	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.4995	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09086	110.4961	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09086	110.4961	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.4958	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.4956	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08691	110.494	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.4743	GEN542957 1-IATAN UNIT #1
FDNSLock	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08615	110.4668	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08714	110.4643	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08656	110.4473	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08656	110.4456	LELAND03-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08656	110.4456	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08656	110.4426	2809X1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08656	110.4402	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.4263	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.4263	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08789	110.4213	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08644	110.4189	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08717	110.4048	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08724	110.3774	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08714	110.3752	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.3667	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08706	110.3596	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08713	110.3287	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.3142	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.3142	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08658	110.294	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.2871	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.2869	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.2867	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.2792	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.2792	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08721	110.2782	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.2769	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.2746	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08693	110.2719	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.261	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08691	110.2595	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.256	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.2559	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.2558	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.2478	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.2476	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08693	110.2445	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.2393	GEN642067 1-PLATTE
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08706	110.2337	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.232	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	110.2267	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	110.2267	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08706	110.2157	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.1989	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.1985	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08657	110.19	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08657	110.19	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08744	110.1892	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08744	110.188	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08657	110.1878	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.1737	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.1688	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.1623	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0901	110.1595	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0901	110.1589	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0901	110.1589	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08744	110.155	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.1397	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08694	110.1368	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0874	110.1336	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08724	110.1292	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.1273	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	110.1217	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	110.1217	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08765	110.1183	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08744	110.1101	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.1071	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.11126	110.1045	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.11119	110.103	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.0994	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	110.0966	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08744	110.0828	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.0826	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08715	110.0814	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.0774	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08717	110.0727	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08718	110.0695	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08772	110.0669	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0874	110.0631	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08718	110.063	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08718	110.063	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08714	110.052	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08789	110.0427	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0874	110.0353	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.0334	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08709	110.0297	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0873	110.0226	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0873	110.0226	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08719	110.0213	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08719	110.0181	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08691	110.0046	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	110.0027	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08657	109.9982	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	109.9951	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08697	109.9921	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	109.9915	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	109.9883	GEN563212 1-G15087_3 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08728	109.9848	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08728	109.9848	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	109.9772	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08765	109.9703	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0873	109.9688	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0873	109.9688	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08765	109.9654	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	109.9517	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	109.9487	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0872	109.9438	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	109.9427	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	109.9426	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08715	109.9389	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	109.9339	GEN303007 1-1BC2 U2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	109.9314	GEN303006 1-1BC2 U1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08698	109.9117	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08714	109.9091	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08728	109.9089	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0885	109.9028	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	109.8773	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	109.8742	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	109.606	AXTELL - SWEETWATER 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	109.4451	BASE CASE
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08701	109.3077	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08701	109.3077	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0863	109.2521	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.087	109.1373	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.087	109.1364	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.087	109.1364	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08716	109.0527	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08706	109.0342	CENTRAL CITY - CLARKS 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08715	108.9971	CRETE - FRIEND 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.9546	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.9546	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.9307	GEN600050 1-FEP
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.9275	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.9202	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.9202	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08718	108.9164	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08713	108.9125	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.9044	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.9044	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.8787	GEN659162 4-RED WLCK
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.8787	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.8785	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.8783	GEN659192 6-LYNN
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.8688	GEN600046 1-MECST
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.8585	GEN600047 1-MECCT1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.8473	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.8408	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.835	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.8322	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.8322	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.8294	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.8288	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.824	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.8235	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.8233	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.8144	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08706	108.8065	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0895	108.7985	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.7917	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.7916	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08713	108.7903	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.787	GEN600017 C-LS POWER CT
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.7766	GEN681522 3-GENOA 3
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08941	108.7648	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08719	108.7607	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08719	108.7607	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.7592	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.7448	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.7312	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.7262	GEN659274 1-GROTON
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0895	108.7208	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0895	108.7202	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0895	108.72	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.7136	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08718	108.7089	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.7055	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.7055	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08707	108.7022	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08707	108.7022	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0895	108.6985	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0895	108.6985	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08715	108.6808	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0868	108.6783	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0868	108.6783	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.6772	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.6752	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.6741	GEN659354 1-DEERCREK STG18.000

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08684	108.6741	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08684	108.6741	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.6685	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0895	108.6651	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.6544	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.6425	GEN659270 1-WEST SW
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.6245	GEN652544 5-BIG BEND
FDNSLock	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08718	108.6094	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08718	108.6094	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08718	108.6094	STMDSJFAFACO
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.5866	GEN657705 X-DRAYTON
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.5858	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.5787	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.5669	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.5637	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08713	108.5538	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.5376	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.536	GEN652559 1-OAHE
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.5217	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.5184	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.5181	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08707	108.506	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.4821	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.4821	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.482	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0869	108.4747	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0869	108.4747	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08717	108.4532	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.4219	GEN652460 4-GARRISON
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.4219	GEN652461 5-GARRISON
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.4021	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08718	108.3965	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.3933	GEN652458 2-GARRISON
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.3933	GEN652459 3-GARRISON
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08718	108.3933	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.3932	GEN652457 1-GARRISON
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.3626	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.3527	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.3272	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08623	108.3088	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08718	108.308	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.3055	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.2827	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.2826	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.2772	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.2556	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.2448	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08997	108.2415	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08686	108.2146	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.1965	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.1473	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.1451	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.0519	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	108.0395	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.9781	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.9629	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.8937	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.8897	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.8409	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNSLock	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.7652	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.7487	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.719	GEN652556 2-OAHE
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.719	GEN652558 6-OAHE
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.7009	GEN652557 5-OAHE
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.694	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.617	GEN615010 1-STANTON4
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.609	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.6068	GEN659141 1-K10215A

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.5283	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.5011	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.4977	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.4613	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.4405	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08685	107.4129	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08685	107.4076	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08685	107.3997	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.3992	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.39	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.3821	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.3478	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.3023	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.3023	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.2776	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.2768	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.2603	GEN600006 1-AS KING
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08586	107.247	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	107.0698	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12356	107.0205	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12356	107.0146	2810X2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12356	106.9409	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNSLock	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	106.6512	GEN600005 1-MONTICELLO
FDNSLock	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	106.4715	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08684	106.428	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09306	106.262	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	106.0792	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09296	105.9526	STORLA - WESSINGTON 230KV CKT 1
FDNSLock	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	105.8381	GEN600001 2-SHERBURNE CNTY G2
FDNSLock	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	105.7274	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	105.6484	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	105.6204	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	105.5718	GEN661015 1-COYOTE
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08852	105.5014	RIEL - ROSEAU 500KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	105.3629	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	105.3629	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08738	105.2953	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08947	105.2157	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08947	105.2157	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	105.2101	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	104.969	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09024	104.9292	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	104.8627	GEN659125 1-COVEY
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09155	104.8415	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0931	104.6844	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0931	104.6844	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12356	104.6447	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.12356	104.6447	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0888	104.6316	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0888	104.6316	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08855	104.45	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	104.4078	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08847	104.3689	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08847	104.3689	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08997	104.3562	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08847	104.3372	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	104.3362	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08847	104.303	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08889	104.2438	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08889	104.2438	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08187	104.1725	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	104.0626	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09396	104.041	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09396	104.041	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	104.0368	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09383	104.0346	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09383	104.0346	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08875	103.9508	HAZLETON - MITCHLCO3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	103.9134	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08896	103.8951	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	103.8418	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08819	103.8414	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09383	103.8317	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08822	103.8021	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	103.556	GEN563222 1-G15088_3 0.6900
FDNSLock	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08925	103.5519	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08925	103.5435	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08925	103.5435	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08854	103.532	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09123	103.5165	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08892	103.4997	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08918	103.4787	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08964	103.4734	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	103.4318	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	103.4304	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08722	103.4105	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08887	103.3798	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	103.3766	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08794	103.3365	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08794	103.3358	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08794	103.3358	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08794	103.3314	2809X1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08794	103.3281	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08875	103.3209	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08868	103.2956	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	103.2533	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08933	103.2357	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08925	103.2192	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	103.1711	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	103.1609	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08897	103.1499	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	103.1147	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09379	103.1092	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09379	103.1092	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09379	103.1092	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09379	103.1092	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	103.0764	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08896	103.0715	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08896	103.0715	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0888	103.0508	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08896	103.0213	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08891	102.9787	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08933	102.9532	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08888	102.9488	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08888	102.9488	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.9447	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.9375	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08819	102.9058	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08888	102.9004	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08896	102.8917	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08963	102.8897	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09043	102.8847	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08889	102.8675	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08929	102.8377	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.8126	GEN542962 2-IATAN UNIT #2
FDNSLock	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08889	102.8007	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08869	102.7955	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09015	102.7792	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08908	102.763	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08908	102.763	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08832	102.7549	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08832	102.7549	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08928	102.7493	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08861	102.7437	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08928	102.738	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08825	102.7359	CROOKED CREEK - RIVERDALE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08929	102.7021	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.1125	102.696	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08928	102.6954	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.6953	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.11244	102.6934	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09296	102.6709	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09296	102.6709	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.6342	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.6154	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.589	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.5851	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08842	102.5716	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.5648	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08872	102.562	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.5605	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08883	102.5602	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08826	102.5592	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08826	102.5592	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08826	102.5557	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08869	102.5462	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08826	102.5353	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08789	102.516	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08789	102.5159	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08923	102.5038	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08967	102.4961	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08897	102.4955	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08897	102.4944	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08789	102.4776	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08906	102.4738	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08889	102.4712	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08899	102.4517	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08899	102.4517	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08872	102.4516	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.4371	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.4343	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08886	102.4296	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08902	102.4223	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08883	102.4066	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08833	102.4064	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.4019	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.4004	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.4002	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.3893	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08868	102.3804	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.3799	GEN642067 1-PLATTE
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08895	102.3761	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.3757	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08826	102.3724	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.3593	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.3543	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.3427	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.3425	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.3337	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08896	102.3311	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNSLock	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09052	102.3286	P13:230-345:NPPD:STEGALL3:KV3A
FDNSLock	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09052	102.3272	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08899	102.3269	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08899	102.3269	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.3016	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08895	102.2941	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08905	102.2906	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.2889	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.2846	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.2765	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08907	102.2745	AINSWORTH - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08925	102.2701	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.2655	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08905	102.2508	BLAIR - GRANITE FALLS 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08905	102.2508	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.2443	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.2443	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08907	102.2424	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.2422	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.2219	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08925	102.2114	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.2076	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08907	102.2024	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.1996	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08907	102.1796	EMMET - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08925	102.1754	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.1733	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08876	102.1726	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08887	102.1718	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.1702	GEN563212 1-G15087_3 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08989	102.1691	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.1668	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08967	102.1396	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08894	102.134	BROKEN BOW - LOUP CITY 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09014	102.1335	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08896	102.1324	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.1315	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08868	102.1263	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08898	102.1177	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.1176	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08895	102.1106	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08893	102.1052	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0891	102.0925	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0891	102.0925	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.0756	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	102.0746	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08896	102.0657	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08896	102.0594	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08896	102.0471	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.7058	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.6262	BASE CASE
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.088	101.4689	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08882	101.3088	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08882	101.3083	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08882	101.3083	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08893	101.2604	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08893	101.2604	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08893	101.2583	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08893	101.2583	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08895	101.2392	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08895	101.2392	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.1626	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08897	101.1593	CRETE - FRIEND 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.1411	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.1391	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.139	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.1345	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.1345	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.1344	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08899	101.1317	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08317	101.1299	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.1174	GEN657600 1-L1GEN3 9 0.5750
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.1163	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.1115	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08888	101.0927	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.0922	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.0809	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.0809	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.0804	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.0727	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.0727	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.0678	GEN659273 2-GROTON SYNC COND

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.0678	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08895	101.0605	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.0463	GEN659162 4-RED WLCK
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.0463	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.0457	GEN659192 6-LYNN
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.0377	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	101.034	GEN600050 1-FEP
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.089	101.0081	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.089	101.0081	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.9887	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.9877	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09137	100.9847	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09128	100.9759	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.9749	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.9727	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.9727	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.9672	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08897	100.9575	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.9473	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.9397	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0889	100.9255	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0889	100.9255	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.9191	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0886	100.9186	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0886	100.9186	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09137	100.9168	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.9139	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.9132	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09137	100.9128	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09137	100.9122	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.9114	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.9113	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.9094	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.9014	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09137	100.892	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09137	100.892	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.089	100.89	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.8766	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.8728	GEN681522 3-GENOA 3
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.8651	GEN600017 C-LS POWER CT
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.8605	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.09137	100.8592	GLENHAM - WHITLOK 230KV CKT 1
FDNSLock	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08899	100.8549	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08899	100.8549	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08899	100.8549	STMDSJFAFACO
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.8479	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.8448	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08869	100.8339	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08869	100.8339	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.8337	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.8337	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08895	100.8299	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.8273	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.8234	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.7966	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.7647	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0889	100.7457	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08898	100.7358	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.7185	GEN652559 1-OAHE
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08874	100.6665	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08874	100.6665	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08899	100.6623	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08899	100.6571	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.6567	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.6462	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.6449	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.6148	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.6147	GEN672304 4-BOUNDARY DAM GENERATOR 4

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.6147	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08899	100.5741	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.5704	GEN652460 4-GARRISON
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.5702	GEN652461 5-GARRISON
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.5406	GEN652457 1-GARRISON
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.5406	GEN652458 2-GARRISON
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.5406	GEN652459 3-GARRISON
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0887	100.5393	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.5237	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.5065	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.5041	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.4939	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.4787	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.4514	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.4501	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.449	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.4213	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.4207	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.3925	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.3912	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.3649	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.2695	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.2456	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08811	100.2429	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.1853	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.1368	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100.0553	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	100	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	99.9	GEN652556 2-OAHE
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	99.9	GEN652557 5-OAHE
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	99.9	GEN652558 6-OAHE
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0887	99.9	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0887	99.9	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0887	99.9	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	99.8	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	99.8	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	99.8	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	99.7	GEN615010 1-STANTON4
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	99.7	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	99.7	GEN659141 1-K10215A
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	99.6	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	99.6	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	99.5	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.08903	99.5	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12117	158.852	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12108	156.9565	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1227	146.5866	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11078	143.2023	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08681	141.6277	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11072	141.4023	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	140.6989	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.1267	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	139.1267	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08418	138.8573	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08955	138.6032	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	138.5639	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	138.5639	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08577	138.3469	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08945	138.0531	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08698	137.9087	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08597	137.5301	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	137.431	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08627	137.431	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08461	137.3111	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08528	137.259	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08528	137.259	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08955	137.1388	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08528	137.0928	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08577	136.9727	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08528	136.9639	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08699	136.961	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08416	136.9165	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08529	136.4947	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08529	136.4947	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08945	136.4172	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08577	136.4156	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08529	136.203	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0882	136.1542	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08529	136.0688	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08961	135.9517	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08961	135.9517	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08681	135.9075	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08561	135.8971	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08561	135.8971	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08577	135.7748	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08598	135.7376	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	135.3539	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	135.3539	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0846	135.2571	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09001	135.1247	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09001	135.1247	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08564	135.1079	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08682	135.0861	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08564	135.0112	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	134.9448	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08595	134.9149	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08991	134.8873	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08991	134.8873	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0882	134.8073	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08526	134.7646	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08577	134.7421	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08961	134.661	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08961	134.661	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08562	134.6181	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08562	134.6181	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08991	134.5322	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	134.3658	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	134.2996	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08489	134.2442	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08489	134.212	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	134.1258	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09002	134.0657	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09002	134.0657	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11089	134.0292	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08564	133.9726	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07961	133.937	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08992	133.8603	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08992	133.8603	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08593	133.7585	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08593	133.7585	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	133.7051	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08571	133.5675	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08992	133.561	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08606	133.552	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	133.5339	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08655	133.4963	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08578	133.4679	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08614	133.4671	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08789	133.4552	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0849	133.4545	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08526	133.4289	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	133.3951	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	133.3325	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	133.3325	RAUN - SIOUX CITY 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0849	133.2208	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	133.1643	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08581	133.1614	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08549	133.1178	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07959	133.1112	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08579	132.9202	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0849	132.8702	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	132.8258	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08614	132.822	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08607	132.8104	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	132.8013	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08571	132.8011	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	132.7853	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08683	132.7689	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08574	132.7147	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	132.7009	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	132.6553	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08578	132.6476	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	132.6453	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	132.6075	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	132.6075	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	132.5958	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	132.5866	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0857	132.5726	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0872	132.5657	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08655	132.5652	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	132.553	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	132.551	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	132.551	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	132.5473	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08657	132.5464	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08789	132.5337	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08554	132.5308	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08644	132.5186	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08555	132.5174	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	132.5172	GEN640009 1-COOPER NUCLEAR STATION
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	132.4738	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	132.4498	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	132.3828	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08585	132.2866	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08945	132.2663	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08945	132.2663	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	132.2635	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	132.2428	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	132.2343	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08656	132.2095	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	132.1892	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08629	132.1027	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08629	132.0652	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	132.0007	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	131.9762	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	131.9656	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08579	131.9624	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	131.9548	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08593	131.9425	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08593	131.9425	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	131.922	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	131.922	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	131.9005	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	131.8745	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08579	131.8584	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	131.818	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	131.8154	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	131.8154	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	131.809	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	131.8008	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	131.7961	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	131.7757	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0857	131.7576	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	131.7514	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	131.7514	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	131.7416	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	131.7272	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08575	131.7245	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	131.7059	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08629	131.6887	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	131.6855	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08657	131.6454	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0872	131.645	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08528	131.6146	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08671	131.5841	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	131.5798	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08866	131.5702	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	131.5593	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0858	131.4091	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	131.4071	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	131.3995	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08573	131.3793	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	131.3791	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08585	131.36	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08585	131.3348	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08656	131.3303	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	131.3289	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08617	131.3259	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08585	131.3151	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08559	131.2842	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08645	131.2754	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08945	131.275	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08945	131.275	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08657	131.2556	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08629	131.2497	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	131.2399	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	131.2374	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	131.2371	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	131.2366	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08629	131.2178	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09042	131.2151	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09042	131.2151	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09042	131.2151	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09042	131.2151	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08589	131.203	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08589	131.203	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	131.1805	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08564	131.1509	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08869	131.1205	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	131.0613	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08638	131.0523	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	131.0063	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08597	130.9913	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	130.974	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0857	130.9535	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0857	130.9535	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08629	130.9476	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	130.9369	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08528	130.9291	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	130.9188	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	130.9188	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	130.9132	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	130.8938	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	130.8938	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	130.8909	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	130.8456	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08579	130.8356	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08593	130.8096	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08593	130.8096	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	130.7845	ATKINSON - STUART 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	130.6421	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08585	130.6052	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08569	130.5983	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	130.5976	EMMETE.TAP 7115.00 - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08569	130.5903	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08569	130.5903	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08657	130.5615	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08866	130.5545	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	130.5518	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	130.5269	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	130.5269	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08866	130.5243	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08866	130.5243	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	130.5158	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	130.4858	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	130.4751	BASE CASE
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	130.3874	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	130.3874	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	130.3727	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	130.2955	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	130.2955	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	130.281	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	130.28	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	130.28	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08553	130.2418	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08553	130.2418	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11018	130.2155	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11012	130.2148	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	130.195	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	130.1875	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	130.1816	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	130.1664	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	130.1621	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	130.1487	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08593	130.1277	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	130.1252	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08593	130.1145	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08593	130.1145	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08555	130.065	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	130.0324	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	130.0324	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08558	130.0021	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08558	130.0021	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08489	129.9384	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08503	129.9378	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	129.9298	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	129.9298	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	129.9268	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	129.9268	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	129.8546	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	129.8546	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08563	129.8241	GRAND ISLAND - HASTINGS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08563	129.7363	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08563	129.7363	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08563	129.7348	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08563	129.7348	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	129.6942	BASE CASE
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08575	129.6787	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	129.6714	STMDSJFAFACO
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	129.6713	COPSTJCPFRSJ
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	129.6713	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0857	129.6512	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0857	129.6512	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0857	129.6421	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	129.6139	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	129.5401	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	129.5217	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	129.5118	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	129.4827	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	129.4661	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08387	129.4492	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	129.4025	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0855	129.3866	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0855	129.3866	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08616	129.3835	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08554	129.3806	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08554	129.3806	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	129.3787	G15088_T 345.00 - MOORE 345KV CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	129.3737	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08959	129.3321	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	129.3269	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08613	129.3269	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08503	129.2416	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	129.0965	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	129.0965	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	129.0931	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	129.0931	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08559	129.0724	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08559	129.0724	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0849	129.0631	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08556	128.9713	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08564	128.9649	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08564	128.9649	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08564	128.9634	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08564	128.9634	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08589	128.9447	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08589	128.9447	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08869	128.9344	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08869	128.9344	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08576	128.9292	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08951	128.8407	STORLA - WESSINGTON 230KV CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	128.8131	STMDSJFAFACO
FDNSLock	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	128.813	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	128.813	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	128.7649	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12328	128.7513	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08684	128.642	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0855	128.6166	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0855	128.6166	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	128.6009	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	128.5971	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	128.5926	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08588	128.5114	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08812	128.288	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08812	128.288	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08461	128.2547	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	128.25	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08812	128.2361	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	128.181	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	128.1807	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	128.1799	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	128.0465	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08437	127.875	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.812	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.7962	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.7536	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08542	127.7167	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.6427	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08554	127.6426	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.6287	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.6238	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.5821	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.5706	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.5257	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.5257	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.5116	GEN672306 6-BOUNDARY DAM GENERATOR 6

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.4764	GEN615010 1-STANTON4
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08554	127.4229	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08814	127.4114	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08554	127.3854	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08961	127.3778	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08961	127.3778	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.365	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08527	127.3574	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08527	127.3574	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.3301	GEN600006 1-AS KING
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.3223	GEN652556 2-OAHE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.3223	GEN652557 4-OAHE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.3223	GEN652558 6-OAHE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08671	127.3025	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.3003	GEN659141 1-K10215A
FDNSLock	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08556	127.2681	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08578	127.2098	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08578	127.2098	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08527	127.1982	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.1911	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.1514	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.1481	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.1454	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08527	127.1428	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08555	127.1244	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	127.1039	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08555	127.1032	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08555	127.101	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	127.033	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	126.9976	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	126.9751	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08559	126.9184	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08559	126.9184	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	126.9105	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08583	126.859	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09031	126.8362	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09031	126.8362	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	126.7689	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	126.7123	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	126.7099	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNSLock	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08556	126.7061	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0902	126.6976	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0902	126.6976	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	126.6797	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08571	126.6441	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	126.6074	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	126.5974	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	126.5845	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	126.5776	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08571	126.4764	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08571	126.4576	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08571	126.4576	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0902	126.4573	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	126.3701	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	126.353	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	126.3338	GEN600000 1-SHERBURNECNTY G1
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08184	126.2953	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07913	126.2336	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	126.192	GEN661015 1-COYOTE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	126.1835	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08512	126.1143	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	126.0112	GEN661015 1-COYOTE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08461	125.9787	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08554	125.9754	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08542	125.8228	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	125.7589	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	125.7136	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08596	125.6168	LAKEFIELD 3 - NOBLES 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08559	125.601	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	125.4949	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08786	125.4859	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08571	125.4743	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	125.4527	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08688	125.4354	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08521	125.4058	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08521	125.4022	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08521	125.4022	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08521	125.3959	2809X1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08521	125.3913	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	125.3319	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	125.3313	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	125.3298	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08644	125.2616	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	125.2421	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12176	125.2319	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12176	125.213	2810X2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	125.1752	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	125.162	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08575	125.0939	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08614	125.0928	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08576	125.0635	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	125.0292	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0851	125.021	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0851	125.021	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.9701	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	124.9574	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	124.9574	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12182	124.9524	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08576	124.9516	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	124.9421	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12182	124.9412	2810X2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08574	124.9222	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08545	124.9207	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08559	124.8732	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08583	124.86	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08583	124.86	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.8331	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.8275	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	124.8265	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0857	124.8081	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0857	124.8081	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12176	124.7309	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0857	124.7282	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08614	124.7228	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.7025	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	124.6942	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0905	124.6631	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0905	124.6631	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0905	124.6631	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0905	124.6631	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08714	124.6603	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.6587	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12182	124.6405	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08563	124.5951	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.5946	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08638	124.5655	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.5542	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.5137	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.5129	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08951	124.4957	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08951	124.4957	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.4941	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.4928	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08605	124.4888	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08556	124.4677	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08556	124.4677	HOSKINS - RAUN 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0867	124.4608	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08574	124.4169	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08577	124.4046	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08577	124.403	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08578	124.3731	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	124.3506	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	124.3411	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.3313	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08569	124.305	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08608	124.2862	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	124.2822	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08608	124.2432	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08577	124.2313	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08648	124.2145	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.1946	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.1943	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.1934	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.1774	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.1713	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	124.1607	RASMUSN - SIOUX CITY 230KV CKT 1
FDNSLock	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08574	124.152	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.1338	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.1314	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.1312	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08576	124.1251	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.1034	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.0896	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.0794	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.0675	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.0671	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	124.0634	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08566	124.0596	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.0472	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.0445	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	124.0378	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08548	124.0323	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08555	124.001	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08514	123.9991	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	123.9929	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	123.9804	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	123.9776	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08608	123.9774	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	123.9714	GEN659125 1-COVEY
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	123.9351	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	123.9351	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	123.9274	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	123.9196	GEN659125 1-COVEY
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08584	123.8993	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08584	123.8993	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08545	123.8961	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08585	123.8913	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08585	123.8913	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08653	123.891	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08653	123.891	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	123.8899	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	123.8899	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	123.8819	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08583	123.871	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08583	123.871	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08602	123.867	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08566	123.8393	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08585	123.8166	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08572	123.8138	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	123.8071	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	123.8071	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0858	123.7966	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	123.7742	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	123.7561	GEN642067 1-PLATTE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	123.7398	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	123.6977	AINSWORTH - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08589	123.6355	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08569	123.6024	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08648	123.5952	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	123.5897	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	123.5807	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	123.5296	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	123.5094	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08577	123.4892	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08583	123.4691	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08583	123.4691	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08603	123.4634	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08578	123.4382	BROKEN BOW - LOUP CITY 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08868	123.4104	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08868	123.4101	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08868	123.4101	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0859	123.393	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08186	123.3596	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	123.267	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	123.249	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	123.249	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	123.2404	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08589	123.2026	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	123.198	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08587	123.198	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08589	123.1827	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12176	123.1459	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12176	123.1459	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	122.8729	BASE CASE
FDNSLock	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	122.7089	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	122.6688	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	122.6172	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08612	122.4837	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12182	122.3931	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12182	122.3931	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0849	122.3916	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08583	122.3869	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08568	122.3852	LOUP CITY - ST LIBORY 115KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	122.3607	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	122.3578	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	122.2712	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08577	122.2684	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08577	122.2684	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	122.2664	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08577	122.2651	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08577	122.2651	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08556	122.1693	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08556	122.1693	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08583	122.1683	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08583	122.1683	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08558	122.1483	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08558	122.1483	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08558	122.1468	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08558	122.1468	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08572	122.1385	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08552	122.0914	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	122.0846	GEN600045 4-ANSON
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	122.0529	GEN587133 1-G16-017-GEN10.6900
FDNSLock	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	122.0217	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	122.0217	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	122.0217	STMDSJFAFACO
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08495	121.9842	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.9517	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.9488	GEN659291 1-FT MP COLLECTOR
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08093	121.8803	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.8458	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08581	121.8377	COOPER - ST JOE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.8367	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.8256	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.8236	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.8121	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08545	121.7918	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08545	121.7918	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	121.724	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	121.7231	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08809	121.6823	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	121.6358	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.088	121.6201	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08809	121.5751	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08809	121.5696	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08809	121.5696	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.5607	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.5521	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.5489	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.5482	GEN652460 4-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.5482	GEN652461 5-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.5461	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08809	121.5403	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08809	121.5403	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.5384	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.5325	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.5096	GEN652458 2-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.5096	GEN652459 3-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.5095	GEN652457 1-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.5053	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08809	121.5045	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.478	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.4778	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.4657	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.4377	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.378	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.3299	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.1768	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.1286	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	121.0106	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.9353	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.8424	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.8392	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.8288	GEN615010 1-STANTON4
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.8277	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.8277	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.7857	GEN659141 1-K10215A
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.775	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.761	GEN652556 2-OAHE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.7609	GEN652557 4-OAHE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.7609	GEN652558 6-OAHE
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11279	120.7212	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.6701	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.6632	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.6602	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.6216	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.502	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.4887	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08552	120.4561	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.4393	GEN600006 1-AS KING
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.4204	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.4116	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08552	120.4109	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08552	120.4092	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	120.0312	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	119.9949	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	119.984	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	119.5432	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	119.2302	GEN661015 1-COYOTE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	119.0031	GEN620315 1-BIG STONE GEN

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	118.9861	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	118.9383	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08096	118.9166	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	118.7336	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	118.6603	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	118.3371	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	118.3371	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	118.2096	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	118.2096	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12215	118.1967	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12215	118.1834	2810X2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	118.1144	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12215	118.0477	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	117.8116	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	117.8116	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	117.7854	GEN659125 1-COVEY
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	117.7094	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	117.7015	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12773	117.49	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	116.9897	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	116.8976	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08202	116.2347	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08819	116.1894	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	116.1529	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12215	115.8647	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12215	115.8647	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08536	113.7832	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09097	113.5799	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08591	113.4339	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08592	113.3884	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09086	113.2111	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08676	113.1127	FORBES - ROSEAU 500KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.897	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	112.897	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08582	112.582	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08836	112.5017	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0866	112.4749	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0866	112.4749	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0866	112.4378	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0866	112.3844	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08693	112.3611	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08693	112.3611	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08115	112.1043	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08959	112.0911	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08819	111.9708	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	111.8512	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	111.8512	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08679	111.8341	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09102	111.8252	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09102	111.8252	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	111.7254	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0872	111.6229	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0872	111.6229	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08729	111.5968	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08708	111.4288	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09147	111.4176	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09147	111.4176	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09136	111.3765	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09136	111.3765	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08708	111.3255	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	111.3012	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08715	111.1906	BROOKING COUNTY - BSSOUTH3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09136	111.1558	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08724	111.155	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11538	111.127	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	111.0858	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08643	111.0312	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08643	111.0312	SPLIT ROCK - WHITE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08652	110.9882	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08066	110.9509	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	110.946	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08701	110.8065	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0871	110.7414	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	110.734	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08788	110.6766	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	110.675	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08712	110.6546	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08927	110.6193	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	110.5821	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08708	110.5736	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08691	110.531	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08747	110.5164	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08678	110.5103	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08724	110.4873	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08724	110.4873	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	110.3996	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	110.3789	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	110.3596	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08708	110.343	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	110.2686	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	110.2686	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	110.2671	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08701	110.2588	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08739	110.2557	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	110.2491	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08747	110.1973	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	110.1607	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	110.1604	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	110.1287	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08788	109.9974	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0875	109.9897	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0871	109.9377	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08855	109.922	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08712	109.9167	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08704	109.9154	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNSLock	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0871	109.8946	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08705	109.8711	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08691	109.8709	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.8579	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.8551	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0875	109.8524	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	109.8259	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	109.8142	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09183	109.8004	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09183	109.8004	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09183	109.8004	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09183	109.8004	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.7968	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08818	109.7904	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08684	109.7897	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08716	109.7889	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.7727	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08761	109.7626	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	109.7496	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08655	109.7458	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.7443	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08657	109.7389	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0871	109.7377	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.7306	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.7177	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.7177	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08744	109.7161	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNSLock	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08615	109.7156	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.7154	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.7152	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09086	109.7148	FT THOMPSON - WESSINGTON 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09086	109.7148	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08691	109.7139	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08714	109.6825	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.6791	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08656	109.6703	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08656	109.6676	LELAND03-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08656	109.6676	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08656	109.6644	2809X1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08656	109.6621	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08789	109.6361	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08644	109.6241	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08717	109.6222	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.6202	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.6202	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08724	109.5963	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08714	109.5911	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.5876	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08706	109.5783	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08713	109.5477	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.534	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.534	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08658	109.5264	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.5057	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.5055	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.5053	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08721	109.4973	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.4959	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08693	109.4927	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.4912	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.4912	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.4859	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.4798	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08691	109.4779	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.4673	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.4672	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.4671	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.4669	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.4668	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08693	109.4654	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.4585	GEN642067 1-PLATTE
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08706	109.4542	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.4406	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08706	109.4354	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0872	109.4314	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0872	109.4314	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.4202	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.42	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08657	109.4182	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08657	109.4182	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08657	109.4156	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08744	109.4041	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08744	109.4037	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.39	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.3837	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.3797	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0901	109.3778	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0901	109.3773	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0901	109.3773	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08744	109.3704	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.358	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08694	109.3567	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0874	109.3559	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.3488	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08724	109.3467	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0872	109.3432	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0872	109.3432	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08765	109.3399	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08744	109.3261	ATKINSON - EMMET 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.3249	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08694	109.3213	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08694	109.3213	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.3211	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0872	109.3183	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.302	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08715	109.3017	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.2994	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08744	109.2991	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08717	109.2942	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08718	109.2908	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0874	109.2854	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08718	109.2835	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08718	109.2835	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08772	109.2833	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08714	109.2689	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08789	109.2607	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0874	109.2578	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.252	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08709	109.2475	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0873	109.2434	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0873	109.2434	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08719	109.2422	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08719	109.2391	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08691	109.2256	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.2247	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.2155	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.2125	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.2085	GEN563212 1-G15087_3 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	109.1996	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08765	109.1926	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0873	109.1898	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0873	109.1898	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08714	109.1298	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.7955	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.7932	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.671	BASE CASE
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.5156	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.499	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0863	108.4519	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08715	108.2219	CRETE - FRIEND 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08718	108.1473	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08713	108.1447	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.1339	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.1339	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.1093	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.1084	GEN659162 4-RED WLCK
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.1084	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.108	GEN659192 6-LYNN
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.1	GEN600046 1-MECST
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.0899	GEN600047 1-MECCT1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.0789	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.0724	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.0665	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.0636	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.0635	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.0635	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.0608	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.0555	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.0549	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.0547	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.0459	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08706	108.0343	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0895	108.0303	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08713	108.0237	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.0228	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.0227	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.0187	GEN600017 C-LS POWER CT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	108.008	GEN681522 3-GENOA 3
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08941	107.9969	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08719	107.9961	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08719	107.9961	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.9909	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.9768	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.9619	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.9569	GEN659274 1-GROTON
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0895	107.9533	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0895	107.9528	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0895	107.9525	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.9445	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.9375	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.9375	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08707	107.9371	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08707	107.9371	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0895	107.9313	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0895	107.9313	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08715	107.9151	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0868	107.9104	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0868	107.9104	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.9084	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.9074	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08684	107.9061	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08684	107.9061	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.9053	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.9009	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0895	107.8981	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08718	107.8913	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.887	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.8739	GEN659270 1-WEST SW
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.8585	GEN652544 5-BIG BEND
FDNSLock	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08718	107.8466	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08718	107.8466	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08718	107.8465	STMDSJFAFACO
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.8197	GEN657705 X-DRAYTON
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.8192	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.8122	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.7989	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.7973	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08713	107.7899	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08586	107.7784	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.775	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.7691	GEN652559 1-OAHE
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.7559	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.7556	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.7551	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08707	107.742	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.7162	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.7161	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.7161	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0869	107.6986	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0869	107.6986	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08717	107.6939	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.6546	GEN652460 4-GARRISON
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.6545	GEN652461 5-GARRISON
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.6369	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08718	107.6364	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08718	107.6325	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.6261	GEN652458 2-GARRISON
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.6261	GEN652459 3-GARRISON
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.626	GEN652457 1-GARRISON
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.5956	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.5858	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.5606	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08718	107.5486	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.5413	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08623	107.5336	COLUMWEST - GRAND ISLAND 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08997	107.5207	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.519	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.5189	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.517	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.4923	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.479	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08686	107.4402	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.4325	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.3845	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.3823	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.2912	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.2755	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.2624	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.2015	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.1346	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.1339	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	107.1287	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.9582	GEN652558 6-OAHE
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.9581	GEN652556 2-OAHE
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.9402	GEN652557 5-OAHE
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.9324	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.8581	GEN615010 1-STANTON4
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.8473	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.8455	GEN659141 1-K10215A
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.7673	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.7487	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.7453	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.7087	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.6882	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08685	106.6451	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08685	106.644	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.6437	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.6388	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08685	106.6373	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.6358	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.5961	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.551	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.551	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.5266	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.5261	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.5099	GEN600006 1-AS KING
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	106.3201	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12356	106.2737	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12356	106.2678	2810X2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12356	106.1845	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNSLock	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	105.902	GEN600005 1-MONTICELLO
FDNSLock	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	105.724	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08684	105.6818	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09306	105.5611	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	105.403	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09296	105.2552	STORLA - WESSINGTON 230KV CKT 1
FDNSLock	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	105.0963	GEN600001 2-SHERBURNE CNTY G2
FDNSLock	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	104.9866	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	104.913	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	104.8771	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	104.8353	GEN661015 1-COYOTE
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08852	104.8066	RIEL - ROSEAU 500KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	104.6216	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	104.6216	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08738	104.5812	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08947	104.5197	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08947	104.5197	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	104.4767	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09024	104.2399	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	104.2379	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09155	104.1504	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	104.1256	GEN659125 1-COVEY
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0931	103.9943	FT THOMPSON - LETCHER 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0931	103.9943	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0888	103.9311	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0888	103.9311	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12356	103.9159	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12356	103.9159	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08855	103.7644	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	103.7048	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08847	103.6798	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08847	103.6798	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08997	103.6751	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08847	103.6485	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08847	103.6145	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	103.6129	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08889	103.501	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08889	103.501	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08187	103.3968	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09396	103.3638	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09396	103.3638	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09383	103.3578	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09383	103.3578	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	103.3435	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	103.3395	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08875	103.2666	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	103.1923	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08896	103.175	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08819	103.1636	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09383	103.1559	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	103.1213	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08822	103.1075	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	102.8748	GEN563222 1-G15088_3 0.6900
FDNSLock	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08925	102.8745	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08925	102.8662	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08925	102.8662	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08854	102.856	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09123	102.8365	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08892	102.821	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08918	102.7973	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08964	102.79	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	102.7569	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	102.7507	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08887	102.7028	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08722	102.6851	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	102.6823	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08794	102.6654	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08794	102.6642	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08794	102.6642	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08794	102.6598	2809X1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08794	102.6565	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08875	102.6431	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08868	102.6192	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	102.5848	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08933	102.5573	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08925	102.5424	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	102.4987	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08897	102.4705	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	102.4644	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	102.4425	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09379	102.4349	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09379	102.4349	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09379	102.4349	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09379	102.4349	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	102.3827	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0888	102.3759	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08896	102.3644	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08896	102.3644	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08896	102.3464	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08891	102.305	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08933	102.2779	EAGLE 4 230.00 - PAHOJA 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08888	102.2778	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08888	102.2778	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	102.2738	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	102.2669	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08819	102.2359	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08888	102.2297	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08896	102.2182	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08963	102.2126	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09043	102.2118	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08889	102.1966	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08929	102.1625	RASMUSN - UTICA JCT 230KV CKT 1
FDNSLock	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08889	102.1303	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	102.1256	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08869	102.1254	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09015	102.1239	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08908	102.0896	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08908	102.0896	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08832	102.0866	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08832	102.0866	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08928	102.0768	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08861	102.0739	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08928	102.0656	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08825	102.0402	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1125	102.0334	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.11244	102.0309	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08929	102.0283	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	102.0264	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08928	102.0235	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09296	102.0018	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09296	102.0018	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.9518	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.9481	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.9209	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.9166	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08842	101.9013	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08826	101.8963	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08826	101.8963	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08872	101.8937	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08826	101.8926	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.8922	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08883	101.8903	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.8869	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08869	101.8781	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08826	101.8734	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08789	101.8655	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08789	101.8654	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08923	101.8335	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08789	101.8285	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08967	101.8256	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08897	101.8251	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08897	101.824	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08906	101.8055	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08889	101.8037	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08872	101.7843	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.7678	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08899	101.7645	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08899	101.7645	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08886	101.762	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.7597	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08902	101.7537	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08833	101.7483	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08883	101.7382	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.7332	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.7318	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.7316	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.7128	GEN642067 1-PLATTE
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.7117	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08868	101.7116	GAVINS POINT - HARTINGTON 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08826	101.7092	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.7074	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08895	101.706	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.6884	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.6852	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.6749	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.6747	GEN345671 2-1RUSH G2 18.000
FDNSLock	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09052	101.6732	P13:230-345:NPPD:STEGALL3:KV3A
FDNSLock	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09052	101.6719	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08896	101.6634	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.6584	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08899	101.6478	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08899	101.6478	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.6332	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08895	101.627	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.6234	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08905	101.6215	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.6154	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.6054	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08907	101.6053	AINSWORTH - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08925	101.6051	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.5985	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08905	101.5845	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08905	101.5845	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.5757	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08907	101.5731	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.5694	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.5694	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.5568	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08925	101.5464	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08829	101.5446	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.5394	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.5346	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08907	101.5337	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08925	101.5112	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08907	101.5111	EMMET - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08876	101.508	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.5041	GEN563212 1-G15087_3 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08887	101.5037	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.5027	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.502	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08989	101.4994	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08967	101.4718	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08894	101.4684	BROKEN BOW - LOUP CITY 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09014	101.4681	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.4673	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08896	101.4669	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08868	101.461	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.4533	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08893	101.4379	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.1128	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	101.1089	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.9658	BASE CASE
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08897	100.4974	CRETE - FRIEND 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08899	100.4757	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.4616	GEN657600 1-L1GEN3 9 0.5750
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.4608	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.4558	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.4368	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08888	100.4345	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.4255	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.4254	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.4249	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.4174	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.4174	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.4114	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.4114	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08895	100.4069	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.3902	GEN659162 4-RED WLCK
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.3902	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.3895	GEN659192 6-LYNN
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.3825	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.3793	GEN600050 1-FEP
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.089	100.3571	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.089	100.3571	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.3341	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.3336	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08317	100.3315	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09137	100.3305	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09128	100.3217	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.3199	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.3185	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.3185	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.3123	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08897	100.3052	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.2931	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.2854	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0889	100.2739	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0889	100.2739	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.2658	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09137	100.2633	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0886	100.2611	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0886	100.2611	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.2602	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.2596	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09137	100.2593	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09137	100.2588	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.2578	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.2576	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.2558	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.2478	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09137	100.2388	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09137	100.2388	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.2217	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.2192	GEN681522 3-GENOA 3
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.2119	GEN600017 C-LS POWER CT
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09137	100.2063	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.2059	GEN659353 1-DEERCREK CTG18.000
FDNSLock	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08899	100.2057	COPSTJCPFRSJ
FDNSLock	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08899	100.2057	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08899	100.2057	STMDSJFAFACO
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.1947	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.1918	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.089	100.1829	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.1803	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.1803	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08869	100.1802	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08869	100.1802	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08895	100.1791	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.173	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.1703	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.1436	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.1108	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0889	100.095	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08898	100.0916	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100.0657	GEN652559 1-OAHE
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	100	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08899	100	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08899	100	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08874	100	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08874	100	103RD & ROKEBY - MOORE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.9	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.9	GEN652457 1-GARRISON
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.9	GEN652458 2-GARRISON
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.9	GEN652459 3-GARRISON
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.9	GEN652460 4-GARRISON
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.9	GEN652461 5-GARRISON
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.9	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.9	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08899	99.9	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0887	99.9	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.8	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.8	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.8	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.8	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.8	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.8	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.8	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.7	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.7	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.7	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.7	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.6	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.6	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08811	99.6	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	3	16WP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08903	99.5	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13678	127.5194	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13665	125.702	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.485	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13619	124.485	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14058	124.4053	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13554	123.8233	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1373	123.7522	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14046	123.6487	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13496	123.4176	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13496	123.4176	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.3888	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13608	123.3888	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13554	123.2333	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14047	123.1869	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13496	123.1259	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1352	123.104	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13496	122.9774	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	122.7828	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13869	122.6949	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13582	122.6058	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14034	122.5273	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13542	122.4466	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	122.4054	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	122.3771	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	122.0375	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13718	121.9869	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13569	121.7982	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13536	121.7388	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13873	121.6348	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13483	121.6139	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13483	121.6139	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1316	121.5766	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14062	121.5166	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14062	121.5166	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13678	121.503	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	121.4986	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	121.4986	GEN562715 1-G15_023_5 0.6900
FDNSLock	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13538	121.4888	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13554	121.4581	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1316	121.4581	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1316	121.4361	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13483	121.3779	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13482	121.2982	SPLIT ROCK - WHITE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13482	121.2982	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13483	121.2502	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13537	120.9635	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13537	120.9635	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14128	120.9488	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14128	120.9488	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13441	120.8678	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	120.7614	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13865	120.7133	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14114	120.707	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14114	120.707	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13538	120.4926	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13861	120.48	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13621	120.4517	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14051	120.362	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14051	120.362	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13621	120.3466	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14114	120.3268	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	120.2018	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	120.2018	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13621	120.1159	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13665	120.0873	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1315	120.0189	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	119.8807	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1315	119.8775	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13542	119.8485	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	119.8142	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1343	119.8135	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13524	119.8066	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13524	119.8066	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	119.7937	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	119.7698	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1347	119.7622	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1347	119.7622	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14115	119.7288	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14115	119.7288	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13621	119.6979	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14101	119.4877	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14101	119.4877	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1352	119.433	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	119.272	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1361	119.2529	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	119.2352	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	119.1658	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1361	119.1626	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	119.1183	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14101	119.0975	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13526	119.0579	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13555	119.0481	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	119.0078	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13524	118.9996	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13508	118.9814	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13378	118.9726	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1361	118.9665	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13544	118.9137	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13621	118.8774	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13834	118.8739	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	118.8545	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13573	118.8521	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13573	118.8521	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	118.8497	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	118.8497	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	118.7984	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13526	118.7592	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1356	118.7536	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13653	118.7261	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13594	118.6935	ONEILL - SPENCER 115KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1361	118.5387	HARMONY - VALENTINE 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	118.3454	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	118.333	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	118.3156	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	118.2995	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	118.2885	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	118.2742	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	118.2085	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	118.2042	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	118.1961	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13441	118.1862	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13266	118.1808	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13603	118.1475	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	118.1304	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1356	117.9861	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.9778	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13557	117.9571	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	117.9316	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13544	117.9143	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.8951	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	117.872	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	117.872	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13559	117.848	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	117.8135	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13582	117.808	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.7795	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13498	117.7745	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13498	117.771	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13498	117.771	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13498	117.7585	2809X1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.7494	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13553	117.749	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13498	117.749	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	117.746	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	117.7373	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13582	117.7341	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13582	117.7341	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.7297	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1361	117.7108	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13367	117.7088	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	117.703	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13822	117.6768	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.6723	GEN337041 1-GERALD ANDRUS
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13582	117.6644	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13741	117.6594	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13534	117.6568	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13655	117.6373	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13581	117.6266	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13788	117.6135	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	117.5966	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13788	117.5952	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13788	117.5931	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13573	117.5867	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13573	117.5867	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13514	117.5754	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13566	117.5542	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13543	117.538	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13641	117.4954	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	117.466	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.4638	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13563	117.4317	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13549	117.4307	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	117.4287	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	117.4287	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13723	117.4275	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1353	117.4084	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.4074	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13723	117.4021	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13723	117.4021	STEGALL - STEGALL TRANSFORMER 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13558	117.3305	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.2993	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13454	117.2987	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.2972	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.297	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.297	GEN344896 3-1LAB G3 20.000
FDNSLock	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13559	117.2947	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.2731	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13856	117.2597	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13542	117.2558	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13542	117.2558	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14046	117.2555	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14046	117.2555	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13548	117.2543	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.2456	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.2386	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.232	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13454	117.1938	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13454	117.1876	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13606	117.1871	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13454	117.1634	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14176	117.163	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14176	117.163	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14176	117.163	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14176	117.163	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13454	117.1525	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13789	117.1523	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13454	117.1522	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13454	117.1522	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13535	117.1442	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13567	117.1372	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	117.1265	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.1073	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.0932	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.0794	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.0695	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13454	117.0588	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.0456	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	117.0455	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13899	117.0425	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	117.0344	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13547	117.0203	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	117.0188	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13789	117.0187	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	116.9777	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1354	116.9757	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1343	116.9472	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13535	116.9456	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13789	116.9322	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	116.9282	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13545	116.9177	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13562	116.9147	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	116.9115	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.9021	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.897	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.8815	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13568	116.8736	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	116.8627	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13938	116.8487	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13938	116.8487	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13534	116.8456	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.842	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13559	116.8295	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	116.8013	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	116.8013	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13569	116.7884	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13569	116.7884	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	116.7867	FORMAN - OAKES 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.7737	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13564	116.7582	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1357	116.7578	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.7527	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1357	116.7484	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13597	116.7467	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13255	116.7409	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13567	116.7348	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13573	116.6837	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1354	116.6727	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13548	116.6627	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13583	116.6581	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13583	116.6581	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.6553	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.6552	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13523	116.6492	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13552	116.6322	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13559	116.6257	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13536	116.6253	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	116.5989	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13569	116.5936	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.5875	GEN303007 1-1BC2 U2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.5819	GEN303006 1-1BC2 U1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13704	116.5783	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13704	116.5783	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13563	116.5772	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13559	116.5758	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13559	116.5758	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13597	116.5657	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13573	116.5626	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13573	116.5626	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	116.5512	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	116.5512	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13597	116.5456	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13583	116.5442	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13583	116.5442	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13547	116.5305	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13493	116.5256	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13487	116.5123	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13487	116.5101	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13487	116.5101	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13569	116.5075	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13487	116.4983	2809X1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	116.4934	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13487	116.491	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.4899	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.4863	GEN303008 1-1BC2 U3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13643	116.4756	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13564	116.4477	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	116.4468	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	116.4468	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	116.4396	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	116.3993	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	116.3973	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1373	116.396	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13552	116.3859	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.3838	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.3824	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.3771	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	116.3763	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.3663	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	116.3634	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13648	116.3539	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	116.3538	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	116.3456	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13939	116.3175	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.3036	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.2987	GEN334070 1-LEWIS CREEK 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13939	116.2831	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13939	116.2831	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13566	116.2828	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13636	116.2602	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13636	116.2602	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13636	116.2597	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	116.2573	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13636	116.2524	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13636	116.2524	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1354	116.2408	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13554	116.222	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1354	116.2164	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13593	116.2157	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.2133	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13537	116.207	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13546	116.1794	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	116.1656	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13536	116.1606	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14034	116.1484	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14034	116.1484	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.134	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	116.1325	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.1303	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13572	116.1231	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1346	116.118	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13523	116.0931	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13572	116.0769	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13572	116.0769	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1353	116.0764	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1353	116.0764	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.076	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1359	116.0757	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13517	116.0746	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.0622	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	116.0367	AS KING 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14163	116.0365	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14163	116.0365	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14163	116.0365	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14163	116.0365	FT THOMPSON - HURON 230KV CKT 2
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13555	116.0358	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1713	115.995	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17121	115.9941	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.9938	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.9919	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.9919	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.9919	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.9829	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13593	115.9749	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13774	115.9683	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13551	115.9643	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.9625	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.9568	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.9529	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.9432	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13442	115.9394	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1378	115.9379	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1378	115.9048	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1378	115.903	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13714	115.8669	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13714	115.8668	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13714	115.8623	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.8286	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.8263	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.8061	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.8025	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.7923	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13774	115.7866	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.7831	GEN336801 1-BAXTER WILSON UNIT #1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.7712	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13556	115.7018	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13556	115.7018	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13774	115.6993	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1386	115.6833	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.6743	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	115.6482	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.6319	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14266	115.6225	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13585	115.5959	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13527	115.5685	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.566	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13905	115.5451	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13905	115.5451	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.5116	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13795	115.4162	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13795	115.4162	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13524	115.4017	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13559	115.3942	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13559	115.3942	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1355	115.3762	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13586	115.2856	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13583	115.2703	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	115.2572	BASE CASE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13579	115.2275	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13683	115.1803	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13683	115.1803	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13683	115.1803	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13683	115.1803	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.1707	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13687	115.1397	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13687	115.1397	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13687	115.1397	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13687	115.1397	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13637	115.0998	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13562	115.0909	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13925	115.0892	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13925	115.0864	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13925	115.0864	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	115.0804	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.0787	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13572	115.0693	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13572	115.0693	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	115.0462	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14257	115.0246	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.02	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	115.012	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13573	115.0009	P12:115:TSGT:GRANTNB7-OGALALA7_2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	114.9927	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13578	114.984	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.9609	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13554	114.9602	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13554	114.9341	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13554	114.9323	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13551	114.9248	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13449	114.9144	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.9101	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13555	114.9054	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13576	114.9045	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13565	114.8852	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1356	114.8843	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1356	114.8843	P13:115-230:NPPD:WAYSIDE4:T1
FDNSLock	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.8762	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1356	114.8686	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13575	114.8607	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13575	114.8607	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13554	114.8394	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13578	114.8205	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.7294	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13722	114.7188	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13551	114.679	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13551	114.679	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13637	114.6761	GORDON - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13479	114.6601	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.6331	GENOA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.611	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13541	114.6091	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13541	114.6091	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13575	114.592	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13575	114.592	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13542	114.5809	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.5745	AS KING 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13558	114.5742	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.5361	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.5161	GEN660003 3-HURON WEST PARK
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.5069	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13543	114.487	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13543	114.487	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13516	114.4809	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13516	114.4809	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.4804	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13518	114.478	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.4645	BIG STONE - G736 230.00 230/34.5KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.4645	G736 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.4585	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.4489	BIG STONE - J442 230.00 230/34.5KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.4489	J442 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.4422	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13567	114.371	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13909	114.3692	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	114.3654	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	114.3654	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.313	GEN600045 4-ANSON
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.2868	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13709	114.2557	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.2406	GEN300007 1-NEW MADRID UNIT 2
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13518	114.2372	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.2364	MONTICELLO 345/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.2344	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.2303	488489510526345.00 - J510 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.2303	J510 345.00 345/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	114.2241	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.2121	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.2004	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13544	114.1603	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13544	114.1532	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13544	114.1532	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.1484	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.1346	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.1169	CLAY BOSWELL 230/22.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.1142	BASE CASE
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.1117	488489510526345.00 - J526 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.1117	J526 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.1077	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.1001	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13567	114.0773	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.0684	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.0648	GEN509416 1-TURK GENERATION
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13563	114.0631	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.0528	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.0524	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.0524	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.0524	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13538	114.0518	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.0205	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.0082	GEN509406 1-WELSH #3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	114.008	GEN509404 1-WELSH #1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.007	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	114.006	GEN659274 1-GROTON
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.989	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.987	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.9853	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.9593	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.9545	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	113.9417	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13562	113.933	P12:115:NPPD:1142:JEFFREY7:COZAD 7:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.136	113.917	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13672	113.9162	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13672	113.9162	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13672	113.9162	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13672	113.9162	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13564	113.9033	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	113.9009	GEN509403 1-PIRKEY GENERATION
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1356	113.8848	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1356	113.8848	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13676	113.877	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13676	113.877	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13676	113.877	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13676	113.877	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13563	113.8284	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13563	113.8284	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13564	113.8251	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	113.812	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13571	113.812	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13852	113.803	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13572	113.7963	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13572	113.7963	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13556	113.7946	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13556	113.7946	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13556	113.7929	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13556	113.7929	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.7852	GEN659270 1-WEST SW
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14092	113.7773	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.7764	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13541	113.7663	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13541	113.7635	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	113.76	P12:115:NPPD:1131B:REDWILO7:STOCKVL7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.7521	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13522	113.7474	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13522	113.7474	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13541	113.7454	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	113.7285	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13543	113.7269	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13564	113.7168	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	113.7067	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.702	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.7019	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1356	113.6995	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1371	113.6802	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13841	113.6744	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13541	113.6566	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13852	113.6455	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13852	113.6356	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13852	113.6356	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13529	113.6342	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	113.6289	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	113.6225	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13852	113.6132	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13852	113.6132	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13552	113.6097	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13552	113.6088	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.6064	GEN652559 1-OAHE
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13552	113.6042	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13563	113.5996	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13563	113.5996	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	113.5771	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13466	113.5695	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13852	113.5488	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13552	113.5265	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13552	113.5249	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13552	113.5234	SPERVIL7-G16-049-TAP-345KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1353	113.5084	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.5012	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13539	113.4982	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13539	113.4982	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13528	113.4826	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13528	113.4826	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13569	113.4333	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13569	113.4333	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13569	113.4332	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.3931	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.3625	GEN652545 7-BIG BEND
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13546	113.3371	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.3326	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.3058	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.3011	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.2845	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.277	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.2661	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.2614	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.2613	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.261	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13703	113.2547	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.2525	GEN652460 4-GARRISON
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.2525	GEN652461 5-GARRISON
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	113.2006	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.195	GEN652459 3-GARRISON
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.1949	GEN652457 1-GARRISON
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.1949	GEN652458 2-GARRISON
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.1821	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14309	113.1659	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14309	113.1659	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	113.1543	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	113.1365	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	113.1308	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13693	113.1137	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	113.0865	GEN600045 4-ANSON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14262	113.0397	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14262	113.0397	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14061	113.0111	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	113.0005	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	112.9933	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	112.9933	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.9673	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13572	112.8068	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13572	112.8068	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.7755	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13685	112.7572	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13685	112.7572	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNSLock	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13721	112.7383	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.7381	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12686	112.714	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.7078	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.6715	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.6613	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13837	112.6509	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.6164	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.5886	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.5886	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.5706	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.5676	GEN615010 1-STANTON4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13685	112.5574	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14378	112.51	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14378	112.51	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.5091	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.5027	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.4959	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13685	112.4863	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13837	112.482	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13837	112.478	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13837	112.4779	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13826	112.4743	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13551	112.4693	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13558	112.4493	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13558	112.4493	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13837	112.444	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13837	112.444	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.4263	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.4064	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.406	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.387	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13837	112.3772	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13517	112.3613	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14362	112.3394	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14362	112.3394	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.3312	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.3093	GEN652559 1-OAHE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13856	112.2866	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13325	112.2344	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.219	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.2144	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1357	112.1997	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.1885	GEN652557 4-OAHE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.1885	GEN652558 6-OAHE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.1884	GEN652556 2-OAHE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13532	112.1567	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.1546	GEN600006 1-AS KING
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13532	112.1466	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.1454	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13532	112.1411	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13325	112.1245	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.1085	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13325	112.1021	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.0989	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.0805	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1356	112.0736	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1356	112.0736	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.0699	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.0653	GEN652461 5-GARRISON
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.0634	GEN652460 4-GARRISON
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.0605	GEN659141 1-K10215A
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.0591	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	112.0487	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13726	112.0446	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13726	112.0446	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.0414	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.041	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14362	112.0168	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.015	GEN652457 1-GARRISON
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.015	GEN652458 2-GARRISON
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	112.015	GEN652459 3-GARRISON
FDNSLock	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13721	112.0112	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1374	111.9704	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	111.928	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	111.9215	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	111.9127	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	111.8974	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13558	111.8923	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13558	111.8923	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	111.8363	GEN587633 1-J510-GEN1 18.000

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	111.7902	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1374	111.7543	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1374	111.7294	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1374	111.7294	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	111.7015	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12675	111.6729	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	111.6309	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	111.6123	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	111.6008	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	111.433	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13538	111.4178	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	111.3958	GEN615010 1-STANTON4
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13557	111.3954	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13557	111.3954	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13549	111.333	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13557	111.3042	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	111.297	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	111.2961	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	111.2961	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	111.275	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	111.2231	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	111.2037	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	111.1967	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	111.1831	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	111.0923	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.136	111.0558	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13719	111.0495	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	111.0287	GEN652556 2-OAHE
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	111.0287	GEN652557 4-OAHE
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	111.0287	GEN652558 6-OAHE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	110.9912	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	110.9775	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	110.9769	GEN661015 1-COYOTE
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	110.9667	GEN659141 1-K10215A
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	110.9433	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	110.9186	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13702	110.8499	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	110.8485	GEN600006 1-AS KING
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13721	110.7802	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	110.7376	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13772	110.6906	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13573	110.6829	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13573	110.6829	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	110.674	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13737	110.667	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	110.6585	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13559	110.637	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13559	110.637	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14027	110.5681	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	110.5579	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	110.5376	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	110.4939	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13743	110.4661	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	110.4044	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	110.3767	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	110.3613	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13743	110.3499	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13677	110.3211	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13677	110.317	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13677	110.317	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13677	110.3087	2809X1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13677	110.3026	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13519	110.275	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13743	110.2632	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13552	110.2352	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13519	110.2266	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13519	110.2188	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13744	110.2056	AS KING - EAU CLAIRE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	110.1868	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13259	110.0888	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1383	110.0748	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	110.0469	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13741	110.0362	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13746	110.0344	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	110.021	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13743	109.9861	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13795	109.9741	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13781	109.9467	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13781	109.9467	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13781	109.9416	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13536	109.8954	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13746	109.8873	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	109.8599	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	109.8303	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	109.8292	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13721	109.8186	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13781	109.8169	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13667	109.8061	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13667	109.8061	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13765	109.7593	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13765	109.7593	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	109.7539	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13706	109.7488	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	109.7322	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	109.7221	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	109.673	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	109.6531	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	109.5702	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13738	109.5563	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13738	109.5563	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13437	109.5446	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	109.5267	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14389	109.5181	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14389	109.5181	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14389	109.5181	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14389	109.5181	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13795	109.5109	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13246	109.4756	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13928	109.4696	HANLON - SIOUX FALLS 230KV CKT 1
FDNSLock	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13743	109.4683	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13739	109.4582	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13687	109.4333	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13728	109.4318	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	109.384	GEN661015 1-COYOTE
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	109.3546	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14257	109.322	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14257	109.322	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	109.2794	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13784	109.2509	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	109.2159	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13822	109.2059	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	109.1292	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	109.1183	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13747	109.1161	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13747	109.1139	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13978	109.1086	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13749	109.0948	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13978	109.0927	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13743	109.0913	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13978	109.091	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13724	109.0443	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13724	109.0443	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	109.0321	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	109.0031	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13795	108.9738	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13908	108.9629	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13908	108.958	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13908	108.9576	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13737	108.9542	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.18661	108.9481	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.18661	108.9346	2810X2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.9276	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.9241	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.9241	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.8593	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.8589	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.8457	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13634	108.8317	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.8305	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13746	108.8121	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.8078	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13634	108.7849	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13634	108.7848	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13634	108.7672	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13634	108.7658	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13634	108.7658	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13634	108.7638	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNSLock	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13743	108.7591	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.7589	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13795	108.7504	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13732	108.7201	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13634	108.6938	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.6732	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.6403	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13709	108.639	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1376	108.6104	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13687	108.5964	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13687	108.5964	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13718	108.5919	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13687	108.5916	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12117	108.5736	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.18661	108.5625	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.5494	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.5268	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.525	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.5234	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.5126	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.5025	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.4937	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.4802	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.4802	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13781	108.4636	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13733	108.4339	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13841	108.4327	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13841	108.4327	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	108.4317	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1371	108.3963	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.3789	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13781	108.3358	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13781	108.3195	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13749	108.3195	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13748	108.3007	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.2871	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1356	108.2833	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1356	108.2833	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13718	108.2804	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.2703	GEN303007 1-1BC2 U2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13741	108.27	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13758	108.266	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.2657	GEN303006 1-1BC2 U1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	108.2518	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13757	108.2443	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13757	108.2443	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13752	108.2357	COLUMEAST - SHELL CREEK 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.199	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17249	108.1989	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.1986	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.17239	108.1965	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.1891	GEN303008 1-1BC2 U3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.1857	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13806	108.1742	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13806	108.1737	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13806	108.1737	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13806	108.169	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13806	108.169	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13689	108.1666	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13763	108.1644	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13687	108.1569	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13753	108.1468	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13751	108.14	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13753	108.1229	PALXFRASBTHI
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.1109	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13728	108.1085	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13907	108.1077	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.1028	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13753	108.1013	7PALM TAP 345.00 - SUB T 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13762	108.0767	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13762	108.0767	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1376	108.0763	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13907	108.0637	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13907	108.0637	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.137	108.0624	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13762	108.0397	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13739	108.0273	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13907	108.0267	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13907	108.0267	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13762	108.0263	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13762	108.0263	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13769	108.0192	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13769	108.0192	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.0153	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1372	108.01	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	108.0091	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13768	108.0002	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13744	107.9901	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13702	107.9818	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.977	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13702	107.9743	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	107.9739	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13702	107.9738	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13745	107.9681	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13772	107.9624	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13753	107.9495	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13753	107.9425	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13769	107.9406	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13769	107.9406	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.9401	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13772	107.9326	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.9316	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13753	107.9303	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13753	107.9285	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13751	107.924	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	107.9161	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13789	107.916	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13742	107.9153	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1375	107.9152	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13751	107.912	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13857	107.9102	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13756	107.9091	GENOA 161 - SENECA 161 161KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13751	107.9057	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.9052	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14155	107.9012	OAHE - PHILIP TAP 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.8991	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13753	107.897	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13757	107.8906	FRANKS - HUBEN 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13787	107.89	EAGLE - PHILIP 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13757	107.8891	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1376	107.8887	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	107.8872	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13753	107.8817	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.8787	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13756	107.8781	DIXONCO 230.00 - HOSKINS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13644	107.8747	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1414	107.8702	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1414	107.8699	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1414	107.8699	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.8584	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.8584	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13747	107.8524	ARNOLD - HAZLETON 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.8431	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.8407	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.8401	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13757	107.8377	NORTH LA CROSSE (10008630_001) 345/161/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.8336	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.8336	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1374	107.8331	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13804	107.8324	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13787	107.8286	EAGLE - MARTIN 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.8283	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13755	107.8164	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13755	107.8164	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.8134	GEN334432 1-SABINE UNIT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.8129	GEN334431 1-SABINE UNIT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1864	107.8119	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.8103	GEN336242 1-1NMIL ST1 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1374	107.8052	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.8049	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13772	107.8029	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.8028	GEN334030 1-FRONTIER UNIT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.8024	GEN334031 1-FRONTIER UNIT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.8006	GEN345756 H-1SIOUX 1 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.797	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1864	107.7934	2810X2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14185	107.7901	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14185	107.7901	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.7783	GEN336446 1-MICHOUD UNIT #2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13708	107.7002	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13708	107.7002	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNSLock	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13708	107.6867	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1864	107.5263	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	107.3916	GEN659125 1-COVEY
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12108	107.3789	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	107.2927	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	107.2927	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	107.1746	BASE CASE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13766	106.9876	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13771	106.9762	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13762	106.9057	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13199	106.8773	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13775	106.8544	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13758	106.8258	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13758	106.8258	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13884	106.8024	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13884	106.8024	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13884	106.8024	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13884	106.8024	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13762	106.7732	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13762	106.7732	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13741	106.7711	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13766	106.7658	AXTELL - PAULINE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13889	106.7644	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13889	106.7644	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13889	106.7644	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13889	106.7644	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.7453	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13755	106.7291	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13912	106.7133	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13744	106.7064	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNSLock	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1377	106.7058	BONESTEEL - GREGORY 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13755	106.655	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1377	106.6465	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.6323	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13758	106.6301	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13729	106.6276	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	106.6147	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.5807	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13755	106.5742	AINSWORTH - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.552	GEN652548 5-FT RANDAL
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.552	GEN652549 7-FT RANDAL
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.5315	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.5247	GEN652547 3-FT RANDAL
FDNSLock	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	106.5147	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13762	106.5139	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13762	106.5139	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13757	106.4848	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13757	106.4848	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNSLock	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1377	106.4823	WINNER - WITTEN 115KV CKT 1
FDNSLock	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13745	106.4776	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNSLock	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1377	106.4761	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13729	106.4682	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.4518	GEN652410 3-FT PECK
FDNSLock	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1377	106.4456	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13729	106.4445	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13729	106.4445	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.4413	GEN659290 1-EDGECOL
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.4354	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.4312	GEN660003 3-HURON WEST PARK
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1377	106.4157	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13753	106.4082	LOUP CITY - NORTH LOUP 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.4058	GEN600012 2-BLACK DOG GEN 2
FDNSLock	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	106.3972	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.3815	GEN652414 4-FT PECK
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.3815	GEN652415 5-FT PECK
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.3647	GEN600020 2-ANGUS ANSON1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.3614	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.3494	GEN600021 3-ANGUS ANSON2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13673	106.3449	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13758	106.3415	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.3393	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.3193	EMERY 161/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.3171	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.3053	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.301	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.2894	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13753	106.2804	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	106.2742	GEN659125 1-COVEY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.2404	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.2372	GEN600050 1-FEP
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.2042	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1976	GEN600046 1-MECST
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1888	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1888	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1839	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1808	GEN659162 4-RED WLCK
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1808	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1796	GEN659192 6-LYNN
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1713	GEN600047 1-MECCT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1646	COYOTE 345/24.0KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13185	106.1605	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1532	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1532	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1483	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1483	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1211	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1211	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1159	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1089	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1083	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1083	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.1066	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.0879	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.0806	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.0794	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.0786	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.0739	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	106.0671	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	106.0671	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.0586	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.0464	GEN600017 C-LS POWER CT
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.0226	GEN600045 4-ANSON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.0176	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.0176	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.0058	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.0053	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	106.0051	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.9991	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.9985	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	105.982	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.9739	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.9496	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.945	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13757	105.9286	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13757	105.9286	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.9179	GEN659274 1-GROTON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.9175	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.8763	GEN681522 3-GENOA 3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.8627	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.8601	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.8601	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.8556	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.834	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13762	105.8314	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13762	105.8314	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.8294	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.7862	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13696	105.7747	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.7687	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.7542	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.7494	GEN659270 1-WEST SW
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.6926	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13756	105.6831	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13756	105.6831	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14044	105.6797	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13756	105.6578	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	105.6291	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14032	105.6015	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14044	105.5456	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14044	105.5389	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14044	105.5388	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14044	105.5051	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14044	105.5051	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.4764	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.474	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.14044	105.4569	GLENHAM - WHITLOK 230KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	105.4474	GEN615001 1-COAL CREEK
FDNSLock	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	105.3327	GEN615002 2-COAL CREEK

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.3203	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.2501	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.2492	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.2344	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.2315	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.2283	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.2272	GEN652460 4-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.2271	GEN652461 5-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.1869	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.1867	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.18661	105.1832	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.18661	105.1832	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.1744	GEN652458 2-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.1744	GEN652459 3-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.1743	GEN652457 1-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.1721	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.1515	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	3	20SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13574	105.1131	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	105.1034	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	104.7699	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	104.7686	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	104.696	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	104.6842	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	104.6566	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13764	104.6424	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13764	104.6424	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1864	104.607	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1864	104.607	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.12864	104.5429	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	104.5023	GEN615010 1-STANTON4
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	104.4784	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	104.4167	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	104.3971	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	104.3971	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13721	104.367	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13721	104.3599	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13721	104.3433	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	104.3241	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	104.293	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	104.2721	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	104.2678	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	104.2502	GEN652556 2-OAHE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	104.2502	GEN652557 4-OAHE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	104.2502	GEN652558 6-OAHE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	104.1455	GEN659141 1-K10215A
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13744	104.1192	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13561	104.051	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	103.9688	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	103.9643	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13762	103.8815	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	103.7219	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	103.7069	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	103.6942	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	103.6869	GEN600006 1-AS KING
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13743	103.2475	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	103.1269	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1377	102.4632	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1377	102.4632	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	102.4225	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	102.3877	GEN661015 1-COYOTE
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	101.9986	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1346	101.9764	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	101.8582	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	101.6207	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	101.2604	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1894	100.6817	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1894	100.6662	2810X2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1894	100.5343	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20WP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1393	100.2745	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.1227	100.2365	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	100.1761	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	99.9	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	99.8	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	99.8	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	99.8	GEN659125 1-COVEY
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	99.6	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.13759	99.5	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13678	127.5177	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13665	125.6567	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.4831	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13619	124.4831	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14058	124.4056	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13554	123.8243	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1373	123.7522	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14046	123.648	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13496	123.4176	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13496	123.4176	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.357	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13608	123.357	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13554	123.2345	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14047	123.1478	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13496	123.1262	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1352	123.1046	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13496	122.9772	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	122.7827	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13869	122.6947	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13582	122.6039	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14034	122.4811	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13542	122.4115	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	122.4053	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	122.377	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	122.0375	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13718	121.9706	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13536	121.7387	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13569	121.7344	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13873	121.6345	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1316	121.5764	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13483	121.5622	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13483	121.5622	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14062	121.5166	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14062	121.5166	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13678	121.503	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	121.4987	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	121.4987	GEN562715 1-G15_023_5 0.6900
FDNSLock	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13538	121.489	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13554	121.4588	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1316	121.4577	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1316	121.436	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13483	121.3225	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13482	121.2981	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13482	121.2981	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13483	121.1932	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13537	120.9636	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13537	120.9636	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14128	120.9487	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14128	120.9487	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13441	120.8675	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	120.7614	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13865	120.7122	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14114	120.7069	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14114	120.7069	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13538	120.4929	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13621	120.4519	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13861	120.4137	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13621	120.3463	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14114	120.3268	FT RANDAL - LAKE PLATT 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14051	120.2911	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14051	120.2911	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	120.2037	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	120.2037	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13621	120.1158	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13665	120.0236	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1315	119.9373	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	119.8807	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	119.8145	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13542	119.7965	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	119.7937	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1343	119.7931	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1315	119.7917	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	119.7698	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1347	119.7512	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1347	119.7512	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13524	119.7138	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13524	119.7138	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13621	119.6984	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14115	119.6698	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14115	119.6698	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1352	119.4331	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14101	119.4289	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14101	119.4289	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	119.272	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	119.2353	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1361	119.2187	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	119.1657	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1361	119.1258	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	119.1181	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13555	119.0479	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14101	119.0332	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13526	119.0187	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13378	118.9723	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13524	118.9544	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13508	118.9365	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	118.9314	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1361	118.93	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13544	118.9142	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13621	118.8773	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13834	118.8741	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	118.8541	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13573	118.8527	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13573	118.8527	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	118.8514	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	118.8514	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	118.7984	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13526	118.7595	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1356	118.7532	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13653	118.7267	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13594	118.693	ONEILL - SPENCER 115KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1361	118.4952	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	118.3333	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	118.2996	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	118.2624	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	118.2495	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	118.2084	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	118.2074	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	118.2039	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	118.1995	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	118.1961	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13441	118.1866	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13266	118.1807	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13603	118.1474	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	118.1303	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1356	117.9862	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.9776	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13557	117.9572	GRIMES - LEHIGH 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	117.9318	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13544	117.9145	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.8953	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	117.8721	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	117.8721	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13559	117.8481	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.7796	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13498	117.7748	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13498	117.7713	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13498	117.7713	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13498	117.7588	2809X1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.7495	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13498	117.7494	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13553	117.7487	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	117.7463	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	117.7315	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13582	117.7304	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.7288	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.6723	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	117.6664	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13582	117.6596	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13582	117.6596	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13741	117.659	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1361	117.652	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13655	117.6374	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13367	117.6257	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	117.6193	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13788	117.6134	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13788	117.595	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13788	117.5929	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13822	117.5908	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13573	117.5871	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13573	117.5871	BLAIR - GRANITE FALLS 230KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13582	117.582	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13534	117.5791	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13566	117.553	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13581	117.5505	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13514	117.516	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	117.5084	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	117.4655	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13543	117.4642	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.4641	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13563	117.4313	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13549	117.4302	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13723	117.4266	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1353	117.4083	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.4073	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13641	117.4061	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13723	117.4016	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13723	117.4016	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	117.3519	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	117.3519	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13558	117.3306	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.2995	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13454	117.2982	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.2974	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.2973	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.2972	GEN344896 3-1LAB G3 20.000
FDNSLock	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13559	117.2948	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.2729	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13856	117.2594	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13542	117.2559	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13542	117.2559	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14046	117.2554	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14046	117.2554	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.2436	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.2386	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.232	GEN345670 1-1RUSH G1 18.000

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13454	117.1933	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13606	117.1873	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13454	117.1871	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13548	117.1752	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14176	117.1632	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14176	117.1632	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14176	117.1632	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14176	117.1632	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13454	117.1627	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13454	117.1532	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13454	117.1528	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13454	117.1528	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13789	117.1525	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13535	117.1447	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13567	117.1373	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.1074	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.0933	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.0795	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.0695	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13454	117.0592	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.0457	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	117.0456	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13899	117.043	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	117.0429	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13789	117.0187	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1354	116.9758	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13547	116.955	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	116.951	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13535	116.9456	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	116.9358	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13789	116.9325	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	116.9282	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13562	116.9152	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.9022	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.8967	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	116.8932	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1343	116.8913	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.8816	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13568	116.8737	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13938	116.8488	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13938	116.8488	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.8421	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13545	116.8271	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	116.8219	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	116.8018	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	116.8018	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13569	116.7883	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13569	116.7883	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	116.7868	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	116.7763	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.7738	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13534	116.7668	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13559	116.7605	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1357	116.7581	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.7527	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1357	116.7487	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13597	116.7462	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13567	116.7349	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13564	116.6891	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13573	116.6842	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13255	116.6672	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13583	116.658	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13583	116.658	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.6554	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.6553	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13552	116.6321	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13536	116.6255	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13569	116.5936	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1354	116.59	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.5876	GEN303007 1-1BC2 U2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.582	GEN303006 1-1BC2 U1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13523	116.5815	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13548	116.5797	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13704	116.5787	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13704	116.5787	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13563	116.5769	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13597	116.5653	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13573	116.5625	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13573	116.5625	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13559	116.5535	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	116.5513	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	116.5513	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13597	116.5452	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13583	116.5442	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13583	116.5442	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13493	116.525	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	116.5137	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13569	116.5075	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13559	116.5017	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13559	116.5017	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.4901	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.4864	GEN303008 1-1BC2 U3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13487	116.4577	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13487	116.4536	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13487	116.4536	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13547	116.4525	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13564	116.448	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13487	116.4416	2809X1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13487	116.4341	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	116.4079	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	116.3968	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13552	116.3858	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.3837	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13643	116.3835	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.3822	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.3766	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	116.3758	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	116.3737	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	116.3737	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.3664	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	116.3634	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13648	116.3544	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	116.354	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	116.3456	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13939	116.3177	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	116.3129	GEN501813 1-RODEMACHER UNIT 3
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1373	116.3043	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.3036	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.2987	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13939	116.2835	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13939	116.2835	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13566	116.2828	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	116.2685	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13636	116.2605	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13636	116.2605	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13636	116.26	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	116.2579	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13636	116.2528	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13636	116.2528	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1354	116.2406	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1354	116.2162	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.2134	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13536	116.1612	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13554	116.1374	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.134	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.1302	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13537	116.1245	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13572	116.1231	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1346	116.1183	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13593	116.116	RASMUSN - UTICA JCT 230KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13546	116.0869	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	116.0787	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13572	116.0771	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13572	116.0771	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1359	116.0765	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.0759	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.0619	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14034	116.0523	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14034	116.0523	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	116.0455	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	116.0367	AS KING 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13523	116.0202	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13517	116.0008	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1713	115.9949	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.17121	115.994	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1353	115.9826	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1353	115.9826	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14163	115.9463	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14163	115.9463	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14163	115.9463	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14163	115.9463	FT THOMPSON - HURON 230KV CKT 2
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13555	115.9413	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.9094	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.9075	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.9075	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.9075	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.8956	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13774	115.8929	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.8758	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13593	115.8747	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.87	GEN345670 1-1RUSH G1 18.000
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13551	115.87	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1378	115.8667	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.866	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.8571	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13442	115.8527	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1378	115.8395	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1378	115.8376	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13714	115.7988	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13714	115.7987	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13714	115.7942	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.7407	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.7306	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.7183	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13774	115.7079	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.7048	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.7042	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.6957	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.6837	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	115.6482	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14266	115.6222	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13774	115.6155	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13556	115.6113	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13556	115.6113	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1386	115.6077	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.5816	GEN563222 1-G15088_3 0.6900
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1355	115.5738	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13527	115.5683	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.5434	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13585	115.5103	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.4805	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13905	115.4684	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13905	115.4684	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13527	115.4454	HIGHLND 3 345.00 - RAUN 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	115.4411	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	115.4411	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13795	115.4163	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13795	115.4163	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.4054	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13524	115.3045	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13559	115.2997	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13559	115.2997	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13586	115.2858	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1355	115.2774	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13583	115.2717	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	115.2572	BASE CASE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13579	115.2268	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13683	115.1803	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13683	115.1803	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13683	115.1803	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13683	115.1803	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13687	115.1398	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13687	115.1398	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13687	115.1398	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13687	115.1398	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	115.0941	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	115.0805	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13572	115.068	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13572	115.068	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	115.0463	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14257	115.0246	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13637	115.0161	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13562	115.0065	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13573	115.0003	P12:115:TSGT:GRANTNB7-OGALALA7_2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	114.9914	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13925	114.9823	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.9791	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13925	114.978	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13925	114.978	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13554	114.9605	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.96	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.9403	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13554	114.9344	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.9329	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13554	114.9321	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13551	114.9254	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.91	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13555	114.9056	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13576	114.9051	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13578	114.8993	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13565	114.8853	SPERVIL7-G16-049-TAP-345KV CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.8762	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13575	114.8611	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13575	114.8611	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13554	114.8391	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1356	114.7965	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1356	114.7965	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1356	114.78	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13449	114.7785	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13578	114.7302	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13722	114.7181	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13551	114.6792	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13551	114.6792	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13479	114.6602	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13541	114.6101	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13541	114.6101	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13575	114.5919	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13575	114.5919	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13637	114.5872	GORDON - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13542	114.5822	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13558	114.5741	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.5461	GENOA 161 161/24.0KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.5162	GEN660003 3-HURON WEST PARK
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.4911	AS KING 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.4804	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.4504	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.4423	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.4247	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13518	114.4074	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13516	114.3932	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13516	114.3932	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.3823	BIG STONE - G736 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.3823	G736 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.3731	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13567	114.3709	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13909	114.3694	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	114.3652	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	114.3652	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.313	GEN600045 4-ANSON
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.287	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13709	114.2557	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.2407	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.2344	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.2003	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13518	114.1593	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.1529	MONTICELLO 345/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.1465	488489510526345.00 - J510 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.1465	J510 345.00 345/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.1285	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.1079	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.1001	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	114.0706	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.0527	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.0525	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.0525	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.0525	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13544	114.0473	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13544	114.0397	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13544	114.0397	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.0332	CLAY BOSWELL 230/22.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.0267	488489510526345.00 - J526 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.0267	J526 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.021	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	114.0145	BASE CASE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.0073	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	114.0061	GEN659274 1-GROTON
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.989	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.987	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.9855	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.9792	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.9593	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	113.958	GEN509416 1-TURK GENERATION
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	113.9554	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.9545	GEN660016 1-B_H WIND 0.7000
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13563	113.9468	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	113.9416	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13567	113.9385	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13538	113.9341	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.136	113.9171	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	113.9027	GEN509406 1-WELSH #3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	113.9026	GEN509404 1-WELSH #1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13672	113.834	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13672	113.834	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13672	113.834	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13672	113.834	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	113.8119	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13571	113.8119	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13852	113.8029	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13572	113.7966	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13572	113.7966	HOLCOMB - SETAB 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	113.794	GEN509403 1-PIRKEY GENERATION
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13676	113.7934	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13676	113.7934	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13676	113.7934	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13676	113.7934	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.7855	GEN659270 1-WEST SW
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14092	113.7772	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.7763	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1356	113.7676	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1356	113.7676	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.7527	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	113.7285	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13563	113.72	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13563	113.72	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13564	113.7098	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.7023	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.7021	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13556	113.6847	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13556	113.6847	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13556	113.683	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13556	113.683	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13841	113.6744	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13541	113.656	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13541	113.6538	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	113.6529	P12:115:NPPD:1131B:REDWILO7:STOCKVL7:BTB
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.6524	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13852	113.6455	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13852	113.6356	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13852	113.6356	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13541	113.6355	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13522	113.6348	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13522	113.6348	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13529	113.6338	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13543	113.614	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13852	113.6132	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13852	113.6132	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.6069	GEN652559 1-OAHE
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13564	113.6001	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	113.5943	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13852	113.5488	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1371	113.5486	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13541	113.542	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	113.5139	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	113.5086	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.5014	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13552	113.4965	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13552	113.4958	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13563	113.4908	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13563	113.4908	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13552	113.4907	SPERVIL7-POSTROCK7-345kV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	113.4603	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13466	113.4592	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13569	113.4336	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13569	113.4336	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13569	113.4333	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13552	113.4114	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13552	113.4106	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13552	113.4077	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.394	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13539	113.389	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13539	113.389	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1353	113.3833	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13528	113.3656	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13528	113.3656	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.363	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.3323	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.3058	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.3011	GEN 11133 1-J442-GEN1 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.2845	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.2775	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.2661	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.2619	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.2616	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.2612	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13703	113.2549	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.2525	GEN652460 4-GARRISON
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.2525	GEN652461 5-GARRISON
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13546	113.2299	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.195	GEN652459 3-GARRISON
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.1949	GEN652457 1-GARRISON
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.1949	GEN652458 2-GARRISON
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.1829	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14309	113.1658	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14309	113.1658	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	113.1543	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	113.0948	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14262	113.0336	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14262	113.0336	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	113.0302	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	113.0244	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14061	113.0105	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13693	112.999	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	112.9945	GEN600045 4-ANSON
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	112.9933	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	112.9933	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	112.894	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	112.8607	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13572	112.8068	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13572	112.8068	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.7755	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13685	112.7521	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13685	112.7521	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNSLock	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13721	112.7383	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.6613	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	112.6458	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12686	112.6365	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	112.6341	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.6166	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	112.6079	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.5886	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.5886	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	112.5715	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.5706	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.5677	GEN615010 1-STANTON4
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13685	112.5506	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13837	112.5475	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	112.5319	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14378	112.5099	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14378	112.5099	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.5091	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.5027	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.496	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13685	112.4777	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13551	112.4691	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	112.467	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	112.4573	GEN659270 1-WEST SW
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.387	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13837	112.38	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13837	112.3762	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13837	112.3761	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13826	112.3723	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13558	112.3489	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13558	112.3489	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13837	112.3401	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13837	112.3401	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14362	112.3395	FT THOMPSON - LAKE PLATT 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14362	112.3395	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.3311	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	112.3259	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	112.3036	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	112.3032	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13837	112.2753	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13856	112.2728	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13325	112.2344	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13517	112.233	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.2144	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	112.2038	GEN652559 1-OAHE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.1885	GEN652557 4-OAHE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.1885	GEN652558 6-OAHE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.1884	GEN652556 2-OAHE
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1357	112.1835	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13532	112.1565	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.1542	GEN600006 1-AS KING
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13532	112.1457	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13532	112.1408	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13325	112.1244	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	112.1157	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.1085	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13325	112.1021	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.0605	GEN659141 1-K10215A
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	112.0488	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	112.0486	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13726	112.013	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13726	112.013	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14362	112.0128	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNSLock	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13721	112.0111	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.9866	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1374	111.9707	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.9681	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.9574	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.9568	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.9526	GEN652461 5-GARRISON
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1356	111.9518	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1356	111.9518	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.9517	GEN652460 4-GARRISON
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.9407	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.9403	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.9028	GEN652457 1-GARRISON
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.9027	GEN652458 2-GARRISON
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.9027	GEN652459 3-GARRISON
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	111.8363	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.816	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.8118	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.803	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13558	111.7895	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13558	111.7895	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.7821	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	111.7803	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1374	111.7541	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1374	111.7294	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1374	111.7294	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	111.7016	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	111.6309	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	111.6123	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.4874	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12675	111.4658	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13549	111.3326	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.3322	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13557	111.2879	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13557	111.2879	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.2791	GEN615010 1-STANTON4
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13538	111.2763	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	111.2231	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13557	111.1971	P12:345:SPS:J07.1.FINN.HITCH

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.1914	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.1857	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.1857	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.1661	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.1035	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.0965	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	111.0774	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	111.0737	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.136	111.0557	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13719	111.0495	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	110.9769	GEN661015 1-COYOTE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	110.9752	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	110.9607	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	110.9188	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	110.9151	GEN652556 2-OAHE
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	110.915	GEN652557 4-OAHE
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	110.915	GEN652558 6-OAHE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13702	110.8498	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	110.849	GEN659141 1-K10215A
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	110.8298	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13721	110.7639	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	110.7495	GEN600006 1-AS KING
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13772	110.6641	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	110.6569	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13737	110.6561	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13573	110.6508	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13573	110.6508	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	110.6225	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14027	110.5395	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	110.5387	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	110.5379	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13559	110.4682	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13559	110.4682	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13743	110.4666	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	110.422	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	110.3834	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	110.3714	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13743	110.3486	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13677	110.321	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13677	110.3171	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13677	110.3171	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13677	110.3088	2809X1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13677	110.3027	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13743	110.2614	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	110.2613	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	110.2381	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13552	110.2215	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13744	110.1859	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	110.1658	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13519	110.1334	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13519	110.0949	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13519	110.0849	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13259	110.0558	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	110.0468	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1383	110.0404	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	110.0211	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13741	110.013	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13746	110.0108	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13743	109.9812	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13795	109.9395	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13781	109.9214	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13781	109.9214	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13781	109.9164	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13746	109.8637	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13667	109.8058	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13667	109.8058	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	109.8054	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	109.8043	GEN337652 1-WHITE BLUFF UNIT #1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13721	109.7949	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13781	109.791	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	109.7556	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	109.7539	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13706	109.7418	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13765	109.7322	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13765	109.7322	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	109.7068	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	109.6966	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13536	109.6711	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	109.6469	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13738	109.5503	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13738	109.5503	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	109.5418	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13437	109.5296	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	109.5268	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14389	109.4923	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14389	109.4923	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14389	109.4923	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14389	109.4923	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13795	109.4744	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	109.4651	GEN600000 1-SHERBURNECNTY G1
FDNSLock	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13743	109.456	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13739	109.4506	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13928	109.4406	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13728	109.4057	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	109.3546	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14257	109.292	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14257	109.292	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	109.2535	GEN661015 1-COYOTE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	109.2507	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13784	109.2183	NOBLES - SPLIT ROCK 345KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13246	109.1978	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	109.1865	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13822	109.1688	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	109.0993	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13978	109.0883	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	109.0883	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13747	109.083	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13747	109.0809	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13743	109.0758	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13978	109.0724	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13978	109.0707	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13749	109.0568	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13724	109.002	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13724	109.002	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	109.0015	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.9721	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.18661	108.9479	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13908	108.9409	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13737	108.9366	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13908	108.936	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13908	108.9357	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13795	108.9343	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.18661	108.9342	2810X2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.8963	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.8928	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.8928	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.8276	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.8272	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.8135	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13634	108.7986	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.7981	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13746	108.78	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.7763	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13634	108.7539	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13634	108.7539	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13743	108.7377	CENTER - CNTSHNT3 345.00 345KV CKT Z1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13634	108.7363	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13634	108.7345	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13634	108.7344	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13634	108.7326	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.7279	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13795	108.7088	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13732	108.6888	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13634	108.6642	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.6379	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13709	108.6148	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.6066	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1376	108.5819	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13718	108.5684	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.18661	108.5614	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.5151	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.4923	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.4905	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.4889	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.4781	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.4666	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.459	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.4495	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.4495	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13781	108.4357	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13733	108.4001	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13841	108.398	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13841	108.398	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1371	108.3628	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.343	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	108.3262	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12117	108.3181	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13781	108.3059	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13781	108.2895	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13749	108.2835	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13748	108.2664	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13718	108.2523	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.2507	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13741	108.2426	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.2337	GEN303007 1-1BC2 U2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13758	108.2315	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.2291	GEN303006 1-1BC2 U1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13757	108.2063	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13757	108.2063	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13752	108.194	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.17249	108.1761	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.17239	108.1735	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.1617	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.1613	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.1518	GEN303008 1-1BC2 U3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.1483	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	108.1464	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13806	108.1387	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13806	108.1381	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13806	108.1381	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13806	108.1333	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13806	108.1333	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13763	108.1203	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13689	108.1167	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13753	108.1106	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13751	108.1076	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13753	108.0835	PALXFRASBTHI
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13728	108.0802	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.0775	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13907	108.0746	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	108.0648	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13753	108.0615	7PALM TAP 345.00 - SUB T 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1376	108.0381	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13907	108.0321	HURON - WATERTOWN 230KV CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13907	108.0321	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13762	108.0315	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13762	108.0315	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.137	108.022	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13762	108.0056	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1356	108.0001	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1356	108.0001	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13907	107.9935	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13907	107.9935	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13762	107.9917	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13762	107.9916	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13739	107.9845	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13769	107.9813	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13769	107.9813	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1372	107.9784	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.9766	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.9705	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13749	107.9584	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13749	107.9584	COUNCIL BLUFFS - SUB 3456 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13768	107.958	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13744	107.9579	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13702	107.9418	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.9384	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13745	107.9355	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13702	107.9345	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13702	107.934	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13772	107.9255	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13768	107.9112	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13753	107.9067	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13753	107.9053	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13769	107.9011	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13769	107.9011	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.9007	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13772	107.8971	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13753	107.8925	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.8915	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	107.8872	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13753	107.8849	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13789	107.8805	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1375	107.8802	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13742	107.8767	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13857	107.8741	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13756	107.8694	GENOA 161 - SENECA 161 161KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13751	107.8664	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14155	107.8647	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.8613	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13753	107.8607	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13787	107.8548	EAGLE - PHILIP 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.8544	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13757	107.8499	FRANKS - HUBEN 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13757	107.8491	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1376	107.8446	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13753	107.838	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.8379	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	107.8341	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13756	107.8334	DIXONCO 230.00 - HOSKINS 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.8188	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.8188	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1414	107.8157	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1414	107.8153	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1414	107.8153	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13747	107.8122	ARNOLD - HAZLETON 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.8079	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.8055	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.8003	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13757	107.7974	NORTH LA CROSSE (10008630_001) 345/161/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13804	107.7947	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.7935	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.7935	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13787	107.7927	EAGLE - MARTIN 115KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	107.7914	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1374	107.7903	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.7881	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13644	107.7791	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13755	107.7756	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13755	107.7756	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.7734	GEN334432 1-SABINE UNIT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.7729	GEN334431 1-SABINE UNIT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.7698	GEN336242 1-1NMIL ST1 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13772	107.7657	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.7649	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.7622	GEN334030 1-FRONTIER UNIT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.7618	GEN334031 1-FRONTIER UNIT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1374	107.7615	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.7604	GEN345756 H-1SIOUX 1 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14185	107.7528	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14185	107.7528	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.7526	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.7376	GEN336446 1-MICHOUD UNIT #2
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1864	107.6923	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1864	107.6734	2810X2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13708	107.6642	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13708	107.6642	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	107.3916	GEN659125 1-COVEY
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1864	107.3446	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	107.2927	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	107.2927	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	107.1287	BASE CASE
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12108	106.9873	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13766	106.9167	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13771	106.9044	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13762	106.8502	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13199	106.8212	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13884	106.7737	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13884	106.7737	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13884	106.7737	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13884	106.7737	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13775	106.7718	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13758	106.769	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13758	106.769	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13889	106.7338	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13889	106.7338	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13889	106.7338	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13889	106.7338	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13762	106.7206	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13762	106.7206	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNSLock	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1377	106.7179	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (T
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13766	106.709	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.6902	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13755	106.6776	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13912	106.6567	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1377	106.6544	BONESTEEL - GREGORY 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13743	106.6518	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13755	106.603	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1377	106.5958	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13729	106.5826	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.582	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13758	106.5794	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.5662	GEN652546 1-FT RANDAL
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.534	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13755	106.5209	AINSWORTH - STUART 115KV CKT 1
FDNSLock	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	106.5075	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.5063	GEN652548 5-FT RANDAL
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.5063	GEN652549 7-FT RANDAL
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.4872	GEN615031 1-PLEASANT VALLEY
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.4813	GEN615032 2-PLEASANT VALLEY

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.4784	GEN652547 3-FT RANDAL
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	106.4673	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13762	106.4551	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13762	106.4551	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13757	106.4316	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13757	106.4316	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNSLock	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13745	106.4284	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNSLock	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1377	106.428	WINNER - WITTEN 115KV CKT 1
FDNSLock	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1377	106.4217	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13729	106.4101	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.398	GEN652410 3-FT PECK
FDNSLock	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1377	106.3912	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNSLock	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	106.3888	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.3886	GEN659290 1-EDGECOL
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13729	106.3885	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13729	106.3885	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.3847	GEN660003 3-HURON WEST PARK
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.3822	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1377	106.362	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13753	106.357	LOUP CITY - NORTH LOUP 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.3552	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.3268	GEN652414 4-FT PECK
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.3268	GEN652415 5-FT PECK
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.3166	GEN600020 2-ANGUS ANSON1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.3046	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.3013	GEN600021 3-ANGUS ANSON2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13673	106.2902	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13758	106.2893	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.2871	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.2687	EMERY 161/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.267	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.2543	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.2485	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.2365	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13753	106.2318	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.1876	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.1857	GEN600050 1-FEP
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.1527	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.1475	GEN600046 1-MECST
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.1358	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.1319	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.1319	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.1234	GEN659162 4-RED WLCK
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.1234	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.1221	GEN659192 6-LYNN
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.1211	GEN600047 1-MECCT1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	106.1171	GEN659125 1-COVEY
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.1011	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.1006	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.1006	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.0957	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.0957	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.0678	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.0678	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.0619	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.0558	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.0549	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.0548	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.0537	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.0344	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.0265	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.0197	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.0175	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.0167	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	106.0112	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.9929	GEN600017 C-LS POWER CT
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	105.9821	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.9779	GEN600045 4-ANSON

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.9584	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.9584	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.9505	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.9444	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.9421	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.9391	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.9386	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.919	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	105.9066	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	105.9066	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.8897	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.8815	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13757	105.8702	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13757	105.8702	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.8601	GEN659274 1-GROTON
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.8565	GEN562872 1-G15046_3 0.6900
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13185	105.8452	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.8227	GEN681522 3-GENOA 3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.8113	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.801	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.8007	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.8007	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.7782	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.7742	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13762	105.7675	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13762	105.7675	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.7226	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13696	105.7153	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.7117	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.6918	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.6867	GEN659270 1-WEST SW
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.6361	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14044	105.6228	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13756	105.6222	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13756	105.6222	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13756	105.5965	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14032	105.544	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	105.5045	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14044	105.4878	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14044	105.4809	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14044	105.4808	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14044	105.447	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14044	105.447	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.4199	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.4175	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.14044	105.3985	GLENHAM - WHITLOK 230KV CKT 1
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	105.2913	GEN615001 1-COAL CREEK
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.2624	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.2026	GEN652545 7-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.18661	105.1833	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.18661	105.1833	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.1807	GEN659010 4-G07_027IS_2 0.6900
FDNSLock	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	105.1758	GEN615002 2-COAL CREEK
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.1655	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.1628	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.1581	GEN652460 4-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.1581	GEN652461 5-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.1539	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.13	GEN652543 3-BIG BEND
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.1297	GEN652542 1-BIG BEND
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.1136	GEN652544 5-BIG BEND
FDNS	00NR_G16_017	3	20SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13574	105.1132	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.1044	GEN652457 1-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.1044	GEN652458 2-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.1044	GEN652459 3-GARRISON
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.0916	GEN681542 6-JP MADGETT
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	105.0331	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	104.6961	GEN659411 1-CAMPBLCNTY W0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	104.63	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	104.6275	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	104.6219	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	104.5941	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13764	104.5567	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13764	104.5567	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1864	104.5135	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1864	104.5135	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	104.4265	GEN615010 1-STANTON4
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	104.4145	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.12864	104.3507	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	104.3444	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	104.3249	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	104.3249	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13721	104.3016	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13721	104.2948	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13721	104.2742	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	104.2518	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	104.2173	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	104.2	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	104.1964	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	104.1772	GEN652556 2-OAHE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	104.1772	GEN652557 4-OAHE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	104.1772	GEN652558 6-OAHE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	104.0687	GEN659141 1-K10215A
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13743	104.0358	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	103.9026	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	103.8981	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_017	3	25SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13561	103.8859	GEN587133 1-G16-017-GEN10.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13762	103.7622	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	103.6504	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	103.6293	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	103.6202	GEN600006 1-AS KING
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	103.6159	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13743	103.1328	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	103.0646	GEN600005 1-MONTICELLO
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	102.3614	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1377	102.3254	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1377	102.3254	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	102.3141	GEN661015 1-COYOTE
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	101.9256	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1346	101.8249	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	101.7986	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	101.5611	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	101.2023	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1894	100.6165	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1894	100.6008	2810X2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1894	100.426	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	3	20WP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1393	100.2438	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	100.0977	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.1227	99.9	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	99.8	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	99.7	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	99.7	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	99.7	GEN659125 1-COVEY
FDNS	00NR_G16_017	3	17SP	G16_017	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.13759	99.5	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_017	4	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	352	352	0.06575	100.0769	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	4	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	352	352	0.06575	100.0769	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	17SP	G16_017	TO->FROM	FT RANDAL - FT THOMPSON 230KV CKT 1	352	352	0.06575	100.0733	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	4	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06452	106.2403	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	4	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06452	106.2403	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06452	106.2384	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06319	104.2061	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06319	104.2061	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06314	103.6713	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06314	103.6713	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	4	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06599	101.0158	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	4	17SP	G16_017	TO->FROM	FT RANDAL - LAKE PLATT 230KV CKT 1	318.7	318.7	0.06599	101.0158	FT RANDAL - FT THOMPSON 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	4	17SP	G16_017	FROM->TO	FT THOMPSON - LAKE PLATT 230KV CKT 1	352	352	0.06452	100.5067	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_017	4	17SP	G16_017	FROM->TO	FT THOMPSON - LAKE PLATT 230KV CKT 1	352	352	0.06452	100.5067	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	17SP	G16_017	FROM->TO	FT THOMPSON - LAKE PLATT 230KV CKT 1	352	352	0.06452	100.5041	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.10772	114.9805	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.10761	114.8694	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	17SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.10947	107.9087	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.0989	104.824	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07719	104.2487	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.09883	104.1484	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.0772	103.2952	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07421	102.6394	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07592	102.5101	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07592	102.5101	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07642	102.4918	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07642	102.4918	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07739	102.479	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07999	102.1887	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07584	102.0584	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07556	101.8873	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07987	101.6537	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07596	101.6456	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07541	101.4727	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07608	101.4573	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07465	101.455	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07541	101.4082	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07541	101.4082	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07541	101.3668	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.0742	101.2447	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07584	101.0204	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07642	101.0153	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07642	101.0153	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.08	100.7822	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNSLock	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.0757	100.6062	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.0774	100.592	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07543	100.5201	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07543	100.5201	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07577	100.4419	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07577	100.4419	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07851	100.4104	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07719	100.3545	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07988	100.3443	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07543	100.3415	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07584	100.3286	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.08005	100.2883	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.08005	100.2883	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07543	100.27	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07495	100.1552	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07586	100	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07465	100	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.0761	99.9	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07557	99.9	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07598	99.9	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07522	99.9	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07522	99.9	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07586	99.8	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07568	99.8	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.0772	99.7	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.08046	99.7	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.08046	99.7	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07598	99.7	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.0757	99.7	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07531	99.7	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07592	99.6	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07592	99.6	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.08035	99.6	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.08035	99.6	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07555	99.5	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.07492	99.5	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.10772	116.1192	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.10761	115.9662	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.10947	108.8189	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.0989	105.7995	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07719	105.2306	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.09883	105.0744	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.0772	104.2871	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07739	103.4915	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07642	103.448	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07642	103.448	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07421	103.3348	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07999	103.1313	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07592	103.0496	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07592	103.0496	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07584	103.0151	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07556	102.8638	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07987	102.5768	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07541	102.3687	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07608	102.3438	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07541	102.301	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07541	102.301	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07541	102.2566	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07596	102.2516	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07465	102.1836	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07642	101.9508	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07642	101.9508	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07584	101.9209	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.0742	101.9159	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.08	101.714	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.0774	101.5619	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07543	101.4168	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07543	101.4168	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07851	101.2617	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07988	101.2542	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07577	101.2459	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07577	101.2459	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07543	101.2301	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07584	101.2032	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07719	101.1949	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07543	101.1532	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.08005	101.1332	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.08005	101.1332	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07586	100.9191	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07557	100.8377	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.0761	100.772	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07568	100.6809	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07586	100.675	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07465	100.6449	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07598	100.601	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.0772	100.58	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.08046	100.5644	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.08046	100.5644	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.0757	100.5622	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07492	100.4776	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.08035	100.4002	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.08035	100.4002	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07531	100.3323	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07555	100.3061	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07852	100.2888	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07579	100.2494	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07579	100.2494	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07492	100.2139	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07592	100.1689	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07592	100.1689	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.08035	100.1524	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.08006	100.1132	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.08006	100.1132	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07598	100.1017	GEN635023 3-WALTER SCOTT UNIT 3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07599	100.1	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07597	100	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07598	100	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_017	4	17SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.09914	99.9	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.08048	99.8	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.08048	99.8	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07571	99.8	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.08037	99.7	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.08037	99.7	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07586	99.7	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07492	99.7	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_017	4	25SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.06996	99.7	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07599	99.6	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07523	99.6	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07523	99.6	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_017	4	20SP	G16_017	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.07496	99.6	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	01ALL_G16_020	0	16WP	G16_020	-	Non-Converged Contingency	1314	1314	0.03363	-	PECULIAR - STILWELL 345KV CKT 1
FDNS	01ALL_G16_020	0	20SP	G16_020	TO->FROM	DGRASSE4 138.00 - MOORELAND 138KV CKT 1	143	187	0.11005	114.0325	BASE CASE
FDNS	01ALL_G16_020	0	17SP	G16_020	TO->FROM	DGRASSE4 138.00 - MOORELAND 138KV CKT 1	143	187	0.11069	113.9619	BASE CASE
FDNS	01ALL_G16_020	0	16WP	G16_020	TO->FROM	DGRASSE4 138.00 - MOORELAND 138KV CKT 1	143	187	0.11044	112.0225	BASE CASE
FDNS	01ALL_G16_020	0	20WP	G16_020	TO->FROM	DGRASSE4 138.00 - MOORELAND 138KV CKT 1	143	187	0.10967	111.9737	BASE CASE
FDNS	01ALL_G16_020	0	17G	G16_020	TO->FROM	DGRASSE4 138.00 - MOORELAND 138KV CKT 1	143	187	0.11096	106.0956	BASE CASE
FDNS	00NR_G16_020	0	20SP	G16_020	TO->FROM	DGRASSE4 138.00 - MOORELAND 138KV CKT 1	143	187	0.03694	105.2695	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	00NR_G16_020	0	20SP	G16_020	TO->FROM	DGRASSE4 138.00 - MOORELAND 138KV CKT 1	143	187	0.04049	104.3401	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
FDNS	01NR_G16_020	0	17G	G16_020	TO->FROM	DGRASSE4 138.00 - MOORELAND 138KV CKT 1	143	187	0.08124	99.5	BASE CASE
FDNS	01ALL_G16_020	0	20SP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.11005	114.0366	BASE CASE
FDNS	01ALL_G16_020	0	17SP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.11069	113.9625	BASE CASE
FDNS	01ALL_G16_020	0	16WP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.11044	112.0225	BASE CASE
FDNS	01ALL_G16_020	0	20WP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.10967	111.9747	BASE CASE
FDNS	01ALL_G16_020	0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.11096	106.0956	BASE CASE
FDNS	00NR_G16_020	0	20SP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.03694	105.3359	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	00NR_G16_020	0	20SP	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.04049	104.4022	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
FDNS	01NR_G16_020	0	17G	G16_020	FROM->TO	DGRASSE4 138.00 - ROSE_VALLEY 138.00 138KV CKT 1	143	187	0.08124	99.5	BASE CASE
FDNS	01ALL_G16_020	2	16WP	G16_020	TO->FROM	DGRASSE4 138.00 - MOORELAND 138KV CKT 1	143	187	0.22349	104.402	BASE CASE
FDNS	01ALL_G16_020	2	17SP	G16_020	TO->FROM	DGRASSE4 138.00 - MOORELAND 138KV CKT 1	143	187	0.22449	103.211	BASE CASE
FDNS	01ALL_G16_020	2	16WP	G16_020	TO->FROM	DGRASSE4 138.00 - MOORELAND 138KV CKT 1	143	187	0.3155	101.5232	WOODWARD - WWPAR4 138.00 138KV CKT 1
FDNS	01ALL_G16_020	2	16WP	G16_020	TO->FROM	DGRASSE4 138.00 - MOORELAND 138KV CKT 1	143	187	0.3155	101.5226	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
FDNS	01ALL_G16_020	2	17SP	G16_020	TO->FROM	DGRASSE4 138.00 - MOORELAND 138KV CKT 1	143	187	0.317	99.8	WOODWARD - WWPAR4 138.00 138KV CKT 1
FDNS	01ALL_G16_020	2	17SP	G16_020	TO->FROM	DGRASSE4 138.00 - MOORELAND 138KV CKT 1	143	187	0.317	99.8	WOODWARD EHV - WWPAR4 138.00 138KV CKT 1
FDNSLock-Blown up	00NR_G16_021	0	16WP	G16_021	-	Non-Converged Contingency	720	720	0.05025	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_021	0	16WP	G16_021	-	Non-Converged Contingency	720	720	0.05025	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_021	0	17SP	G16_021	-	Non-Converged Contingency	0	0	0.10286	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_021	0	17SP	G16_021	-	Non-Converged Contingency	720	720	0.05143	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_021	0	17SP	G16_021	-	Non-Converged Contingency	720	720	0.05143	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_021	0	17SP	G16_021	-	Non-Converged Contingency	720	720	0.05143	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_021	0	17SP	G16_021	-	Non-Converged Contingency	720	720	0.05143	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_021	0	20SP	G16_021	-	Non-Converged Contingency	0	0	0.13971	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_021	0	20SP	G16_021	-	Non-Converged Contingency	720	720	0.06986	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_021	0	20SP	G16_021	-	Non-Converged Contingency	720	720	0.06986	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_021	0	25SP	G16_021	-	Non-Converged Contingency	0	0	0.14075	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_021	0	25SP	G16_021	-	Non-Converged Contingency	720	720	0.07038	-	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock-Blown up	00NR_G16_021	0	25SP	G16_021	-	Non-Converged Contingency	720	720	0.07038	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_021	0	25SP	G16_021	-	Non-Converged Contingency	720	720	0.07038	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_021	0	25SP	G16_021	-	Non-Converged Contingency	720	720	0.07038	-	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock-Blown up	00NR_G16_021	2	17SP	G16_021	-	Non-Converged Contingency	0	0	0.14372	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_021	2	17SP	G16_021	-	Non-Converged Contingency	720	720	0.07186	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_021	2	17SP	G16_021	-	Non-Converged Contingency	720	720	0.07186	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_021	3	20SP	G16_021	-	Non-Converged Contingency	0	0	0.13971	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_021	3	20SP	G16_021	-	Non-Converged Contingency	956	956	0.06986	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_021	3	20SP	G16_021	-	Non-Converged Contingency	956	956	0.06986	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_021	3	25SP	G16_021	-	Non-Converged Contingency	0	0	0.14075	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_021	3	25SP	G16_021	-	Non-Converged Contingency	956	956	0.07038	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_021	3	25SP	G16_021	-	Non-Converged Contingency	956	956	0.07038	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.07495	105.8631	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.07495	105.6987	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.07455	102.0817	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.07455	102.047	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.07555	101.1558	COLUMEAST - SHELL CREEK 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.07555	101.0311	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	20WP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.07521	100.9774	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	20WP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.07521	100.3339	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04976	159.455	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05026	159.146	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04996	158.3863	STORLA - WESSINGTON 230KV CKT 1
FDNSLock	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05136	158.0974	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05049	157.5856	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05049	157.5232	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05049	157.5232	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05049	156.9877	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04884	156.6305	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04787	156.2198	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05946	155.9667	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05013	155.8111	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04972	155.5667	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04972	155.5667	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05043	153.9227	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05043	153.9227	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04913	153.9016	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04913	153.9016	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04919	153.582	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04919	153.582	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04919	153.0988	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05112	152.9165	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05134	152.7184	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05026	152.6453	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05137	152.3071	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05304	152.2802	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05304	152.1938	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05304	152.1646	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05975	152.142	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05975	152.142	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0504	152.0303	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	151.8002	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	151.3654	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05117	151.2857	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	151.216	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05117	151.1587	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05117	151.1587	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05117	151.1538	2809X2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05117	151.1474	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04944	151.1361	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04944	151.1361	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05117	151.1355	2809X1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05117	151.1185	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	151.0638	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05117	151.0587	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05163	151.0181	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	150.9706	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	150.9692	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04944	150.9659	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	150.8697	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05203	150.8638	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04944	150.8485	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05063	150.7711	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	150.6557	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05149	150.5591	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	150.4965	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05149	150.494	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05075	150.4117	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	150.3759	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05149	150.3277	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05137	150.3233	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNSLock	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05181	150.3066	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05282	150.2363	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05139	150.207	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05169	150.1214	AS KING - EAU CLAIRE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05139	150.0822	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05139	150.0822	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05149	149.9578	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0508	149.9307	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05141	149.6931	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05203	149.6602	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	149.6451	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	149.6432	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05069	149.6315	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05069	149.6315	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05069	149.6291	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.03727	149.5672	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	149.5605	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	149.5507	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04996	149.5368	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04996	149.5368	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNSLock	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05149	149.4818	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05065	149.4799	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05114	149.4659	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05069	149.4568	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	149.3993	GEN501801 1-DOLET HILLS UNIT1
FDNSLock	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05141	149.3903	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05114	149.3875	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05114	149.3875	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05164	149.3491	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05605	149.3072	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05605	149.3001	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05114	149.2937	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05114	149.2937	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05215	149.2851	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05605	149.2801	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05141	149.24	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05162	149.2242	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05182	149.2232	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05423	149.099	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05423	149.099	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05164	149.0923	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05423	149.0653	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	149.0276	GEN336252 1-NINEMILE POINT UNIT#5
FDNSLock	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05139	149.0269	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0779	149.0194	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	149.0157	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0514	148.9645	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05065	148.9582	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05094	148.8825	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.862	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.8478	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05033	148.827	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05033	148.827	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.7726	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.7568	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05355	148.746	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05142	148.7228	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05142	148.7228	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.7207	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.7169	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.7167	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.6507	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.6354	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.6354	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05201	148.6155	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05169	148.6066	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.6019	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05201	148.5843	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.5792	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.5752	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05094	148.5708	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05169	148.5097	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05169	148.5097	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05169	148.5048	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05169	148.5047	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0514	148.504	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.5	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05169	148.4902	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05169	148.4893	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.4891	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05169	148.4888	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05146	148.4485	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05164	148.4193	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05113	148.3984	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05169	148.376	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.3737	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05141	148.2729	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.2625	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.2424	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05141	148.2364	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.06079	148.2073	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.2058	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05113	148.1821	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05169	148.1772	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05113	148.1759	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.1726	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.1661	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.1462	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.1428	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04986	148.1323	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04986	148.1323	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05989	148.1126	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05989	148.1126	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.0848	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05075	148.075	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.0632	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.0557	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.0519	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	148.0515	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNSLock	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05144	148.0374	BIG STONE - BLAIR 230KV CKT 1
FDNSLock	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05144	148.0374	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05152	148.0219	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05144	148.011	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05144	148.011	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05141	148.0089	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05098	148.0003	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05098	148.0003	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05098	148.0003	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05098	148.0003	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.9837	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.9667	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05141	147.9631	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05166	147.9018	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0514	147.8969	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.892	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05165	147.8738	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.8723	GEN303007 1-1BC2 U2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.8672	GEN303006 1-1BC2 U1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0514	147.8628	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05144	147.8561	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05144	147.8561	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0514	147.8529	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.8478	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04959	147.8368	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05144	147.8145	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.7991	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.7986	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04968	147.7944	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05397	147.7888	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04959	147.7818	CLEARWATER - ONEILL 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.7807	GEN303008 1-1BC2 U3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.7779	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05156	147.7434	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05156	147.7434	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05144	147.7424	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05142	147.7386	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05196	147.7295	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.7169	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05176	147.7168	EAGLE - PHILIP 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0514	147.7066	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05073	147.6979	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05073	147.6979	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05073	147.6979	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05169	147.6934	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05169	147.6934	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05169	147.6918	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05073	147.6902	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05073	147.6902	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.681	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05341	147.667	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05196	147.6625	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05186	147.6501	PALXFRASBTHI
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05176	147.6333	EAGLE - MARTIN 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05141	147.6247	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.617	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04959	147.617	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.616	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05144	147.6151	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05186	147.6111	7PALM TAP 345.00 - SUB T 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05123	147.6074	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05341	147.5988	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05419	147.5917	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05419	147.5917	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.5816	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05142	147.5814	PRAIRIE - WINGER 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.5753	AUDUBON - HUBBARD 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05196	147.5686	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05177	147.5654	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.5639	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05174	147.5596	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05174	147.5594	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.5561	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05174	147.5455	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05341	147.5386	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05209	147.5342	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.5277	KARLSTAD - WINGER 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0514	147.5277	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05154	147.524	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.5038	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.4935	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0506	147.4845	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05142	147.4747	PRAIRIE - RAMSEY 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.4638	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.4517	GEN525561 1-TOLK GEN #1 24 KV
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05151	147.44	GENOA 161 - SENECA 161 161KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05125	147.4398	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.4272	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05227	147.4231	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05146	147.42	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05149	147.4139	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.4139	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.4139	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05174	147.4098	ARNOLD - HAZLETON 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05113	147.4042	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.3955	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.3955	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.3933	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05196	147.3923	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.3919	GEN345756 H-1SIOUX 1 18.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.3895	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05146	147.3864	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05113	147.3853	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05113	147.3793	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.3773	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05147	147.3771	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05149	147.3744	NORTH LA CROSSE (10008630_001) 345/161/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05147	147.373	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05148	147.3717	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05148	147.3717	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.3653	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.3635	GEN336242 1-1NMIL ST1 18.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05144	147.3619	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.3614	GEN334432 1-SABINE UNIT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.361	GEN334431 1-SABINE UNIT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05129	147.3603	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05129	147.3603	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0514	147.3595	LELAND OLDS - STANTON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0514	147.3595	LELAND OLDS - STANTON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.355	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05155	147.352	FRANKS - HUBEN 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05136	147.3483	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05136	147.3483	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.3409	GEN334030 1-FRONTIER UNIT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.3405	GEN334031 1-FRONTIER UNIT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.3281	GEN336446 1-MICHOUD UNIT #2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.3192	GEN345832 1-1TS G1 13.800
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.3188	GEN345841 2-1TS G2 13.800
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05051	147.3051	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.3037	GEN501970 1-EVANGELINE UNIT 7
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05341	147.2621	NELIGH - PETERSBRG.N7115.00 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05176	147.2412	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04977	147.2346	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05176	147.2273	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05176	147.2273	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05383	147.2195	P12:115:NPPD:1090:AINSWND7:THEDFRD7:BTB
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.173	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	147.173	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05087	147.1529	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05087	147.1529	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.06551	147.1384	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05377	147.0208	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05377	147.0103	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05377	147.0103	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	146.8486	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	146.6544	BASE CASE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05308	146.6151	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05162	146.5484	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05162	146.5484	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05561	146.5114	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04911	146.3879	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05162	146.3792	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05162	146.3786	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05256	146.3401	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05305	146.2692	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05305	146.2692	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05124	146.2526	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05124	146.2526	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05124	146.2505	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05124	146.2505	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05184	146.2483	AURORA - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05169	146.2355	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	146.2021	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	146.1841	GEN587153 1-G16-021-GEN10.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05188	146.1662	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05188	146.1662	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05167	146.1412	P12:115:UMZW:# 172 #: WI IN SD.

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05151	146.1194	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05151	146.1194	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05151	146.1184	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05151	146.1184	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.06551	146.0973	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05276	146.0391	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05276	146.0391	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	146.0383	GEN652546 1-FT RANDAL
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	146.0355	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	146.0072	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05374	145.9923	LOUP CITY - NORTH LOUP 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0536	145.9902	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.9676	GEN652548 5-FT RANDAL
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.9676	GEN652549 7-FT RANDAL
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.9656	GEN620324 3-HOOT LAKE 3 GEN
FDNSLock	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05162	145.9619	COPSTJCPFRSJ
FDNSLock	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05162	145.9619	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05162	145.9619	STMDSJFAFACO
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.9606	GEN615031 1-PLEASANT VALLEY
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05322	145.9564	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05322	145.9564	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.9545	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05148	145.9543	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05148	145.9543	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.9511	GEN620115 1-HRDLKGEN 0.6000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.9488	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.9487	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05154	145.9456	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.9434	GEN652547 3-FT RANDAL
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05148	145.9418	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.9337	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05148	145.9282	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05135	145.9265	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05148	145.9257	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05148	145.9257	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05148	145.9256	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.9221	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05135	145.9217	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05157	145.9146	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.9139	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.9082	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.9082	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05144	145.8993	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04944	145.8974	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.8882	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.8836	GEN563302 1-G15096_3 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.8801	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.8801	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.88	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.8772	GEN600020 2-ANGUS ANSON1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0537	145.8765	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05135	145.8765	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05156	145.8667	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05156	145.8667	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.8639	GEN657964 1-ASH2GEN9 0.5750
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.8627	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.8566	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.8454	GEN600021 3-ANGUS ANSON2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05142	145.8238	DRAYTON - LETELLIER 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.8147	GEN659158 2-PIONEER G213.800
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.8147	GEN659159 3-PIONEER G313.800
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.8062	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.8049	GEN659156 2-LONESMCRK 2G13.800
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.8049	GEN659157 3-LONESMCRK 3G13.800
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.7939	GEN659290 1-EDGECOL
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05188	145.7913	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05188	145.7913	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.7827	GEN660003 3-HURON WEST PARK

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.7678	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.7578	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.7578	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.7488	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.7485	GEN652410 3-FT PECK
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.7444	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05335	145.668	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.6647	GEN652414 4-FT PECK
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.6647	GEN652415 5-FT PECK
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.6612	GEN600046 1-MECST
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.6499	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.6349	GEN600050 1-FEP
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.6329	GEN600047 1-MECCT1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.6281	EMERY 161/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.6279	GEN600045 4-ANSON
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05171	145.6251	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0521	145.6234	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0521	145.6234	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05211	145.6133	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.6052	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.5699	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05352	145.5676	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05352	145.5676	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.5309	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.5309	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.5291	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.5291	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.4821	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.4799	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.4799	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.4754	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.4745	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.4656	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.4654	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.4499	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.438	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.438	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.4116	GEN600017 C-LS POWER CT
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.3937	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.3595	GEN659192 6-LYNN
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.3587	GEN659162 4-RED WLCK
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.3587	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.3391	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05148	145.3153	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.293	GEN681522 3-GENOA 3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.2919	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.2771	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.2704	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.1826	GEN659274 1-GROTON
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.1476	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.1366	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.1366	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.1038	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.0873	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.0852	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.0713	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.0692	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.0075	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.0075	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	145.0047	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.9906	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.9518	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05521	144.9508	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05521	144.9508	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.9433	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.9214	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.9185	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.893	GEN652907 1-G09_007IS_3 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.8716	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.8677	GEN659270 1-WEST SW
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05124	144.8391	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.8379	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.797	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.7544	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.7536	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05124	144.7328	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.7143	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05124	144.6733	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05124	144.6595	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05124	144.6593	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.6457	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05124	144.622	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05124	144.622	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.5911	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05124	144.5548	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.4518	GEN652545 7-BIG BEND
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.4125	GEN681542 6-JP MADGETT
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05561	144.3982	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.2964	GEN652544 5-BIG BEND
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.2963	GEN652543 3-BIG BEND
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.2956	GEN652542 1-BIG BEND
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.2575	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.2371	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.2369	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.2282	GEN652460 4-GARRISON
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.2282	GEN652461 5-GARRISON
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05519	144.2218	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.1555	GEN652457 1-GARRISON
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.1555	GEN652458 2-GARRISON
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.1555	GEN652459 3-GARRISON
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	144.0443	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.6662	GEN659411 1-CAMPBLCNTY W0.6900
FDNSLock	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.6535	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.6399	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.5935	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05272	143.5716	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.5663	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.4909	GEN652559 1-OAHE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05272	143.4876	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05272	143.4822	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.4326	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.2934	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.1925	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.1653	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.1653	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.1145	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.0332	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.0276	GEN615010 1-STANTON4
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.0267	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.0052	GEN652557 4-OAHE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.0052	GEN652558 6-OAHE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	143.0051	GEN652556 2-OAHE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	142.9754	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	142.8231	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	142.8049	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	142.7729	GEN659141 1-K10215A
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	142.6747	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	142.6218	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	142.6217	GEN600006 1-AS KING
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	142.2265	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	142.1539	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.06147	142.0698	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	141.8497	GEN600005 1-MONTICELLO
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0426	141.6028	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	141.0346	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04383	140.705	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	140.198	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	140.1458	GEN661015 1-COYOTE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	139.9519	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	139.7764	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	139.7578	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.06233	138.4605	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05066	138.1795	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05066	137.9992	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05066	137.9776	2810X2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	137.9348	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	137.8494	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05066	137.481	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05066	137.481	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05066	137.4628	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	137.4489	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05066	137.4484	2801X
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	137.2878	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	137.2878	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	137.2795	GEN659125 1-COVEY
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05066	136.9846	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	136.5516	GEN615001 1-COAL CREEK
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	136.4069	GEN615002 2-COAL CREEK
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	129.9258	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	129.9258	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_021	0	20WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04649	124.2281	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05143	123.2539	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04901	121.5497	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0486	120.5016	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0488	119.8501	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04897	118.8239	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04856	118.3385	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04856	118.3385	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05849	117.8645	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05849	117.8645	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0583	117.758	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04932	117.7041	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04932	117.6471	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04932	117.6471	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04932	117.6447	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05185	117.5909	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05185	117.5202	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05185	117.5048	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04092	117.4866	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05087	117.3605	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04901	117.3276	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04923	117.3008	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04923	117.3008	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	117.2435	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04792	117.24	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04792	117.24	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04798	117.238	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04798	117.238	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04994	117.212	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04798	116.9665	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05051	116.8866	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04923	116.8835	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	116.8682	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	116.8584	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	116.7709	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05045	116.75	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	116.7434	GEN336153 1-WATERFORD UNIT#3
FDNSLock	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05791	116.6592	P13:230-345:NPPD:STEGALL3:KV3A
FDNSLock	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05791	116.6554	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05087	116.5245	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	116.5217	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	116.468	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	116.4599	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05019	116.4273	BISON 3 345.00 - BUFFALO 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04801	116.4139	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04801	116.4139	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04943	116.3684	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04801	116.3649	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04958	116.3413	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04801	116.3202	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04999	116.3108	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04999	116.3106	2809X2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04999	116.3105	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04999	116.3105	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0516	116.3055	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04999	116.3049	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04999	116.303	2809X1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04999	116.2977	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	116.2432	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05017	116.2395	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05133	116.2267	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05063	116.1784	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05065	116.171	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05235	116.16	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	116.1404	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04963	116.1326	FT RANDAL - UTICA JCT 230KV CKT 1
FDNSLock	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05023	116.1184	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04942	116.1039	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	116.0487	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	116.0297	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04994	115.9906	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04999	115.9243	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.8963	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0505	115.8906	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04974	115.8656	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0488	115.8174	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0488	115.8174	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.8056	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.8022	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.8006	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04998	115.7613	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04942	115.7603	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.7501	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0765	115.747	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05032	115.7228	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04974	115.6887	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.673	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05021	115.6721	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05021	115.6721	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05032	115.6691	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04998	115.6469	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04998	115.6469	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05021	115.6128	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04998	115.5912	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04998	115.5912	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05032	115.5911	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05032	115.5456	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.5403	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05051	115.5279	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0502	115.5055	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05046	115.4939	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05023	115.4885	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05954	115.4798	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.4436	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05023	115.4403	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0495	115.4311	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0495	115.4311	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.4305	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05022	115.4271	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0495	115.3914	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05861	115.3872	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05861	115.3872	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.3845	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.3824	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.3823	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.3489	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05082	115.3392	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05082	115.3382	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05023	115.3375	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05052	115.3269	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.3189	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.3188	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0505	115.3106	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.3003	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0495	115.2953	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05032	115.2944	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05513	115.2819	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05046	115.2803	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05513	115.2721	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05513	115.2715	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04983	115.2705	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04983	115.2705	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04983	115.2705	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04983	115.2705	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0505	115.2682	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0505	115.268	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0505	115.2673	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0505	115.2672	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0505	115.2652	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0505	115.2612	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.2594	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0505	115.221	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05022	115.2183	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.2088	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05034	115.198	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.198	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04994	115.1961	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.1897	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.1771	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04899	115.1746	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04899	115.1746	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05018	115.1527	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04941	115.1433	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05092	115.1347	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05018	115.1314	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.1301	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04994	115.1042	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04877	115.0836	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05046	115.0833	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05023	115.0815	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04994	115.0745	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04837	115.0731	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.0677	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04837	115.0597	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.0401	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0472	115.0399	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.0365	GEN303007 1-1BC2 U2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.0347	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.0328	GEN303006 1-1BC2 U1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04837	115.0255	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.0173	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	115.0158	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05047	115.0076	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05028	115.0063	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05022	114.9948	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.9881	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.9844	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.9826	GEN303008 1-1BC2 U3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.981	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.9744	GEN334441 1-SABINE UNIT 5

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.9739	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.9651	GEN642067 1-PLATTE
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05022	114.96	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.9592	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.9465	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05022	114.9449	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.9238	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05268	114.9237	AINSWORTH - CALAMUS 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05268	114.9232	P12:115:NPPD:1090:AINSWND7:THEDFRD7:BTB
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.9219	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05024	114.9185	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05024	114.9185	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05268	114.9173	CALAMUS - THEDFORD 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05026	114.9158	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05026	114.9158	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05023	114.9107	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04778	114.908	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05036	114.9075	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.9072	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04779	114.9067	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.9032	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.897	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05026	114.8963	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05023	114.8944	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.8896	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.8851	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05051	114.884	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05024	114.8767	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05221	114.8754	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05221	114.8716	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05031	114.8694	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.8591	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.8587	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05221	114.8567	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04941	114.8533	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05026	114.8514	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05023	114.8483	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05033	114.8343	GENOA 161 - SENECA 161 161KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.8298	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05005	114.8284	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05031	114.8263	NORTH LA CROSSE (10008630_001) 345/161/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.03531	114.8227	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05024	114.8223	BALTA - MCHENRY 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04931	114.8153	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.8097	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05056	114.8006	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.7979	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05268	114.7955	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.7834	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.7808	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.7808	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05106	114.7535	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	114.3316	BASE CASE
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04782	114.1849	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05197	114.1123	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05037	113.9606	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05092	113.9214	FINNEY SWITCHING STATION - Hitchland Interchange 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05039	113.9083	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05039	113.9083	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05039	113.9083	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05039	113.9083	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0505	113.9046	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05064	113.8862	VICTORY HILL (VICTORYHL T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05064	113.8862	VICTORY HILL (VICTORYHL T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0504	113.8847	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0504	113.8847	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0504	113.8847	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0504	113.8847	FT THOMPSON - OAHE 230KV CKT 4

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05058	113.8801	CRETE - FRIEND 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05029	113.8691	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0503	113.8688	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0503	113.8688	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0503	113.8654	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0503	113.8645	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0503	113.8645	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0503	113.8645	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0503	113.8639	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.8576	GEN659116 1-SPIRIT MOUND UNIT1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.8576	GEN659117 2-SPIRIT MOUND UNIT2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.8556	CLKREACT5 161.00 - LIME CREEK 5 SPLITS INTO LIME EAST TO A 161KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.8551	EMERY 161/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05024	113.8519	BROOKINGS - WHITE 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05024	113.8519	BROOKINGS - WHITE 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05027	113.8515	PONY CREEK - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.8488	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05024	113.8454	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.8448	GEN672369 3-MERIDIAN GENERATOR 3 ST
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05035	113.8345	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.8343	GEN620285 1-SOLWAY
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05245	113.8293	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05045	113.8262	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05045	113.8262	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.8242	CLKREACT5 161.00 - CRYSTLK5 161.00 161KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05017	113.8198	HILLS - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05054	113.8188	7MAYWOOD 345.00 - 7SPENCER 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05054	113.8169	7MONTGMRY 345.00 - 7SPENCER 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.814	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.8136	GEN620115 1-HRDLKGEN 0.6000
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.8027	GEN620323 2-HOOT LAKE 2 GEN
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.8009	GEN600013 3-BLACK DOG GEN 3
FDNSLock	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05045	113.7971	COPSTJCPFRSJ
FDNSLock	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05045	113.7971	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05045	113.7971	STMDSJFAFACO
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.7914	GEN600125 2-FEP ST G 13.800
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.7894	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05049	113.7882	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.7808	GEN563302 1-G15096_3 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.7796	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05165	113.7649	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05165	113.7649	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.7635	GEN672384 1-CENTENNIAL WINDFARM
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0503	113.7566	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05048	113.7523	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.7369	GEN652548 5-FT RANDAL
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.7369	GEN652549 7-FT RANDAL
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.7342	GEN657964 1-ASH2GEN9 0.5750
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.7322	GEN652547 3-FT RANDAL
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.7258	GEN652546 1-FT RANDAL
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.713	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.7092	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.708	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.7007	GEN659290 1-EDGECOL
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.7005	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.7	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.6859	GEN587153 1-G16-021-GEN10.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0503	113.6857	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.6845	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05037	113.6817	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.6789	GEN652410 3-FT PECK
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0488	113.6749	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05454	113.6617	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05035	113.6562	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05052	113.6412	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.6377	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.633	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.633	GEN672348 2-CORY COGEN GENERATOR 2 GT2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.6275	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.6274	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.6274	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.6266	GEN657600 1-L1GEN3 9 0.5750
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.6205	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.6183	GEN652414 4-FT PECK
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.6183	GEN652415 5-FT PECK
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.6047	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.6001	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.5997	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.5918	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05027	113.5881	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.5838	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.5792	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.5739	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.5724	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.55	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.55	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.5496	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.5387	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.5387	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.4977	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.4829	GEN600050 1-FEP
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05007	113.4809	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05007	113.4671	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.464	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.4583	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.4583	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05248	113.4519	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05248	113.4519	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05037	113.4511	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.4346	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05225	113.4209	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.4183	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05168	113.4113	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05168	113.4113	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.3992	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.3992	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05007	113.398	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05007	113.398	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05007	113.3952	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.3743	GEN659192 6-LYNN
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.3731	GEN659162 4-RED WLCK
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.3731	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05007	113.367	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05007	113.367	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0524	113.3665	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0524	113.3665	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.3647	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.3558	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.3546	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.3442	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05193	113.3378	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05193	113.3378	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05007	113.3246	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.3164	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.3149	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.3139	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.3137	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.3109	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.3079	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.2997	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0479	113.2595	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.06416	113.2548	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05248	113.2466	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.2463	GEN600017 C-LS POWER CT
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.2234	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.218	GEN615052 1-CAMBRIDGE GENERATING STATION

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.2062	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.2062	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.2033	GEN681522 3-GENOA 3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.1886	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.1873	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.1657	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.1577	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.1372	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.1268	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.0773	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	113.0124	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.955	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.9468	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.9363	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.8884	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.8884	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.8884	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05414	112.7961	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05414	112.7961	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.6844	GEN652461 5-GARRISON
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.6843	GEN652460 4-GARRISON
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.6576	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.6389	GEN652457 1-GARRISON
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.6388	GEN652459 3-GARRISON
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.6387	GEN652458 2-GARRISON
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.6175	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.6122	GEN652542 1-BIG BEND
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.612	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.6021	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.586	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.5699	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.541	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.5377	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.5368	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.5363	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.4347	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.4323	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.4321	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05148	112.3997	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05148	112.3975	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05148	112.394	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.3299	GEN681542 6-JP MADGETT
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05416	112.2555	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.1907	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	112.0022	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.9961	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.9898	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.9795	GEN652559 1-OAHE
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.936	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.8196	GEN652556 2-OAHE
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.8196	GEN652558 6-OAHE
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.7937	GEN652557 5-OAHE
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.6806	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05454	111.6616	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.6226	GEN659453 1-Gi1414GEN W0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.5788	GEN615010 1-STANTON4
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.5524	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.4181	GEN659141 1-K10215A
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.2626	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.2153	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.1455	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.1454	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.1131	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.0854	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.0812	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	111.0416	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	110.7776	GEN600006 1-AS KING
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	110.7387	GEN657749 1-YOUNG 1 GENERATOR

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	110.2222	GEN600005 1-MONTICELLO
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	109.4977	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04954	109.4904	2801X
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04954	109.4074	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04954	109.2832	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04954	109.2581	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04954	109.2506	2810X2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04954	109.1549	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04954	109.1549	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04954	109.1508	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	109.0584	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	108.5974	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	108.5591	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	108.5112	GEN661015 1-COYOTE
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	108.3012	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	108.1487	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	108.1487	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	108.1179	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	107.9397	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.06024	107.5138	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	107.3921	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	107.0684	GEN659125 1-COVEY
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	106.0979	GEN615001 1-COAL CREEK
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	105.9807	GEN615002 2-COAL CREEK
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.06133	105.0863	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	99.9	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05025	99.9	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04976	158.4289	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05026	158.1121	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04996	157.3811	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05049	156.5982	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05049	156.5378	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05049	156.5378	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05049	155.9882	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04884	155.5664	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04787	155.1788	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05946	154.961	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05013	154.784	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04972	154.5492	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04972	154.5492	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05043	152.9298	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05043	152.9298	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04913	152.8877	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04913	152.8877	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04919	152.5735	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04919	152.5735	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04919	152.0863	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05026	151.634	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05137	151.3442	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05304	151.2632	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05304	151.1893	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05304	151.1689	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05975	151.1165	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05975	151.1165	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0504	151.0108	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	150.7863	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	150.3547	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	150.2051	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04944	150.1243	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04944	150.1243	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	150.0516	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05163	150.012	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	149.9709	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	149.9596	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04944	149.954	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	149.8674	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05203	149.8548	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04944	149.8404	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05063	149.7557	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	149.6471	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05149	149.5579	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05149	149.4927	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	149.4865	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05075	149.4024	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	149.366	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05137	149.3277	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05149	149.3269	HARMONY - ST FRANCIS 115KV CKT 1
FDNSLock	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05181	149.2948	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05282	149.2315	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05139	149.2136	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	149.1019	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05139	149.0925	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05139	149.0925	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05149	148.9597	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0508	148.9154	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05141	148.6926	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05203	148.6542	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	148.6356	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	148.6338	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05069	148.6205	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05069	148.6205	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05069	148.6187	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	148.5529	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	148.5432	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04996	148.5269	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04996	148.5269	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.03727	148.4899	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNSLock	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05149	148.4804	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05114	148.4676	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05065	148.4661	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05069	148.4467	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05114	148.3843	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05114	148.3843	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	148.3823	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05164	148.3378	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05605	148.309	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05605	148.2968	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05114	148.2908	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05114	148.2908	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05215	148.2881	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05605	148.2808	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05182	148.2181	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05162	148.2138	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05423	148.0982	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05423	148.0981	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05164	148.0815	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05423	148.0636	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	148.0203	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	148.008	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05065	147.947	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05094	147.8714	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0475	147.8619	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.8551	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.841	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05033	147.821	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05033	147.821	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.7661	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.7502	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05355	147.73	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05142	147.7215	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05142	147.7215	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.7144	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.7106	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.7104	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.6446	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.6295	GEN345670 1-1RUSH G1 18.000

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.6295	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	147.6066	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05201	147.6042	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.5934	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05201	147.5731	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05094	147.5598	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.5575	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	147.5104	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	147.5103	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	147.5054	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	147.5054	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	147.4871	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	147.4863	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	147.4856	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.4823	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.4776	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05146	147.4451	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05164	147.4164	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	147.3741	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.3669	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.2553	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.2372	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.2007	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06079	147.1909	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.1581	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.1319	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.1285	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	147.0764	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05006	146.8368	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04959	146.8345	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04892	146.2479	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04892	146.2471	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04977	146.2157	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05087	146.1387	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05087	146.1387	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06551	146.125	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05148	146.1051	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05377	146.0053	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05377	145.9942	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05377	145.9942	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	145.8574	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05157	145.8157	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05157	145.8157	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05157	145.8157	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05157	145.8157	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05158	145.7635	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05158	145.7635	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05158	145.7635	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05158	145.7635	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	145.6529	BASE CASE
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04911	145.3779	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05256	145.338	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05305	145.2626	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05305	145.2626	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05124	145.2438	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05124	145.2438	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05124	145.2417	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05124	145.2417	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	145.2277	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	145.2151	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	145.2029	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05151	145.1173	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05151	145.1173	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05151	145.1162	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05151	145.1162	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06551	145.0856	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05276	145.0354	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05276	145.0354	HOLCOMB - SETAB 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05148	144.9721	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05148	144.9721	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05148	144.9625	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05148	144.9574	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05148	144.9548	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05148	144.9547	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05148	144.9547	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05322	144.9469	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05322	144.9469	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.9222	GEN300007 1-NEW MADRID UNIT 2
FDNSLock	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.9174	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.9141	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.9115	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04944	144.8848	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0537	144.8813	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05156	144.864	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05156	144.864	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNSLock	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.8481	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.8421	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05188	144.7897	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05188	144.7897	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.7484	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.7473	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05335	144.6544	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.6343	GEN600045 4-ANSON
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0521	144.6201	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0521	144.6201	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05211	144.611	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05352	144.5584	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05352	144.5584	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05148	144.3279	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.2964	GEN681522 3-GENOA 3
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.2409	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.2111	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.1815	GEN659274 1-GROTON
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.1523	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.1082	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.0918	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.0078	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.0074	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	144.0074	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.9907	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.9568	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.9483	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05521	143.9319	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05521	143.9319	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.8923	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.8707	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.8667	GEN659270 1-WEST SW
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05124	143.8431	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.8401	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05124	143.7379	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05124	143.6782	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05124	143.6637	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05124	143.6636	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05124	143.6258	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05124	143.6258	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.5963	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05124	143.5595	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.4603	GEN652545 7-BIG BEND
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.4169	GEN681542 6-JP MADGETT
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05561	143.3937	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.3013	GEN652544 5-BIG BEND
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.3009	GEN652543 3-BIG BEND
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.3002	GEN652542 1-BIG BEND
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.2567	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.2363	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.2362	GEN659194 1-NDPRAIRWND1W0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.2271	GEN652460 4-GARRISON
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.2271	GEN652461 5-GARRISON
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05519	143.2063	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.1543	GEN652459 3-GARRISON
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.1542	GEN652457 1-GARRISON
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.1542	GEN652458 2-GARRISON
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	143.0436	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	142.6677	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	142.5895	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	142.573	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05272	142.5721	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05272	142.4944	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	142.4934	GEN652559 1-OAHE
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05272	142.4882	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	142.4404	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	142.3028	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	142.1943	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	142.167	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	142.167	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	142.1162	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	142.042	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	142.0355	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	142.0253	GEN615010 1-STANTON4
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	142.0074	GEN652556 2-OAHE
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	142.0074	GEN652557 4-OAHE
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	142.0074	GEN652558 6-OAHE
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	141.9745	GEN659453 1-Gi1414GEN W0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	141.8242	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	141.8078	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	141.7713	GEN659141 1-K10215A
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	141.6728	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	141.6311	GEN600006 1-AS KING
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	141.628	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	141.2258	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	141.152	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06147	141.0085	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	140.8588	GEN600005 1-MONTICELLO
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0426	140.6599	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	140.0463	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04383	139.7392	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	139.2114	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	139.1437	GEN661015 1-COYOTE
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	138.9656	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	138.7762	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	138.7722	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06233	137.4112	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05066	137.2211	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05066	137.0331	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05066	137.0113	2810X2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	136.9322	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	136.8673	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05066	136.4908	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05066	136.4908	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05066	136.4722	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	136.467	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05066	136.4576	2801X
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	136.2855	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	136.2855	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	136.2769	GEN659125 1-COVEY
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05066	135.9689	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	135.5502	GEN615001 1-COAL CREEK
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	135.4121	GEN615002 2-COAL CREEK
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	129.1491	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	129.1491	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_021	0	20WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04649	123.2869	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	122.4374	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04901	120.6784	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0486	119.6387	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0488	118.9945	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04897	117.976	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04856	117.4947	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04856	117.4947	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05849	117.0188	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05849	117.0188	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0583	116.9363	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04932	116.8699	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04932	116.8131	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04932	116.8131	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04932	116.8107	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05185	116.7651	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05185	116.6956	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05185	116.683	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04092	116.5951	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05087	116.5287	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04901	116.5038	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04923	116.475	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04923	116.475	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	116.4145	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04792	116.4145	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04792	116.4145	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04798	116.4129	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04798	116.4129	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04994	116.3872	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04798	116.1433	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05051	116.0607	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04923	116.0549	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	116.0433	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	116.0242	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	115.9448	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05045	115.9263	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	115.9199	GEN336153 1-WATERFORD UNIT#3
FDNSLock	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05791	115.8466	P13:230-345:NPPD:STEGALL3:KV3A
FDNSLock	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05791	115.8429	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05087	115.7021	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	115.6924	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	115.6474	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	115.6396	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05019	115.6075	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04801	115.5933	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04801	115.5933	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04801	115.5449	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04943	115.5423	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04958	115.5218	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04801	115.5006	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04999	115.4967	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04999	115.4966	2809X2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04999	115.4965	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04999	115.4965	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04999	115.4915	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0516	115.4912	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04999	115.4891	2809X1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04999	115.4838	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	115.4449	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05017	115.4216	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05133	115.4169	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05063	115.3602	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05065	115.3528	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	115.3455	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05235	115.3385	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04963	115.3115	FT RANDAL - UTICA JCT 230KV CKT 1
FDNSLock	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05023	115.3036	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04942	115.2857	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	115.233	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	115.2139	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04994	115.178	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04999	115.1123	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	115.0819	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0505	115.0741	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04974	115.049	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0488	115.0047	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0488	115.0047	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.9921	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.9909	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.9871	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04998	114.948	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04942	114.9462	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.9436	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0765	114.922	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05032	114.9127	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04974	114.8742	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.8611	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05032	114.86	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05021	114.8599	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05021	114.8599	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04998	114.8354	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04998	114.8354	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05021	114.8012	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05032	114.7828	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04998	114.78	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04998	114.78	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05032	114.7377	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.7299	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05051	114.717	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0502	114.6946	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05046	114.6806	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05023	114.6798	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05954	114.6674	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05023	114.6299	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0495	114.6232	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0495	114.6232	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.6223	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.6213	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05022	114.617	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0495	114.5843	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.5748	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.5727	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.5725	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05861	114.57	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05861	114.57	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.5396	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05023	114.5301	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05082	114.5293	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05082	114.5284	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05052	114.5183	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.51	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.5099	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0505	114.5024	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.4924	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0495	114.4891	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05032	114.4885	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05513	114.4778	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05046	114.4693	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05513	114.4685	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05513	114.4678	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04983	114.4633	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04983	114.4633	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04983	114.4633	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04983	114.4633	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0505	114.4619	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0505	114.4617	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0505	114.4609	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0505	114.4609	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0505	114.459	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04614	114.4563	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0505	114.4551	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.4519	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0505	114.4168	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.4168	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.4151	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05022	114.4103	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.4015	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.3911	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05034	114.3909	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04994	114.3909	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.3706	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04899	114.3671	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04899	114.3671	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05018	114.3455	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04941	114.3366	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05092	114.3264	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05018	114.3244	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.324	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04994	114.2998	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04877	114.2778	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05023	114.2772	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05046	114.2771	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04994	114.2704	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04837	114.2675	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.2598	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04837	114.2541	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.235	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.2315	GEN303007 1-1BC2 U2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.2296	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.2277	GEN303006 1-1BC2 U1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0472	114.2251	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04837	114.2203	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.2107	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.2105	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05047	114.2024	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05028	114.1994	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05022	114.1909	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.1835	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.1799	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.1781	GEN303008 1-1BC2 U3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.1765	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.1701	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.1695	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.161	GEN642067 1-PLATTE
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05022	114.1564	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.1524	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.1424	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05022	114.1415	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.1406	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05268	114.1224	AINSWORTH - CALAMUS 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05268	114.1216	P12:115:NPPD:1090:AINSWND7:THEDFRD7:BTB
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.1199	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.118	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05268	114.1158	CALAMUS - THEDFORD 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05024	114.1127	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05024	114.1127	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05026	114.1117	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05026	114.1117	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04778	114.1092	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04779	114.108	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05023	114.1077	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.104	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05036	114.1035	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.1017	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.0935	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05026	114.093	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05023	114.0915	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.0862	GEN334071 1-LEWIS CREEK 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.0818	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05051	114.0797	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05221	114.0739	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05024	114.0739	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05221	114.0701	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05031	114.0658	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.0558	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05221	114.0555	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.0555	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04941	114.0503	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05026	114.0485	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05023	114.0458	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05033	114.0311	GENOA 161 - SENECA 161 161KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.0269	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05005	114.0268	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05031	114.0231	NORTH LA CROSSE (10008630_001) 345/161/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04931	114.0131	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	114.007	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05268	113.9952	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.03531	113.9192	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	113.5341	BASE CASE
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05039	113.1182	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05039	113.1182	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05039	113.1182	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05039	113.1182	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0504	113.0945	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0504	113.0945	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0504	113.0945	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0504	113.0945	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05058	113.0819	CRETE - FRIEND 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0503	113.0811	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0503	113.0811	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0503	113.0775	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0503	113.0766	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0503	113.0765	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0503	113.0765	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0503	113.0762	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	113.0568	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	113.0421	GEN620285 1-SOLWAY
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05035	113.04	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05245	113.0347	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	113.0326	CLKREACT5 161.00 - CRYSTLK5 161.00 161KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05017	113.0285	HILLS - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05045	113.0272	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05045	113.0272	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05054	113.027	7MAYWOOD 345.00 - 7SPENCER 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05054	113.0251	7MONTGMRY 345.00 - 7SPENCER 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	113.022	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	113.0215	GEN620115 1-HRDLKGEN 0.6000
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	113.011	GEN620323 2-HOOT LAKE 2 GEN
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	113.0094	GEN600013 3-BLACK DOG GEN 3
FDNSLock	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05045	113.0069	COPSTJCPFRSJ
FDNSLock	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05045	113.0069	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05045	113.0068	STMDSJFAFACO
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	113	GEN600125 2-FEP ST G 13.800
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.9977	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05049	112.9955	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.9887	GEN563302 1-G15096_3 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.9885	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0503	112.9722	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.9721	GEN672384 1-CENTENNIAL WINDFARM
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05165	112.9632	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05165	112.9632	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05048	112.9591	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.9466	GEN652548 5-FT RANDAL
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.9466	GEN652549 7-FT RANDAL
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.9431	GEN657964 1-ASH2GEN9 0.5750
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.9419	GEN652547 3-FT RANDAL

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.9356	GEN652546 1-FT RANDAL
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.9186	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.9175	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.9157	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.9115	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.9095	GEN659290 1-EDGECOL
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.901	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0503	112.8975	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.8959	GEN587153 1-G16-021-GEN10.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05037	112.8921	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.8903	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.8879	GEN652410 3-FT PECK
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0488	112.8842	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05035	112.8626	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05454	112.8623	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05052	112.8517	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.8477	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.843	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.843	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.8375	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.8374	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.8374	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.8365	GEN657600 1-L1GEN3 9 0.5750
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.8298	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.8279	GEN652414 4-FT PECK
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.8279	GEN652415 5-FT PECK
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.8154	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.8101	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.8095	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.8024	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05027	112.7995	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.7942	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.7844	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.7835	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.7792	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.7609	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.7609	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.7605	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.7497	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.7497	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.7117	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.695	GEN600050 1-FEP
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05007	112.6928	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05007	112.6792	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.6765	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.6694	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.6694	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05248	112.6658	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05248	112.6658	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05037	112.6642	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.6471	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.6306	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05168	112.6225	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05168	112.6225	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.6121	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.6121	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05007	112.6108	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05007	112.6108	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05225	112.6102	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05007	112.6081	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.5863	GEN659192 6-LYNN
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.5851	GEN659162 4-RED WLCK
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.5851	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05007	112.5801	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05007	112.5801	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.5775	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.5679	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.5667	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0524	112.5608	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0524	112.5608	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.558	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05193	112.5397	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05193	112.5397	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05007	112.5384	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.5303	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.5288	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.5278	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.5276	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.5249	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.524	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.5137	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05248	112.462	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.4609	GEN600017 C-LS POWER CT
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0479	112.4604	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06416	112.4596	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.4384	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.4329	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.4204	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.4204	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.4184	GEN681522 3-GENOA 3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.4063	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.4023	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.3797	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.3725	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.3529	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.342	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.29	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.2281	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.1728	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.1636	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.154	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.1064	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.1064	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	112.1064	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05414	111.9799	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05414	111.9799	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.9031	GEN652461 5-GARRISON
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.903	GEN652460 4-GARRISON
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.8781	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.8579	GEN652457 1-GARRISON
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.8579	GEN652459 3-GARRISON
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.8578	GEN652458 2-GARRISON
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.8372	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.8345	GEN652542 1-BIG BEND
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.8342	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.8193	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.8056	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.7897	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.7612	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.758	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.7547	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.7543	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.6561	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05148	111.6153	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05148	111.6096	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05148	111.6067	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.5549	GEN681542 6-JP MADGETT
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05416	111.446	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.4148	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.2335	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.2273	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.2181	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.2065	GEN652559 1-OAHE
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.1652	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.0479	GEN652556 2-OAHE
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.0479	GEN652558 6-OAHE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	111.0223	GEN652557 5-OAHE
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	110.9121	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	110.8523	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05454	110.8506	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	110.81	GEN615010 1-STANTON4
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	110.7824	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	110.6497	GEN659141 1-K10215A
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	110.4971	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	110.4514	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	110.3822	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	110.3822	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	110.3502	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	110.3244	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	110.3203	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	110.2765	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	110.0198	GEN600006 1-AS KING
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	109.9789	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	109.4705	GEN600005 1-MONTICELLO
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	108.7542	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04954	108.743	2801X
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04954	108.6515	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04954	108.5483	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04954	108.5199	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04954	108.5124	2810X2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04954	108.4089	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04954	108.4089	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04954	108.4049	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	108.3199	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	107.8569	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	107.8246	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	107.7753	GEN661015 1-COYOTE
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	107.5713	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	107.4128	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	107.4128	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	107.3895	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	107.21	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06024	106.7068	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	106.6705	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	106.344	GEN659125 1-COVEY
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	105.3883	GEN615001 1-COAL CREEK
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05025	105.2724	GEN615002 2-COAL CREEK
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06133	104.2646	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06835	123.4798	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06891	123.2627	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06794	122.3407	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06975	121.7817	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06868	121.2777	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06816	120.8352	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06837	120.1614	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07784	120.0652	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	120.0523	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	119.5576	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	119.532	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06889	119.3847	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06789	119.3269	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06789	119.3269	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	119.2935	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0684	119.1526	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0684	119.1526	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07833	118.8385	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	118.7834	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	118.7834	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07145	118.7521	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06728	118.7374	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06728	118.7374	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06835	118.704	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07145	118.6696	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07145	118.6649	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06734	118.4773	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06734	118.4773	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07056	118.1571	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06754	118.1093	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06754	118.1093	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNSLock	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06983	118.1017	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06734	118.071	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06754	117.9636	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07784	117.9098	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07784	117.9098	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	117.8784	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07043	117.7895	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06754	117.7892	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07043	117.6967	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0678	117.6389	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0678	117.6389	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	117.4993	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	117.4993	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07043	117.4889	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06958	117.483	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06891	117.4727	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06787	117.3601	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06787	117.3601	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06917	117.2847	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06867	117.085	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	117.0601	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	117.0456	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07043	117.0253	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	117.0003	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06917	116.9996	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	116.9776	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06807	116.9746	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06807	116.9746	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07095	116.9735	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07095	116.9724	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06787	116.9626	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06917	116.9414	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06917	116.9414	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07015	116.8871	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07834	116.8787	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07834	116.8787	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06807	116.7154	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07095	116.7069	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07004	116.7036	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06807	116.5143	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	116.4847	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0689	116.4703	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	116.4642	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	116.4139	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	116.3912	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNSLock	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07043	116.3825	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06979	116.3588	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07066	116.3197	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07095	116.1939	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07131	116.1936	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07001	116.1505	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06898	116.1435	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06898	116.1435	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06919	116.1386	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06898	116.1154	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06968	116.038	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07025	116.0373	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06968	115.9862	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06898	115.9708	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06968	115.9321	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06968	115.9321	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07006	115.878	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06908	115.7694	HANLON - SIOUX FALLS 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06958	115.6957	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06895	115.6375	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	115.5946	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	115.5734	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	115.5682	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07034	115.563	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	115.5573	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	115.5561	GEN337652 1-WHITE BLUFF UNIT #1
FDNSLock	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06983	115.5557	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	115.5446	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	115.5031	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	115.4639	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	115.4608	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06847	115.4557	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06847	115.4557	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06913	115.3819	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06942	115.3151	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07183	115.2938	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	115.2558	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	115.246	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07011	115.2427	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07095	115.2	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0695	115.187	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	115.1817	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07197	115.1661	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0695	115.1546	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0695	115.1546	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	115.1287	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06895	115.1256	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07025	115.1224	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	115.0986	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	115.0827	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	115.0827	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	115.0825	GEN501813 1-RODEMACHER UNIT 3
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07035	115.0536	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07461	115.047	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07052	115.0427	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06959	115.039	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	115.0272	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	115.0213	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06926	115.0161	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07461	115.0108	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07461	115.0023	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0695	114.9639	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	114.9383	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07031	114.9326	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07017	114.9309	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.9103	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06816	114.9068	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06816	114.9068	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07077	114.8907	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06982	114.8802	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06989	114.8469	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06959	114.8466	2809X2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.8443	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06959	114.8403	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06959	114.8403	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06959	114.8333	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06959	114.8322	2809X1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07276	114.8243	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07019	114.8077	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06959	114.8043	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06959	114.8041	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07276	114.7857	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07276	114.7802	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07034	114.7513	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09555	114.7392	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.7072	GEN501812 1-RODEMACHER UNIT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06926	114.6933	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07013	114.6774	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07014	114.6737	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07007	114.6682	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.6668	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.6661	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.6638	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.6638	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.6636	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07005	114.628	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07014	114.6049	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.5989	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.5935	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0701	114.5735	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07014	114.5725	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07014	114.5723	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07014	114.5711	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07014	114.5711	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07014	114.5469	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07014	114.5468	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.5442	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.5237	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06947	114.5173	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.5086	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.5074	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.4858	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.4833	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06982	114.4822	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07014	114.4658	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07014	114.4484	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06965	114.4429	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0696	114.4414	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07057	114.437	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06982	114.4251	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07041	114.4238	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07004	114.3904	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	114.3627	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06985	114.359	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06985	114.359	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.3556	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07014	114.347	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06954	114.3377	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07212	114.3219	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.3119	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	114.2755	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07921	114.2704	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	114.2667	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.2512	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.2416	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06985	114.2262	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06985	114.2262	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06995	114.2257	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07008	114.2217	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07237	114.2208	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07237	114.2208	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.2105	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07087	114.2092	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	114.1957	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.1864	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06985	114.181	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06948	114.1625	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06954	114.1397	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.1335	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.1335	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06948	114.1273	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06948	114.1273	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07034	114.126	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06991	114.1258	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06991	114.1258	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.1165	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	114.092	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	114.092	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.0918	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.0916	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06954	114.0912	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0699	114.0898	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.069	114.0841	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0699	114.0797	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06899	114.0743	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06899	114.0743	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07827	114.0727	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07827	114.0727	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06948	114.0378	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06948	114.0378	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	114.0371	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.0257	GEN303007 1-1BC2 U2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	114.0202	GEN303006 1-1BC2 U1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07077	114.0195	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06987	114.0169	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06997	114.0112	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07034	114.0072	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06987	113.9836	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07248	113.9768	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06985	113.9566	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06897	113.9498	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06983	113.9385	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06983	113.9268	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	113.9254	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	113.9227	GEN303008 1-1BC2 U3
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06987	113.9176	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07002	113.912	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07002	113.912	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06814	113.9104	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06814	113.9104	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.8926	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	113.8819	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06983	113.872	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06989	113.8524	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06987	113.8499	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06947	113.8335	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07068	113.8318	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07011	113.8274	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07011	113.826	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07011	113.826	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07011	113.8255	2809X2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07011	113.8248	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06989	113.8161	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	113.8104	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07011	113.8039	2809X1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07062	113.8022	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06996	113.8019	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.7996	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07011	113.7955	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07011	113.7938	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07066	113.7897	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07091	113.7681	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0707	113.7626	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06998	113.7436	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	113.7427	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07043	113.7396	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	113.7379	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06835	113.7264	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07043	113.7061	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.6906	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	113.6591	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07051	113.6395	DENISON - SIOUX CITY 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.6356	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06868	113.6306	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06868	113.6306	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	113.6168	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06966	113.6112	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	113.602	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06978	113.602	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07009	113.592	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07009	113.5919	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06913	113.5851	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06913	113.5851	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06913	113.5851	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.5786	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06913	113.5777	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06913	113.5777	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06885	113.5654	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	113.565	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07009	113.5618	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.5519	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06897	113.5379	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06885	113.5219	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07059	113.5	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07005	113.4981	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07043	113.4864	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07213	113.4827	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06542	113.4403	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07511	113.4156	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07091	113.4009	GORDON - SHANNON 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07055	113.3926	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	113.371	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07511	113.3691	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.343	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07511	113.3345	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.307	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07039	113.2864	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07065	113.2845	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06978	113.2656	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07327	113.2536	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07327	113.2535	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07037	113.2477	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.2391	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.2382	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.2382	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07327	113.2321	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.207	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.2057	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.2037	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.2036	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07037	113.1919	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07037	113.1919	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.1629	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.1509	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.1451	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.1403	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.1398	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07056	113.1382	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07043	113.1342	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07043	113.1342	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07065	113.1219	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	113.1098	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07037	113.0934	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07037	113.0934	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07062	113.091	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07013	113.0794	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0706	113.051	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07042	113.0427	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07006	113.0386	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07042	113.0297	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.0208	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07065	113.0087	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	113.0073	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	112.9823	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	112.9819	GEN335614 1-WILLOW GLENN UNIT#4
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07251	112.9726	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	112.9708	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	112.9614	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	112.9474	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07047	112.9048	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07	112.8786	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07035	112.8762	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	112.8632	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07	112.8384	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07	112.8384	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	112.8204	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07972	112.8133	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07278	112.8108	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07278	112.8108	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	112.8106	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07006	112.806	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07006	112.7748	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07	112.7589	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07	112.7589	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07056	112.7262	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	112.7158	BASE CASE
FDNSLock	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	112.7133	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	112.7036	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0704	112.6928	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07031	112.6267	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06998	112.6129	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06998	112.6129	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06998	112.6129	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06998	112.6129	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0708	112.6123	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06998	112.572	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06998	112.572	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06998	112.572	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06998	112.572	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06949	112.5456	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	112.5338	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	112.44	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	112.44	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07438	112.4035	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06998	112.3933	P12:115:TSGT:GRANTNB7-OGALALA7_2
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07143	112.3843	MARTIN - SHANNON 115KV CKT 1
FDNSLock	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	112.3734	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	112.3639	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07036	112.3549	CALLAWAY - MAXWELL 115KV CKT 1
FDNSLock	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	112.3414	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	112.333	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07194	112.3319	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07194	112.3312	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06951	112.3296	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07095	112.3243	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07005	112.3231	SPERVIL7-G16-049-TAP-345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0699	112.3155	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08312	112.3152	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	112.3108	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07236	112.3074	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07194	112.3057	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07095	112.2524	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0703	112.2494	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0703	112.2494	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07194	112.2231	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07138	112.2187	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07138	112.2187	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07061	112.2094	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07061	112.1982	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07061	112.1977	P13:115-230:NPPD:WAYSIDE4:T1
FDNSLock	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	112.1876	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	112.1806	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07072	112.1544	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	112.1513	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07014	112.1489	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0701	112.1402	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0701	112.1402	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06609	112.1263	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	112.1031	GEN587153 1-G16-021-GEN10.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07095	112.0997	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	112.0594	GEN652548 5-FT RANDAL
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	112.0594	GEN652549 7-FT RANDAL
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	112.049	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	112.0393	GEN652547 3-FT RANDAL
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07201	112.0144	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07155	111.9967	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07155	111.9967	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.9858	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0703	111.9758	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0703	111.9758	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.9534	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07245	111.9359	EMMETE.TAP 7115.00 - ONEILL 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0699	111.8855	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0699	111.8835	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0699	111.8834	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0699	111.8834	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.8833	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.8833	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.882	GEN600045 4-ANSON
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0699	111.8812	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0699	111.8812	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.8807	GEN660003 3-HURON WEST PARK
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06789	111.8799	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.8791	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.8791	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06619	111.8774	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06618	111.8743	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0699	111.871	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.8629	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.8629	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07063	111.8619	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.8617	GEN681522 3-GENOA 3
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07143	111.8564	GORDON - SHANNON 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.8401	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.8331	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.8331	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.8287	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.828	EMERY 161/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.8242	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.8238	GEN600070 9-RIVER SIDE
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07063	111.8222	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.8045	GEN300003 1-THOMAS HILL UNIT 3
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07073	111.7999	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07073	111.7999	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.7997	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.7933	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.7903	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07013	111.7889	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.7841	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.782	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.782	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07073	111.7773	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.7735	GEN600017 C-LS POWER CT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07048	111.7708	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07048	111.7708	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.7603	GEN587583 1-J432-GEN1 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.6945	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.6812	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.6679	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.6608	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07106	111.6557	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.6507	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.6304	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.6303	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07129	111.6216	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07112	111.6162	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.6058	GEN659162 4-RED WLCK
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.6058	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.6046	GEN659192 6-LYNN
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.5859	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07042	111.5336	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07252	111.5321	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07245	111.5215	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.51	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07252	111.5092	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07252	111.5092	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0699	111.4784	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.4736	P12:115:NPPD:TSGT5:OGALALA7:ELSIETP7:BTB
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.4628	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07081	111.458	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.4322	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.4097	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.4097	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.4022	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.3928	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.3766	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.3621	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.362	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.362	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.3559	GEN509416 1-TURK GENERATION
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.35	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.3426	GEN659274 1-GROTON
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07497	111.3381	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.3323	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.3071	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.3059	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.3047	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.3007	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07045	111.2859	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.2773	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.269	1303-KEARNEY
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.269	2367-REDWLCK7 115.00
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.269	2566-SIDNEY1-LNX3345.00
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.269	BASE CASE
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.2602	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.2426	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06959	111.2394	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07039	111.2359	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.2342	P12:115:NPPD:TSGT6:SUTHLND7:ELSIETP7:BTB
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07048	111.2321	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07048	111.2321	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07204	111.2155	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07204	111.2155	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.2109	GEN509403 1-PIRKEY GENERATION
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.1926	SIDNEY1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.1909	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.1867	SIDNEY1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07043	111.1692	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.1443	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.1429	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.1429	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.1426	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07202	111.1316	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.1304	GEN 10648 1-G830_GEN 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.1271	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	111.1271	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.1265	GEN681542 6-JP MADGETT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06959	111.1183	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07588	111.1086	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.0995	GEN659270 1-WEST SW
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.0967	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07284	111.0723	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07093	111.0579	SUB 3455 - SUB 3740 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07093	111.0579	SUB 3455 - SUB 3740 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	111.0431	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07245	111.041	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07081	111.0308	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07081	111.0308	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07018	111.019	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07018	111.019	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07018	111.0173	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07018	111.0173	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07245	111.0158	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07245	111.014	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	110.9846	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07003	110.9736	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07087	110.9682	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08384	110.9542	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07066	110.9526	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06959	110.9418	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06959	110.9285	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06959	110.9284	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07245	110.9229	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07044	110.9106	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.9099	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06959	110.8976	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06959	110.8976	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07077	110.8594	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07077	110.8594	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07034	110.8557	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07058	110.8527	COPSTJCPFRSJ
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07058	110.8527	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07058	110.8527	STMDSJFAFACO
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07078	110.8508	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06959	110.8454	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07081	110.838	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07081	110.838	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07034	110.8278	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07058	110.8232	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07058	110.8188	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07058	110.814	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07034	110.8115	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06849	110.7893	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07056	110.7516	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07056	110.7516	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07058	110.747	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07058	110.7332	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07058	110.7318	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.7276	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07211	110.7127	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07211	110.7127	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.6969	GEN652545 7-BIG BEND
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07193	110.6908	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07193	110.6908	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.6778	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	110.6457	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	110.6347	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	110.6171	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.603	GEN652544 5-BIG BEND
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.5871	GEN652543 3-BIG BEND
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.5868	GEN652542 1-BIG BEND
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07259	110.579	CENTRAL CITY - GRAND ISLAND 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.5696	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.551	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.5427	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.5359	GEN652460 4-GARRISON
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.5358	GEN652461 5-GARRISON
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.5116	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	110.4956	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	110.4836	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.4745	GEN652457 1-GARRISON
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.4745	GEN652458 2-GARRISON
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.4745	GEN652459 3-GARRISON
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07014	110.4619	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07014	110.4619	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	110.4598	GEN600045 4-ANSON
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07251	110.4333	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.4251	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.4178	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07066	110.3822	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.3746	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	110.3541	GEN652414 4-FT PECK
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	110.3541	GEN652415 5-FT PECK
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	110.3484	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	110.3161	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07042	110.2993	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07162	110.2695	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07325	110.1961	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07325	110.1961	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.074	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	110.0658	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.9855	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.9811	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.964	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07438	109.9579	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.9577	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.9556	GEN652559 1-OAHE
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.9436	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.9436	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.9175	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07011	109.9058	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05277	109.9044	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.8875	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.8859	GEN659274 1-GROTON
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.8613	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.8387	GEN672356 1-FUT-WL1X 18.000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.8384	GEN562872 1-G15046_3 0.6900
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.8268	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.071	109.7992	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.071	109.7992	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.794	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.7937	GEN672389 1-FUT-SW1X 18.000
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.7903	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.7903	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.7823	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07011	109.7745	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07011	109.7744	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.7687	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.7342	GEN681542 6-JP MADGETT
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07011	109.7311	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07011	109.7311	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07011	109.6976	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.6947	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.6945	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07011	109.694	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07011	109.6841	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.6833	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.6785	GEN615010 1-STANTON4
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.6671	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.6655	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.6391	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.6137	GEN659270 1-WEST SW
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07114	109.6104	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.5921	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07114	109.591	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07254	109.5904	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07114	109.5873	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.5618	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.5536	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.533	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07328	109.5228	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.5148	GEN600006 1-AS KING
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.4878	GEN652556 2-OAHE
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.4878	GEN652557 4-OAHE
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.4878	GEN652558 6-OAHE
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.4439	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.3785	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07254	109.3462	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07254	109.3462	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.2702	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.2439	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.071	109.2407	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.071	109.2407	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	109.2268	GEN659141 1-K10215A
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.2211	GEN652545 7-BIG BEND
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.1576	GEN652544 5-BIG BEND
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.1222	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.1182	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.117	GEN652543 3-BIG BEND
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.1167	GEN652542 1-BIG BEND
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.1044	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.081	GEN652461 5-GARRISON
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	109.0611	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05359	109.0116	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	108.9965	GEN657749 1-YOUNG 1 GENERATOR
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.9936	GEN652457 1-GARRISON
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.9936	GEN652458 2-GARRISON
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.9936	GEN652459 3-GARRISON
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	108.9329	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.9285	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	108.8979	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07497	108.8878	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07129	108.7851	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07129	108.7851	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	108.7574	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.7416	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	108.7041	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07129	108.6841	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.6208	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07441	108.5899	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.5455	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.5386	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.3619	GEN652559 1-OAHE
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.3224	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.3204	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	108.3194	GEN600005 1-MONTICELLO
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.3191	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.3191	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.2648	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07374	108.2234	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07374	108.2234	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.1793	GEN600006 1-AS KING
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.1217	GEN615010 1-STANTON4
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	108.0754	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.0538	GEN652556 2-OAHE
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.0538	GEN652557 4-OAHE
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.0538	GEN652558 6-OAHE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05026	108.043	KELLY - MEADOWGROVE4230.00 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07604	108.0256	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07604	108.0256	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	108.01	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	107.9997	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	107.9462	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	107.9368	GEN661015 1-COYOTE
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	107.7844	GEN659141 1-K10215A
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04976	107.7554	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07172	107.7016	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	107.673	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07172	107.6718	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07172	107.6662	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07486	107.4958	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	107.4866	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07929	107.4492	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	107.4104	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	107.3753	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	107.2957	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	107.2755	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	107.2631	GEN600005 1-MONTICELLO
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	107.009	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	106.9889	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	106.98	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04996	106.9779	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08019	106.9371	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	106.8879	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	106.8413	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	106.3479	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	106.1513	GEN661015 1-COYOTE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05049	106.0879	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05049	106.0499	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05049	106.0499	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	105.9155	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	105.804	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	105.804	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	105.779	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05049	105.6916	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04787	105.6868	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05946	105.4085	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05013	105.266	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04972	105.133	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04972	105.133	FT THOMPSON - LETCHER 230KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04884	105.006	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	104.9117	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	104.7027	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	104.6654	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06842	104.5732	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06842	104.5125	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06842	104.507	2801X
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06842	104.5038	2810X2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06842	104.4877	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06842	104.4422	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06842	104.4422	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08033	104.3995	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06842	104.3644	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	104.3032	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	104.3032	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	104.2775	GEN659125 1-COVEY
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06891	104.1756	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06891	104.0977	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06891	104.072	2810X2
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	104.0702	GEN615001 1-COAL CREEK
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04913	103.9439	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04913	103.9439	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08119	103.9397	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	103.892	GEN615002 2-COAL CREEK
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06891	103.8373	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06891	103.8373	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06891	103.8161	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06891	103.7976	2801X
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04919	103.7033	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04919	103.7033	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06891	103.581	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05043	103.4228	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05043	103.4228	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04919	103.3487	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	103.3419	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	103.184	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05026	103.143	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	102.9339	GEN659125 1-COVEY
FDNS	00NR_G16_021	0	20SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06986	102.8548	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	102.761	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	102.761	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05304	102.6035	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05304	102.5607	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	102.5265	GEN615001 1-COAL CREEK
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05304	102.5238	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05975	102.4974	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05975	102.4974	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05134	102.492	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0504	102.4655	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	102.3954	GEN615002 2-COAL CREEK
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05137	102.2681	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	102.1643	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	102.099	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	101.9399	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	101.6924	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04944	101.6904	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04944	101.6904	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	101.6772	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	101.5981	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04944	101.5804	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	101.5239	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04944	101.5015	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05163	101.499	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05203	101.4153	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05063	101.3831	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07038	101.2835	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	101.162	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	101.1592	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05149	101.137	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05075	101.1328	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05149	101.088	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	101.0714	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNSLock	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05181	100.9963	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05282	100.9877	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05149	100.9623	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05137	100.8937	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	100.8472	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05139	100.7741	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0508	100.6958	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05139	100.6931	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05139	100.6931	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05149	100.6905	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05069	100.5524	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05069	100.5524	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05069	100.5427	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	100.5016	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	100.5002	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04996	100.4989	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04996	100.4989	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05203	100.4966	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05065	100.4531	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	100.4323	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	100.4243	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05069	100.4141	ONEILL - SPENCER 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05141	100.4102	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05114	100.3381	CARPENTER - HURON 230KV CKT 1
FDNSLock	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05149	100.3244	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	100.3178	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05605	100.3099	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05605	100.3069	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05215	100.3047	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05605	100.2929	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05164	100.2771	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05114	100.2628	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05114	100.2628	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05162	100.2119	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05114	100.1977	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05114	100.1977	CARPENTER - WATERTOWN 230KV CKT 1
FDNSLock	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05141	100.1945	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05182	100.1582	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05423	100.1452	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05423	100.1452	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05423	100.1191	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	100.1	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05141	100.0859	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05164	100.0789	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	100	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	100	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	100	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05065	100	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	99.9	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05094	99.9	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05033	99.9	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05033	99.9	RAUN - SIOUX CITY 345KV CKT 1
FDNSLock	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05139	99.9	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05355	99.8	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	99.8	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	99.8	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	99.8	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	99.8	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	99.8	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	99.8	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	99.8	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05142	99.8	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05142	99.8	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05201	99.7	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05201	99.7	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	99.7	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	99.7	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	99.7	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	99.7	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	99.7	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05094	99.7	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	99.6	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	99.6	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	99.6	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	99.6	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	99.6	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	99.6	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	99.6	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05169	99.5	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05164	99.5	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05146	99.5	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	99.5	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05143	99.5	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05113	99.5	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0475	99.5	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06835	123.6735	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06891	123.5706	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06794	122.5239	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06975	121.8959	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06868	121.5766	STORLA - WESSINGTON 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06816	121.0079	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06837	120.3475	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	120.1941	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07784	120.1855	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	119.7748	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	119.7552	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06889	119.6846	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06789	119.5146	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06789	119.5146	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0684	119.4506	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0684	119.4506	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	119.4428	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07833	119.0431	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07145	118.9736	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06728	118.9057	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06728	118.9057	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07145	118.8918	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06835	118.8801	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	118.8778	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	118.8778	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07145	118.8619	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06734	118.6446	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06734	118.6446	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07056	118.4427	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06754	118.2824	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06754	118.2824	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNSLock	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06983	118.2433	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06734	118.2426	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06754	118.1367	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07784	118.1176	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07784	118.1176	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	118.0602	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06754	117.9627	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07043	117.9314	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0678	117.9308	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0678	117.9308	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07043	117.8384	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06891	117.7627	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	117.6826	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	117.6826	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06787	117.6497	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06787	117.6497	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07043	117.6311	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06958	117.6096	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06917	117.4463	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06867	117.2768	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06807	117.2665	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06807	117.2665	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06787	117.2549	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	117.2384	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07095	117.231	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07095	117.2281	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	117.2234	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	117.1772	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07834	117.1729	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07834	117.1729	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07043	117.169	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06917	117.1655	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	117.1536	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06917	117.1071	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06917	117.1071	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07015	117.08	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06807	117.007	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07095	116.9626	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07004	116.8747	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06807	116.8049	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	116.7574	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0689	116.6657	FT RANDAL - SIOUX CITY 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	116.6634	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07066	116.6096	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	116.5903	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	116.5709	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNSLock	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07043	116.5304	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06979	116.5156	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07095	116.4503	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06919	116.4291	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07131	116.3624	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06968	116.3264	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07001	116.3227	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06898	116.3167	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06898	116.3167	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06898	116.2883	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06968	116.2713	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06968	116.2204	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06968	116.2204	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07025	116.2153	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06898	116.1439	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07006	116.0543	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06908	115.9505	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	115.8625	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	115.8582	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	115.8472	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06958	115.8467	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	115.8346	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06895	115.8287	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	115.7733	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	115.7349	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07034	115.7215	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNSLock	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06983	115.7174	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	115.6812	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	115.6427	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	115.6392	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06847	115.635	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06847	115.635	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06942	115.5998	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07183	115.5815	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06913	115.5734	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0695	115.4737	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	115.4699	GEN635023 3-WALTER SCOTT UNIT 3
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07095	115.4639	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0695	115.442	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0695	115.442	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	115.4248	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07011	115.4219	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	115.368	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07197	115.3548	GRIMES - LEHIGH 345KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07035	115.3359	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07052	115.3286	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	115.3163	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06895	115.315	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	115.3077	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07025	115.2998	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	115.2777	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	115.2612	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	115.2531	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	115.2531	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0695	115.2493	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	115.2266	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07031	115.2132	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07461	115.2073	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06926	115.2058	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	115.2003	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06959	115.1886	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07077	115.1795	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07461	115.1697	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07461	115.161	STEGALL - STEGALL-LNX3230.00 230KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07017	115.112	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06816	115.0924	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06816	115.0924	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	115.0892	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06982	115.0475	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07034	115.0326	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	115.0233	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06989	115.02	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06959	114.9995	2809X2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06959	114.9928	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06959	114.9928	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07019	114.9872	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07276	114.9867	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06959	114.9862	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06959	114.9851	2809X1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06959	114.9571	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06959	114.9547	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07276	114.9462	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07276	114.9407	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.09555	114.9376	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.8866	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06926	114.883	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07014	114.8664	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07013	114.8572	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.8456	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07007	114.8454	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.8446	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0701	114.8441	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.8423	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.8423	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.8421	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07005	114.8083	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06947	114.8044	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.7773	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.7719	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07014	114.7673	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07014	114.753	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07014	114.7527	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07014	114.7516	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07014	114.7515	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07014	114.7281	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07014	114.728	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0696	114.7274	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06965	114.7262	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.7234	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07057	114.7232	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07041	114.7115	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.7032	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.6883	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.6864	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.6649	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.6626	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06982	114.6504	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	114.6494	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07014	114.6426	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07014	114.6143	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06982	114.5942	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07004	114.5712	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	114.5618	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	114.553	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06985	114.5365	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06985	114.5365	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.5353	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07014	114.5186	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06954	114.5085	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07087	114.494	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.4917	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07212	114.4902	OAHE - PHILIP TAP 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	114.482	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07921	114.4579	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.4314	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.4244	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07034	114.4065	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06985	114.4043	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06985	114.4043	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07008	114.4036	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06995	114.4034	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.3901	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07237	114.3899	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07237	114.3899	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	114.377	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	114.377	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.3681	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06899	114.3599	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06899	114.3599	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06985	114.3532	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06948	114.3403	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	114.3233	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06954	114.3121	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07077	114.3049	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.3042	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.3042	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06991	114.3041	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06991	114.3041	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06948	114.3035	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06948	114.3035	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07034	114.2915	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.2874	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.2716	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.2714	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0699	114.2674	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07827	114.2645	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07827	114.2645	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06954	114.2635	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07248	114.2626	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.069	114.2612	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0699	114.2573	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06948	114.2153	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06948	114.2153	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.2054	GEN303007 1-1BC2 U2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.2	GEN303006 1-1BC2 U1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06987	114.1913	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06997	114.1893	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06987	114.1578	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06897	114.1337	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06985	114.1298	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06947	114.1185	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07068	114.1145	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.1055	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.1027	GEN303008 1-1BC2 U3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06983	114.0982	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07002	114.0949	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07002	114.0949	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06987	114.093	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07062	114.0872	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06814	114.087	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06814	114.087	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	114.0849	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07066	114.0769	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	114.0654	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0707	114.0471	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	114.0432	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06983	114.043	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06989	114.0318	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06987	114.0252	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06989	113.9955	MN VALLEY TAP - PANTHER 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	113.9905	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06996	113.9819	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.9756	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07091	113.9412	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	113.923	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06998	113.9228	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.9205	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	113.9181	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07043	113.9166	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06868	113.9153	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06868	113.9153	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06835	113.9119	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06978	113.8869	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07043	113.8788	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.8634	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	113.8392	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.8364	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07051	113.828	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	113.7969	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06966	113.7847	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07059	113.7836	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	113.782	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07009	113.766	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07009	113.766	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06913	113.7626	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06913	113.7626	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06913	113.7626	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06913	113.7553	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06913	113.7553	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06885	113.7464	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	113.7452	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07009	113.7355	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06897	113.7198	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06885	113.704	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06542	113.6925	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07005	113.6821	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07511	113.6804	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07055	113.6765	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07213	113.6692	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07043	113.6615	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.6272	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07511	113.6268	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0961	113.5978	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07511	113.5939	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.5909	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07091	113.5771	GORDON - SHANNON 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07039	113.5704	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07065	113.557	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	113.555	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06978	113.5493	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07037	113.5308	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.5215	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.5209	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.5209	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07327	113.5146	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07327	113.5146	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07327	113.4947	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.4907	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.4896	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.4877	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.4876	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07037	113.475	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07037	113.475	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.4465	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.4343	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.4284	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.4238	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.4233	GEN338388 1-1PLUM PT U1 23.000

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07056	113.4212	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07043	113.4177	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07043	113.4177	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07065	113.3969	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07037	113.3756	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07037	113.3756	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07062	113.3737	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0706	113.3326	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07042	113.3257	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07006	113.3203	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07042	113.3127	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.3059	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.2905	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07065	113.2882	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	113.2814	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.2657	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.265	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.2539	GEN336801 1-BAXTER WILSON UNIT #1
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07251	113.2453	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.2445	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.2336	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07047	113.1875	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07	113.161	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.1452	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07	113.1206	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07	113.1206	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.1056	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07972	113.0961	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.0933	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07006	113.087	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07278	113.0862	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07278	113.0862	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07006	113.0563	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07	113.0411	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07	113.0411	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	113.006	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07877	112.9891	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07877	112.9891	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0704	112.9745	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07056	112.9567	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07041	112.9277	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	112.9172	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.8966	BASE CASE
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06866	112.8746	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06866	112.8746	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNSLock	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.8682	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.8574	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06888	112.8538	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07031	112.851	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0708	112.8479	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06949	112.8268	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	112.8164	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06998	112.7643	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06998	112.7643	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06998	112.7643	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06998	112.7643	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06998	112.7247	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06998	112.7247	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06998	112.7247	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06998	112.7247	FT THOMPSON - OAHE 230KV CKT 4
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07143	112.6626	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.6374	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.6374	P12:115:UMZB:# 119 #: IN NE.
FDNSLock	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.6077	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07095	112.6051	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07438	112.6039	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06998	112.6013	P12:115:TSGT:GRANTNB7-OGALALA7_2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.5972	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.5812	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07036	112.5532	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.5491	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07095	112.5303	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.5263	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07194	112.52	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07194	112.52	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07005	112.5131	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.08312	112.5084	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07236	112.5075	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06937	112.4965	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07194	112.4943	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07061	112.4892	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07061	112.4781	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07061	112.4777	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06937	112.4509	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0699	112.4444	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0703	112.4402	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0703	112.4402	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07194	112.4141	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06609	112.4101	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07138	112.4074	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07138	112.4074	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07095	112.3795	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07014	112.347	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0701	112.3262	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0701	112.3262	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.2769	GEN587153 1-G16-021-GEN10.6900
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.2348	GEN652548 5-FT RANDAL
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.2348	GEN652549 7-FT RANDAL
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07245	112.2183	EMMETE.TAP 7115.00 - ONEILL 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.2151	GEN652547 3-FT RANDAL
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07201	112.1976	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07155	112.1897	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07155	112.1897	103RD & ROKEBY - MOORE 345KV CKT 1
FDNSLock	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.1892	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.1875	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.1841	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.1808	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0703	112.1719	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0703	112.1719	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.1688	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.1612	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.1612	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.1365	GEN590011 2-ERCOT EQUIVALENCE
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07143	112.1357	GORDON - SHANNON 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07063	112.1256	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06789	112.0772	COOPER - MOORE 345KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07073	112.0755	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07073	112.0755	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07063	112.0739	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.0631	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.0631	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.0569	GEN660003 3-HURON WEST PARK
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07073	112.0532	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.0526	GEN600045 4-ANSON
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.043	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.043	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0699	112.0394	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.0392	GEN681522 3-GENOA 3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0699	112.0375	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0699	112.0374	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0699	112.0374	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0699	112.0337	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0699	112.0337	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0699	112.0239	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.0201	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.0132	GEN600065 7-HIGH BRIDGE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.0132	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.0088	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.0056	EMERY 161/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.0046	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	112.0042	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06619	112.0018	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06618	111.9986	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.9892	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.9786	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.976	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.9746	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.9685	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07013	111.9667	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.9618	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.9618	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07048	111.9574	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07048	111.9574	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.952	GEN600017 C-LS POWER CT
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	111.9488	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07106	111.9405	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.9399	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07129	111.9068	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07042	111.8886	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.8757	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	111.8668	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.8476	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.8402	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.8303	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.8155	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.8155	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07252	111.811	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07112	111.8056	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07245	111.8024	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.7915	GEN659162 4-RED WLCK
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.7915	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.7904	GEN659192 6-LYNN
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07252	111.7886	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07252	111.7886	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	111.754	P12:115:NPPD:TSGT5:OGALALA7:ELSIETP7:BTB
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07081	111.7404	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.6976	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	111.6824	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	111.6727	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0699	111.6458	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.6417	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	111.6355	GEN509416 1-TURK GENERATION
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	111.6298	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07497	111.6184	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.6163	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	111.6122	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.5959	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.5959	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0705	111.576	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0705	111.576	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0705	111.576	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0705	111.576	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07045	111.5657	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.5632	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	111.5476	1303-KEARNEY
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	111.5476	2367-REDWLCK7 115.00
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	111.5476	BASE CASE
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.5465	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.5465	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.5465	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0705	111.5346	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0705	111.5346	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0705	111.5346	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0705	111.5346	FT THOMPSON - OAHE 230KV CKT 4

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.527	GEN659274 1-GROTON
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	111.5152	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	111.5	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.4906	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	111.4902	GEN509403 1-PIRKEY GENERATION
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.4884	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.4867	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.4811	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.4537	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07048	111.421	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07048	111.421	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06959	111.4164	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07204	111.4117	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07204	111.4117	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	111.4073	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	111.4073	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07588	111.3877	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.3753	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07284	111.3529	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07093	111.3369	SUB 3455 - SUB 3740 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07093	111.3369	SUB 3455 - SUB 3740 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.3353	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.3336	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.3211	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.3211	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07245	111.3202	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.3201	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07202	111.3198	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.3043	GEN681542 6-JP MADGETT
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07018	111.2987	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07018	111.2987	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07018	111.297	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07018	111.297	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06959	111.2953	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07245	111.2946	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07245	111.2928	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.2881	GEN659270 1-WEST SW
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.2877	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	111.2639	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07003	111.2526	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07087	111.2471	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07066	111.2332	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.08384	111.2328	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.2313	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07245	111.2015	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07044	111.1888	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07034	111.135	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07058	111.1311	COPSTJCPFRSJ
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07058	111.1311	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07058	111.1311	STMDSJFAFACO
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07042	111.1201	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07042	111.1201	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06959	111.1199	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07042	111.1176	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07081	111.1163	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07081	111.1163	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07042	111.1103	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07042	111.1102	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07042	111.1102	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07042	111.1099	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06959	111.1067	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06959	111.1066	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07034	111.1064	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07058	111.1019	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07058	111.0969	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07058	111.0922	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07034	111.0907	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	111.0892	GEN587593 1-J460-GEN1 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06959	111.0754	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06959	111.0754	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06849	111.0672	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07077	111.0526	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07077	111.0526	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07078	111.0432	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07056	111.0294	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07056	111.0294	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07058	111.0255	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06959	111.0232	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07058	111.0114	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07058	111.0101	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07211	110.9912	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07211	110.9912	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07193	110.9703	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07193	110.9703	SUB 3454 - WAGENER 345KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.9302	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.9202	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.9032	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.8946	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.8692	GEN652545 7-BIG BEND
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.8611	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07259	110.857	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06668	110.823	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06667	110.8201	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.7832	GEN652544 5-BIG BEND
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.773	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.7648	GEN652543 3-BIG BEND
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.7646	GEN652542 1-BIG BEND
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.7614	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.7607	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.7421	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.7344	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.731	GEN600045 4-ANSON
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.7274	GEN652460 4-GARRISON
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.7274	GEN652461 5-GARRISON
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07251	110.7104	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.6941	GEN660003 3-HURON WEST PARK
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.687	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.6667	GEN652457 1-GARRISON
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.6667	GEN652458 2-GARRISON
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.6667	GEN652459 3-GARRISON
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07066	110.6584	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.6315	GEN652414 4-FT PECK
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.6315	GEN652415 5-FT PECK
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.6258	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.6135	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07014	110.6123	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07014	110.6123	FT THOMPSON - LOWERBRULE 4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.6064	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.594	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07042	110.573	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.5665	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07162	110.5463	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07325	110.4162	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07325	110.4162	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.2624	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.2566	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.2557	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.2542	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.2201	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.2201	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.1875	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05277	110.1845	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.1836	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07011	110.1794	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07438	110.1688	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.1617	GEN660016 1-B_H WIND 0.7000

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.1605	GEN659274 1-GROTON
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.1459	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.1459	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.1459	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.1437	GEN652559 1-OAHE
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.142	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.1357	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.1142	GEN672356 1-FUT-WL1X 18.000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.1141	GEN562872 1-G15046_3 0.6900
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.1016	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.071	110.0747	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.071	110.0747	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.0691	GEN672389 1-FUT-SW1X 18.000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.0577	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	110.0505	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07011	110.05	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07011	110.0499	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	110.0088	GEN681542 6-JP MADGETT
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07011	110.0064	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07011	110.0064	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	109.9797	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	109.9797	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07011	109.974	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	109.9733	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07011	109.9696	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.9692	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.969	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	109.9582	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07011	109.9581	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.958	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.9429	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.9412	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.9144	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.8888	GEN659270 1-WEST SW
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	109.8754	GEN615010 1-STANTON4
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07254	109.8676	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.8664	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.8366	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07114	109.8015	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07328	109.7986	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07114	109.7855	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07114	109.7827	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	109.7393	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	109.7195	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.7157	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	109.6946	GEN600006 1-AS KING
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	109.6773	GEN652556 2-OAHE
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	109.6773	GEN652557 4-OAHE
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	109.6773	GEN652558 6-OAHE
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07254	109.622	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07254	109.622	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	109.5747	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.5441	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.071	109.515	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.071	109.515	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.4941	GEN652545 7-BIG BEND
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	109.4379	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.4289	GEN652544 5-BIG BEND
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	109.425	GEN659141 1-K10215A
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.3943	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.3902	GEN652543 3-BIG BEND
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.3898	GEN652542 1-BIG BEND
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.3887	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.3749	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.3531	GEN652461 5-GARRISON
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.3343	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05359	109.2926	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.2674	GEN652457 1-GARRISON

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.2674	GEN652458 2-GARRISON
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.2674	GEN652459 3-GARRISON
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.2027	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	109.1977	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07497	109.1641	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	109.1284	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	109.0873	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07129	109.0585	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07129	109.0585	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	109.0139	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	108.9589	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07129	108.957	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	108.9078	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.8942	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07441	108.8612	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.8177	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.8107	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.637	GEN652559 1-OAHE
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.5952	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.5944	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.5917	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.5917	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.5373	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	108.5041	GEN600005 1-MONTICELLO
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07374	108.5009	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07374	108.5009	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.4507	GEN600006 1-AS KING
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.3942	GEN615010 1-STANTON4
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05026	108.3297	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.3259	GEN652556 2-OAHE
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.3259	GEN652557 4-OAHE
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.3259	GEN652558 6-OAHE
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07604	108.2971	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07604	108.2971	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.2812	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.2707	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	108.2601	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.2184	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	108.1422	GEN661015 1-COYOTE
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	108.0563	GEN659141 1-K10215A
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04976	108.0413	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07172	107.9753	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	107.9456	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07172	107.9446	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07172	107.9388	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07486	107.772	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	107.7572	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07929	107.7212	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	107.6815	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	107.6464	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	107.5667	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	107.5464	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	107.5322	GEN600005 1-MONTICELLO
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04996	107.2595	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	107.2485	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	107.2234	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.08019	107.2162	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	107.1732	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	107.1565	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	107.0255	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	106.546	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	106.4199	GEN661015 1-COYOTE
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05049	106.3654	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05049	106.3271	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05049	106.3271	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	106.1809	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	106.0754	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	106.0754	GEN562715 1-G15_023_5 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	106.0444	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05049	105.9699	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04787	105.9697	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05946	105.6869	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05013	105.5466	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04972	105.4117	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04972	105.4117	FT THOMPSON - LETCHER 230KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04884	105.291	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	105.139	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	104.9678	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	104.9296	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06842	104.7109	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06842	104.7061	2801X
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06842	104.6869	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06842	104.6677	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.08033	104.6649	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06842	104.6589	2810X2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06842	104.6416	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06842	104.6416	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06842	104.6099	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	104.5332	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	104.5332	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	104.5076	GEN659125 1-COVEY
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06891	104.4027	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06891	104.3408	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06891	104.3155	2810X2
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	104.3011	GEN615001 1-COAL CREEK
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04913	104.2199	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04913	104.2199	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.08119	104.2172	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	104.1249	GEN615002 2-COAL CREEK
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06891	104.0994	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06891	104.0994	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06891	104.0784	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06891	104.0596	2801X
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04919	103.978	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04919	103.978	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06891	103.8456	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05043	103.6955	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05043	103.6955	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04919	103.6232	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	103.6044	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	103.4433	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05026	103.4167	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	103.1954	GEN659125 1-COVEY
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06986	103.0652	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	103.0225	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	103.0225	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05304	102.8777	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05304	102.8327	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05304	102.7942	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	102.7869	GEN615001 1-COAL CREEK
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05975	102.7717	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05975	102.7717	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05134	102.7661	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0504	102.7391	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	102.6555	GEN615002 2-COAL CREEK
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05137	102.5345	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	102.4367	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	102.3688	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	102.2099	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	101.9634	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04944	101.9615	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04944	101.9615	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	101.9482	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	101.869	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04944	101.8512	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	101.7946	GEN336153 1-WATERFORD UNIT#3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04944	101.7713	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05163	101.7691	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05203	101.6854	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05063	101.6539	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07038	101.5385	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	101.4316	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	101.4289	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05149	101.4058	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05075	101.4023	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05149	101.3567	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	101.341	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNSLock	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05181	101.266	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05282	101.2564	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05149	101.2307	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05137	101.1613	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05169	101.118	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05139	101.0412	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0508	100.9653	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05139	100.9591	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05139	100.9591	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05149	100.9578	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05069	100.821	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05069	100.821	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05069	100.8111	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100.77	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100.7685	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04996	100.7672	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04996	100.7672	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05203	100.7645	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05065	100.7217	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100.7002	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100.6922	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05069	100.6823	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05141	100.6775	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05114	100.6044	CARPENTER - HURON 230KV CKT 1
FDNSLock	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05149	100.5914	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100.5869	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05605	100.5762	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05605	100.5741	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05215	100.5709	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05605	100.5595	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05164	100.5454	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05114	100.53	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05114	100.53	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05162	100.4796	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05114	100.4645	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05114	100.4645	CARPENTER - WATERTOWN 230KV CKT 1
FDNSLock	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05141	100.4606	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05182	100.4252	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05423	100.4117	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05423	100.4116	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05423	100.3856	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05141	100.3528	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05164	100.3466	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05065	100.3095	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100.2822	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100.2756	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05094	100.2109	RASMUSN - UTICA JCT 230KV CKT 1
FDNSLock	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05139	100.2045	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100.1523	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100.1415	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05033	100.1409	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05033	100.1409	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0779	100.1186	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100.1	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100.1	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100.1	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05355	100.0917	GRIMES - LEHIGH 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100.085	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100.0691	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05201	100	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	100	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05142	100	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05142	100	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05094	100	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05201	99.9	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05169	99.9	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05169	99.9	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05169	99.9	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05169	99.9	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05169	99.9	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05169	99.9	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05169	99.9	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	99.9	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	99.9	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	99.9	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05169	99.8	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05169	99.8	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05164	99.8	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05146	99.8	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	99.8	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05113	99.8	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06079	99.7	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	99.7	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	99.7	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	99.7	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05169	99.6	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	99.6	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	99.6	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	99.6	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	99.6	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05113	99.6	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05113	99.6	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04986	99.6	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04986	99.6	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05989	99.5	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05989	99.5	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05144	99.5	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05144	99.5	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05143	99.5	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03358	106.1077	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03388	105.8283	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	KELLY - MEADOWGROVE4230.00 230KV CKT 1	368	368	0.03628	101.3204	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.03079	122.7969	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.03079	122.228	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.03079	122.1834	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.03082	104.7076	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.03082	104.182	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.03082	104.158	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.03498	121.3215	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.03498	120.7359	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.03498	120.6885	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.02967	117.631	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	25SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.02967	117.6229	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.02987	117.1445	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.02987	117.0533	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	0	20SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.02987	116.9552	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	16WP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.03459	99.6	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	400	480	0.03498	99.6	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	0	17SP	G16_021	FROM->TO	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1	400	480	0.03498	99.6	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.07447	100.8581	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	COLUMEAST (COL.EAST T3) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.07447	100.6148	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.05024	147.0008	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.0443	134.1488	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_021	2	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04901	114.2989	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	16WP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.04283	108.4793	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05024	146.0007	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0443	133.2356	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_021	2	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04901	113.4997	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	16WP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04283	107.7255	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07039	115.3799	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0698	115.1707	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07004	114.182	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07073	113.3213	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07149	113.2451	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07073	113.0692	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07073	113.0462	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07073	113.0462	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08021	112.8748	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07027	112.8161	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06975	112.4324	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06975	112.4324	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	112.1888	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	111.9659	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNSLock	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07177	111.4257	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	111.3598	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	111.3598	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06908	111.2866	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06908	111.2866	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06915	111.0556	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06915	111.0556	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07077	110.8938	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07077	110.8938	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07344	110.888	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07344	110.8019	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07344	110.7607	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06915	110.6927	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07039	110.5151	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNSLock	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07149	110.1862	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	110.0326	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08041	110.0143	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08041	110.0143	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07178	109.8638	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07175	109.8299	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07059	109.7953	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	109.3739	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	109.3283	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	109.2527	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06966	109.0896	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06966	109.0896	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07206	109.0511	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07223	109.0225	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06966	108.9416	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07223	108.9375	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07246	108.9132	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06966	108.8814	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	108.8638	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07156	108.8254	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	108.816	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07223	108.804	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	108.7321	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0733	108.7067	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07156	108.6843	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07156	108.6843	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07156	108.6842	2809X2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07156	108.6752	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07156	108.6704	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07156	108.6646	2809X1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07156	108.6564	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07177	108.6384	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07091	108.6363	FT RANDAL - SIOUX CITY 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07223	108.4778	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07103	108.4359	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07212	108.4193	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	108.4117	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07182	108.2866	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07182	108.2866	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07225	108.2558	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	108.2132	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07095	108.1753	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07095	108.1746	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07095	108.1746	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07182	108.0872	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	108.0802	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	108.0785	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07095	108.0172	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07234	108.0006	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07246	107.9952	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.987	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.9754	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.9068	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07114	107.9005	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07207	107.8718	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07223	107.8691	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07096	107.8636	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07207	107.8623	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07183	107.8197	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07004	107.7763	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07004	107.7763	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07202	107.6621	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07224	107.6413	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07663	107.6369	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07145	107.6235	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07663	107.6209	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07663	107.6155	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07145	107.5464	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07145	107.5464	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.5346	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.5327	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07183	107.5224	FORMAN - HANKINSON 230KV CKT 1
FDNSLock	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07183	107.4964	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07145	107.4775	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07145	107.4775	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07096	107.4266	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07474	107.4085	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07474	107.3962	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07474	107.3888	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.3854	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.3734	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.3182	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07128	107.2968	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.2888	GEN337041 1-GERALD ANDRUS
FDNSLock	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07179	107.2483	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07059	107.2233	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07059	107.2233	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07407	107.205	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07182	107.1989	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.1931	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.1896	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.1895	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.1514	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07246	107.1441	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07246	107.14	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.1334	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07214	107.132	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.1255	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.1253	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07184	107.0861	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07184	107.0861	BLAIR - GRANITE FALLS 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.0794	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07214	107.0774	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07214	107.0774	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.09818	107.0721	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07214	107.0659	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07214	107.0657	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	107.0522	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07214	107.049	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07214	107.0489	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07128	107.0475	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07214	106.9922	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07211	106.9779	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.9558	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07182	106.9372	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.9144	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07189	106.8814	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07207	106.8709	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.8325	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.8264	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.812	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07152	106.8116	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.7947	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.7906	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.7773	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.765	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08145	106.7226	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07184	106.6862	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07211	106.6777	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07152	106.6489	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07016	106.644	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07016	106.644	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07183	106.6388	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.6186	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07152	106.6133	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.6095	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07195	106.5677	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07208	106.5491	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08063	106.5397	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08063	106.5397	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.5302	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.5288	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.5164	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.5164	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.5132	GEN303007 1-1BC2 U2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07114	106.5108	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.5086	GEN303006 1-1BC2 U1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07207	106.5026	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07183	106.4568	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07201	106.4511	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07201	106.4511	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.4407	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.4403	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.4299	GEN303008 1-1BC2 U3
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.4275	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07183	106.4272	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.42	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.4165	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.4165	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07183	106.3782	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07122	106.3742	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07122	106.3742	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07122	106.3742	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07122	106.3742	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07187	106.3726	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07228	106.3624	EAGLE - PHILIP 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07183	106.3596	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07185	106.3577	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07224	106.3558	P13:115-230:TSGT:SIDNEY-KV1A

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.3443	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07183	106.3384	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07109	106.3353	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07109	106.3353	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07109	106.3353	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07233	106.3307	PALXFRASBTHI
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07109	106.3296	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07109	106.3296	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07183	106.3146	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07	106.3133	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07233	106.3061	7PALM TAP 345.00 - SUB T 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07241	106.2987	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07187	106.2983	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07215	106.2953	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07215	106.2953	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07215	106.2919	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.2881	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07228	106.2863	EAGLE - MARTIN 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07063	106.2851	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07241	106.2787	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.2593	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07163	106.2587	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07185	106.2567	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.2532	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07255	106.246	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07187	106.2331	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.2292	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07386	106.192	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07386	106.1871	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.1866	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.1861	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.1824	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07266	106.1726	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07163	106.1658	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07446	106.1636	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.1521	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07386	106.149	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.1488	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07098	106.1488	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07194	106.1428	GENOA 161 - SENECA 161 161KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07197	106.1343	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.1197	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07192	106.1186	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.1095	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.1095	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.072	106.1084	FRANKS - HUBEN 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.0917	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.0789	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.0732	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.0655	GEN334432 1-SABINE UNIT 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.0654	GEN334431 1-SABINE UNIT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.0613	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.0575	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.0552	GEN336242 1-1NMIL ST1 18.000
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07466	106.0533	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07466	106.0533	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.0486	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.0486	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.045	GEN334031 1-FRONTIER UNIT 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	106.0444	GEN334030 1-FRONTIER UNIT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07241	106.044	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07228	106.0375	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07228	106.0375	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNSLock	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07228	106.0023	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06762	105.9639	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	105.4469	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	105.4381	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	105.4185	BASE CASE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07191	105.2812	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0723	105.1733	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.072	105.1724	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.072	105.1724	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.072	105.1724	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.072	105.1724	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07263	105.1417	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.072	105.1282	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.072	105.1282	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.072	105.1282	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.072	105.1282	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0722	105.1225	CALLAWAY - MAXWELL 115KV CKT 1
FDNSLock	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	105.1176	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	105.1032	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	105.0897	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07187	105.0795	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07187	105.0795	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	105.0787	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06811	105.0375	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0681	105.0358	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0724	105.0265	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (N
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07289	105.0152	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07231	104.9968	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07231	104.9968	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07436	104.9905	AXTELL - PAULINE 345KV CKT 1
FDNSLock	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0724	104.99	BONESTEEL - GREGORY 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07447	104.9875	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.9743	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07672	104.9724	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07346	104.9515	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07346	104.9515	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07447	104.9387	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.9328	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.9325	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07193	104.8859	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07447	104.8825	AINSWORTH - STUART 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07199	104.8714	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.8663	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0724	104.865	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07208	104.8633	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07208	104.8633	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0724	104.8607	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0724	104.8575	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07214	104.8521	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0724	104.8516	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08556	104.816	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.8052	GEN652548 5-FT RANDAL
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.8052	GEN652549 7-FT RANDAL
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.785	GEN652547 3-FT RANDAL
FDNSLock	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07409	104.7683	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07231	104.7275	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07231	104.7275	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.711	GEN600020 2-ANGUS ANSON1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07246	104.7019	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07246	104.7019	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.6934	GEN600021 3-ANGUS ANSON2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07449	104.6892	LOUP CITY - NORTH LOUP 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.6722	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.6679	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.6671	GEN659290 1-EDGECOL
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.665	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.665	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07363	104.6616	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07363	104.6616	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.6556	GEN587153 1-G16-021-GEN10.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.6534	GEN652410 3-FT PECK
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.6489	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.6346	GEN590011 2-ERCOT EQUIVALENCE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07199	104.6302	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.06998	104.6238	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.0724	104.6161	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.6059	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.6029	GEN660003 3-HURON WEST PARK
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.5807	GEN652414 4-FT PECK
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.5807	GEN652415 5-FT PECK
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07191	104.565	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07191	104.5633	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07191	104.5633	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07191	104.5633	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.5609	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07191	104.5535	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07191	104.5535	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07191	104.5518	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.5327	EMERY 161/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07214	104.528	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.5216	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.5196	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.5114	GEN600050 1-FEP
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.5113	GEN600046 1-MECST
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.494	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.4833	GEN600047 1-MECCT1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.4559	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.4548	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.448	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.4323	GEN600045 4-ANSON
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.4261	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.4261	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.4236	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.4234	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.4234	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.3862	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.3861	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.3839	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.3839	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.381	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.3797	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.3758	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.3718	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.3717	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.3567	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.3251	GEN659192 6-LYNN
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.3244	GEN659162 4-RED WLCK
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.3244	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.3193	GEN600017 C-LS POWER CT
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.2808	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.2665	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.251	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07191	104.2289	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.2275	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.2136	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.1736	GEN681522 3-GENOA 3
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07246	104.1657	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07246	104.1657	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.1545	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.1545	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.1272	GEN659274 1-GROTON
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.0888	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.0755	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.0732	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.0715	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.0683	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.0647	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.0642	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07377	104.057	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.0564	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.0373	GEN672303 3-BOUNDARY DAM GENERATOR 3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.0373	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.0325	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07398	104.0285	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07398	104.0285	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	104.0074	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.9769	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.9628	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.9113	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07274	103.9095	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07274	103.9095	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.9009	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.8934	GEN659270 1-WEST SW
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07275	103.8833	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07161	103.8826	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.8787	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.8637	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.8588	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.8585	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07161	103.7882	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07161	103.7414	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07161	103.7307	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07161	103.7306	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07161	103.6997	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07161	103.6997	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07161	103.6495	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.6037	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.4293	GEN652545 7-BIG BEND
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.4175	GEN681542 6-JP MADGETT
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.3534	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.3435	GEN652543 3-BIG BEND
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.3428	GEN652542 1-BIG BEND
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.3403	GEN652544 5-BIG BEND
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.3391	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.3351	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.3287	GEN652460 4-GARRISON
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.3287	GEN652461 5-GARRISON
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.268	GEN652457 1-GARRISON
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.268	GEN652458 2-GARRISON
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.268	GEN652459 3-GARRISON
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.1844	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.0602	GEN652559 1-OAHE
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	103.0389	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	102.8596	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07519	102.8222	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07519	102.8222	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	102.8013	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.05488	102.6882	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	102.6579	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	102.6331	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	102.6331	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	102.589	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07187	102.5854	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07313	102.5784	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07313	102.5739	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	102.5561	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07313	102.5551	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	102.4952	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07672	102.4217	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	102.4198	GEN615010 1-STANTON4
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	102.2934	GEN652556 2-OAHE
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	102.2934	GEN652557 4-OAHE
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	102.2934	GEN652558 6-OAHE
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	102.2901	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	102.2281	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	102.2229	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	102.2013	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	102.131	GEN659141 1-K10215A
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07519	102.0719	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	101.9096	GEN600006 1-AS KING
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	101.843	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	101.7306	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	101.671	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07625	101.469	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	101.3436	GEN600005 1-MONTICELLO
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	100.6028	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07795	100.5977	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07795	100.5977	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.08165	100.2293	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	100.1376	GEN661015 1-COYOTE
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	99.9	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	99.8	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	99.7	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_021	2	17SP	G16_021	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.07186	99.6	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07039	115.53	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0698	115.301	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07004	114.3095	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07073	113.4251	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07149	113.2758	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07073	113.1785	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07073	113.1558	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07073	113.1558	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.08021	112.9642	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07027	112.9585	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06975	112.5807	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06975	112.5807	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	112.2922	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	112.0874	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNSLock	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07177	111.5181	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	111.4374	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	111.4374	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06908	111.4184	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06908	111.4184	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06915	111.1857	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06915	111.1857	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07344	111.032	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07077	110.9946	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07077	110.9946	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07344	110.9373	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07344	110.8838	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06915	110.8272	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07039	110.6598	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNSLock	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07149	110.2748	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.08041	110.1856	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.08041	110.1856	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	110.1777	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07178	109.9709	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07059	109.9511	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07175	109.9365	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	109.5162	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	109.4755	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	109.3969	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06966	109.2354	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06966	109.2354	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07206	109.1875	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07223	109.14	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06966	109.0873	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07246	109.0572	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07223	109.0562	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06966	109.0279	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	109.0058	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	108.9612	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07223	108.9228	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07156	108.9198	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	108.878	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0733	108.8447	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07091	108.7954	FT RANDAL - SIOUX CITY 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07156	108.7827	2809X2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07156	108.7826	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07156	108.7826	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07156	108.7739	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07156	108.7657	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07156	108.763	2809X1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07177	108.7593	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07156	108.755	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07223	108.5984	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07103	108.5833	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07212	108.5621	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	108.5548	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07182	108.4078	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07182	108.4078	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07225	108.4013	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07095	108.3207	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07095	108.3204	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07095	108.3204	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	108.3103	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	108.2263	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	108.2245	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07182	108.2104	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07095	108.1614	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07246	108.1401	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	108.1327	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07234	108.1299	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	108.1212	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07114	108.0573	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	108.0542	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07096	108.0214	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07207	108.0186	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07207	108.0117	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07223	107.9967	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07183	107.9462	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07004	107.9267	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07004	107.9267	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07202	107.8163	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07224	107.7858	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07663	107.7678	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07145	107.7638	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07663	107.7508	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07663	107.7455	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07145	107.6853	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07145	107.6853	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	107.6809	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	107.6788	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07183	107.6521	FORMAN - HANKINSON 230KV CKT 1
FDNSLock	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07183	107.6251	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07145	107.6178	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07145	107.6178	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07096	107.5833	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07474	107.5408	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	107.5317	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07474	107.5286	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07474	107.5209	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	107.5198	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	107.4647	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07128	107.4536	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	107.4352	GEN337041 1-GERALD ANDRUS
FDNSLock	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07179	107.3812	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07059	107.3718	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07059	107.3718	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07407	107.3614	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	107.3395	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	107.3359	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	107.3359	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07182	107.3315	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	107.2986	GEN501812 1-RODEMACHER UNIT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07246	107.295	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07246	107.2909	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07214	107.2846	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	107.2799	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	107.2719	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	107.2717	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.09818	107.2378	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07184	107.2284	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07184	107.2284	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	107.2268	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07214	107.2246	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07214	107.2246	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07214	107.2134	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07214	107.2131	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07128	107.205	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	107.1983	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07214	107.1967	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07214	107.1967	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07214	107.1349	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07211	107.1241	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	107.1031	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07182	107.0723	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	107.0642	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07189	107.0259	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07207	107.0191	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.9786	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.9726	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.9583	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07152	106.9505	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.941	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.9373	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.9271	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.9118	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.08145	106.8777	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07184	106.8234	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07211	106.8232	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07016	106.7919	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07016	106.7919	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07152	106.7894	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07183	106.7735	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.7657	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07152	106.7543	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.7495	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07195	106.7132	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.08063	106.6977	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.08063	106.6977	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07208	106.6964	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.6774	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.6763	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.6631	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.6631	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.6605	GEN303007 1-1BC2 U2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.6558	GEN303006 1-1BC2 U1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07207	106.6526	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07114	106.6502	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07201	106.5995	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07201	106.5995	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07183	106.5949	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.5881	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.5877	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.5774	GEN303008 1-1BC2 U3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.5749	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07183	106.5656	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.5647	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.5647	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.5622	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07122	106.5183	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07122	106.5183	FT THOMPSON - HURON 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07122	106.5183	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07122	106.5183	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07183	106.5176	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07187	106.5151	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07224	106.5119	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07228	106.5028	EAGLE - PHILIP 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07183	106.4994	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07185	106.499	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.4919	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07109	106.4816	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07109	106.4816	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07109	106.4816	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07233	106.4804	PALXFRASBTHI
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07183	106.4783	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07109	106.476	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07109	106.476	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07183	106.4606	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07	106.4596	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07233	106.456	7PALM TAP 345.00 - SUB T 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07187	106.4415	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07241	106.4414	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.4385	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07063	106.4382	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07215	106.4376	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07215	106.4376	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07215	106.4341	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07228	106.4275	EAGLE - MARTIN 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07241	106.423	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.4072	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07255	106.402	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07163	106.4014	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.4011	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.3772	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07187	106.3768	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07386	106.348	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07386	106.3417	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.3305	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.3304	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.33	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07266	106.3173	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07163	106.3093	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07446	106.308	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07386	106.3036	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07098	106.3012	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.2978	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07194	106.2913	GENOA 161 - SENECA 161 161KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07197	106.2825	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.2738	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07192	106.2674	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.2577	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.2577	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.072	106.2576	FRANKS - HUBEN 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.24	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.2281	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.2219	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.2147	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.2141	GEN334432 1-SABINE UNIT 2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.2139	GEN334431 1-SABINE UNIT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.2061	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.2037	GEN336242 1-1NMIL ST1 18.000
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07466	106.1983	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07466	106.1983	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.1958	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.1958	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	106.1928	GEN334030 1-FRONTIER UNIT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06762	106.1898	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07241	106.1885	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07228	106.1767	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07228	106.1767	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNSLock	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07228	106.1416	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	105.5728	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	105.5685	BASE CASE
FDNSLock	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	105.5641	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07191	105.3634	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0723	105.3612	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07263	105.3301	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNSLock	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	105.3277	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	105.3137	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	105.3061	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	105.2954	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.072	105.2888	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.072	105.2888	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.072	105.2888	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.072	105.2888	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0722	105.2828	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.072	105.2465	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.072	105.2465	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.072	105.2465	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.072	105.2465	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07187	105.2451	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07187	105.2451	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07289	105.2126	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNSLock	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0724	105.177	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07231	105.1544	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07231	105.1544	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07436	105.154	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07447	105.1427	ATKINSON - EMMET 115KV CKT 1
FDNSLock	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0724	105.1409	BONESTEEL - GREGORY 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	105.134	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06811	105.1332	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07672	105.1329	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0681	105.1313	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07346	105.1075	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07346	105.1075	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07447	105.0954	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07447	105.0398	AINSWORTH - STUART 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07193	105.0374	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	105.0207	GEN652546 1-FT RANDAL
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0724	105.0186	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07208	105.0156	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07208	105.0156	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07214	105.0155	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0724	105.0144	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	105.0131	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0724	105.0123	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0724	105.0054	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.08556	104.9759	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.9501	GEN652548 5-FT RANDAL
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.9501	GEN652549 7-FT RANDAL
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.9496	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.9443	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.9328	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.9325	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.9305	GEN652547 3-FT RANDAL
FDNSLock	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07409	104.9185	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07231	104.8905	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07231	104.8905	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.8585	GEN600020 2-ANGUS ANSON1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07246	104.8573	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07246	104.8573	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07449	104.8412	LOUP CITY - NORTH LOUP 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.8409	GEN600021 3-ANGUS ANSON2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.8234	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07363	104.8213	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07363	104.8213	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.8213	GEN659290 1-EDGECOL

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.8198	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.8195	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.8195	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.8093	GEN652410 3-FT PECK
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.8035	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.7999	GEN587153 1-G16-021-GEN10.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.7865	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.06998	104.7865	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07199	104.7833	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.0724	104.7736	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.7559	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.7488	GEN660003 3-HURON WEST PARK
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.7371	GEN652414 4-FT PECK
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.7371	GEN652415 5-FT PECK
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.7129	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.683	EMERY 161/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07191	104.6798	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07191	104.6782	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07191	104.6782	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07191	104.6782	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07214	104.6764	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.6746	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.673	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07191	104.667	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07191	104.667	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07191	104.6653	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.6621	GEN600050 1-FEP
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.66	GEN600046 1-MECST
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.6444	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.632	GEN600047 1-MECCT1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.6085	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.6075	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.6007	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.5835	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.5775	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.5775	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.5749	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.5748	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.574	GEN600045 4-ANSON
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.5439	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.5438	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.5359	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.5359	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.5313	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.5275	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.5254	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.5239	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.5238	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.5088	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.4839	GEN659192 6-LYNN
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.4831	GEN659162 4-RED WLCK
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.4831	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.4711	GEN600017 C-LS POWER CT
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.4248	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.4193	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.4033	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.3805	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.3692	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07191	104.3596	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07246	104.3254	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07246	104.3254	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.3241	GEN681522 3-GENOA 3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.3143	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.3143	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.2832	GEN659274 1-GROTON
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.2489	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.2399	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.2376	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.2341	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.2336	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.2326	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.2169	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07377	104.2164	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.207	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.1955	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.1955	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07398	104.1951	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07398	104.1951	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.1805	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.1658	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.148	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.1155	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.0771	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07274	104.0712	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07274	104.0712	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.0627	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.0555	GEN659270 1-WEST SW
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07275	104.0455	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.0425	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07161	104.0328	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.0146	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.0137	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	104.0089	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07161	103.9383	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07161	103.8912	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07161	103.8808	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07161	103.8807	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07161	103.8494	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07161	103.8494	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07161	103.7993	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.7547	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.57	GEN681542 6-JP MADGETT
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.5692	GEN652545 7-BIG BEND
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.5191	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.5052	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.5009	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.495	GEN652460 4-GARRISON
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.495	GEN652461 5-GARRISON
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.4936	GEN652543 3-BIG BEND
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.493	GEN652542 1-BIG BEND
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.4898	GEN652544 5-BIG BEND
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.435	GEN652457 1-GARRISON
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.435	GEN652458 2-GARRISON
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.435	GEN652459 3-GARRISON
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.3502	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.2218	GEN652559 1-OAHE
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.2132	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	103.0246	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07519	103.0091	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07519	103.0091	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.9611	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.05488	102.9499	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.8218	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.7972	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.7972	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07187	102.7465	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.7408	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07313	102.7355	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07313	102.7311	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.7206	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07313	102.7177	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.6506	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07672	102.5993	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.5949	GEN615010 1-STANTON4
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.4635	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.4594	GEN652558 6-OAHE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.4593	GEN652556 2-OAHE
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.4593	GEN652557 4-OAHE
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.3818	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.3774	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.3766	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.3065	GEN659141 1-K10215A
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07519	102.3039	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.0662	GEN600006 1-AS KING
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	102.005	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	101.9107	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	101.8507	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07625	101.6853	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	101.5023	GEN600005 1-MONTICELLO
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07795	100.8436	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07795	100.8436	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	100.7631	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.08165	100.4814	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	100.3303	GEN661015 1-COYOTE
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	100.1	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	100	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	99.9	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.07186	99.7	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.02999	116.8971	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.02999	116.649	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	2	17SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.02999	116.5305	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	3	20SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.04787	114.0899	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	3	25SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.04884	113.5773	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	3	17SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.05024	107.5806	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	3	20SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.04261	104.3801	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	3	25SP	G16_021	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.04383	103.3825	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	3	20SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.04787	113.1865	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	3	25SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.04884	112.6576	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	3	17SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.05024	106.684	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_021	3	20SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.04261	103.542	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	3	25SP	G16_021	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.04383	102.5324	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_021	3	20SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.02987	115.2491	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	3	17SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.02999	115.146	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	3	17SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.02999	114.832	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	3	20SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.02987	114.6216	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	3	17SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.02999	114.6158	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	3	25SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.02967	114.5967	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_021	3	20SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.02987	114.5446	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_021	3	25SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.02967	114.0614	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_021	3	25SP	G16_021	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.02967	113.9316	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	00_G16_022	0	16WP	G16_022	-	Non-Converged Contingency	2075	2075	0.03777	-	LACYGNE - WEST GARDNER 345KV CKT 1
FDNS	08ALL_G16_022	0	25SP	G16_022	FROM->TO	G15052_T 345.00 - ROSE HILL 345KV CKT 1	1195	1195	1	105.1305	RANCHRD7 345.00 - SOONER 345KV CKT 1
FDNS	08ALL_G16_022	0	20SP	G16_022	FROM->TO	G15052_T 345.00 - ROSE HILL 345KV CKT 1	1195	1195	1	104.8827	RANCHRD7 345.00 - SOONER 345KV CKT 1
FDNS	08ALL_G16_022	0	17SP	G16_022	FROM->TO	G15052_T 345.00 - ROSE HILL 345KV CKT 1	1195	1195	1	103.1661	RANCHRD7 345.00 - SOONER 345KV CKT 1
FDNS	08ALL_G16_022	0	20SP	G16_022	FROM->TO	RANCHRD7 345.00 - SOONER 345KV CKT 1	1195	1195	1	103.0724	G15052_T 345.00 - ROSE HILL 345KV CKT 1
FDNS	08ALL_G16_022	0	25SP	G16_022	FROM->TO	RANCHRD7 345.00 - SOONER 345KV CKT 1	1195	1195	1	103.0575	G15052_T 345.00 - ROSE HILL 345KV CKT 1
FDNS	08ALL_G16_022	0	17SP	G16_022	FROM->TO	RANCHRD7 345.00 - SOONER 345KV CKT 1	1195	1195	1	101.5008	G15052_T 345.00 - ROSE HILL 345KV CKT 1
FDNS	08ALL_G16_022	2	20SP	G16_022	FROM->TO	RANCHRD7 345.00 - SOONER 345KV CKT 1	1195	1195	1	103.0724	G15052_T 345.00 - ROSE HILL 345KV CKT 1
FDNS	08ALL_G16_022	2	25SP	G16_022	FROM->TO	RANCHRD7 345.00 - SOONER 345KV CKT 1	1195	1195	1	103.0575	G15052_T 345.00 - ROSE HILL 345KV CKT 1
FDNS	08ALL_G16_022	2	17SP	G16_022	FROM->TO	RANCHRD7 345.00 - SOONER 345KV CKT 1	1195	1195	1	101.5008	G15052_T 345.00 - ROSE HILL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	0	0	1.67945	-	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	0	0	1.13771	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	0	0	1.11963	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	956	956	0.56885	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	956	956	0.56885	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	956	956	0.5624	-	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	956	1052	0.55982	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	956	1052	0.55982	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	0	0	0.55982	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	956	1052	0.42175	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	0	0	0.39423	-	P13:230-345:NPPD:STEGALL3:KV3A
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	785	785	0.19884	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	785	785	0.19884	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	400	480	0.19712	-	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	0	0	0.18492	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	0	0	0.12328	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	720	720	0.06164	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	720	720	0.06164	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	16WP	G16_023	-	Non-Converged Contingency	720	720	0.06164	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	1.67949	-	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	1.13921	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	1.11966	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	956	0.56961	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	956	0.56961	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	956	0.56301	-	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	1052	0.55983	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	1052	0.55983	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	0.55983	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	1052	0.42044	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	0.27075	-	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	0.25247	-	POSTROCK7-AXTELL3-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	1052	0.22565	-	SIDNEY - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	0.21977	-	SPERVIL7-POSTROCK7-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	785	785	0.20139	-	GEN531447 1-HOLCOMB GENERATOR
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	785	785	0.20139	-	GEN539670 4-JUDSON LARGE GENERATOR
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	785	785	0.20139	-	GEN563002 1-G15064_3 0.6900
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	785	785	0.20139	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	400	480	0.19478	-	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	320	320	0.18392	-	OGALLALA - SIDNEY 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	956	0.18007	-	AXTELL - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	320	320	0.17559	-	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	952	952	0.16962	-	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	762.5	762.5	0.16902	-	MINGO - SETAB 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	0.16616	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	956	0.16577	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	717.1	717.1	0.15676	-	HOLCOMB - SETAB 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	956	0.1518	-	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	0.14651	-	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	0.14651	-	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	319	341	0.1457	-	NUNDRWD - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	956	0.14565	-	MCCOOL - MOORE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	956	0.14048	-	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	364	364	0.13538	-	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	478	478	0.13538	-	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	717	717	0.13004	-	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1504	1792	0.12624	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1504	1792	0.12624	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	0.1111	-	COPSTJCPFRSJ
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	0.11077	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1792	1792	0.10919	-	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	956	0.10888	-	COOPER - MOORE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956.09	1051.7	0.1038	-	GEN523971 1-HARRINGTON GEN #1 24 KV
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956.09	1051.7	0.1038	-	GEN523972 1-HARRINGTON GEN #2 24 KV
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956.09	1051.7	0.1038	-	GEN523973 1-HARRINGTON GEN #3 24 KV
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956.09	1051.7	0.1038	-	GEN525561 1-TOLK GEN #1 24 KV
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956.09	1051.7	0.1038	-	GEN525844 1-ELK_1 118.000
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956.09	1051.7	0.1038	-	GEN526331 1-JONES GEN #1 22 KV
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956.09	1051.7	0.1038	-	GEN527901 1-HOBBS PLANT #1 (CT)
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956.09	1051.7	0.1038	-	GEN527902 1-HOBBS PLANT #2 (CT)
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956.09	1051.7	0.1038	-	GEN527903 1-HOBBS PLANT #3 (ST)
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1792	1792	0.10121	-	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	0.1012	-	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	0.09936	-	STMDSJFAFACO
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	956	0.09871	-	103RD & ROKEBY - MOORE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	956	0.09236	-	G15088_T 345.00 - MOORE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	956	0.09236	-	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1195	1195	0.08984	-	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	0.08728	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1195	1195	0.08289	-	COOPER - ST JOE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1195	1195	0.08289	-	GEN542955 1-LACYGNE UNIT #1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1195	1195	0.08289	-	GEN542956 2-LACYGNE UNIT #2
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	410	502	0.0808	-	OAHE - PHILIP TAP 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	956	0.07782	-	AXTELL - PAULINE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	392	392	0.07419	-	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1505	1793	0.07326	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1505	1793	0.07326	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1505	1793	0.07326	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	342	342	0.06979	-	NUNDRWD - PHILIP TAP 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	982	982	0.06447	-	SUB 3454 - WAGENER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1793	1793	0.06065	-	IRONWOOD7 345.00 - SPEARVILLE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	226	226	0.05941	-	STEGALL - VICTORY HILL 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	187	187	0.05941	-	VICTORY HILL (VICTORYHL T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	419	419	0.05935	-	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1792	1792	0.05717	-	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1792	1792	0.05717	-	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1792	1792	0.05717	-	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1792	1792	0.05717	-	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1195	1195	0.05555	-	COOPER - FAIRPORT 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	720	720	0.05539	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	720	720	0.05539	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	720	720	0.05539	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1141	1195	0.05208	-	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1141	1195	0.05208	-	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1141	1195	0.05208	-	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1141	1195	0.05208	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1141	1195	0.05208	-	IATAN - STRANGER CREEK 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	319	385	0.05132	-	BISON - HETINGER 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	400	400	0.05132	-	BISON - MAURINE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1195	1195	0.05094	-	COOPER - SUB 3458 NEB CTY 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	320	342	0.0506	-	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	320	352	0.0506	-	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	480	480	0.04735	-	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	320	320	0.04712	-	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	320	320	0.04712	-	COLUMWEST - KELLY 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	720	720	0.04583	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	720	720	0.04583	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1077	1195	0.04498	-	NW68TH & HOLDREGE - WAGENER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	0.04364	-	2801X
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	0.04364	-	2810X2
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	239	299	0.04009	-	BOWMAN - HETINGER 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	239	299	0.04009	-	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	0	0	0.0384	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1299	1299	0.03588	-	GEN514805 1-SOONER UNIT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1299	1299	0.03588	-	GEN514806 1-SOONER UNIT 2
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1299	1299	0.03588	-	GEN515223 1-MUSKOGEE 4G
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1299	1299	0.03588	-	GEN515225 1-MUSKOGEE 5G
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	1299	1299	0.03588	-	GEN515226 1-MUSKOGEE 6G
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	956	956	0.03572	-	HOSKINS - RAUN 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	452	452	0.0353	-	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	401	401	0.03355	-	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 2
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	401	401	0.03345	-	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 3
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	480	480	0.03247	-	KELLY - SHELL CREEK 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	336	336	0.03247	-	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	120	120	0.03225	-	CHADRON - RUSHVILLE 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	120	120	0.03225	-	GORDON - RUSHVILLE 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	120	120	0.03225	-	GORDON - SHANNON 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	104	104	0.03225	-	MARTIN - SHANNON 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	109	109	0.03195	-	CHAPPEL - COLTON 7 115.00 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	109	109	0.03195	-	CHAPPEL - JULESBURG TAP 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	109	109	0.03195	-	COLTON 7 115.00 - SIDNEY 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	112	112	0.03195	-	SIDNEY (SD KV1A) 230/115/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	330	330	0.03192	-	KNOLL 230 - SMOKYHL6 230.00 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	109	109	0.0315	-	GERINGT7 115.00 - MORRILL 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	120	120	0.0315	-	GERINGT7 115.00 - SCOTTSBLUFF 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	109	109	0.0315	-	MORRILL - SNAKECK7 115.00 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	120	120	0.0315	-	SCOTTSBLUFF - VICTORY HILL 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	215	215	0.03078	-	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	239	239	0.03078	-	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	160	160	0.03016	-	BEVERLY - ENDERS 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17G	G16_023	-	Non-Converged Contingency	160	160	0.03016	-	BEVERLY - RED WILLOW 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	09ALL_G16_023	0	17SP	G16_023	-	Non-Converged Contingency	0	0	1.68008	-	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17SP	G16_023	-	Non-Converged Contingency	0	0	1.13505	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	17SP	G16_023	-	Non-Converged Contingency	0	0	1.12005	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	17SP	G16_023	-	Non-Converged Contingency	956	956	0.56752	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17SP	G16_023	-	Non-Converged Contingency	956	956	0.56752	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	17SP	G16_023	-	Non-Converged Contingency	956	1052	0.56003	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17SP	G16_023	-	Non-Converged Contingency	956	1052	0.56003	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	17SP	G16_023	-	Non-Converged Contingency	0	0	0.56003	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	17SP	G16_023	-	Non-Converged Contingency	956	1052	0.42692	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	0	0	1.61968	-	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	0	0	1.08432	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	0	0	1.07979	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	956	956	0.54216	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	956	956	0.54216	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	956	1052	0.53989	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	956	1052	0.53989	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	0	0	0.53989	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	956	956	0.53279	-	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	956	1052	0.39843	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	0	0	0.2978	-	P13:230-345:NPPD:STEGALL3:KV3A
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	0	0	0.24701	-	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	956	1052	0.20811	-	SIDNEY - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	400	400	0.20584	-	SIDNEY 230KV BUS SHUNT
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	0	0	0.19974	-	POSTROCK7-AXTELL3-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	320	320	0.17647	-	OGALLALA - SIDNEY 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	785	785	0.16181	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	785	785	0.16181	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	400	480	0.1489	-	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	956	956	0.14326	-	AXTELL - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	0	0	0.1419	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	319	341	0.13739	-	NUNDRWD - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	762.5	762.5	0.1362	-	MINGO - SETAB 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	762.5	762.5	0.1362	-	MINGO - SETAB 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	952	952	0.13544	-	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	956	956	0.13267	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	717.1	717.1	0.12532	-	HOLCOMB - SETAB 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	717.1	717.1	0.12532	-	HOLCOMB - SETAB 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	364	364	0.12351	-	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	478	478	0.12351	-	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	0	0	0.11751	-	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	0	0	0.11751	-	P12:115:UMZB:# 119 #: IN NE.
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	956	956	0.11689	-	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	0	0	0.11315	-	P12:115:NPPD:WAPA3:SNAKECK7:SCOTBLF7:BTB
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	956	956	0.11217	-	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	956	956	0.11203	-	MCCOOL - MOORE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	717	717	0.10435	-	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	1504	1792	0.09987	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	1504	1792	0.09987	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	0	0	0.0946	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	956	956	0.08964	-	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	1792	1792	0.08132	-	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	956	956	0.0714	-	G15088_T 345.00 - MOORE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	956	956	0.0714	-	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	392	392	0.05983	-	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	720	720	0.0473	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	720	720	0.0473	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	720	720	0.0473	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	109	109	0.03772	-	GERINGT7 115.00 - MORRILL 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	120	120	0.03772	-	GERINGT7 115.00 - SCOTTSBLUFF 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	109	109	0.03772	-	MORRILL - SNAKECK7 115.00 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	720	720	0.03402	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	720	720	0.03402	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20L	G16_023	-	Non-Converged Contingency	120	120	0.03247	-	GORDON 115KV SWITCHED SHUNT
FDNSLock-Blown up	09ALL_G16_023	0	20SP	G16_023	-	Non-Converged Contingency	0	0	1.67965	-	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20SP	G16_023	-	Non-Converged Contingency	0	0	1.1337	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	20SP	G16_023	-	Non-Converged Contingency	0	0	1.11977	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	20SP	G16_023	-	Non-Converged Contingency	956	956	0.56685	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20SP	G16_023	-	Non-Converged Contingency	956	956	0.56685	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	09ALL_G16_023	0	20SP	G16_023	-	Non-Converged Contingency	956	1052	0.55988	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20SP	G16_023	-	Non-Converged Contingency	956	1052	0.55988	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20SP	G16_023	-	Non-Converged Contingency	0	0	0.55988	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	20SP	G16_023	-	Non-Converged Contingency	956	1052	0.42745	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20WP	G16_023	-	Non-Converged Contingency	0	0	1.67221	-	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20WP	G16_023	-	Non-Converged Contingency	0	0	1.12635	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	20WP	G16_023	-	Non-Converged Contingency	956	956	0.56318	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20WP	G16_023	-	Non-Converged Contingency	956	956	0.56318	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	20WP	G16_023	-	Non-Converged Contingency	956	1052	0.5574	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20WP	G16_023	-	Non-Converged Contingency	956	1052	0.5574	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20WP	G16_023	-	Non-Converged Contingency	956	1052	0.42497	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	20WP	G16_023	-	Non-Converged Contingency	400	400	0.21223	-	SIDNEY 230KV BUS SHUNT
FDNSLock-Blown up	09ALL_G16_023	0	25SP	G16_023	-	Non-Converged Contingency	0	0	1.68063	-	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	25SP	G16_023	-	Non-Converged Contingency	0	0	1.13444	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	25SP	G16_023	-	Non-Converged Contingency	0	0	1.12042	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_023	0	25SP	G16_023	-	Non-Converged Contingency	956	956	0.56722	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	25SP	G16_023	-	Non-Converged Contingency	956	956	0.56722	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	25SP	G16_023	-	Non-Converged Contingency	956	1052	0.56021	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	25SP	G16_023	-	Non-Converged Contingency	956	1052	0.56021	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	0	25SP	G16_023	-	Non-Converged Contingency	0	0	0.56021	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_023	0	25SP	G16_023	-	Non-Converged Contingency	956	1052	0.42796	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_023	3	20SP	G16_023	-	Non-Converged Contingency	400	480	0.13684	-	STEGALLM 13KV SWITCHED SHUNT
FDNSLock-Blown up	09ALL_G16_023	3	20SP	G16_023	-	Non-Converged Contingency	364	364	0.11485	-	STEGALL-LNX3230.00 230KV SWITCHED SHUNT
FDNSLock	09ALL_G16_023	0	20WP	G16_023	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320	320	0.51936	127.0334	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	09ALL_G16_023	0	17SP	G16_023	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320	320	0.52358	100.9333	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	09ALL_G16_023	0	16WP	G16_023	FROM->TO	GGS	1635	1635	0.57874	113.2812	BASE CASE
FDNS	09ALL_G16_023	0	17G	G16_023	FROM->TO	GGS	1635	1635	0.57817	112.7025	BASE CASE
FDNS	09ALL_G16_023	0	20WP	G16_023	FROM->TO	GGS	1635	1635	0.57546	112.5982	BASE CASE
FDNS	09ALL_G16_023	0	17SP	G16_023	FROM->TO	GGS	1635	1635	0.59345	112.1566	BASE CASE
FDNS	09ALL_G16_023	0	25SP	G16_023	FROM->TO	GGS	1635	1635	0.59497	111.3444	BASE CASE
FDNS	09ALL_G16_023	0	20SP	G16_023	FROM->TO	GGS	1635	1635	0.59253	110.8408	BASE CASE
FDNS	09ALL_G16_023	0	20L	G16_023	FROM->TO	GGS	1635	1635	0.46041	102.4172	BASE CASE
FDNSLock	09ALL_G16_023	0	17G	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52453	115.1831	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_023	0	17G	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52453	115.138	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_023	0	17SP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.51852	114.7422	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_023	0	17SP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.51852	114.0985	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_023	0	17SP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.51852	114.0829	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_023	0	17G	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52453	113.7186	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_023	0	25SP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52134	110.1489	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_023	0	25SP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52134	109.7848	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_023	0	25SP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52134	109.7222	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_023	0	20SP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52118	108.9353	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_023	0	20SP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52118	108.4925	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_023	0	20SP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52118	108.4841	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_023	0	16WP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52427	106.7508	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_023	0	16WP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52427	106.4536	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_023	0	16WP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52427	106.3941	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_023	0	20WP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.5182	102.9499	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock	09ALL_G16_023	0	20WP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.5182	101.989	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_023	0	20WP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.5182	101.963	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_023	0	17SP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61592	114.0511	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_023	0	17SP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61592	113.3902	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_023	0	17SP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61592	113.3763	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_023	0	25SP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61921	110.0361	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_023	0	25SP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61921	109.5998	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_023	0	25SP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61921	109.5198	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_023	0	17G	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62542	109.4167	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_023	0	17G	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62542	109.3901	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_023	0	20SP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61902	108.7436	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_023	0	17G	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62542	108.5614	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_023	0	20SP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61902	108.203	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_023	0	20SP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61902	108.1918	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_023	0	16WP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62512	102.2452	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_023	0	16WP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62512	101.8947	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_023	0	16WP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62512	101.8292	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_023	2	17G	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52821	114.0674	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_023	2	17G	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52821	114.0218	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_023	2	17SP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52212	113.8602	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	09ALL_G16_023	2	17SP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52212	113.0843	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_023	2	17SP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52212	113.0128	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_023	2	17G	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52821	112.2837	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_023	2	16WP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52798	106.3728	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_023	2	16WP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52798	105.9718	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_023	2	16WP	G16_023	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52798	105.9448	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_023	2	17SP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62007	113.267	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_023	2	17SP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62007	112.4842	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_023	2	17SP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62007	112.3931	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock	09ALL_G16_023	2	17G	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62967	108.3968	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_023	2	17G	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62967	108.3694	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_023	2	17G	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62967	107.2384	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_023	2	16WP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.6294	101.9011	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_023	2	16WP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.6294	101.4505	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_023	2	16WP	G16_023	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.6294	101.4173	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	00_G16_024	0	16WP	G16_024	-	Non-Converged Contingency	2075	2075	0.04034	-	LACYGNE - WEST GARDNER 345KV CKT 1
FDNSLock-Blown up	00NR_G16_024	0	17SP	G16_024	-	Non-Converged Contingency	0	0	0.03558	-	P12:161:OPPD:HUMBOLT-S1398-S1399
FDNSLock-Blown up	00NR_G16_024	0	17SP	G16_024	-	Non-Converged Contingency	0	0	0.03558	-	P12:161:WERE-OPPD:S1399-KELLY
FDNSLock-Blown up	00NR_G16_024	0	17SP	G16_024	-	Non-Converged Contingency	0	0	0.03019	-	P12:161:WERE:TECH-KELL-OPPD_161::
FDNS	08NR_G16_024	0	20L	G16_024	TO->FROM	ALTOONA - BUTLER 138KV CKT 1	96	96	0.10353	105.4898	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
FDNS	14ALL_G16_028	0	20SP	G16_028	FROM->TO	CLAYTON - SARDIS 138KV CKT 1	98	98	0.61265	106.9342	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
FDNS	14ALL_G16_028	0	20SP	G16_028	FROM->TO	CLAYTON - SARDIS 138KV CKT 1	98	98	0.61265	106.9342	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
FDNS	14ALL_G16_028	0	20SP	G16_028	FROM->TO	CLAYTON - SARDIS 138KV CKT 1	98	98	0.61265	106.9035	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
FDNS	14ALL_G16_028	0	20SP	G16_028	FROM->TO	CLAYTON - SARDIS 138KV CKT 1	98	98	0.61265	106.9035	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
FDNS	14ALL_G16_028	0	25SP	G16_028	FROM->TO	CLAYTON - SARDIS 138KV CKT 1	98	98	0.61268	102.9308	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
FDNS	14ALL_G16_028	0	25SP	G16_028	FROM->TO	CLAYTON - SARDIS 138KV CKT 1	98	98	0.61268	102.9308	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
FDNS	14ALL_G16_028	0	25SP	G16_028	FROM->TO	CLAYTON - SARDIS 138KV CKT 1	98	98	0.61268	102.7293	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
FDNS	14ALL_G16_028	0	25SP	G16_028	FROM->TO	CLAYTON - SARDIS 138KV CKT 1	98	98	0.61268	102.7293	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
FDNS	14ALL_G16_028	0	20SP	G16_028	FROM->TO	ENOWILT - LONE OAK 138KV CKT 1	88	98	0.61265	102.1399	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
FDNS	14ALL_G16_028	0	20SP	G16_028	FROM->TO	ENOWILT - LONE OAK 138KV CKT 1	88	98	0.61265	102.1399	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
FDNS	14ALL_G16_028	0	20SP	G16_028	FROM->TO	ENOWILT - LONE OAK 138KV CKT 1	88	98	0.61265	102.1151	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
FDNS	14ALL_G16_028	0	20SP	G16_028	FROM->TO	ENOWILT - LONE OAK 138KV CKT 1	88	98	0.61265	102.1151	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
FDNS	14ALL_G16_028	0	20SP	G16_028	TO->FROM	ENOWILT - SARDIS 138KV CKT 1	98	98	0.61265	103.6945	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
FDNS	14ALL_G16_028	0	20SP	G16_028	TO->FROM	ENOWILT - SARDIS 138KV CKT 1	98	98	0.61265	103.6945	CANADIAN RIVER () 345/138/13.8KV TRANSFORMER CKT 1
FDNS	14ALL_G16_028	0	20SP	G16_028	TO->FROM	ENOWILT - SARDIS 138KV CKT 1	98	98	0.61265	103.6557	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
FDNS	14ALL_G16_028	0	20SP	G16_028	TO->FROM	ENOWILT - SARDIS 138KV CKT 1	98	98	0.61265	103.6557	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
FDNS	14ALL_G16_028	0	25SP	G16_028	TO->FROM	ENOWILT - SARDIS 138KV CKT 1	98	98	0.61268	99.6	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
FDNS	14ALL_G16_028	0	25SP	G16_028	TO->FROM	ENOWILT - SARDIS 138KV CKT 1	98	98	0.61268	99.6	CANADIAN RIVER - MCALESTER SOUTH 138KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	0	0	1.67945	-	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	0	0	1.13771	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	0	0	1.11963	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	956	956	0.56885	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	956	956	0.56885	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	956	956	0.5624	-	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	956	1052	0.55982	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	956	1052	0.55982	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	0	0	0.55982	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	956	1052	0.42175	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	0	0	0.39423	-	P13:230-345:NPPD:STEGALL3:KV3A
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	785	785	0.19884	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	785	785	0.19884	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	400	480	0.19712	-	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	0	0	0.18492	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	0	0	0.12328	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	720	720	0.06164	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	720	720	0.06164	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	16WP	G16_029	-	Non-Converged Contingency	720	720	0.06164	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	0	0	1.67949	-	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	0	0	1.13922	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	0	0	1.11966	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	956	0.56961	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	956	0.56961	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	956	0.56301	-	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	1052	0.55983	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	1052	0.55983	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	0	0	0.55983	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	1052	0.42044	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	0	0	0.27075	-	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	0	0	0.25248	-	POSTROCK7-AXTELL3-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	1052	0.22565	-	SIDNEY - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	0	0	0.21977	-	SPERVIL7-POSTROCK7-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	785	785	0.20139	-	GEN531447 1-HOLCOMB GENERATOR
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	785	785	0.20139	-	GEN539670 4-JUDSON LARGE GENERATOR
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	785	785	0.20139	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	400	480	0.19478	-	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	320	320	0.18392	-	OGALLALA - SIDNEY 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	956	0.18007	-	AXTELL - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	320	320	0.17559	-	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	952	952	0.16963	-	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	762.5	762.5	0.16902	-	MINGO - SETAB 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	0	0	0.16615	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	956	0.16577	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	717.1	717.1	0.15676	-	HOLCOMB - SETAB 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	956	0.15181	-	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	0	0	0.14651	-	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	0	0	0.14651	-	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	319	341	0.1457	-	NUNDRWD - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	956	0.14566	-	MCCOOL - MOORE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	956	0.14048	-	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	364	364	0.13538	-	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	478	478	0.13538	-	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	717	717	0.13004	-	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1504	1792	0.12624	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1504	1792	0.12624	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	0	0	0.1111	-	COPSTJCPFRSJ
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	0	0	0.11077	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1792	1792	0.10919	-	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	956	0.10889	-	COOPER - MOORE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956.09	1051.7	0.10381	-	GEN523971 1-HARRINGTON GEN #1 24 KV
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956.09	1051.7	0.10381	-	GEN523972 1-HARRINGTON GEN #2 24 KV
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956.09	1051.7	0.10381	-	GEN523973 1-HARRINGTON GEN #3 24 KV
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956.09	1051.7	0.10381	-	GEN525561 1-TOLK GEN #1 24 KV
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956.09	1051.7	0.10381	-	GEN527903 1-HOBBS PLANT #3 (ST)
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1792	1792	0.10122	-	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	0	0	0.1012	-	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	0	0	0.09936	-	STMDSJFAFACO
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	956	0.09871	-	103RD & ROKEBY - MOORE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	956	0.09237	-	G15088_T 345.00 - MOORE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	956	0.09237	-	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1195	1195	0.08984	-	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1195	1195	0.08289	-	COOPER - ST JOE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	410	502	0.0808	-	OAHE - PHILIP TAP 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	956	0.07783	-	AXTELL - PAULINE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	392	392	0.07419	-	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1505	1793	0.07326	-	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1505	1793	0.07326	-	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1505	1793	0.07326	-	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	342	342	0.06979	-	NUNDRWD - PHILIP TAP 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	982	982	0.06447	-	SUB 3454 - WAGENER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	226	226	0.0594	-	STEGALL - VICTORY HILL 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	187	187	0.0594	-	VICTORY HILL (VICTORYHL T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	419	419	0.05935	-	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1792	1792	0.05717	-	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1792	1792	0.05717	-	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1792	1792	0.05717	-	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1792	1792	0.05717	-	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1195	1195	0.05555	-	COOPER - FAIRPORT 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	720	720	0.05538	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	720	720	0.05538	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	720	720	0.05538	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1141	1195	0.05208	-	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1141	1195	0.05208	-	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1141	1195	0.05208	-	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1141	1195	0.05208	-	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1141	1195	0.05208	-	IATAN - STRANGER CREEK 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	319	385	0.05132	-	BISON - HETINGER 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	400	400	0.05132	-	BISON - MAURINE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1195	1195	0.05095	-	COOPER - SUB 3458 NEB CTY 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	320	342	0.0506	-	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	320	352	0.0506	-	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	480	480	0.04735	-	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	320	320	0.04712	-	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	320	320	0.04712	-	COLUMWEST - KELLY 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	720	720	0.04583	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	720	720	0.04583	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	0	0	0.04364	-	2810X2
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	239	299	0.04009	-	BOWMAN - HETINGER 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	239	299	0.04009	-	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1299	1299	0.03588	-	GEN514805 1-SOONER UNIT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	1299	1299	0.03588	-	GEN514806 1-SOONER UNIT 2
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	956	956	0.03572	-	HOSKINS - RAUN 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	452	452	0.0353	-	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	401	401	0.03355	-	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 2
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	401	401	0.03345	-	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 3
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	480	480	0.03247	-	KELLY - SHELL CREEK 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	336	336	0.03247	-	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	120	120	0.03225	-	CHADRON - RUSHVILLE 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	120	120	0.03225	-	GORDON - RUSHVILLE 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	120	120	0.03225	-	GORDON - SHANNON 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	104	104	0.03225	-	MARTIN - SHANNON 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	109	109	0.03195	-	CHAPPEL - COLTON 7 115.00 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	109	109	0.03195	-	CHAPPEL - JULESBURG TAP 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	109	109	0.03195	-	COLTON 7 115.00 - SIDNEY 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	112	112	0.03195	-	SIDNEY (SD KV1A) 230/115/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	109	109	0.0315	-	GERINGT7 115.00 - MORRILL 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	120	120	0.0315	-	GERINGT7 115.00 - SCOTTSBLUFF 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	109	109	0.0315	-	MORRILL - SNAKECK7 115.00 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	120	120	0.0315	-	SCOTTSBLUFF - VICTORY HILL 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	215	215	0.03078	-	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	239	239	0.03078	-	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	160	160	0.03016	-	BEVERLY - ENDERS 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17G	G16_029	-	Non-Converged Contingency	160	160	0.03016	-	BEVERLY - RED WILLOW 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17SP	G16_029	-	Non-Converged Contingency	0	0	1.68008	-	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17SP	G16_029	-	Non-Converged Contingency	0	0	1.13505	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	17SP	G16_029	-	Non-Converged Contingency	0	0	1.12005	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	17SP	G16_029	-	Non-Converged Contingency	956	956	0.56752	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17SP	G16_029	-	Non-Converged Contingency	956	956	0.56752	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	17SP	G16_029	-	Non-Converged Contingency	956	1052	0.56003	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17SP	G16_029	-	Non-Converged Contingency	956	1052	0.56003	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	17SP	G16_029	-	Non-Converged Contingency	0	0	0.56003	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	17SP	G16_029	-	Non-Converged Contingency	956	1052	0.42692	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	0	0	1.61968	-	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	0	0	1.08432	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	0	0	1.07979	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	956	956	0.54216	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	956	956	0.54216	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	956	1052	0.53989	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	956	1052	0.53989	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	0	0	0.53989	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	956	956	0.53279	-	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	956	1052	0.39843	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	0	0	0.2978	-	P13:230-345:NPPD:STEGALL3:KV3A
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	0	0	0.24701	-	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	956	1052	0.20811	-	SIDNEY - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	400	400	0.20584	-	SIDNEY 230KV BUS SHUNT
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	0	0	0.19974	-	POSTROCK7-AXTELL3-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	320	320	0.17647	-	OGALLALA - SIDNEY 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	785	785	0.16181	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	785	785	0.16181	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	400	480	0.1489	-	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	956	956	0.14326	-	AXTELL - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	0	0	0.1419	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	319	341	0.13739	-	NUNDRWD - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	762.5	762.5	0.1362	-	MINGO - SETAB 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	762.5	762.5	0.1362	-	MINGO - SETAB 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	952	952	0.13544	-	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	956	956	0.13267	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	717.1	717.1	0.12532	-	HOLCOMB - SETAB 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	717.1	717.1	0.12532	-	HOLCOMB - SETAB 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	364	364	0.12351	-	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	478	478	0.12351	-	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	0	0	0.11751	-	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	0	0	0.11751	-	P12:115:UMZB:# 119 #: IN NE.
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	956	956	0.11689	-	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	0	0	0.11315	-	P12:115:NPPD:WAPA3:SNAKECK7:SCOTBLF7:BTB
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	956	956	0.11217	-	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	956	956	0.11203	-	MCCOOL - MOORE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	717	717	0.10435	-	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	1504	1792	0.09987	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	1504	1792	0.09987	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	0	0	0.0946	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	956	956	0.08964	-	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	1792	1792	0.08132	-	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	956	956	0.0714	-	G15088_T 345.00 - MOORE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	956	956	0.0714	-	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	392	392	0.05983	-	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	720	720	0.0473	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	720	720	0.0473	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	720	720	0.0473	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	109	109	0.03772	-	GERINGT7 115.00 - MORRILL 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	120	120	0.03772	-	GERINGT7 115.00 - SCOTTSBLUFF 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	109	109	0.03772	-	MORRILL - SNAKECK7 115.00 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	720	720	0.03402	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	720	720	0.03402	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20L	G16_029	-	Non-Converged Contingency	120	120	0.03247	-	GORDON 115KV SWITCHED SHUNT
FDNSLock-Blown up	09ALL_G16_029	0	20SP	G16_029	-	Non-Converged Contingency	0	0	1.67965	-	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20SP	G16_029	-	Non-Converged Contingency	0	0	1.1337	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	20SP	G16_029	-	Non-Converged Contingency	0	0	1.11977	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	20SP	G16_029	-	Non-Converged Contingency	956	956	0.56685	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20SP	G16_029	-	Non-Converged Contingency	956	956	0.56685	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	20SP	G16_029	-	Non-Converged Contingency	956	1052	0.55988	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20SP	G16_029	-	Non-Converged Contingency	956	1052	0.55988	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20SP	G16_029	-	Non-Converged Contingency	0	0	0.55988	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	20SP	G16_029	-	Non-Converged Contingency	956	1052	0.42745	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20WP	G16_029	-	Non-Converged Contingency	0	0	1.67221	-	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20WP	G16_029	-	Non-Converged Contingency	0	0	1.12635	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	20WP	G16_029	-	Non-Converged Contingency	956	956	0.56318	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20WP	G16_029	-	Non-Converged Contingency	956	956	0.56318	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	20WP	G16_029	-	Non-Converged Contingency	956	1052	0.5574	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20WP	G16_029	-	Non-Converged Contingency	956	1052	0.5574	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20WP	G16_029	-	Non-Converged Contingency	956	1052	0.42497	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	20WP	G16_029	-	Non-Converged Contingency	400	400	0.21223	-	SIDNEY 230KV BUS SHUNT
FDNSLock-Blown up	09ALL_G16_029	0	25SP	G16_029	-	Non-Converged Contingency	0	0	1.68063	-	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	25SP	G16_029	-	Non-Converged Contingency	0	0	1.13444	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	25SP	G16_029	-	Non-Converged Contingency	0	0	1.12042	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_029	0	25SP	G16_029	-	Non-Converged Contingency	956	956	0.56722	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	25SP	G16_029	-	Non-Converged Contingency	956	956	0.56722	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	25SP	G16_029	-	Non-Converged Contingency	956	1052	0.56021	-	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	25SP	G16_029	-	Non-Converged Contingency	956	1052	0.56021	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	0	25SP	G16_029	-	Non-Converged Contingency	0	0	0.56021	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_029	0	25SP	G16_029	-	Non-Converged Contingency	956	1052	0.42796	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_029	3	20SP	G16_029	-	Non-Converged Contingency	400	480	0.13684	-	STEGALLM 13KV SWITCHED SHUNT
FDNSLock-Blown up	09ALL_G16_029	3	20SP	G16_029	-	Non-Converged Contingency	364	364	0.11485	-	STEGALL-LNX3230.00 230KV SWITCHED SHUNT
FDNSLock	09ALL_G16_029	0	20WP	G16_029	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320	320	0.51936	127.0375	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	09ALL_G16_029	0	17SP	G16_029	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320	320	0.52358	100.9333	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	09ALL_G16_029	0	16WP	G16_029	FROM->TO	GGS	1635	1635	0.57874	113.2811	BASE CASE
FDNS	09ALL_G16_029	0	17G	G16_029	FROM->TO	GGS	1635	1635	0.57818	112.7305	BASE CASE
FDNS	09ALL_G16_029	0	20WP	G16_029	FROM->TO	GGS	1635	1635	0.57546	112.588	BASE CASE
FDNS	09ALL_G16_029	0	17SP	G16_029	FROM->TO	GGS	1635	1635	0.59345	112.1568	BASE CASE
FDNS	09ALL_G16_029	0	25SP	G16_029	FROM->TO	GGS	1635	1635	0.59497	111.3465	BASE CASE
FDNS	09ALL_G16_029	0	20SP	G16_029	FROM->TO	GGS	1635	1635	0.59253	110.8407	BASE CASE
FDNS	09ALL_G16_029	0	20L	G16_029	FROM->TO	GGS	1635	1635	0.46041	102.4171	BASE CASE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock	09ALL_G16_029	0	17G	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52453	115.183	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_029	0	17G	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52453	115.138	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_029	0	17SP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.51852	114.7422	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_029	0	17SP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.51852	114.0985	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_029	0	17SP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.51852	114.0829	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_029	0	17G	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52453	113.7186	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_029	0	25SP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52134	110.1489	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_029	0	25SP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52134	109.7848	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_029	0	25SP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52134	109.7222	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_029	0	20SP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52118	108.9353	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_029	0	20SP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52118	108.4926	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_029	0	20SP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52118	108.4841	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_029	0	16WP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52427	106.7508	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_029	0	16WP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52427	106.4536	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_029	0	16WP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52427	106.3941	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_029	0	20WP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.5182	102.9499	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock	09ALL_G16_029	0	20WP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.5182	101.989	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_029	0	20WP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.5182	101.963	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_029	0	17SP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61592	114.051	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_029	0	17SP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61592	113.3902	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_029	0	17SP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61592	113.3763	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_029	0	25SP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61921	110.0361	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_029	0	25SP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61921	109.5998	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_029	0	25SP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61921	109.5198	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_029	0	17G	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62542	109.4166	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_029	0	17G	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62542	109.3901	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_029	0	20SP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61902	108.7436	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_029	0	17G	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62542	108.5614	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_029	0	20SP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61902	108.203	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_029	0	20SP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.61902	108.1918	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_029	0	16WP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62512	102.2452	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_029	0	16WP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62512	101.8947	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_029	0	16WP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62512	101.8292	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_029	2	17G	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52821	114.0674	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_029	2	17G	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52821	114.0218	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_029	2	17SP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52212	113.8602	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_029	2	17SP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52212	113.0843	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_029	2	17SP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52212	113.0129	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_029	2	17G	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52821	112.2837	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_029	2	16WP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52798	106.3728	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_029	2	16WP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52798	105.9718	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_029	2	16WP	G16_029	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.52798	105.9448	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_029	2	17SP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62007	113.267	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_029	2	17SP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62007	112.4842	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_029	2	17SP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62007	112.3932	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock	09ALL_G16_029	2	17G	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62967	108.3968	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_029	2	17G	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62967	108.3694	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_029	2	17G	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.62967	107.2385	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_029	2	16WP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.6294	101.9011	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_029	2	16WP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.6294	101.4505	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_029	2	16WP	G16_029	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.6294	101.4173	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	00_G16_031	0	16WP	G16_031	-	Non-Converged Contingency	2075	2075	0.03778	-	LACYGNE - WEST GARDNER 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68339	131.5454	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68508	129.5164	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68505	125.1777	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68553	123.6916	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68339	123.2257	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68124	121.8151	BASE CASE
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68508	120.8572	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68895	118.6391	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68547	118.4002	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68251	118.3935	BASE CASE
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67859	117.3303	MORISNT4 138.00 - STILLWATER 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67924	117.2448	P12:138:OKGE:3TERM2
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68195	116.797	CLEVELAND - G15066_T 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68505	116.5322	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.69286	116.4809	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68242	115.5724	BASE CASE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67845	115.412	P12:138:OKGE:3TERM1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68553	115.3969	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67809	115.2934	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67809	115.1239	HENESSEY - WAUKOMIS 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67809	114.9358	DOVER SW - HENESSEY 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68195	114.4101	G15066_T 345.00 - SOONER 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68195	113.9772	917X
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6804	113.8503	MORISNT4 138.00 - STILLWATER 138KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68582	113.3892	BASE CASE
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67996	113.2102	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67996	113.1511	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67973	112.7909	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6804	112.5252	MORISNT4 138.00 - STILLWATER 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68275	112.4254	BASE CASE
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67973	112.4181	HENESSEY - WAUKOMIS 138KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68097	112.2785	P12:138:OKGE:3TERM2
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68895	112.0848	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67973	112.0008	DOVER SW - HENESSEY 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68188	111.9846	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68188	111.9846	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68411	111.5342	CLEVELAND - G15066_T 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68265	111.4327	BASE CASE
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68699	110.8893	OTTER - WARREN VALLEY 138KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68142	110.8509	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68142	110.8486	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68008	110.6122	P12:138:OKGE:3TERM1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67971	110.3675	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68699	110.325	COW CREEK - WARREN VALLEY 138KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68547	110.1227	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67835	110.0319	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68025	109.9719	ARCADIA - NORTHWEST 345KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67835	109.8754	MCELROY - UNVRSTY4 138.00 138KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6814	109.8361	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68808	109.7816	BASE CASE
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.685	109.767	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67971	109.7667	HENESSEY - WAUKOMIS 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.66759	109.6531	CRESENT - TWIN LAKES 138KV CKT 1
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.69286	109.633	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.66759	109.4695	COTTONWOOD CREEK - CRESENT 138KV CKT 1
FDNS	08ALL_G16_032	0	16WP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	249	270	0.68461	109.4544	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67835	109.3018	KINZE - MCELROY 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68114	109.2869	MORISNT4 138.00 - STILLWATER 138KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68411	109.1764	G15066_T 345.00 - SOONER 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6817	109.1727	COW CREEK - MORRISON 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6817	109.1537	MORISNT4 138.00 - MORRISON 138KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67971	109.0813	DOVER SW - HENESSEY 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6815	109.0592	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6815	109.0591	WAVERLY7-LACYGNE7-TAP-345kV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68136	109.0583	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68032	109.0573	P12:138:OKGE:3TERM1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68399	109.0541	CLEVELAND - G15066_T 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6815	109.0477	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68171	108.9255	P12:138:OKGE:3TERM2
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68101	108.7873	MORISNT4 138.00 - STILLWATER 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67995	108.7449	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68279	108.7293	MORISNT4 138.00 - STILLWATER 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68242	108.7	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67862	108.6851	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67862	108.6486	MCELROY - UNVRSTY4 138.00 138KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68353	108.6072	P12:138:OKGE:3TERM2
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67862	108.5229	KINZE - MCELROY 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6815	108.5201	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68144	108.5182	CIMARRON - DRAPER LAKE 345KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68158	108.5092	P12:138:OKGE:3TERM2
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67835	108.3957	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68055	108.3389	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68136	108.1932	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68619	108.1713	CLEVELAND - G15066_T 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67995	108.154	HENESSEY - WAUKOMIS 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68184	108.153	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67835	108.128	MCELROY - UNVRSTY4 138.00 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68147	108.1176	OSAGE - WEBB CITY TAP 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68147	108.1112	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6805	108.0492	MORISNT4 138.00 - SOONER 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67643	107.9064	DOVER - DOVER SW 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68177	107.8818	WAUKOMIS TAP - WOODRING 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68271	107.8584	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68147	107.8572	FAIRFAX TAP - SHIDLER 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68147	107.8571	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67643	107.8325	DOVER - TWIN LAKES 138KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68144	107.6366	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67995	107.4689	DOVER SW - HENESSEY 138KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68366	107.4333	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67835	107.1592	KINZE - MCELROY 138KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68023	106.9107	P12:138:OKGE:3TERM1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68511	106.8477	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68789	106.736	OTTER - WARREN VALLEY 138KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68399	106.7269	G15066_T 345.00 - SOONER 345KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67987	106.633	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68313	106.4278	P12:138:OKGE:3TERM1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68279	106.311	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68619	106.2932	G15066_T 345.00 - SOONER 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68399	106.2652	917X
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68279	106.1413	HENESSEY - WAUKOMIS 138KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68789	106.1391	COW CREEK - WARREN VALLEY 138KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67987	106.0448	HENESSEY - WAUKOMIS 138KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68279	105.9532	DOVER SW - HENESSEY 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68189	105.9319	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68619	105.9299	917X
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68279	105.7443	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68279	105.7443	WAVERLY7-LACYGNE7-TAP-345kV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68279	105.7431	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68305	105.7402	COW CREEK - MORRISON 138KV CKT 1
FDNS	08ALL_G16_032	0	20WP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	249	270	0.68497	105.7011	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68305	105.6977	MORISNT4 138.00 - MORRISON 138KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68175	105.6164	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68272	105.5135	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68413	105.4148	CLEVELAND - G15066_T 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67987	105.37	DOVER SW - HENESSEY 138KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.66885	105.3136	CRESENT - TWIN LAKES 138KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6831	105.2589	WAUKOMIS TAP - WOODRING 138KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68279	105.2254	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68557	105.1711	MORISNT4 138.00 - STILLWATER 138KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68285	105.1431	CIMARRON - DRAPER LAKE 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68124	105.012	GEN562691 1-G15_015_3 0.6900
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68124	105.0097	GEN515484 1-CHSHMVW1 0.5750
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68124	105.0093	GEN515479 1-CHSHMVE1 0.5750
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68124	104.981	GEN514806 1-SOONER UNIT 2
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6819	104.9747	MORISNT4 138.00 - SOONER 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68124	104.9287	GEN562992 1-G15063_3 0.6900
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.66885	104.9227	COTTONWOOD CREEK - CRESENT 138KV CKT 1
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68622	104.9223	P12:138:OKGE:3TERM2
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.66218	104.884	P12:138:OKGE:3TERM47
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68119	104.7796	ARCADIA (ARCADIA4) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68057	104.7543	ARCADIA - SEMINOLE 345KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68422	104.7531	FAIRMONT TAP - WOODRING 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.66212	104.7167	FITZGERALD CREEK - KINZE 138KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68356	104.705	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68356	104.705	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68428	104.6455	CLEVELAND - G15066_T 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.66212	104.5767	FITZGERALD CREEK - PINE ST 138KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68462	104.3537	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.66212	104.352	COTTONWOOD CREEK - PINE ST 138KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68462	104.3517	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68764	104.3502	OTTER - WARREN VALLEY 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68262	104.2757	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68124	104.2315	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67711	104.1788	KETCH - KETCH TAP 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68008	104.0302	REDBUD - RIVERSIDE STATION 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68008	104.0302	REDBUD - RIVERSIDE STATION 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68124	103.8686	GEN514805 1-SOONER UNIT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68623	103.8655	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68623	103.8655	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68124	103.859	GEN562429 1-G13-029 0.6900
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68585	103.7479	P12:138:OKGE:3TERM1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68764	103.7341	COW CREEK - WARREN VALLEY 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.72485	103.6505	WOODRING (WOODRNG2) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68551	103.5714	WAUKOMIS - WAUKOMIS TAP 138KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68294	103.5319	COW CREEK - MORRISON 138KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68316	103.4766	P12:069:OKGE:3TERM4
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68294	103.4616	MORISNT4 138.00 - MORRISON 138KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6818	103.4428	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68551	103.2032	HENESSEY - WAUKOMIS 138KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68302	103.1281	WAUKOMIS TAP - WOODRING 138KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68413	103.1056	G15066_T 345.00 - SOONER 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68242	102.9998	GEN514939 1-HORSESHOE LAKE 8G
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68261	102.9335	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6827	102.8857	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6827	102.8857	WAVERLY7-LACYGNE7-TAP-345kV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6827	102.8841	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68414	102.8406	FAIRMONT TAP - WOODRING 138KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.69235	102.801	OTTER - WARREN VALLEY 138KV CKT 1
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68551	102.7861	DOVER SW - HENESSEY 138KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68183	102.7067	MORISNT4 138.00 - SOONER 138KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67939	102.6801	KETCH TAP - NORTHWEST 138KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68413	102.664	917X
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68898	102.6372	CLEVELAND - G15066_T 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68274	102.5284	CIMARRON - DRAPER LAKE 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6829	102.4198	OSAGE - WEBB CITY TAP 138KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6829	102.4074	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68244	102.3972	P12:138:WFEC:MSL15
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68242	102.3948	GEN336821 1-GRAND GULF UNIT
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6827	102.3879	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68428	102.3633	G15066_T 345.00 - SOONER 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68116	102.3551	ARCADIA (ARCADIA4) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68724	102.3504	ARCADIA - NORTHWEST 345KV CKT 1
FDNS	08ALL_G16_032	0	16WP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	249	270	0.68461	102.3154	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.69235	102.2354	COW CREEK - WARREN VALLEY 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68124	102.1829	GEN514643 1-BRKWND11 0.6900
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68759	101.9887	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68759	101.9867	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68251	101.9681	GEN515484 1-CHSHMVW1 0.5750
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68251	101.9677	GEN515479 1-CHSHMVE1 0.5750
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68251	101.9613	GEN562691 1-G15_015_3 0.6900
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68251	101.9163	GEN562992 1-G15063_3 0.6900
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68381	101.9103	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68428	101.91	917X
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68262	101.8803	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68372	101.8458	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68168	101.729	ARCADIA - SEMINOLE 345KV CKT 1
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68372	101.6893	MCELROY - UNVRSTY4 138.00 138KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67329	101.6842	CRESENT - TWIN LAKES 138KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67329	101.5003	COTTONWOOD CREEK - CRESENT 138KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68251	101.4882	GEN514806 1-SOONER UNIT 2
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68634	101.4456	COW CREEK - MORRISON 138KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68634	101.4266	MORISNT4 138.00 - MORRISON 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.65003	101.3179	P12:138:OKGE:3TERM11
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68595	101.2816	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68587	101.2048	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68587	101.2041	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68587	101.2041	WAVERLY7-LACYGNE7-TAP-345kV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68038	101.1534	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68372	101.1154	KINZE - MCELROY 138KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68304	101.0814	STILLWATER - UNVRSTY4 138.00 138KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68373	101.0727	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68373	101.0727	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68629	101.0569	CIMARRON - DRAPER LAKE 345KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68304	101.0453	MCELROY - UNVRSTY4 138.00 138KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68594	101.0139	MATHWSN7 345.00 - NORTHWEST 345KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68038	101.0095	MCELROY - UNVRSTY4 138.00 138KV CKT 1
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68914	100.9849	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68386	100.9533	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68386	100.9533	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68304	100.9183	KINZE - MCELROY 138KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.67832	100.8326	KETCH - KETCH TAP 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.65027	100.824	KETCH TAP - MITCHSB4 138.00 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68275	100.7858	GEN514939 1-HORSESHOE LAKE 8G
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68587	100.7847	WAVERLY7 345.00 - WOLF CREEK 345KV CKT 1
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68898	100.7791	G15066_T 345.00 - SOONER 345KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68791	100.7466	OTTER - WARREN VALLEY 138KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68251	100.735	GEN562429 1-G13-029 0.6900
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6835	100.7017	P12:069:OKGE:3TERM4
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68802	100.6771	OTTER - WARREN VALLEY 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68333	100.6703	WAUKOMIS TAP - WOODRING 138KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68533	100.6593	WOODRNG7-SOONER7-345kV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68533	100.6575	G16-061-TAP 345.00 - WOODRING 345KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68595	100.657	CANEYRV7 345.00 - LATHAMS7 345.00 345KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68596	100.6507	OSAGE - WEBB CITY TAP 138KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68596	100.644	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68626	100.631	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68533	100.6122	G16-061-TAP 345.00 - SOONER 345KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68335	100.5938	COW CREEK - MORRISON 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68335	100.5267	MORISNT4 138.00 - MORRISON 138KV CKT 1
FDNS	08NR_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68498	100.5133	MORISNT4 138.00 - SOONER 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68038	100.511	KINZE - MCELROY 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68275	100.4511	GEN515040 1-SEMINOLE 1G
FDNS	08NR_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68898	100.3881	917X
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68444	100.3279	FAIRMONT TAP - WOODRING 138KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68027	100.313	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68251	100.2598	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68251	100.2338	GEN514805 1-SOONER UNIT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68275	100.2224	GEN515042 1-SEMINOLE 3G
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68403	100.209	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68027	100.172	MCELROY - UNVRSTY4 138.00 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68275	100.152	GEN515041 1-SEMINOLE 2G
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.65027	100.1396	MITCHSB4 138.00 - SHDWLKE4 138.00 138KV CKT 1
FDNS	08ALL_G16_032	0	20L	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.65027	100.1367	SHDWLKE4 138.00 - WHITESB4 138.00 138KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68791	100	COW CREEK - WARREN VALLEY 138KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68324	100	COW CREEK - MORRISON 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68802	100	COW CREEK - WARREN VALLEY 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6822	100	MORISNT4 138.00 - SOONER 138KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6834	99.9	P12:069:OKGE:3TERM4
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68324	99.9	MORISNT4 138.00 - MORRISON 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68508	99.9	IMO TAP - MEN TAP 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68296	99.9	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68277	99.9	CHSHLMWEST 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68305	99.8	G16-012-TAP 345.00 - LACYGNE 345KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68305	99.8	G16-012-TAP 345.00 - WAVERLY7 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68305	99.8	WAVERLY7-LACYGNE7-TAP-345kV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68275	99.8	GEN514936 1-HORSESHOE LAKE 7S
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.6815	99.8	ARCADIA (ARCADIA4) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68393	99.7	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68027	99.7	KINZE - MCELROY 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68508	99.7	CLEOPLT4 138.00 - MEN TAP 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68432	99.7	CLEO CORNER - GLASS MOUNTAIN 138KV CKT 1
FDNS	08ALL_G16_032	0	17G	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68381	99.6	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68242	99.6	GEN562882 1-G15047_3 0.6900
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68156	99.6	ARCADIA - SEMINOLE 345KV CKT 1
FDNS	08ALL_G16_032	0	20SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68323	99.6	WAUKOMIS TAP - WOODRING 138KV CKT 1
FDNS	08ALL_G16_032	0	25SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68277	99.6	P12:138:WFEC:MSL15
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68383	99.5	HUNTERS7 345.00 - RENFROW7 345.00 345KV CKT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68242	99.5	GEN515479 1-CHSHMVE1 0.5750

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68242	99.5	GEN515484 1-CHSHMVW1 0.5750
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68242	99.5	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68242	99.5	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68242	99.5	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.68242	99.5	GEN562691 1-G15_015_3 0.6900
FDNS	08ALL_G16_032	0	17SP	G16_032	FROM->TO	G16-032-TAP 345.00 345/138KV TRANSFORMER CKT 1	194	222	0.63687	99.5	ARCADIA - COTTONWOOD CREEK 138KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	16WP	G16_034	-	Non-Converged Contingency	0	0	1.16694	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_034	0	16WP	G16_034	-	Non-Converged Contingency	956	1052	0.74989	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	16WP	G16_034	-	Non-Converged Contingency	956	956	0.58347	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	16WP	G16_034	-	Non-Converged Contingency	956	956	0.58347	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_034	0	16WP	G16_034	-	Non-Converged Contingency	956	1052	0.23121	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	16WP	G16_034	-	Non-Converged Contingency	0	0	0.13372	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_034	0	16WP	G16_034	-	Non-Converged Contingency	720	720	0.06686	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	0	0	1.50035	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	0	0	1.16929	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	0	0	1.0007	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	956	1052	0.75017	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	0	0	0.75017	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	956	956	0.58464	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	956	956	0.58464	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	956	956	0.57603	-	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	0	0	0.25442	-	POSTROCK7-AXTELL3-345kV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	0	0	0.24293	-	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	956	1052	0.23013	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	785	785	0.20413	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	956	956	0.18302	-	AXTELL - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	0	0	0.18047	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	952	952	0.17342	-	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	400	480	0.17226	-	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	762.5	762.5	0.17126	-	MINGO - SETAB 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	956	956	0.16823	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	717.1	717.1	0.15883	-	HOLCOMB - SETAB 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	956	956	0.15412	-	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	956	956	0.14791	-	MCCOOL - MOORE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	956	956	0.14362	-	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	717	717	0.13402	-	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	319	341	0.132	-	NUNDRWD - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	1504	1792	0.12721	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	1504	1792	0.12721	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	364	364	0.12146	-	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	478	478	0.12146	-	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	0	0	0.12031	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	1792	1792	0.11345	-	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	1792	1792	0.10452	-	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	956	956	0.09457	-	G15088_T 345.00 - MOORE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	392	392	0.07586	-	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	720	720	0.06016	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	720	720	0.06016	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	720	720	0.06016	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	226	226	0.0508	-	STEGALL - VICTORY HILL 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	187	187	0.0508	-	VICTORY HILL (VICTORYHL T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	720	720	0.04437	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_034	0	17G	G16_034	-	Non-Converged Contingency	720	720	0.04437	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17SP	G16_034	-	Non-Converged Contingency	0	0	1.16637	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_034	0	17SP	G16_034	-	Non-Converged Contingency	956	956	0.58318	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	17SP	G16_034	-	Non-Converged Contingency	956	956	0.58318	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_034	0	17SP	G16_034	-	Non-Converged Contingency	956	1052	0.2363	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	0	0	1.46138	-	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	0	0	1.1161	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	956	1052	0.73069	-	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	0	0	0.73069	-	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	956	956	0.55805	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	956	956	0.55805	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	956	956	0.5465	-	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	0	0	0.2628	-	P13:230-345:NPPD:STEGALL3:KV3A
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	0	0	0.22017	-	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	956	1052	0.20796	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	0	0	0.2021	-	POSTROCK7-AXTELL3-345kV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	785	785	0.16495	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	785	785	0.16495	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	0	0	0.157	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	956	956	0.14653	-	AXTELL - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	952	952	0.13954	-	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	762.5	762.5	0.13878	-	MINGO - SETAB 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	762.5	762.5	0.13878	-	MINGO - SETAB 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	956	956	0.13548	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	400	480	0.1314	-	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	319	341	0.1235	-	NUNDRWD - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	956	956	0.11948	-	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	956	956	0.11557	-	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	956	956	0.11456	-	MCCOOL - MOORE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	364	364	0.11008	-	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	478	478	0.11008	-	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	0	0	0.10467	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	1504	1792	0.10105	-	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	1504	1792	0.10105	-	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	956	956	0.07379	-	G15088_T 345.00 - MOORE 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	720	720	0.05233	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	720	720	0.05233	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	720	720	0.05233	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_034	0	20L	G16_034	-	Non-Converged Contingency	720	720	0.03255	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20SP	G16_034	-	Non-Converged Contingency	0	0	1.16512	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_034	0	20SP	G16_034	-	Non-Converged Contingency	956	956	0.58256	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20SP	G16_034	-	Non-Converged Contingency	956	956	0.58256	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_034	0	20WP	G16_034	-	Non-Converged Contingency	0	0	1.1578	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_034	0	20WP	G16_034	-	Non-Converged Contingency	956	956	0.5789	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20WP	G16_034	-	Non-Converged Contingency	956	956	0.5789	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_034	0	20WP	G16_034	-	Non-Converged Contingency	956	1052	0.23434	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	20WP	G16_034	-	Non-Converged Contingency	400	400	0.22021	-	SIDNEY 230KV BUS SHUNT
FDNSLock-Blown up	09ALL_G16_034	0	25SP	G16_034	-	Non-Converged Contingency	0	0	1.16591	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	09ALL_G16_034	0	25SP	G16_034	-	Non-Converged Contingency	956	956	0.58296	-	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_034	0	25SP	G16_034	-	Non-Converged Contingency	956	956	0.58296	-	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_034	0	25SP	G16_034	-	Non-Converged Contingency	956	1052	0.2373	-	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	09ALL_G16_034	0	16WP	G16_034	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320	320	0.53457	117.975	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNSLock	09ALL_G16_034	0	20WP	G16_034	TO->FROM	GERALD GENTLEMAN STATION - OGALLALA 230KV CKT 1	320	320	0.53079	116.6372	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	09ALL_G16_034	0	16WP	G16_034	FROM->TO	GGS	1635	1635	0.5899	112.3713	BASE CASE
FDNS	09ALL_G16_034	0	17G	G16_034	FROM->TO	GGS	1635	1635	0.59017	111.1496	BASE CASE
FDNS	09ALL_G16_034	0	20WP	G16_034	FROM->TO	GGS	1635	1635	0.5878	110.8237	BASE CASE
FDNS	09ALL_G16_034	0	17SP	G16_034	FROM->TO	GGS	1635	1635	0.60561	110.3833	BASE CASE
FDNS	09ALL_G16_034	0	25SP	G16_034	FROM->TO	GGS	1635	1635	0.60726	109.6409	BASE CASE
FDNS	09ALL_G16_034	0	20SP	G16_034	FROM->TO	GGS	1635	1635	0.60481	108.9922	BASE CASE
FDNS	09ALL_G16_034	0	20L	G16_034	FROM->TO	GGS	1635	1635	0.4736	100.7559	BASE CASE
FDNS	09ALL_G16_034	0	17SP	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.53289	104.9922	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock	09ALL_G16_034	0	17G	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.53841	104.963	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_034	0	17SP	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.53289	104.4669	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_034	0	17SP	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.53289	104.4474	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_034	0	17G	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.53841	104.1692	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_034	0	17G	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.53841	104.1413	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_034	0	25SP	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.53592	100.6377	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_034	0	25SP	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.53592	100.1271	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_034	0	25SP	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.53592	100.1093	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_034	0	17SP	G16_034	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.63488	104.8048	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_034	0	17SP	G16_034	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.63488	104.2844	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_034	0	17SP	G16_034	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.63488	104.2628	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_034	0	25SP	G16_034	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.63841	100.9545	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_034	0	25SP	G16_034	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.63841	100.4381	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_034	0	25SP	G16_034	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.63841	100.4326	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_034	0	17G	G16_034	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.64366	99.8	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_034	0	20SP	G16_034	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.63819	99.7	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_034	2	17SP	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.53663	103.8837	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock	09ALL_G16_034	2	17G	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.54224	103.7921	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_034	2	17SP	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.53663	103.3736	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_034	2	17SP	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.53663	103.3638	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_034	2	17G	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.54224	103.0543	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	09ALL_G16_034	2	17G	G16_034	TO->FROM	OGALLALA - SIDNEY 230KV CKT 1	320	320	0.54224	103.0255	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_034	2	17SP	G16_034	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.63921	103.8097	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	09ALL_G16_034	2	17SP	G16_034	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.63921	103.2871	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_034	2	17SP	G16_034	TO->FROM	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1	400	400	0.63921	103.2802	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	07ALL_G16_037	0	16WP	G16_037	-	Non-Converged Contingency	1532	1793	0.05549	-	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_037	0	25SP	G16_037	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.06258	99.5	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	478	502	0.18709	-	CHERRY1 - HARRINGTON STATION 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	478	502	0.18709	-	CHERRY1 - HARRINGTON STATION 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	318.7	350.57	0.18585	-	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	318.7	350.57	0.18585	-	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	478	502	0.15926	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	478	502	0.15926	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	318.7	350.57	0.14186	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	318.7	350.57	0.14186	-	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	478	502	0.13422	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	435.82	501.55	0.1124	-	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	435.82	501.55	0.1124	-	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	0	0	0.11156	-	P12:115:SPS:W40.1.WCANYON.DFSMTH
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	685	796	0.10054	-	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	343.79	343.79	0.0991	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	343.79	343.79	0.0991	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	0	0	0.08924	-	BADGER-G16-003-TAP-345kV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	0	0	0.08924	-	BADGER-G16-003-TAP-345kV CKT 2
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	0	0	0.08924	-	G16-001-TAP-WOODWARD-345kV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	0	0	0.08924	-	G16-001-TAP-WOODWARD-345kV CKT 2
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	478.05	501.55	0.08421	-	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	478.05	501.55	0.08421	-	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	0	0	0.08273	-	P12:115:SPS:T67.1.HAPPY.KRESS
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	0	0	0.07202	-	P12:115:SPS:V55.1.SUNDWN.TERRY
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	1792	1972	0.0662	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	1792	1972	0.0662	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	717	926	0.06604	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	318.7	350.57	0.05743	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	318.7	350.57	0.05743	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	0	0	0.0493	-	P12:115:SPS:V15.1.TUCO.INDANA
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	0	0	0.0493	-	P12:115:SPS:V62.1.CRLSLE.INDANA
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	0	0	0.0458	-	P12:115:SPS:T04.1.DFSMTH.CASTRO
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	119.51	153.97	0.04548	-	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	119.51	153.97	0.04548	-	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	1793	1793	0.04462	-	BVRCNTY7 345.00 - G11-14T 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	1716	1793	0.04462	-	BVRCNTY7 345.00 - G11-14T 345.00 345KV CKT 2
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	1793	1793	0.04462	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	1716	1793	0.04462	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	1793	1793	0.04462	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	1716	1793	0.04462	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	249	274	0.04137	-	HAPPY INTERCHANGE - PALO DURO SUB 115KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	0	0	0.04123	-	P12:115:SPS:V80.1.DC_STH.LE-WAIT
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	318.7	350.57	0.03777	-	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	318.7	350.57	0.03777	-	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
FDNSLock-Blown up	00NR_G16_038	0	17SP	G16_038	-	Non-Converged Contingency	0	0	0.03427	-	P12:115:SPS:V37.1.CASTRO.PLANTX
FDNSLock-Blown up	02ALL_G16_038	2	16WP	G16_038	-	Non-Converged Contingency	1076	1076	0.03129	-	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
FDNS	02ALL_G16_038	0	25SP	G16_038	TO->FROM	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.05253	115.428	BASE CASE
FDNS	02NR_G16_038	0	17G	G16_038	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96	96	0.06179	134.2069	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	02NR_G16_038	0	17G	G16_038	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96	96	0.06179	134.2069	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_038	0	25SP	G16_038	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	160	160	0.07156	103.0517	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_038	0	25SP	G16_038	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	160	160	0.07156	103.0517	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	02NR_G16_038	0	17G	G16_038	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96	96	0.06179	106.1943	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	02NR_G16_038	0	17G	G16_038	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96	96	0.06179	106.1943	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_038	0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165	177	0.06068	105.9242	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_038	0	16WP	G16_038	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165	177	0.06068	105.9242	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_038	0	25SP	G16_038	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159	160	0.03175	100.9846	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	02NR_G16_038	0	17G	G16_038	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96	96	0.06179	103.1086	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	02NR_G16_038	0	17G	G16_038	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96	96	0.06179	103.1086	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_038	0	25SP	G16_038	FROM->TO	G15079_T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	318.7	350.57	0.06306	102.893	HOBBS - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_038	0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11525	116.6278	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_038	0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11525	116.6278	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_038	0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11297	102.863	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_038	0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	100.6322	GEN526333 1-JONES GEN #3 21 KV
FDNS	00NR_G16_038	0	25SP	G16_038	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	100.2225	GEN526334 1-JONES_4 116.500
FDNS	00NR_G16_038	0	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03583	101.5564	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_038	0	25SP	G16_038	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03583	101.543	P12:LPL:SPS:K64.1.LP-SE.LUBBS
FDNS	02ALL_G16_038	0	25SP	G16_038	FROM->TO	SPSNORTH_STX	1160	1160	0.38867	111.0508	BASE CASE
FDNS	02ALL_G16_038	0	17G	G16_038	FROM->TO	SPSNORTH_STX	1160	1160	0.39757	102.745	BASE CASE
FDNS	00NR_G16_038	0	25SP	G16_038	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.04278	104.8916	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_038	0	17SP	G16_038	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	120	154	0.03639	101.154	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
FDNS	02ALL_G16_038	2	17G	G16_038	FROM->TO	SPSNORTH_STX	1160	1160	0.39311	100.8517	BASE CASE
FDNS	06ALL_G16_039	0	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.25082	150.9311	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_039	0	20WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.25082	148.4798	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_039	0	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.22483	146.5207	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_039	0	17G	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.25133	145.8107	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_039	0	20L	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.22483	144.488	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_039	0	17G	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.25133	143.7687	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_039	0	16WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.25969	137.4561	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_039	0	16WP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.25969	136.2454	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_039	0	20SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.25572	130.9005	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_039	0	20SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.25572	129.7824	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_039	0	17SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.25601	129.562	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_039	0	17SP	G16_039	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.25601	128.9293	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_039	0	20L	G16_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.09747	99.8	BASE CASE
FDNS	06ALL_G16_039	0	25SP	G16_039	TO->FROM	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1	226	249	0.52155	103.8168	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
FDNS	06ALL_G16_039	0	25SP	G16_039	TO->FROM	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1	226	249	0.49065	103.1505	BASE CASE
FDNS	06ALL_G16_039	0	25SP	G16_039	TO->FROM	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1	226	249	0.52836	99.9	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_039	2	20L	G16_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.09782	99.9	BASE CASE
FDNS	06ALL_G16_039	3	20L	G16_039	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.09782	99.9	BASE CASE
FDNS	06ALL_G16_039	3	25SP	G16_039	TO->FROM	KRESS INTERCHANGE - SWISHER COUNTY INTERCHANGE 115KV CKT 1	239	259	0.5204	99.8	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
FDNS	02ALL_G16_041	0	25SP	G16_041	TO->FROM	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.04077	112.5645	BASE CASE
FDNS	02NR_G16_041	0	17G	G16_041	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96	96	0.04099	128.5301	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	02NR_G16_041	0	17G	G16_041	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96	96	0.04099	128.5301	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	02NR_G16_041	0	17G	G16_041	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96	96	0.04099	100.5365	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	02NR_G16_041	0	17G	G16_041	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96	96	0.04099	100.5365	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_041	0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165	177	0.07656	110.2512	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_041	0	16WP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165	177	0.07656	110.2512	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159	160	0.03634	101.8245	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	G15079_T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	318.7	350.57	0.06826	103.5837	HOBBS - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	Hansford County Switch Station - SPEARMAN INTERCHANGE 115KV CKT 1	159.35	159.95	0.09409	117.6809	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	Hansford County Switch Station - SPEARMAN INTERCHANGE 115KV CKT 1	159.35	159.95	0.09409	117.6809	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	Hansford County Switch Station - SPEARMAN INTERCHANGE 115KV CKT 1	159.35	159.95	0.06671	100.5874	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	Hansford County Switch Station - SPEARMAN INTERCHANGE 115KV CKT 1	159.35	159.95	0.06671	100.5874	HITCHLAND INTERCHANGE - OCHILTREE 230KV CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	Hansford County Switch Station - SPEARMAN INTERCHANGE 115KV CKT 1	159.35	159.95	0.06671	100.5647	OCHILTREE (H TP80219401) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	Hansford County Switch Station - SPEARMAN INTERCHANGE 115KV CKT 1	159.35	159.95	0.06671	100.5647	OCHILTREE (H TP80219401) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	HITCHLAND INTERCHANGE - Hansford County Switch Station 115KV CKT 1	159.95	159.95	0.09409	108.115	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	HITCHLAND INTERCHANGE - Hansford County Switch Station 115KV CKT 1	159.95	159.95	0.09409	108.115	Hitchland Interchange - POTTER COUNTY INTERCHANGE 345KV CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	HITCHLAND INTERCHANGE (H TP80148301) 230/115/13.2KV TRANSFORMER CKT 1	250	288	0.08691	100	HITCHLAND INTERCHANGE (HITCHLDT2) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	HITCHLAND INTERCHANGE (H TP80148301) 230/115/13.2KV TRANSFORMER CKT 1	250	288	0.08691	100	HITCHLAND INTERCHANGE (HITCHLDT2) 230/115/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	HITCHLAND INTERCHANGE (HITCHLDT2) 230/115/13.2KV TRANSFORMER CKT 2	250	288	0.08691	100	HITCHLAND INTERCHANGE (H TP80148301) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	HITCHLAND INTERCHANGE (HITCHLDT2) 230/115/13.2KV TRANSFORMER CKT 2	250	288	0.08691	100	HITCHLAND INTERCHANGE (H TP80148301) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2	560	644	0.23136	101.3645	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2	560	644	0.23136	101.3645	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2	560	644	0.23136	99.8	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	Hitchland Interchange (SIEM 8743067) 345/230/13.2KV TRANSFORMER CKT 2	560	644	0.23136	99.8	Hitchland Interchange (H TB80155502) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13049	117.9056	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.13049	117.9056	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.12804	104.247	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	100.8155	GEN526333 1-JONES GEN #3 21 KV
FDNS	00NR_G16_041	0	25SP	G16_041	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.10124	100.4145	GEN526334 1-JONES_4 116.500
FDNS	00NR_G16_041	0	16WP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165	180	0.07656	102.7422	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_041	0	16WP	G16_041	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165	180	0.07656	102.7422	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03587	101.3985	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_041	0	25SP	G16_041	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03587	101.3852	P12:LPL:SPS:K64.1.LP-SE.LUBBS
FDNS	02ALL_G16_041	0	25SP	G16_041	FROM->TO	SPSNORTH_STX	1160	1160	0.16681	103.667	BASE CASE
FDNS	00NR_G16_041	0	25SP	G16_041	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.04892	106.0792	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_041	0	17SP	G16_041	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	120	154	0.04117	102.353	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	16WP	G16_044	-	Non-Converged Contingency	0	0	0.92477	-	2809X2
FDNSLock-Blown up	16ALL_G16_044	0	16WP	G16_044	-	Non-Converged Contingency	717	789	0.46238	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	16WP	G16_044	-	Non-Converged Contingency	0	0	0.46238	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	00NR_G16_044	0	16WP	G16_044	-	Non-Converged Contingency	717	789	0.27482	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17G	G16_044	-	Non-Converged Contingency	0	0	0.92328	-	2809X2
FDNSLock-Blown up	16NR_G16_044	0	17G	G16_044	-	Non-Converged Contingency	0	0	0.78778	-	2809X2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	16ALL_G16_044	0	17G	G16_044	-	Non-Converged Contingency	717	789	0.46164	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17G	G16_044	-	Non-Converged Contingency	0	0	0.46164	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16NR_G16_044	0	17G	G16_044	-	Non-Converged Contingency	717	789	0.39389	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16NR_G16_044	0	17G	G16_044	-	Non-Converged Contingency	0	0	0.39389	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	17G	G16_044	-	Non-Converged Contingency	717	789	0.34162	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16NR_G16_044	0	17G	G16_044	-	Non-Converged Contingency	717	789	0.27471	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16NR_G16_044	0	17G	G16_044	-	Non-Converged Contingency	717	789	0.27471	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17G	G16_044	-	Non-Converged Contingency	0	0	0.23534	-	2810X2
FDNSLock-Blown up	16NR_G16_044	0	17G	G16_044	-	Non-Converged Contingency	0	0	0.20666	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16NR_G16_044	0	17G	G16_044	-	Non-Converged Contingency	0	0	0.20666	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock-Blown up	16ALL_G16_044	0	17G	G16_044	-	Non-Converged Contingency	717	789	0.11767	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16NR_G16_044	0	17G	G16_044	-	Non-Converged Contingency	0	0	0.10333	-	2801X
FDNSLock-Blown up	16NR_G16_044	0	17G	G16_044	-	Non-Converged Contingency	0	0	0.10333	-	2810X2
FDNSLock-Blown up	16NR_G16_044	0	17G	G16_044	-	Non-Converged Contingency	717	789	0.05167	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16NR_G16_044	0	17G	G16_044	-	Non-Converged Contingency	717	789	0.05167	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16NR_G16_044	0	17G	G16_044	-	Non-Converged Contingency	717	789	0.05167	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16NR_G16_044	0	17G	G16_044	-	Non-Converged Contingency	0	0	0.05167	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.92837	-	2809X2
FDNSLock-Blown up	00NR_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.81984	-	2809X2
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.49611	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.47965	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	717	789	0.46419	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.46419	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	00NR_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	717	789	0.40992	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.40992	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	717	789	0.34074	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	717	789	0.34074	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.33693	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNSLock-Blown up	00NR_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.31382	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	00NR_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.31382	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	717	789	0.25909	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	717	789	0.25909	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	720	792	0.24805	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	720	792	0.24805	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.23982	-	2801X
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.23982	-	2810X2
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.22462	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.22462	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.21577	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	720	792	0.16104	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	720	792	0.15691	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	00NR_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	720	792	0.15691	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	717	789	0.11991	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	717	789	0.11991	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	717	789	0.11991	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.11991	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	720	720	0.11231	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	720	720	0.11231	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	720	720	0.11231	-	GEN640009 1-COOPER NUCLEAR STATION
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	720	720	0.11231	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	720	720	0.11231	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	720	720	0.11231	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	720	720	0.11231	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	720	720	0.11231	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	717	717	0.10964	-	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	717	717	0.10964	-	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	956	1007	0.10909	-	RAUN - SIOUX CITY 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.08266	-	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	430.2	430.2	0.07291	-	LELAND OLDS - STANTON 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.0726	-	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	720	792	0.07206	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	720	792	0.07206	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.07192	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	478	526	0.07192	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.07192	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	732	732	0.07192	-	BROADLAND - HURON 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	400	400	0.07192	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.07038	-	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	320	352	0.06976	-	BISMARK - WASHBURN 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	319	351	0.06976	-	LELAND OLDS - WASHBURN 230KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.06602	-	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	785	785	0.06564	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	762.5	762.5	0.05819	-	MINGO - SETAB 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.05299	-	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	956	956	0.05103	-	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	319	341	0.0458	-	NUNDRWD - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	215	236	0.04353	-	BISON - HETINGER 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	384	384	0.04353	-	BISON - MAURINE 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	210	210	0.04151	-	BISMARK - L3 HAWDON 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	210	210	0.04151	-	GLENHAM - L3 HAWDON 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	240	260	0.04133	-	GLENHAM - WHITLOK 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	240	260	0.04133	-	OAHE - SULLEY BUTTE 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	400	480	0.03952	-	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	342	342	0.0394	-	FARGO - SHEYNNE 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	409	409	0.03801	-	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	341.8	341.8	0.03801	-	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	410	410	0.03785	-	BLAIR - GRANITE FALLS 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	320	320	0.03695	-	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	364	364	0.0363	-	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	364	364	0.0363	-	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	318.7	318.7	0.03626	-	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	352	352	0.03626	-	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	956	956	0.03552	-	AXTELL - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	320	342	0.03519	-	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	320	342	0.03519	-	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	239	299	0.03482	-	BOWMAN - HETINGER 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	239	299	0.03482	-	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	320	320	0.03471	-	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	368	368	0.03471	-	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	956	956	0.03469	-	HOSKINS - RAUN 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	717	717	0.03301	-	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	717	717	0.03301	-	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	956	956	0.03227	-	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	111	111	0.03063	-	BRISTOL - GROTON 115KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	111	111	0.03063	-	BRISTOL - SUMMIT 115KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	17SP	G16_044	-	Non-Converged Contingency	0	0	0.03022	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	0	0	0.925	-	2809X2
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	0	0	0.81927	-	2809X2
FDNSLock-Blown up	16ALL_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	717	789	0.4625	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	0	0	0.4625	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	717	789	0.40964	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	0	0	0.40964	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	717	789	0.33412	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	717	789	0.33412	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	0	0	0.30759	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	0	0	0.30759	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	717	789	0.25867	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	717	789	0.25867	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	0	0	0.23741	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	720	792	0.15379	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	720	792	0.15379	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	720	720	0.11871	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	400	500	0.10488	-	WATERTOWN 230KV SWITCHED SHUNT
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	720	792	0.0771	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	720	792	0.0771	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	478	526	0.07061	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	0	0	0.06613	-	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	0	0	0.06564	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	717	789	0.05909	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	0	0	0.04923	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	0	0	0.04923	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	319	351	0.03321	-	LELAND OLDS - WASHBURN 230KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	717	717	0.03306	-	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	717	717	0.03306	-	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	20SP	G16_044	-	Non-Converged Contingency	0	0	0.03244	-	P13:230-345:NPPD:STEGALL3:KV3A
FDNSLock-Blown up	00NR_G16_044	0	20WP	G16_044	-	Non-Converged Contingency	0	0	2	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	00NR_G16_044	0	20WP	G16_044	-	Non-Converged Contingency	0	0	2	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.92575	-	2809X2
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.81968	-	2809X2
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.47948	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.47948	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.46483	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.46483	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	717	789	0.46288	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.46288	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	717	789	0.40984	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.40984	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.35881	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	717	789	0.33464	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	717	789	0.33464	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.30785	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.30785	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.28376	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	717	789	0.25891	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	717	789	0.25891	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.23974	-	2801X
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.23974	-	2810X2
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.23921	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.23921	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	720	792	0.23242	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	720	792	0.23242	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.21282	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.21282	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	720	792	0.1693	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	720	792	0.1693	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	720	792	0.15393	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	720	792	0.15393	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	717	789	0.11987	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	717	789	0.11987	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	717	789	0.11987	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.11987	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	720	720	0.1196	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	720	720	0.1196	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	720	720	0.1196	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	720	720	0.1196	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	720	720	0.1196	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	720	720	0.0789	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	720	792	0.07719	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	720	792	0.07719	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.07094	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	478	526	0.07094	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.07094	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	732	732	0.07094	-	BROADLAND - HURON 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	400	400	0.07094	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	400	400	0.07094	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.06653	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.06572	-	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.0499	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	0	0	0.0499	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	215	236	0.04113	-	BISON - HETINGER 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	384	384	0.04113	-	BISON - MAURINE 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	319	341	0.04082	-	NUNDRWD - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	717	717	0.03286	-	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	717	717	0.03286	-	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	0	25SP	G16_044	-	Non-Converged Contingency	717	717	0.03286	-	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	0	0	0.47958	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	0	0	0.47958	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	0	0	0.42084	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	0	0	0.42084	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	0	0	0.34499	-	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	717	789	0.30417	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	717	789	0.30417	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	720	792	0.23979	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	720	792	0.23979	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	0	0	0.23	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	0	0	0.23	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	0	0	0.21042	-	2801X
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	0	0	0.21042	-	2810X2
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	478	526	0.15818	-	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	0	0	0.15818	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	732	732	0.15818	-	BROADLAND - HURON 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	400	400	0.15818	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	400	400	0.15818	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	0	0	0.1471	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	720	720	0.115	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	720	720	0.115	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	720	720	0.115	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	720	720	0.115	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	720	720	0.115	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	720	720	0.115	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	720	720	0.115	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	717	789	0.10521	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	717	789	0.10521	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	717	789	0.10521	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	0	0	0.10521	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	319	341	0.0464	-	NUNDRWD - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	215	236	0.04217	-	BISON - HETINGER 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	17SP	G16_044	-	Non-Converged Contingency	384	384	0.04217	-	BISON - MAURINE 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	20SP	G16_044	-	Non-Converged Contingency	717	789	0.29757	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	25SP	G16_044	-	Non-Converged Contingency	717	789	0.2982	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	25SP	G16_044	-	Non-Converged Contingency	717	789	0.2982	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	25SP	G16_044	-	Non-Converged Contingency	0	0	0.24449	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_044	2	25SP	G16_044	-	Non-Converged Contingency	0	0	0.21118	-	2810X2
FDNSLock-Blown up	16ALL_G16_044	2	25SP	G16_044	-	Non-Converged Contingency	478	526	0.15777	-	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	25SP	G16_044	-	Non-Converged Contingency	0	0	0.14411	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	16ALL_G16_044	2	25SP	G16_044	-	Non-Converged Contingency	720	720	0.12224	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	25SP	G16_044	-	Non-Converged Contingency	720	720	0.12224	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	25SP	G16_044	-	Non-Converged Contingency	720	720	0.12224	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	2	25SP	G16_044	-	Non-Converged Contingency	717	789	0.10559	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	2	25SP	G16_044	-	Non-Converged Contingency	717	789	0.10559	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	3	17SP	G16_044	-	Non-Converged Contingency	717	789	0.28733	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	3	17SP	G16_044	-	Non-Converged Contingency	717	789	0.28733	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	3	17SP	G16_044	-	Non-Converged Contingency	0	0	0.28359	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	16ALL_G16_044	3	17SP	G16_044	-	Non-Converged Contingency	478	526	0.19336	-	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	3	17SP	G16_044	-	Non-Converged Contingency	0	0	0.19336	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_044	3	17SP	G16_044	-	Non-Converged Contingency	0	0	0.09023	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock-Blown up	00NR_G16_044	3	20SP	G16_044	-	Non-Converged Contingency	717	789	0.20208	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	3	20SP	G16_044	-	Non-Converged Contingency	1202	1202	0.049	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_044	3	20SP	G16_044	-	Non-Converged Contingency	1202	1202	0.049	-	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	3	25SP	G16_044	-	Non-Converged Contingency	717	789	0.2836	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	3	25SP	G16_044	-	Non-Converged Contingency	0	0	0.2786	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	00NR_G16_044	3	25SP	G16_044	-	Non-Converged Contingency	717	789	0.20235	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_044	4	17SP	G16_044	-	Non-Converged Contingency	0	0	0.28359	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.04353	111.769	BASE CASE
FDNS	16ALL_G16_044	0	25SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.04113	110.4348	BASE CASE
FDNS	16ALL_G16_044	0	20SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.04107	104.842	BASE CASE
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111	111	0.06301	121.6725	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	0	20L	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111	111	0.06589	104.4412	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111	111	0.06301	114.2684	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	0	20L	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111	111	0.06589	101.3477	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34074	99.5	BASE CASE
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.25909	106.0033	BASE CASE
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34074	104.9846	BASE CASE
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26085	103.8144	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26513	102.7785	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26156	102.6035	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26156	102.6035	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26156	102.6001	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26156	102.5706	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26156	102.5673	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26156	102.5673	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26156	102.5673	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26823	102.163	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26823	102.163	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.25849	102.1582	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.25849	102.1582	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26823	102.136	2801X
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26823	102.136	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26823	102.123	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26156	102.1185	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26823	102.1115	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26823	102.0954	2810X2
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26513	101.8702	G13_001IST 115.00 - SUMMIT 115KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.26823	101.7039	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.27103	100.3651	BRISTOL - GROTON 115KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.25434	100.3204	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.25434	100.1884	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.25434	100.1884	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.25434	100.0739	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.25434	100.0739	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.27103	100	BRISTOL - SUMMIT 115KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.25938	99.6	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.04907	113.3111	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	0	20L	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.04971	101.0929	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	0	20L	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03602	111.7741	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16NR_G16_044	0	20L	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03602	111.6918	2809X2
FDNS	16NR_G16_044	0	20L	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03602	111.6841	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16NR_G16_044	0	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.0306	99.8	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	16NR_G16_044	0	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.0306	99.8	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	16NR_G16_044	0	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.0306	99.8	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	16NR_G16_044	0	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.0306	99.8	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	16NR_G16_044	0	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.0306	99.7	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16NR_G16_044	0	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.0306	99.7	BROADLAND - HURON 230KV CKT 1
FDNS	16NR_G16_044	0	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.0306	99.7	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_044	0	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.0306	99.7	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319	351	0.04901	121.2236	2809X1
FDNS	00NR_G16_044	0	25SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319	351	0.04901	121.2236	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319	351	0.04901	120.5784	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	20SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319	351	0.04905	118.5657	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319	351	0.04905	118.5148	2809X1
FDNS	00NR_G16_044	0	20SP	G16_044	FROM->TO	HANKINSON - WAHPETON 230KV CKT 1	319	351	0.04905	118.474	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_044	0	20L	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06479	117.575	2809X2
FDNS	16NR_G16_044	0	20L	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06479	117.5723	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16NR_G16_044	0	20L	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06479	117.186	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16NR_G16_044	0	20L	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06479	112.72	2809X2
FDNS	16NR_G16_044	0	20L	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06479	112.7195	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16NR_G16_044	0	20L	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.06479	112.3816	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	0	25SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07094	105.9336	BASE CASE
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07192	105.6481	BASE CASE
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.02967	104.5932	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	0	20SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07061	103.2367	BASE CASE
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.02967	103.0939	2810X2
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.02967	103.0528	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.02967	102.8895	2801X
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.02967	102.8895	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.02967	102.8855	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.02967	102.8855	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.02967	102.8766	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	0	25SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07094	102.6273	BASE CASE
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07192	102.2894	BASE CASE
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.02967	101.5783	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.02967	100.2787	2810X2
FDNS	16ALL_G16_044	0	20SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.07061	100.2659	BASE CASE
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.02967	100.2134	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.02967	100.1649	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.02967	100.1612	2801X
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.02967	100.1612	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.02967	100.0979	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.02967	100.0979	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0848	158.0215	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0848	156.5501	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	156.4628	BASE CASE
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	150.6173	BASE CASE
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0813	148.1528	AURORA - BROOKINGS 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0813	148.1528	AURORA - BROOKINGS 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0813	147.9645	AURORA - FLANDRU 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0813	147.9645	AURORA - FLANDRU 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07922	146.9623	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08457	146.6545	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0848	146.6442	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07645	146.5439	BROOKINGS - WHITE 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07645	146.5439	BROOKINGS - WHITE 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	146.4172	GEN600045 4-ANSON
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08457	146.3544	2810X2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0788	146.2892	PIPESTONE - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08457	145.9592	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08457	145.8962	2801X
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08457	145.891	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08457	145.891	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07727	145.5054	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0791	145.2342	BISON - HETINGER 230KV CKT 1
FDNSLock	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0791	145.1933	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08457	145.0302	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07747	144.8397	FENTON - NOBLES 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07844	144.8107	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07844	144.8107	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07743	144.6783	FENTON - NOBLES 115KV CKT 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	144.6539	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	144.6539	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0767	144.4874	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0767	144.4874	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08177	144.4577	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.09528	144.3628	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.09528	144.3628	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	144.3267	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	144.2933	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0813	144.2445	FLANDRU - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	144.2	GEN600020 2-ANGUS ANSON1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	144.1952	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	144.1841	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	144.1684	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	144.1681	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	144.1604	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	144.1403	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	144.0943	GEN600021 3-ANGUS ANSON2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	144.0865	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	144.0189	GEN303007 1-1BC2 U2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	144.0024	GEN303006 1-1BC2 U1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.9877	NOBLES 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07715	143.9825	AIRTECH - FEP TAP 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07705	143.9639	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.9638	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07752	143.9452	KOSSUTH 3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.9005	GEN303008 1-1BC2 U3
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.8631	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.8329	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07536	143.8181	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07536	143.8181	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07715	143.7871	AIRTECH - WEST FARIBAULT 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07731	143.7522	FORT RIDGELY - FRANKLIN 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.7459	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07896	143.7084	HURON - WOONSOCKET 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.7039	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07709	143.7027	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.6736	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0773	143.6509	FENTON 115/69KV TRANSFORMER CKT 5
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.6468	GEN600149 W-J183 PROSEW10.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.6259	GEN600150 W-J183 PROSEW20.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07638	143.6237	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07638	143.6237	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.6106	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07862	143.608	CHANARANBIE - FENTON 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07713	143.6013	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07713	143.5914	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	143.5868	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.5501	LANGDON - LANGWIN7 115.00 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.5362	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.5359	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.5359	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0767	143.5285	CHERRY CREEK - GRANT 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.5276	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.509	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07638	143.4928	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.4778	GEN645025 5-NORTH OMAHA 5
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.4717	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07722	143.4598	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07722	143.4573	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.4325	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.4322	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.4311	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.4159	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.3943	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.3892	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.3852	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07744	143.38	BLUE LAKE - MCLEOD 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.3781	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07744	143.3636	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07715	143.3265	PLEZIOZO1ARC
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.3264	GEN345756 H-1SIOUX 1 18.000
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0773	143.3227	LYON COUNTY 115/69KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.3061	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.2892	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07716	143.2783	OVEXFRMCCOVE
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.267	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.2592	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07889	143.2516	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07889	143.2516	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.2505	GEN334432 1-SABINE UNIT 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07727	143.2447	FRANKLIN - REDWOOD FALLS 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.2438	GEN336446 1-MICHOUD UNIT #2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.2418	GEN334431 1-SABINE UNIT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07896	143.2414	STORLA - WOONSOCKET 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.2396	NOBLES 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.2378	GEN345832 1-1TS G1 13.800
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.2372	GEN345841 2-1TS G2 13.800
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.2062	GEN629069 1-EMERY STEAM TURBINE 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.2039	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.2039	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07712	143.2007	CEDRSAUK B4 345.00 - EDG BUS2 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.2002	GEN336242 1-1NMIL ST1 18.000
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.1808	GEN501823 1-TECHE UNIT 3
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0772	143.1714	BRANDN 7 115.00 - ELBOWLK7 115.00 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07717	143.1671	ARNOLD - MORGANV3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	143.1669	MORGANV3 345.00 - TIFFIN 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.1534	GEN334031 1-FRONTIER UNIT 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.1466	GEN345156 H-1MER 4 18.000
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.1387	GEN334030 1-FRONTIER UNIT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.1346	GEN336944 1-REX BROWN
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.125	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07727	143.1142	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.1107	GEN335612 1-WILLOW GLENN UNIT#2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.1077	WHITE BLUFF 500/26.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.1021	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07896	143.0987	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0772	143.0821	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.0773	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07725	143.0597	BLUE LAKE - HAMPTON CORNER 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.0573	FENTON 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08063	143.0452	GROTON - REDFIELD 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.0307	7CALAWY 1 345.00 345/25.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	143.0307	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07715	143.0248	ELM CREEK - PARKERS LAKE 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07718	143.0204	NOBLES () 345/115/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07718	143.0123	NOBLES () 345/115/34.5KV TRANSFORMER CKT 10
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07905	143.0116	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07714	143.0058	LANSING EAST TO POSTVILLE - LANSING WEST 161KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07433	142.9837	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07433	142.9837	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	142.9722	GRAND MEADOW - PLEASANT VALLEY 161KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08063	142.967	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	142.9639	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07766	142.9631	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07666	142.9613	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07712	142.9586	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	142.955	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	142.9491	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07796	142.905	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	142.9017	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	142.8878	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07714	142.8853	NORTH ROCHESTER (NROC TR) 345/161/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08016	142.8746	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08047	142.8671	HURON - REDFIELD 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07718	142.8667	GLENCOE MUNI - MCLEOD 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0773	142.8634	BLUE EARTH TAP - WILMARTH 161KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	142.8586	GEN659116 1-SPIRIT MOUND UNIT1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08176	142.8482	AURORA - BROOKINGS 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08176	142.8482	AURORA - BROOKINGS 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07712	142.8448	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07734	142.8261	PAYNESVILLE - WAKEFIELD 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08016	142.824	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08016	142.824	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0772	142.8216	AUSTIN - PLEASANT VALLEY 161KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	142.8105	GEN629992 1-G164_WF9 34.500
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08016	142.8048	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08016	142.7942	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	142.7903	GRE-CHUBLAK3345.00 - HAMPTON CORNER 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07664	142.7894	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08031	142.7827	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08016	142.76	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	142.7558	HELENA - SCOTTCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	142.7483	ANSON - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	142.7472	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	142.7433	GEN659117 2-SPIRIT MOUND UNIT2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0773	142.7291	WILMARTH () 161/115/13.8KV TRANSFORMER CKT 6
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	142.7035	ANSON - SPLIT ROCK 115KV CKT 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07785	142.6521	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08016	142.6037	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	142.5868	ANSON 115/17.5KV TRANSFORMER CKT 4
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07932	142.5315	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07681	142.484	HAZEL CREEK - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07694	142.4518	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07714	142.4394	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	142.4332	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	142.4061	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08468	142.3713	2801X
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08468	142.3713	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08468	142.3268	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08468	142.2062	2810X2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08468	142.2062	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07708	142.1781	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07716	142.1476	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07715	142.0616	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07715	142.0616	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	142.0307	GEN600046 1-MECST

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	142.0032	GEN600047 1-MECCT1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07711	141.9594	CARROLL COUNTY - VICTORY 161KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.9461	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08176	141.9347	AURORA - FLANDRU 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08176	141.9347	AURORA - FLANDRU 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07681	141.9086	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07681	141.8619	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.8421	GEN681540 5-ALMA UNIT 5
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08468	141.8313	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08468	141.8313	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.7938	GEN615031 1-PLEASANT VALLEY
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.077	141.7924	DIXONCO 230.00 - HOSKINS 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.7895	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0774	141.779	BROOKING COUNTY - YANKEE 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0774	141.779	BROOKING COUNTY - YANKEE 115KV CKT 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07681	141.7698	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07712	141.749	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0773	141.7212	BROWNS VALLEY - HANKINSON 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.6752	GEN619954 1-HUTCHINSON
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07712	141.6659	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07718	141.6528	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.648	GEN600130 W-G586 - CWN 10.6000
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.6415	GEN600131 W-G586 - CWN 20.6000
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07706	141.6137	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.6106	GEN600125 2-FEP ST G 13.800
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.5672	GEN652004 1-G13_001IS_3 0.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.5592	COOPER - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.5592	COOPER - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07721	141.5557	ELK - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.5477	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07491	141.5364	SPLIT ROCK (SPLT 11) 345/115/13.8KV TRANSFORMER CKT 11
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07482	141.5196	SPLIT ROCK (SPLT 10) 345/115/13.8KV TRANSFORMER CKT 10
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.5062	GEN600013 3-BLACK DOG GEN 3
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.4846	NEW MADRID 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.4667	NEW MADRID 345/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07707	141.4605	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.4582	GEN681522 3-GENOA 3
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.4446	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.4426	GEN672372 3-COTEAU CREEK GENERATOR 3
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.4425	GEN672370 1-COTEAU CREEK GENERATOR 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.4425	GEN672371 2-COTEAU CREEK GENERATOR 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07666	141.4332	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.4323	GEN603185 1-FIBROMINN GENERATION
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.4148	GRE-STNYCRK7115.00 (STNYCR115-69) 115/69/12.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07711	141.4076	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07711	141.4076	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07752	141.4055	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07752	141.4055	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.4035	GEN620285 1-SOLWAY
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	141.4004	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.3909	H081 345.00 - H081-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.3909	H081 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07712	141.3812	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.3759	GEN659289 1-DAYCNTYWND W0.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.3732	GEN563312 1-G15097_3 0.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07712	141.3666	STMDSJFAFACO
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07712	141.3665	COPSTJCPFRSJ
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07712	141.3665	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.3638	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.3474	GEN657705 X-DRAYTON
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.3439	GEN672369 3-MERIDIAN GENERATOR 3 ST
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07713	141.3413	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.3371	GEN659031 1-G12_014IS_4 0.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.16413	141.3269	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.2961	GEN600050 1-FEP
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.2817	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.16413	141.2762	2809X1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07737	141.2679	GRACEVT7 - ORTONVILLE 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.2667	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07711	141.2521	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07711	141.252	DENISON - EXIRA 161KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.2503	GEN620323 2-HOOT LAKE 2 GEN
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.16413	141.2352	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0773	141.2301	BIG STONE - BROWNS VALLEY 230KV CKT 1
FDNSLock	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.2194	GEN672384 1-CENTENNIAL WINDFARM
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.19	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07733	141.1818	HILLS - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.1509	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.1508	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07666	141.1431	BROOKINGS - WHITE 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07666	141.1431	BROOKINGS - WHITE 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.0722	GEN600056 W-BUFFALO RIDGE WIND GEN
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.0376	GEN672358 1-CHAPLN1W 0.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.0344	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.0343	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.0297	YANKEE 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07737	141.021	BIG STONE - HIGHWAY 12 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.0192	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.0021	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.002	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	141.002	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07734	140.9786	LEHIGH - RAUN 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07711	140.9537	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.9433	GEN652414 4-FT PECK
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.9433	GEN652415 5-FT PECK
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.9256	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.9256	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07712	140.9155	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.8966	GEN 11143 1-J436GEN1 0.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.8966	GEN 11153 1-J437GEN1 0.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.8853	GEN587663 1-H081-GEN1 0.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.8687	GEN657964 1-ASH2GEN9 0.5750
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.8367	GEN587603 1-J488&J489GN10.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.8303	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.8203	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.8085	GEN659290 1-EDGECOL
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.7906	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0789	140.7641	PIPESTONE - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.7612	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.7591	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.7487	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.7475	DONALDSON - DONALDSON PIPE 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.7473	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.7445	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.7405	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.7405	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.736	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.736	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	140.7324	GEN600045 4-ANSON
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.7092	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.7075	GEN659162 4-RED WLCK
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.7075	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.7009	GEN659192 6-LYNN
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.6997	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.6819	GEN600017 C-LS POWER CT
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.6818	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.6709	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.6708	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.6466	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	140.5903	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08468	140.5855	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.5794	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.5691	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07713	140.5599	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07713	140.4639	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07713	140.4622	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.4542	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07759	140.4379	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07805	140.432	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.4169	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07713	140.3749	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.3639	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07761	140.3481	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07718	140.344	DAN JUHL - SPLIT ROCK 161KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.3428	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07718	140.3192	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.3165	GEN660001 2-ABERDEEN SIEBRECHT
FDNSLock	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.3027	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.3012	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.2888	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.2471	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07853	140.2228	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07853	140.2228	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	140.2169	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.1851	GEN652556 2-OAHE
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.1851	GEN652558 6-OAHE
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.185	GEN652557 4-OAHE
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.1654	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07737	140.1344	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
FDNSLock	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.1246	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07737	140.1192	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07718	140.0824	DAN JUHL - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.0754	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07732	140.0662	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.0459	GEN681542 6-JP MADGETT
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07917	140.0273	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	140.0262	GEN659270 1-WEST SW
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.9948	GEN600069 W-YANKEE 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.9668	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.9668	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.9666	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.9615	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.9413	GEN600077 W-YANKEE 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.9413	GEN600099 W-YANKEE 4
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.9272	GEN600078 W-YANKEE 3
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.9002	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.858	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.8449	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.8392	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.8383	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.8201	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.8201	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.8201	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.8168	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.7874	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.7874	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.7652	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.7637	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.7533	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.7493	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.7349	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.7323	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0954	139.7178	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0954	139.7178	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.7102	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.7083	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07718	139.6898	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07698	139.6768	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07698	139.6768	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07698	139.6768	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07698	139.6768	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07737	139.6265	GRACEVT7 - MORRIS 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07737	139.6265	GRACEVT7 - MORRIS 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07757	139.6138	FENTON - NOBLES 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07853	139.6051	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07853	139.6051	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.5585	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.552	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.5507	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.5464	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.5436	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.5421	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.5358	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07726	139.5354	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.5349	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.5248	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.5195	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.5071	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.4866	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.4846	GEN652460 4-GARRISON
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.4846	GEN652461 5-GARRISON
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07727	139.482	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07707	139.459	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.4348	GEN659274 1-GROTON
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.4136	GEN652457 1-GARRISON
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.4136	GEN652458 2-GARRISON
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.4136	GEN652459 3-GARRISON
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07707	139.3842	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07707	139.3842	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.3699	GEN652559 1-OAHE
FDNSLock	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07917	139.3132	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07753	139.2804	FENTON - NOBLES 115KV CKT 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07714	139.2747	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.2666	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.2447	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07783	139.1916	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.1779	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07751	139.1721	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.1616	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.1513	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.1445	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07783	139.1429	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.1345	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07739	139.1091	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07714	139.0971	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07783	139.0887	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08089	139.0701	FLANDRU - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.0673	GEN336222 1-LITTLE GYPSY UNIT#2
FDNSLock	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	139.0522	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.0433	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.0317	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.0304	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	139.0198	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07721	138.9502	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.9381	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.9039	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07714	138.8948	P12:115:TSGT:COVALT7-SNAKECK7
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08026	138.8911	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0768	138.8909	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0768	138.8909	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.8889	MEC345 - WILMARTH 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.8832	MEC345 345/19.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0775	138.8828	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.871	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07757	138.8662	MONTICELLO - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07721	138.8473	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.8472	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.8471	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.8455	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08026	138.8382	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08026	138.8382	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07727	138.8136	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.8027	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.795	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.7934	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08026	138.786	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.7831	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07761	138.767	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.7581	GEN303007 1-1BC2 U2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08026	138.7489	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08026	138.7487	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08041	138.7354	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.7305	GEN303006 1-1BC2 U1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07727	138.7303	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.7289	MEC115 115/15.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.7288	MEC115 - WILMARTH 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07723	138.7016	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07721	138.7012	ARROWHEAD - FORBES 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.692	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.6816	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07714	138.6816	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07724	138.6778	GRAND FORKS - PICKERT 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07714	138.6595	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.6487	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.6486	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.644	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07714	138.6431	P12:115:TSGT:BSPRGS7-WHORSE7
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.6385	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.6271	GEN303008 1-1BC2 U3
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.6207	GEN600020 2-ANGUS ANSON1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.6165	NOBLES 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07714	138.6009	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0775	138.5935	LYON COUNTY (8779072) 345/115/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07714	138.5863	P12:115:NPPD:TSGT2:W.HORSE7:B.SPRGS7:BTB
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08026	138.5828	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.5786	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07724	138.5738	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.568	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.5669	GEN600021 3-ANGUS ANSON2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07728	138.5626	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.5389	LANGDON - LANGWIN7 115.00 115KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	138.5387	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07722	138.5166	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07722	138.5166	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07723	138.5107	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07714	138.5082	BLUE CREEK - W.HORSE7 115.00 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.5064	GENOA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.4816	NOBLES 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07733	138.4782	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.4684	AS KING 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07722	138.467	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07723	138.4609	LAWERENCE CREEK - SHAEFER 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07754	138.449	BLUE LAKE - MCLEOD 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07724	138.4368	AIRTECH - FEP TAP 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.4273	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.4208	MORANVILLE - ROSEAU 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.4197	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.3949	GEN525561 1-TOLK GEN #1 24 KV
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.3792	GEN512688 2-GRDA1 GSU2 22
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07647	138.379	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07647	138.379	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.3789	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.3785	GEN600149 W-J183 PROSEW10.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.3718	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07761	138.3655	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07761	138.3653	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07724	138.3602	AIRTECH - WEST FARIBAULT 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.3564	GEN600150 W-J183 PROSEW20.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.346	GEN514805 1-SOONER UNIT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.3419	GEN514806 1-SOONER UNIT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07732	138.3362	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07647	138.3247	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07718	138.3189	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.3152	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	138.3146	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.2871	GEN532722 1-EVANS ENERGY CENTER UNIT 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	138.2711	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.2641	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.264	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07723	138.261	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.2508	RUNNING 230/118KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	138.2507	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.2507	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07905	138.239	HURON - WOONSOCKET 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.2304	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0772	138.229	EDGETOWN TAP - HOOT LAKE 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07723	138.2288	MAPLE RIVER - WINGER 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08241	138.2271	HELENA - SHEAS LK3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07725	138.2208	ELM CREEK - PARKERS LAKE 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	138.2201	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0774	138.1995	FENTON 115/69KV TRANSFORMER CKT 5
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.1989	GEN645025 5-NORTH OMAHA 5
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07718	138.1986	BONESTEEL - FT RANDAL 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07735	138.1925	ARNOLD - HAZLETON 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.1889	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.1784	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07723	138.1774	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07723	138.1659	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	138.1637	YANKEE 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.1616	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07718	138.144	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (
FDNSLock	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07803	138.141	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	138.1387	YANKEE 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.1361	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07721	138.1256	TYNDALL - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0774	138.1191	FORT RIDGELY - FRANKLIN 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.1178	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.0816	GEN635407 W-SHD415 W 0.6000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.0816	GEN635408 W-SHD425 W 0.6000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.08	GEN635409 W-SHD435 W 0.6000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07803	138.0683	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07803	138.0683	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0768	138.0446	CHERRY CREEK - GRANT 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.025	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.025	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.0223	GEN336446 1-MICHOUD UNIT #2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.0193	GEN334432 1-SABINE UNIT 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.0191	GEN334431 1-SABINE UNIT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	138.0188	GEN659141 1-K10215A
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	138.0158	GEN345756 H-1SIOUX 1 18.000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07754	138.0126	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07545	137.9597	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07545	137.9597	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.9541	GEN345832 1-1TS G1 13.800
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.9536	GEN345841 2-1TS G2 13.800
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07675	137.9518	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.9506	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.9506	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.9435	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07736	137.9422	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07728	137.9393	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07742	137.9174	LEHIGH - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07731	137.9171	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.9103	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.8922	GEN336242 1-1NMIL ST1 18.000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07545	137.888	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.8743	GEN501823 1-TECHE UNIT 3
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.8716	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07905	137.8713	STORLA - WOONSOCKET 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07905	137.8638	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07775	137.8504	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	137.8391	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.8363	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07744	137.8355	PAYNESVILLE - WAKEFIELD 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.8337	GEN336944 1-REX BROWN
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	137.8254	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07435	137.8137	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07435	137.8137	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07673	137.8084	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	137.8076	GEN615010 1-STANTON4
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.8071	GEN338443 1-PANDA S1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.807	HELENA - SCOTTCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07739	137.8043	LYON COUNTY 115/69KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07729	137.8009	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.795	GEN335612 1-WILLOW GLENN UNIT#2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	137.7921	BROOKING COUNTY - J432 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	137.7921	J432 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07761	137.7892	KOSSUTH 3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.7832	GEN629069 1-EMERY STEAM TURBINE 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07736	137.7808	FRANKLIN - REDWOOD FALLS 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.7795	GEN501970 1-EVANGELINE UNIT 7
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.776	GEN334030 1-FRONTIER UNIT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.7753	GEN334031 1-FRONTIER UNIT 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07721	137.7687	FRANKS - HUBEN 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.7614	GEN337430 1-PERYVILLE UNIT #3
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.7611	GEN337428 1-PERYVILLE UNIT #1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.7083	FENTON 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.7022	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07899	137.6886	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07899	137.6886	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07727	137.6843	NOBLES () 345/115/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07727	137.6802	NOBLES () 345/115/34.5KV TRANSFORMER CKT 10
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07724	137.672	PLEZIOZO1ARC
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08072	137.6671	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08072	137.662	GROTON - REDFIELD 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07805	137.6606	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.6589	GRAND MEADOW - PLEASANT VALLEY 161KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.6328	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07721	137.623	AS KING - WILLOW RIVER 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07915	137.6229	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.5966	WHEATON () 161/13.8/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	137.5712	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07727	137.5676	ARNOLD - MORGANV3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.5583	GEN645042 2-CASS COUNTY 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.5559	GEN645041 1-CASS COUNTY 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07729	137.5392	GRE-CHUBLAK3345.00 - HAMPTON CORNER 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07734	137.519	BLUE LAKE - HAMPTON CORNER 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07721	137.5151	CEDRSAUK B4 345.00 - EDG BUS2 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	137.4878	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.4824	HIPRAR_WF5 161.00 161/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07724	137.4741	NORTH ROCHESTER (NROC TR) 345/161/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.4556	GEN659116 1-SPIRIT MOUND UNIT1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.436	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	137.4308	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	137.4057	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07728	137.3963	GLENCOE MUNI - MCLEOD 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.3825	GEN600112 W-G287 NOB2G W0.5750
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	137.3722	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.335	GEN659117 2-SPIRIT MOUND UNIT2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.3162	FENTON 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	137.3139	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	137.2489	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	137.2489	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.1477	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.1382	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07717	137.1335	COLUMEAST - SHELL CREEK 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0769	137.0848	HAZEL CREEK - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.0591	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	137.0448	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07724	137.0365	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07724	137.0365	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07794	136.935	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.9248	1222-AINSWORTH WIND
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	136.8262	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07721	136.8138	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	136.7868	GEN600006 1-AS KING
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07709	136.7607	DIXONCO 230.00 - HOSKINS 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.7577	GEN600046 1-MECST
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0772	136.7018	CARROLL COUNTY - VICTORY 161KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.6797	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.6602	GEN600047 1-MECCT1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07735	136.633	BROOKING COUNTY () 345/115/13.8KV TRANSFORMER CKT 10
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07736	136.6103	BROOKING COUNTY () 345/115/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0769	136.6005	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0769	136.5807	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.5697	GEN681540 5-ALMA UNIT 5
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07721	136.5005	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07721	136.5005	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07727	136.4817	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07716	136.4812	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0772	136.4735	COOPER - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0772	136.4735	COOPER - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07721	136.4627	COPSTJCPFRSJ
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07721	136.4627	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07721	136.4627	STMDSJFAFACO
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07726	136.4597	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.4593	GEN615031 1-PLEASANT VALLEY
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	136.4586	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	136.4586	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07827	136.4582	ELLSBORO - LAKE YANKTON 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.4555	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07722	136.4292	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07721	136.4246	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.4193	GEN619954 1-HUTCHINSON
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07749	136.4177	BROOKING COUNTY - YANKEE 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07749	136.4177	BROOKING COUNTY - YANKEE 115KV CKT 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07827	136.4078	CHANARANBIE - ELLSBORO 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.16422	136.3732	2809X1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.16422	136.3732	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0772	136.367	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07691	136.3518	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0772	136.3479	DENISON - EXIRA 161KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07721	136.3324	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.3318	GRE-STNYCRK7115.00 (STNYCR115-69) 115/69/12.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.3211	GEN600125 2-FEP ST G 13.800
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.297	GEN600130 W-G586 - CWN 10.6000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.2885	GEN600131 W-G586 - CWN 20.6000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07731	136.2802	ELK - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.2663	GEN652004 1-G13_001IS_3 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.2649	GEN600081 W-BUFFALO RIDGE WIND GEN 4
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07721	136.2619	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0772	136.2567	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07791	136.2517	HESKETT - WISHEK 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.2399	GEN660003 3-HURON WEST PARK
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.2337	GEN600013 3-BLACK DOG GEN 3
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.2286	GEN672371 2-COTEAU CREEK GENERATOR 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.2285	GEN672370 1-COTEAU CREEK GENERATOR 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.2285	GEN672372 3-COTEAU CREEK GENERATOR 3
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.2185	GEN620285 1-SOLWAY
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.2003	GEN603185 1-FIBROMINN GENERATION
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.1843	GEN681522 3-GENOA 3
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07722	136.1829	EDEN 345 345.00 - HCKRYCK3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.1719	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07728	136.1583	DAN JUHL - SPLIT ROCK 161KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.1502	GEN659289 1-DAYCNTYWND W0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.1477	GEN563312 1-G15097_3 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.1437	GEN672369 3-MERIDIAN GENERATOR 3 ST
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07744	136.1334	LEHIGH - RAUN 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.1098	GEN659031 1-G12_014IS_4 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07728	136.1058	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.0975	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07716	136.089	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.0847	GEN672384 1-CENTENNIAL WINDFARM
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.0736	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.0551	GEN620323 2-HOOT LAKE 2 GEN
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07498	136.0518	SPLIT ROCK (SPLT 11) 345/115/13.8KV TRANSFORMER CKT 11
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.0411	H081 345.00 - H081-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.0411	H081 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	136.0252	GEN600050 1-FEP
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07743	136.0225	HILLS - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0772	136.0207	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07488	136.0151	SPLIT ROCK (SPLT 10) 345/115/13.8KV TRANSFORMER CKT 10
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.9566	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.9566	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07728	135.9435	DAN JUHL - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07722	135.9413	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.9411	GEN652410 3-FT PECK
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.9375	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.9205	GEN672358 1-CHAPLN1W 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07722	135.8887	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	135.8821	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	135.8821	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.8723	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07722	135.8712	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07817	135.8687	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.8635	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.8635	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.8572	GEN600056 W-BUFFALO RIDGE WIND GEN
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.8391	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.8391	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.8391	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.8347	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.8226	WINGER (WINGER) 115/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.8043	THIEF RIVER FALLS (TRF) 115/69/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.8042	GEN652414 4-FT PECK
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.8042	GEN652415 5-FT PECK
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.7138	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.7048	GEN657964 1-ASH2GEN9 0.5750
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.16422	135.7005	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.6912	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.6912	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.6872	GEN587603 1-J488&J489GN10.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.6753	GEN659290 1-EDGECOL
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.6733	YANKEE 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.6693	GEN 11143 1-J436GEN1 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.6693	GEN 11153 1-J437GEN1 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.6691	GEN672357 2-FUT-WL2X 13.800
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.6568	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.6539	GEN672390 2-FUT-SW2X 13.800
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.6522	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.6223	GEN659162 4-RED WLCK
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.6223	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.6193	GEN659192 6-LYNN
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.6158	DONALDSON - DONALDSON PIPE 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.6112	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.5957	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.5957	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.5449	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.5449	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.5444	GEN587663 1-H081-GEN1 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.544	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.5429	GEN600070 9-RIVER SIDE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.5408	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.5187	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.5187	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.5117	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.4993	FRONTER4 230.00 (FRONTIER) 230/69/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.49	GEN600017 C-LS POWER CT
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07747	135.3873	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.3323	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.3264	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	135.3149	GEN661015 1-COYOTE
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.3101	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.2709	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.2433	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07723	135.2395	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.1844	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.1768	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.1363	GEN652556 2-OAHE
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.1363	GEN652557 4-OAHE
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.1363	GEN652558 6-OAHE
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.1274	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.1194	GEN681542 6-JP MADGETT
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.1147	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.0355	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.016	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	135.0112	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.9886	GEN659270 1-WEST SW
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	134.9577	GEN600005 1-MONTICELLO
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.9539	GEN657705 X-DRAYTON
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.9495	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.9327	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.8702	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.8702	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.7927	GEN600069 W-YANKEE 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.7663	GEN600078 W-YANKEE 3
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.7558	GEN600077 W-YANKEE 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.7558	GEN600099 W-YANKEE 4
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.7462	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.7462	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.7462	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.7446	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.7112	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.6897	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.6823	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.6805	GEN672356 1-FUT-WL1X 18.000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.6707	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.6273	GEN672389 1-FUT-SW1X 18.000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.6102	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.5578	GEN652559 1-OAHE
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.5073	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	134.4772	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	134.4689	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.4635	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	134.4605	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.3524	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.3521	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.3357	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.3256	GEN652460 4-GARRISON
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.3256	GEN652461 5-GARRISON
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.2918	GEN659274 1-GROTON
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.2672	GEN652458 2-GARRISON
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.2671	GEN652457 1-GARRISON
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.2671	GEN652459 3-GARRISON
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	134.2059	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	134.1597	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	134.094	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	134.0807	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	133.8904	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	133.7778	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	133.5795	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	133.4513	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	133.4305	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	133.3538	GEN659141 1-K10215A
FDNSLock	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	133.2954	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	133.2584	GEN659125 1-COVEY
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	133.1014	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	133.1013	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	132.9843	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	132.9723	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	132.9416	GEN615010 1-STANTON4
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	132.7517	YANKEE 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	132.7452	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	132.6887	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	132.6849	BASE CASE
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	132.6771	BROOKING COUNTY - J432 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	132.6771	J432 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	132.6437	YANKEE 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	132.5818	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	132.5818	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	132.5472	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	132.4455	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	132.4232	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	132.2661	GEN600006 1-AS KING
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	132.2333	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	132.0766	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	131.9202	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	131.7453	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	131.4805	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	131.311	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	131.3081	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.077	131.1897	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.077	131.1888	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	130.8571	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	130.6872	GEN587293 1-G16-044-GEN10.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	130.5704	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	130.477	GEN600005 1-MONTICELLO
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	130.3393	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	130.3393	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	130.0215	GEN600000 1-SHERBURNECNTY G1
FDNSLock	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	129.9429	GEN615001 1-COAL CREEK
FDNSLock	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	129.7909	GEN615002 2-COAL CREEK
FDNSLock	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	129.5963	GEN661015 1-COYOTE
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	129.4955	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	129.4798	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	129.1594	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	128.9838	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	128.9434	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	128.72	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	128.688	GEN659125 1-COVEY
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07469	128.607	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07487	128.5577	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	128.5102	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	128.4928	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	128.4919	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	128.4579	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	128.4579	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07655	128.1002	FORBES - ROSEAU 500KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	128.0694	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07655	128.0357	RIEL - ROSEAU 500KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07655	128.0316	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07655	128.0316	ROSEAU - ROSEAUM 2 500.00 500KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07768	127.6798	HANKINSON - WAHPETON 230KV CKT 1
FDNSLock	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	127.6476	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08092	127.4301	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07605	127.1954	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	127.1131	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07605	127.0175	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	126.7631	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07891	126.7507	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08214	126.7407	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07478	126.1839	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	126.1291	GEN587293 1-G16-044-GEN10.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07792	126.0812	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07792	126.0812	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	125.9859	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07765	125.9225	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07427	125.9195	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07427	125.9195	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07764	125.8939	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	125.8062	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	125.6355	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08046	125.5653	AURORA - BROOKINGS 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08046	125.5653	AURORA - BROOKINGS 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07667	125.5473	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07714	125.5459	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07569	125.3985	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07569	125.3985	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	125.3121	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	125.3075	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	125.2864	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07487	125.2311	LETCHER - SIOUX FALLS 230KV CKT 1
FDNSLock	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	125.2087	GEN615001 1-COAL CREEK
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	125.1208	GEN635023 3-WALTER SCOTT UNIT 3
FDNSLock	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07664	125.0829	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNSLock	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	125.0551	GEN615002 2-COAL CREEK
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0777	124.9331	CHANARANBIE - FENTON 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08046	124.9029	AURORA - FLANDRU 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08046	124.9029	AURORA - FLANDRU 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07732	124.8571	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07732	124.8571	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07838	124.717	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08214	124.6859	FIELD SOUTH - WILMARTH 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08214	124.6419	FIELD NORTH - FIELD SOUTH 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08214	124.6336	FIELD NORTH - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08349	124.5819	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07642	124.5079	BIG STONE - BROWNS VALLEY 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	124.4829	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.077	124.462	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08349	124.4277	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08349	124.4201	2810X2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08349	124.377	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08349	124.377	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08349	124.3675	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07714	124.3568	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08349	124.3512	2801X
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08349	124.2383	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.077	124.2382	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.077	124.2205	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.077	124.2094	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.077	124.2061	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07717	124.1963	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07513	124.0758	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07642	123.9502	BROWNS VALLEY - HANKINSON 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08141	123.8521	HELENA - SHEAS LK3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07717	123.7891	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0756	123.7656	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	123.7551	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	123.7538	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	123.7496	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.09427	123.6823	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.09427	123.6823	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	123.6783	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07716	123.6267	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07716	123.6116	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07465	123.5176	FT RANDAL - UTICA JCT 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0756	123.5026	BROOKINGS - WHITE 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0756	123.5026	BROOKINGS - WHITE 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07671	123.489	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	123.4763	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.19547	123.4744	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07664	123.3323	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07795	123.3198	PIPESTONE - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0767	123.3114	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0767	123.3114	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07669	123.2333	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07669	123.2333	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07714	123.2271	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07672	123.1658	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	123.1575	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	123.1195	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07653	123.1045	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	123.0819	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07669	123.0209	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0753	123.0104	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07707	122.9735	MCLEOD - PANTHER 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.946	LANGDON - LANGWIN7 115.00 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07662	122.8526	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.8187	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.7789	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07657	122.7354	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.7262	BARNES 4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07732	122.7201	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07732	122.7201	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07662	122.6976	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.6935	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07668	122.6858	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08087	122.6633	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07635	122.6539	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07635	122.6539	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNSLock	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07651	122.6446	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07616	122.6338	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07656	122.5828	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07662	122.5812	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07732	122.5562	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07732	122.5562	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.5404	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.522	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07771	122.4788	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07771	122.4788	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07554	122.4748	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07554	122.4748	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07554	122.462	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.4368	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07659	122.4339	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.419	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07661	122.4085	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07661	122.4085	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07633	122.4031	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.3943	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07647	122.3886	GRACEVT7 - ORTONVILLE 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.3611	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.3611	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.3397	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.3336	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.3117	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0767	122.2948	PAYNSVILLE - WILLMAR 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07646	122.2617	BIG STONE - HIGHWAY 12 115KV CKT 1
FDNSLock	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07827	122.2604	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0767	122.2267	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07638	122.2259	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.1713	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.1611	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.1605	GEN338146 1-INDEPENDENCE UNIT #2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07591	122.1598	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.1589	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.1575	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.1342	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07651	122.1221	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07742	122.0874	NUNDRWD - WAYSIDE 230KV CKT 1
FDNSLock	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07516	122.0746	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07647	122.0605	GRACEVT7 - MORRIS 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07647	122.0605	GRACEVT7 - MORRIS 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07646	122.0511	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07641	122.0457	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07665	122.044	FENTON - NOBLES 115KV CKT 1
FDNSLock	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07516	122.0432	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07516	122.0201	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.0185	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	122.0175	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07634	122.0079	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07927	121.9923	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07478	121.9707	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07478	121.9707	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07638	121.9702	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07771	121.9654	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07771	121.9654	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.9526	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.952	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.9519	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07654	121.9477	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.9451	MEC345 - WILMARTH 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07927	121.9429	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07927	121.9429	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.9428	MEC345 345/19.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.9309	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07686	121.9241	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.9093	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07631	121.9012	BURR - CANBY 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07927	121.9002	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07927	121.8966	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07927	121.8959	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07661	121.8811	FENTON - NOBLES 115KV CKT 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07636	121.8775	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07636	121.8775	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.8761	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.8759	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.8613	RGBYWND4 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.8563	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.8563	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.8414	MEC115 - WILMARTH 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.8409	MEC115 115/15.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07942	121.8234	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.7986	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.7925	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07927	121.7829	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08046	121.7772	FLANDRU - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07595	121.7655	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07648	121.759	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.751	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.7506	GEN600149 W-J183 PROSEW10.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07592	121.7477	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07592	121.7477	GRANT - MITCHELL 115KV CKT 1
FDNSLock	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07827	121.7421	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.7333	GEN600150 W-J183 PROSEW20.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.7128	NOBLES 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.703	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.6795	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.6698	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.6581	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.6489	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07607	121.6417	G15088_T 345.00 - MOORE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07648	121.6346	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07634	121.6016	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.6012	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.5774	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.564	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.5513	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07633	121.5439	AIRTECH - FEP TAP 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.5332	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07637	121.5247	AUDUBON - HUBBARD 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07818	121.5241	HURON - WOONSOCKET 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07633	121.5218	AIRTECH - WEST FARIBAULT 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.5066	GENOA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.4937	GEN334440 1-SABINE UNIT 4
FDNS	16ALL_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.19547	121.4909	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07649	121.4818	FENTON 115/69KV TRANSFORMER CKT 5
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07632	121.48	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.4579	AS KING 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07632	121.4543	JAMES TOWN - PICKERT 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07625	121.4532	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.4522	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07573	121.451	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.4353	LKFLDXL3 - TRIMONT WD 3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07592	121.4346	CHERRY CREEK - GRANT 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07632	121.4292	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07625	121.4199	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.4193	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07632	121.4136	LAWERENCE CREEK - SHAEFER 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.4022	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07635	121.3827	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07635	121.3827	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07578	121.3824	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07616	121.3804	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.377	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.3694	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.3693	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07625	121.3666	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.3659	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07632	121.3605	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07632	121.3552	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.3482	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07646	121.3432	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07632	121.3412	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.3352	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07625	121.3316	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.3311	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07663	121.3278	BLUE LAKE - MCLEOD 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.3201	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07818	121.316	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.3132	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07613	121.3065	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07553	121.306	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07663	121.3035	BLUE LAKE () 230/115/13.8KV TRANSFORMER CKT 7
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07641	121.3011	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.3011	GEN303007 1-1BC2 U2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.2973	GEN303006 1-1BC2 U1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07649	121.2969	FORT RIDGELY - FRANKLIN 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.2937	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07607	121.2931	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.16351	121.2851	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07977	121.2837	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07632	121.2768	GRAND FORKS - PICKERT 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07643	121.2674	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.16351	121.2634	2809X1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.16351	121.2584	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07636	121.2476	KARLSTAD - WINGER 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.2467	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07646	121.2443	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.2431	GEN303008 1-1BC2 U3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07484	121.2419	MANNING - SPIRIT MOUND 115KV CKT 1
FDNSLock	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.2298	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07356	121.2255	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07356	121.2255	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07629	121.2212	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07633	121.2211	ELM CREEK - PARKERS LAKE 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07812	121.2195	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07812	121.2195	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.217	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.2115	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.2096	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07646	121.2077	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07685	121.2025	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07977	121.2012	GROTON - REDFIELD 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07637	121.1795	AS KING - KOHLMAN LAKE 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.1749	GEN645025 5-NORTH OMAHA 5
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07632	121.174	MAPLE RIVER - WINGER 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.1729	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07818	121.1721	STORLA - WOONSOCKET 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07661	121.1721	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.1682	LANGWIN7 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07625	121.1567	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.1559	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07648	121.1524	LYON COUNTY 115/69KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.152	ADAMS NORTH - HIPRAR_WF5 161.00 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.1468	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0764	121.1462	MCLEOD (MCLEO230/115) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07643	121.138	BLUE LAKE - HAMPTON CORNER 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.1247	FENTON 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.1176	GEN659116 1-SPIRIT MOUND UNIT1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.1176	GEN659117 2-SPIRIT MOUND UNIT2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07459	121.1172	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07459	121.1172	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07459	121.1148	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0764	121.1121	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.1064	GEN562517 1-G14_021_S2 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.0992	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.0949	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.0942	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.0939	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07645	121.0906	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.0899	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07638	121.0857	ELBOWLK7 115.00 - GRANTCO7 115.00 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07484	121.0825	BERSFORD - MANNING 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.0818	GEN629992 1-G164_WF9 34.500
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.0717	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07826	121.0674	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07629	121.0659	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.0623	GRAND MEADOW - PLEASANT VALLEY 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07632	121.0536	LANSING EAST TO POSTVILLE - LANSING WEST 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.0523	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.047	GEN635407 W-SHD415 W 0.6000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.047	GEN635408 W-SHD425 W 0.6000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.047	GEN635409 W-SHD435 W 0.6000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07626	121.037	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.0346	GEN345756 H-1SIOUX 1 18.000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07644	121.0221	ARNOLD - HAZLETON 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07648	121.0095	WILMARTH () 161/115/13.8KV TRANSFORMER CKT 6
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	121.0083	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07653	120.9581	PAYNESVILLE - WAKEFIELD 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.5941	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07585	120.3628	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07638	120.2657	BREWSTER - ELK 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07684	120.2377	STORLA (KV1A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	120.2306	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.2048	GEN600046 1-MECST
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07629	120.2003	CARROLL COUNTY - DRAGER5 161.00 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07629	120.2003	CARROLL COUNTY - DRAGER5 161.00 161KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07629	120.1895	POCAHONTAS COUNTY - POMEROY 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07636	120.1874	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.1681	GEN672383 1-MLTC 1G 13.800
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.1612	GEN600056 W-BUFFALO RIDGE WIND GEN
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.1609	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07632	120.1587	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0763	120.1522	HAYES - POMEROY 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.1502	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.1477	GEN600047 1-MECCT1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07658	120.1426	BROOKING COUNTY - YANKEE 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07658	120.1426	BROOKING COUNTY - YANKEE 115KV CKT 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07599	120.1424	SIOUX CITY - TWIN CHURCH 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.1397	DELL 500 - ESSEX UNIT 2 500KV CKT Z1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07564	120.1392	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07564	120.1392	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07618	120.139	DIXONCO 230.00 - HOSKINS 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.1383	NEW MADRID 345/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07633	120.1381	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07633	120.1381	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.1351	GEN563302 1-G15096_3 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.135	NEW MADRID 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.1336	GEN672336 7-E B CAMPBELL GENERATOR 7
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.1336	GEN672337 8-E B CAMPBELL GENERATOR 8
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.1262	GEN672382 1-MEADOW LAKE GENERATOR 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07588	120.12	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.1095	GEN652004 1-G13_001IS_3 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.1092	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07633	120.1059	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07633	120.1059	PLYMOUTH - SIOUX CITY 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.101	DEVILS LAKE JCT - DEVILS LAKE S 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0999	GEN681540 5-ALMA UNIT 5
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07629	120.0929	CARROLL COUNTY - VICTORY 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07631	120.0917	EDEN 345 345.00 - HCKRYCK3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0904	GEN600130 W-G586 - CWN 10.6000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0904	GEN659159 3-PIONEER G313.800
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0879	GEN600131 W-G586 - CWN 20.6000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0837	GEN672396 1-YHPS 1G 13.800
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0837	GEN672397 2-YHPS 2G 13.800
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07626	120.0805	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0742	GEN659156 2-LONESMCRK 2G13.800
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0742	GEN659157 3-LONESMCRK 3G13.800
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.074	GEN659289 1-DAYCNTYWND W0.6900
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	120.0732	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0726	GEN563312 1-G15097_3 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.072	GEN659031 1-G12_014IS_4 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0689	GEN659147 1-PIONEER 1G13.800
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0689	GEN659158 2-PIONEER G213.800
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07634	120.0645	ELLENDLMVP4 230.00 - J316_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07637	120.0581	ALEXMRES3 345.00 () 345/115/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07629	120.0551	BLACKHAWK 3 345.00 - HAZLETON 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.051	COOPER - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.051	COOPER - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0505	KARLSTA7 115.00 (KARLSTAD) 115/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07631	120.0471	G14-021T 345.00 - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07629	120.0433	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07629	120.0433	DRAGER5 161.00 - GRAND JUNCTION 161KV CKT 1
FDNSLock	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0763	120.0397	COPSTJCPFRSJ
FDNSLock	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0763	120.0397	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0763	120.0397	STMDSJFAFACO
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0364	GEN652410 3-FT PECK
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0299	GEN620857 1-LKPRSTN9 41.600
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0261	GEN620115 1-HRDLKGEN 0.6000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07635	120.0212	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07636	120.019	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0175	GEN672378 1-ERMINE GENERATOR 4
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0175	GEN672379 2-ERMINE2X 13.800
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0095	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0091	GEN672371 2-COTEAU CREEK GENERATOR 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0091	GEN672372 3-COTEAU CREEK GENERATOR 3
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.009	GEN672370 1-COTEAU CREEK GENERATOR 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0763	120.0058	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0763	120.0058	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	120.0001	LAKOTA 115/69KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.997	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.9854	GEN672369 3-MERIDIAN GENERATOR 3 ST
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.9841	YANKEE 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.9837	GEN652414 4-FT PECK
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.9837	GEN652415 5-FT PECK
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.9796	GEN600125 2-FEP ST G 13.800
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.9773	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.9697	GEN672314 1-TNTLLN1X 13.800
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.9697	GEN672315 2-TNTLLN2X 13.800
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07652	119.9686	HILLS - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.9536	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0763	119.9431	FREEBORN5 161.00 - HAYWD#15 161.00 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07725	119.9285	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07629	119.9226	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07629	119.9223	DENISON - EXIRA 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.9148	GEN652559 1-OAHE
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.8985	GEN620285 1-SOLWAY
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07639	119.8896	BISON 3 345.00 - MAPLE R3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.8859	GEN600013 3-BLACK DOG GEN 3
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.8768	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.8765	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.8658	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07525	119.8423	P13:345:UMZW:# 260 #: SC2 IN IA. LOSS OF TRANSFORMER (KU1A
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.8392	GEN652556 2-OAHE
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.8392	GEN652558 6-OAHE
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.8344	GEN672384 1-CENTENNIAL WINDFARM
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.8312	GEN652557 5-OAHE
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.8257	DONALDSON - DONALDSON PIPE 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.8197	GEN659162 4-RED WLCK
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.8197	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.8186	GEN659192 6-LYNN
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07629	119.791	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.7892	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.7892	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07625	119.7692	COLBY3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.19547	119.7676	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.7563	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.7457	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.7348	GEN603185 1-FIBROMINN GENERATION
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.7326	H081 345.00 - H081-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.7326	H081 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.7284	GEN659290 1-EDGECOL
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.7278	GEN657600 1-L1GEN3 9 0.5750
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.7265	ULRICH (ULRICH) 115/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.7131	PICKERT (PICKER230/69) 230/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.7069	GEN657964 1-ASH2GEN9 0.5750
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0763	119.7027	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.6913	GEN672358 1-CHAPLN1W 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.6838	GEN587603 1-J488&J489GN10.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07638	119.6822	ELK - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.661	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07629	119.6586	ANITA TAP POINT TO CRESTON AND DENISON - EXIRA 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.654	THIEF RIVER FALLS (TRF) 115/69/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.6503	GEN620323 2-HOOT LAKE 2 GEN
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.6476	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.6476	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.6473	GEN600050 1-FEP
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.6421	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.625	GEN 11143 1-J436GEN1 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.625	GEN 11153 1-J437GEN1 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.6054	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.6054	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.6054	GEN672352 3-NIPAWIN GENERATOR 3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0763	119.5997	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.5962	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.5962	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07627	119.5924	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.5797	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.5779	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.5652	GEN681522 3-GENOA 3
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.5447	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.5313	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.5161	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.5161	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.5104	FRONTER4 230.00 (FRONTIER) 230/69/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07415	119.5074	SPLIT ROCK (SPLT 11) 345/115/13.8KV TRANSFORMER CKT 11
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.5058	WINGER (WINGER) 115/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.5018	GEN659270 1-WEST SW
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07406	119.4623	SPLIT ROCK (SPLT 10) 345/115/13.8KV TRANSFORMER CKT 10
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.4285	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.4277	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07655	119.3902	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07609	119.3837	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07631	119.3747	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07631	119.3746	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.366	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.3597	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.347	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.3309	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.3263	GEN587663 1-H081-GEN1 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0763	119.3085	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07631	119.2777	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.2634	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07624	119.2367	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08128	119.226	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08128	119.226	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07601	119.2206	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.2134	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.2133	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.2005	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.2005	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.1707	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.1701	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.164	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08128	119.1636	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08128	119.1636	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.1562	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.1473	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07635	119.1394	DAN JUHL - SPLIT ROCK 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07635	119.1383	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.1271	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.1243	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.1226	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.1167	GEN600017 C-LS POWER CT
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.109	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.109	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07635	119.0638	DAN JUHL - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.0476	GEN652461 5-GARRISON
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.0475	GEN652460 4-GARRISON
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.0443	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.0293	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.0279	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.0165	GEN652457 1-GARRISON
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.0165	GEN652459 3-GARRISON
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	119.0161	GEN652458 2-GARRISON
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.9553	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.939	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.9318	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.9048	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.8528	GEN657705 X-DRAYTON
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.8303	GEN659403 1-NDSUNFLWR W0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.8145	GEN600078 W-YANKEE 3
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08128	118.8102	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.8046	GEN600077 W-YANKEE 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.8046	GEN600099 W-YANKEE 4
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.7908	GEN600069 W-YANKEE 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07604	118.7836	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07652	118.774	LEHIGH - RAUN 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.6722	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.6556	GEN659274 1-GROTON
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07631	118.6393	COLBY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.6174	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.6118	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.6118	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.6115	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.5291	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07604	118.5101	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.4337	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.3716	GEN681542 6-JP MADGETT
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.2847	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.0606	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.0564	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	118.0302	GEN659141 1-K10215A
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	117.795	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	117.7185	GEN615010 1-STANTON4
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	117.5095	YANKEE 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0771	117.4725	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	117.4354	YANKEE 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07567	117.3251	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07567	117.3251	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	117.2278	BROOKING COUNTY - J432 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	117.2278	J432 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	116.7551	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	116.7248	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07526	116.7221	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07526	116.7221	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	116.6846	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	116.3997	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	116.3522	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	116.3447	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	116.297	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	116.229	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	116.1989	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	116.1989	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	116.0685	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	116.0665	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08092	115.8299	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	115.6099	GEN600006 1-AS KING
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	115.5442	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	115.4912	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	115.1921	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	115.1921	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	114.9728	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	114.9728	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	114.537	GEN661015 1-COYOTE
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	114.5108	GEN659125 1-COVEY
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	114.4865	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	114.4765	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	114.4103	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	113.9326	GEN600005 1-MONTICELLO
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	113.9322	GEN657748 1-YOUNG 2 GENERATOR
FDNSLock	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	113.522	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03471	113.5123	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	113.1919	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07719	112.988	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	112.1449	GEN615001 1-COAL CREEK
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	112.0237	GEN615002 2-COAL CREEK
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	112.01	GEN587293 1-G16-044-GEN10.6900
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	111.9716	GEN587653 1-J526-GEN1 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	111.8695	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	111.7382	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	111.3381	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	111.1426	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03471	109.6633	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03629	107.6011	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03629	107.5626	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03629	107.4551	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.03629	107.4551	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07837	106.844	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07526	106.7836	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07206	106.3458	BASE CASE
FDNS	16ALL_G16_044	0	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.16852	106.1223	BASE CASE
FDNS	16ALL_G16_044	0	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.1693	105.1042	BASE CASE
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0677	105.0046	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0677	104.9695	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0677	104.9656	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.0677	104.9656	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	16NR_G16_044	0	20L	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.10761	104.0994	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07206	103.9107	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07206	102.5532	ANSON - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07206	102.5531	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	102.5216	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07465	102.4117	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	16NR_G16_044	0	20L	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.10761	102.3425	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07206	102.3212	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07362	102.1099	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07206	102.0965	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07079	101.5725	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07308	101.5469	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	20WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07628	101.4642	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07304	101.4531	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07606	101.3422	AURORA - BROOKINGS 115KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07606	101.3422	AURORA - BROOKINGS 115KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07368	101.3199	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07368	101.3199	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07233	101.2098	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07249	101.1953	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07342	101.19	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07341	101.1661	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07206	101.1289	ANSON - SPLIT ROCK 115KV CKT 2
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07206	101.1243	ANSON 115/17.5KV TRANSFORMER CKT 4
FDNS	16NR_G16_044	0	20L	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.10761	100.795	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07233	100.7792	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07233	100.7792	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07233	100.7792	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07606	100.6235	AURORA - FLANDRU 115KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07606	100.6235	AURORA - FLANDRU 115KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07837	100.6171	FIELD SOUTH - WILMARTH 345KV CKT 1
FDNS	00NR_G16_044	0	16WP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.08782	100.5999	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07837	100.5799	FIELD NORTH - FIELD SOUTH 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07837	100.569	FIELD NORTH - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07033	100.4809	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07233	100.4134	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.073	100.3614	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07412	100.28	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07206	100.2115	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07206	100.1679	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07206	100.1667	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07871	100	2801X
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07871	100	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07871	100	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07871	100	LELAND03-FTTHOMP3-T-LINE-REACTOR-345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07871	100	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07206	100	GEN600045 4-ANSON
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07871	99.9	2810X2
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07871	99.9	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07349	99.9	CHANARANBIE - FENTON 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07284	99.9	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07206	99.9	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07747	99.7	HELENA - SHEAS LK3 345.00 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07206	99.7	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07297	99.5	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	720	792	0.07206	99.5	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	108.7996	BASE CASE
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.16071	106.081	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.16071	106.081	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25264	103.7944	BROOKINGS - WATERTOWN 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25264	103.7944	BROOKINGS - WATERTOWN 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	103.584	GEN659353 1-DEERCREK CTG18.000
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	103.5683	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.16305	103.4667	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.16305	103.4667	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25169	102.8867	ARLINGTON - WATERTOWN 115KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.16305	102.8245	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.16305	102.8245	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25174	102.5808	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25174	102.5808	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24828	102.3592	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.15691	102.2035	BASE CASE
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24828	102.0455	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2497	102.0097	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24868	101.9642	GRANT - MITCHELL 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24868	101.9642	GRANT - MITCHELL 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	101.7139	GEN645012 2-NEBRASKA CITY 2
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24817	101.6489	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25066	101.5829	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	101.5339	GEN645011 1-NEBRASKA CITY 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	101.4497	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25169	101.4378	ARLINGTON - BROOKINGS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24806	101.4121	FT THOMPSON - OAHE 230KV CKT 3
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24806	101.4121	FT THOMPSON - OAHE 230KV CKT 3
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24806	101.4121	FT THOMPSON - OAHE 230KV CKT 4
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24806	101.4121	FT THOMPSON - OAHE 230KV CKT 4
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	101.3631	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24826	101.3412	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	101.2483	GEN542962 2-IATAN UNIT #2
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24813	101.2327	OGALLALA - SIDNEY 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24826	101.2076	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24814	101.1992	FERGSFL7 115.00 - HOOT LAKE 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25024	101.1581	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	101.1079	GEN542957 1-IATAN UNIT #1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	101.1055	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25166	101.0857	HURON - WOONSOCKET 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24885	101.0849	SQUARE BUTTE - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24844	101.0143	CLEARWATER - NELIGH 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.9858	GEN659148 S1-LONESMCRK 1G13.800
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.9858	GEN659148 S1-LONESMCRK 1G13.800
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24821	100.9783	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24821	100.9717	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24821	100.9717	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.9674	GEN344895 2-1LAB G2 20.000
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.9365	LONESMCRKGN7115.00 115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24845	100.8897	BADOURA - HUBBARD 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24809	100.8841	DONALDSON - DRAYTON 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2497	100.8783	HENNING - INMANN 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.863	GEN336831 1-BAXTER WILSON SES
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24813	100.8593	LETCHER (LET KV3A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.8463	GEN300003 1-THOMAS HILL UNIT 3
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.8214	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.7964	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25002	100.7955	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.7933	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.7932	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.7826	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24821	100.7771	FT RANDAL - WHITE SWAN 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25169	100.766	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25169	100.766	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25169	100.766	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.7552	GEN600045 4-ANSON
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.7435	GEN542955 1-LACYGNE UNIT #1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24817	100.7065	P12:115:TSGT:COVALT7-SNAKECK7
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24821	100.7015	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.7013	GEN337041 1-GERALD ANDRUS
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.6802	GEN335206 1-NELSON UNIT 6
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25016	100.6765	GARRISON - LELAND OLDS 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24818	100.6494	SCRIBNR7 115.00 - WILTON TAP 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24803	100.6144	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (I
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24826	100.6127	CHADRON - DUNLAP 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24817	100.5993	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24958	100.5877	CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24857	100.5857	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24857	100.5857	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.5778	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.5736	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24813	100.5625	PHILIP (PL KV1A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24821	100.527	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24821	100.527	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.5218	VALLEY CITY 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24822	100.5039	DEVILS LAKE SE - SWEETWATER 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.5	2545-VALLEY CITY
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24817	100.4536	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24847	100.4358	GRACEVT7 - MORRIS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24847	100.4358	GRACEVT7 - MORRIS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24813	100.4238	PHILIP - PHILIP TAP 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24827	100.4108	BLACKBERRY - RIVERTON 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24813	100.4104	FALCONER - OSLO 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.4073	GEN334440 1-SABINE UNIT 4
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24835	100.4047	GARRISON - HILKEN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.3906	EDGETOWN TAP - HOOT LAKE 115KV CKT 1
FDNSLock	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.3845	EAST BISMARCK 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.3798	GEN542956 2-LACYGNE UNIT #2
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.3732	EAST BISMARCK 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.3724	GEN542951 5-HAWTHORN UNIT #5
FDNSLock	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24817	100.3718	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24802	100.3672	J316_SUB 230.00 - TATANKA 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24817	100.3627	LAWERENCE CREEK - SHAEFER 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24803	100.3359	BONESTEEL - GREGORY 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.3351	MONTICELLO 345/22.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24782	100.296	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24782	100.296	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2481	100.2901	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.2791	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24811	100.2748	P12:115:UMZB:# 122 #: RUTH IN ND. RUTH TAP
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24818	100.2567	SCRIBNR7 115.00 - WILTON 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.2159	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.2159	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25166	100.2006	STORLA - WOONSOCKET 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24817	100.1928	CHISAGO COUNTY (C055765(2-4)) 500/345/34.5KV TRANSFORMER CKT 9
FDNSLock	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2481	100.188	KELLY - SHELL CREEK 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24817	100.1854	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24823	100.1675	CHARLIE CREEK (CCR KV2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24817	100.1672	CHISAGO COUNTY (C073455(1-2)) 500/345/34.5KV TRANSFORMER CKT 10
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.1554	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24817	100.1469	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
FDNSLock	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2481	100.1399	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2481	100.1399	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24773	100.1261	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24803	100.1195	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24817	100.1148	APPLE RIVER 161 - POPLAR LAKE 161 161KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24823	100.1131	MORO TAP - MORRIS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24823	100.1131	MORO TAP - MORRIS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.1092	H081 345.00 - H081-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.1092	H081 345.00 345/34.5KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24817	100.1063	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24802	100.0918	MERRCRT4 230.00 - TATANKA 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24817	100.0881	P12:115:TSGT:BSPRGS7-WHORSE7
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24868	100.0856	CHERRY CREEK - GRANT 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24817	100.083	COVALT 7 115.00 - LYNN 7 115.00 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2537	100.0736	GROTON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24807	100.0684	ALVARAD - OSLO TN 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24871	100.0637	PAYNSVILLE - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.0603	RGBYWND4 230.00 - RUGBY 230KV CKT 1
FDNSLock	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100.0563	DEVILSL LAKE 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24851	100	BADOURA - RIVERTON 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24839	100	HARVEY - UNDERWOOD 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24825	100	CHARLIE CREEK - KILDEER 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24816	100	G14_001IST 115.00 - NEWELL 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24807	100	ALVARAD - WARREN 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100	DEVILSL LAKE 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100	GEN509403 1-PIRKEY GENERATION
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	100	GEN509416 1-TURK GENERATION
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24796	100	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24796	100	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24796	100	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24796	100	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.15852	100	HANKINSON - WAHPETON 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2537	99.9	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25026	99.9	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25026	99.9	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24836	99.9	AS KING - RED ROCK 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24825	99.9	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24825	99.9	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24807	99.9	ANDER NW - WARREN 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.9	BARNES 4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.9	GEN512688 2-GRDA1 GSU2 22
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.9	KARLSTA7 115.00 - VIKING 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.9	P12:115:UMZW:# 185 #: EGI IN ND.
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24803	99.9	STONE LK B1 345.00 () 345/161/13.8KV TRANSFORMER CKT 9
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24776	99.9	AXTELL - PAULINE 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25367	99.8	HURON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24963	99.8	MCLEOD - PANTHER 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24936	99.8	GRANITE FALLS - S3 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24936	99.8	GRANITE FALLS - S3 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24895	99.8	ARMOUR - MT VERN 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24873	99.8	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24873	99.8	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24839	99.8	COAL CREEK - UNDERWOOD 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24823	99.8	MORO TAP - WALDON 7 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24817	99.8	COVALT 7 115.00 - W.HORSE7 115.00 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24817	99.8	COVALT 7 115.00 - W.HORSE7 115.00 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24817	99.8	P12:115:NPPD:TSGT2:W.HORSE7:B.SPRGS7:BTB
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24811	99.8	IRV SIMMONS - MIDLAND 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24807	99.8	OSLO - OSLO TN 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.8	CERRO GORDO 5 GSU TRANSFORMER - HANCOCK 161KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.8	GEN300006 1-NEW MADRID UNIT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.8	GEN300007 1-NEW MADRID UNIT 2
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.8	GEN509394 1-FLINT CREEK
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.8	GEN587593 1-J460-GEN1 0.6900
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.8	GENOA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24778	99.8	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.15733	99.8	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24933	99.7	MARSHALL ERIE ROAD - S3 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24933	99.7	MARSHALL ERIE ROAD - S3 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24922	99.7	AURORA - BROOKINGS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24922	99.7	AURORA - BROOKINGS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24909	99.7	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24821	99.7	TYNDALL - YANKON JCT 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.7	FARIBALT GEN115.00 115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.7	GEN600020 2-ANGUS ANSON1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.7	GEN600021 3-ANGUS ANSON2
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25166	99.6	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25163	99.6	GROTON - ORDWAY 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25045	99.6	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24909	99.6	FRANKLIN - REDWOOD FALLS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24871	99.6	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24829	99.6	BURR - CANBY 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24824	99.6	EDEN PRAIRIE - PARKERS LAKE 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.6	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.6	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.6	GEN587663 1-H081-GEN1 0.6900
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.6	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.6	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.6	YANKEE 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24791	99.6	BLUE LAKE - SCOTTCO3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.5	BROOKING COUNTY - J432 345.00 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.5	J432 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.5	LANGDON - LANGWIN7 115.00 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24805	99.5	YANKEE 115/34.5KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	110.4055	BASE CASE
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.16071	106.8483	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.16071	106.8483	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25264	105.2818	BROOKINGS - WATERTOWN 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25264	105.2818	BROOKINGS - WATERTOWN 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	105.0402	GEN659353 1-DEERCREK CTG18.000
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	105.0245	GEN659354 1-DEERCREK STG18.000
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25169	104.3638	ARLINGTON - WATERTOWN 115KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.16305	104.2537	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.16305	104.2537	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25174	104.1153	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25174	104.1153	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24828	104.0006	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24828	103.6548	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.16305	103.5893	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.16305	103.5893	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24868	103.5525	GRANT - MITCHELL 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24868	103.5525	GRANT - MITCHELL 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2497	103.504	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	103.3221	GEN645012 2-NEBRASKA CITY 2
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	103.2536	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.15691	103.1895	BASE CASE
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	103.1391	GEN645011 1-NEBRASKA CITY 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24806	103.0328	FT THOMPSON - OAHE 230KV CKT 3
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24806	103.0328	FT THOMPSON - OAHE 230KV CKT 3
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24806	103.0328	FT THOMPSON - OAHE 230KV CKT 4
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24806	103.0328	FT THOMPSON - OAHE 230KV CKT 4
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25066	103.0239	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.9785	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.9688	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24826	102.9393	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25169	102.9044	ARLINGTON - BROOKINGS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.848	GEN542962 2-IATAN UNIT #2
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24813	102.824	OGALLALA - SIDNEY 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24814	102.8075	FERGSFL7 115.00 - HOOT LAKE 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24826	102.8012	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.7061	GEN542957 1-IATAN UNIT #1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24885	102.6902	SQUARE BUTTE - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25024	102.597	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.596	GEN344895 2-1LAB G2 20.000
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.5891	GEN659148 S1-LONESMCRK 1G13.800
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.5891	GEN659148 S1-LONESMCRK 1G13.800
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24844	102.5884	CLEARWATER - NELIGH 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25166	102.57	HURON - WOONSOCKET 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24821	102.5584	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24821	102.5521	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24821	102.5521	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.5382	LONESMCRKGN7115.00 115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.4875	GEN336831 1-BAXTER WILSON SES
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24809	102.476	DONALDSON - DRAYTON 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24813	102.4691	LETCHER (LET KV3A) 230/115/13.2KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24845	102.4618	BADOURA - HUBBARD 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.4296	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.4228	GEN300003 1-THOMAS HILL UNIT 3
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.4172	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.4168	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.3773	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.3772	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.3651	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25002	102.3396	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24821	102.33	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.3241	GEN542955 1-LACYGNE UNIT #1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2497	102.3161	HENNING - INMANN 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.3127	GEN337041 1-GERALD ANDRUS
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.2953	GEN335206 1-NELSON UNIT 6
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	102.2766	P12:115:TSGT:COVALT7-SNAKECK7
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.2765	GEN600045 4-ANSON
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25016	102.2689	GARRISON - LELAND OLDS 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24821	102.2521	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24818	102.2277	SCRIBNR7 115.00 - WILTON TAP 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24803	102.1755	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24826	102.1741	CHADRON - DUNLAP 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	102.1522	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24958	102.1476	CASS LK4 230.00 - ZEMPLE 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25169	102.128	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25169	102.128	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25169	102.128	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24813	102.1255	PHILIP (PL KV1A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.1002	VALLEY CITY 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.0964	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24821	102.0766	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24821	102.0766	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24822	102.0697	DEVILS LAKE SE - SWEETWATER 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24857	102.0627	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24857	102.0627	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.0462	GEN338388 1-1PLUM PT U1 23.000
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	102.0182	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	102.0045	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.9972	GEN334440 1-SABINE UNIT 4
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.9891	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24827	101.9779	BLACKBERRY - RIVERTON 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24813	101.9728	PHILIP - PHILIP TAP 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24835	101.9714	GARRISON - HILKEN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24813	101.9621	FALCONER - OSLO 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24802	101.9467	J316_SUB 230.00 - TATANKA 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24847	101.9465	GRACEVT7 - MORRIS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24847	101.9465	GRACEVT7 - MORRIS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.9378	EAST BISMARCK 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.9374	GEN542956 2-LACYGNE UNIT #2
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.9268	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.9259	GEN542951 5-HAWTHORN UNIT #5
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.9249	EDGETOWN TAP - HOOT LAKE 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.9191	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNSLock	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	101.9148	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.9143	GEN334441 1-SABINE UNIT 5
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	101.9021	LAWERENCE CREEK - SHAEFER 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.8912	GEN335204 1-NELSON UNIT 4
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.8892	MONTICELLO 345/22.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24803	101.8875	BONESTEEL - GREGORY 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2481	101.8521	OAHE (OA NO. 5) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24782	101.8452	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24782	101.8452	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24811	101.8325	P12:115:UMZB:# 122 #: RUTH IN ND. RUTH TAP
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24818	101.8076	SCRIBNR7 115.00 - WILTON 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	101.7287	CHISAGO COUNTY (C055765(2-4)) 500/345/34.5KV TRANSFORMER CKT 9
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.725	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNSLock	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2481	101.7203	KELLY - SHELL CREEK 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24823	101.715	CHARLIE CREEK (CCR KV2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	101.714	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	101.7016	CHISAGO COUNTY (C073455(1-2)) 500/345/34.5KV TRANSFORMER CKT 10
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.6917	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.6917	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	101.6748	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24773	101.6691	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.6675	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
FDNSLock	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2481	101.6674	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2481	101.6674	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24803	101.6541	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25166	101.6534	STORLA - WOONSOCKET 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24823	101.6431	MORO TAP - MORRIS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24823	101.6431	MORO TAP - MORRIS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24802	101.6413	MERRCRT4 230.00 - TATANKA 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	101.6384	APPLE RIVER 161 - POPLAR LAKE 161 161KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	101.6311	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	101.6172	P12:115:TSGT:BSPRGS7-WHORSE7
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	101.6119	COVALT 7 115.00 - LYNN 7 115.00 115KV CKT 1
FDNSLock	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.5969	DEVILSL LAKE 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24807	101.5935	ALVARAD - OSLO TN 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24868	101.5914	CHERRY CREEK - GRANT 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.5892	H081 345.00 - H081-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.5892	H081 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24816	101.5792	G14_001IST 115.00 - NEWELL 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24825	101.5773	CHARLIE CREEK - KILDEER 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.5742	GEN303007 1-1BC2 U2
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.5636	GEN303006 1-1BC2 U1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2537	101.5548	GROTON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24851	101.5412	BADOURA - RIVERTON 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.5326	GEN509416 1-TURK GENERATION
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.5225	GEN509403 1-PIRKEY GENERATION
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24871	101.5097	PAYNSVILLE - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24807	101.5077	ALVARAD - WARREN 115KV CKT 1
FDNSLock	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.5071	ABERDEEN JCT 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.5002	ABERDEEN JCT 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.4957	DEVILSL LAKE 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24839	101.4859	HARVEY - UNDERWOOD 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24825	101.4789	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24825	101.4789	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24776	101.4603	AXTELL - PAULINE 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24807	101.4546	ANDER NW - WARREN 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24796	101.4397	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24796	101.4397	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.4384	GEN512688 2-GRDA1 GSU2 22
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24796	101.4344	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24796	101.4344	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.4289	RGBYWND4 230.00 - RUGBY 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24803	101.4234	STONE LK B1 345.00 () 345/161/13.8KV TRANSFORMER CKT 9
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24836	101.4184	AS KING - RED ROCK 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.4007	BARNES 4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.3878	KARLSTA7 115.00 - VIKING 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.3831	P12:115:UMZW:# 185 #: EGI IN ND.
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.3793	GEN636641 1-LOUISA UNIT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.3764	GEN300007 1-NEW MADRID UNIT 2
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.3747	GEN300006 1-NEW MADRID UNIT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2537	101.3695	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.3686	GEN509394 1-FLINT CREEK
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25026	101.3655	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25026	101.3655	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24839	101.3516	COAL CREEK - UNDERWOOD 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24778	101.3503	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24807	101.3474	OSLO - OSLO TN 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.3368	GEN514806 1-SOONER UNIT 2
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.3344	GEN514805 1-SOONER UNIT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24812	101.3334	CROOKSTON - FERTILE 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24806	101.3274	NESET 4 230.00 - TANDE 4230.00 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24806	101.3242	TANDE 3345.00 (TANDE KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.3102	GEN515226 1-MUSKOGEE 6G
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	101.3095	P12:115:NPPD:TSGT2:W.HORSE7:B.SPRGS7:BTB

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	101.3083	COVALT 7 115.00 - W.HORSE7 115.00 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	101.3083	COVALT 7 115.00 - W.HORSE7 115.00 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.2997	GEN515223 1-MUSKOGEE 4G
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24811	101.2972	IRV SIMMONS - MIDLAND 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24873	101.2955	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24873	101.2955	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.248	101.2933	AINSWORTH - STUART 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24823	101.2904	MORO TAP - WALDON 7 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.2857	FARGO - MOORHEAD BROOKDALE 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24895	101.2806	ARMOUR - MT VERN 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.2755	CERRO GORDO 5 GSU TRANSFORMER - HANCOCK 161KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.2713	GEN515225 1-MUSKOGEE 5G
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.2629	GENOA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24936	101.2605	GRANITE FALLS - S3 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24936	101.2605	GRANITE FALLS - S3 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24823	101.2471	BENSON 7 - HANCOCK 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25367	101.2412	HURON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.241	GEN587593 1-J460-GEN1 0.6900
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24963	101.2336	MCLEOD - PANTHER 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.2294	GEN509404 1-WELSH #1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.2294	GEN509406 1-WELSH #3
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.224	LITTLE SIOUX 161/69KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24806	101.2107	FARGO 115/69KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24933	101.2039	MARSHALL ERIE ROAD - S3 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24933	101.2039	MARSHALL ERIE ROAD - S3 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24909	101.1764	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.1712	CERRO GORDO 5 GSU TRANSFORMER - EMERY 161KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.1685	FARIBALT GEN115.00 115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24817	101.1631	BLUE CREEK - W.HORSE7 115.00 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24809	101.1626	AIRTECH - FEP TAP 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24826	101.1571	ALIANCE - BOXBUTE7 115.00 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24821	101.157	TYNDALL - YANKON JCT 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.1542	GEN600020 2-ANGUS ANSON1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24791	101.1289	BLUE LAKE - SCOTTCO3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24809	101.1158	AIRTECH - WEST FARIBAULT 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.1143	GEN600021 3-ANGUS ANSON2
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.1138	GEN587663 1-H081-GEN1 0.6900
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24922	101.1123	AURORA - BROOKINGS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24922	101.1123	AURORA - BROOKINGS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.0985	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.0982	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25045	101.0849	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24824	101.0643	EDEN PRAIRIE - PARKERS LAKE 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25163	101.062	GROTON - ORDWAY 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.0617	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24829	101.0549	BURR - CANBY 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.0412	PROSE WIND7 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.0391	YANKEE 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24871	101.0284	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24909	101.0275	FRANKLIN - REDWOOD FALLS 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25166	101.0168	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	101.0092	YANKEE 115/34.5KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.9963	GEN600046 1-MECST
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.9652	LANGDON - LANGWIN7 115.00 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.9548	BROOKING COUNTY - J432 345.00 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.9548	J432 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.9046	GEN587583 1-J432-GEN1 0.6900
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24853	100.8958	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24853	100.8958	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.15852	100.8758	HANKINSON - WAHPETON 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24864	100.8678	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24864	100.8678	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24922	100.8653	AURORA - FLANDRU 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24922	100.8653	AURORA - FLANDRU 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25026	100.7489	REDFIELD - WEST PARK B TAP 115KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.15733	100.6938	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.6663	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.6663	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.634	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.26079	100.5211	BLAIR - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.26079	100.5211	BLAIR - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.3687	2545-VALLEY CITY
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.3687	2555-SULLYBT-LNX3230.00
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.3687	2559-ANTELOP-LNX3345.00
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.3687	2560-BRDLAND-LNX3345.00
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.3687	2561-BRDLAND-LNX3345.00
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.3687	NF
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.3687	NF
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.3687	NF
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.3687	NF
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.3687	NF
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.3687	NF
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.3687	NF
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.3687	NF
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.3687	NF
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.3687	NF
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.3687	NF
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.3687	NF
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100.1699	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.15733	100.1318	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.15733	100.1318	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.15733	100.1318	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24747	100.1164	MERRCRT4 230.00 - WISHEK 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24576	100.1	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100	GEN600003 1-PRAIRIE ISLAND G1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	100	GEN600004 2-PRAIRIE ISLAND G2
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.9	GEN600067 9-HIGH BRIDGE
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2505	99.8	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2505	99.8	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24901	99.8	FORMAN - MBPP1 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24901	99.8	MBPP1 - SUMMIT 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24668	99.8	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.7	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.7	GEN652004 1-G13_001IS_3 0.6900
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.7	GEN660003 3-HURON WEST PARK
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24747	99.7	HESKETT - WISHEK 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24677	99.7	GRIMES - LEHIGH 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.6	CASS LAKE (CASS115/69) 115/69/41.6KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.6	GEN600000 1-SHERBURNECNTY G1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.6	GEN615021 1-GRE-ER 14G 16.000
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.6	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.6	GEN620285 1-SOLWAY
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.6	GEN672336 7-E B CAMPBELL GENERATOR 7
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.6	GEN672337 8-E B CAMPBELL GENERATOR 8
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.6	MNTC CONCNTRATR2 7 115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.6	NEW MADRID 161/22.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.6	NEW MADRID 345/22.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.6	P13:230-345:NPPD:NUCOR-1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24793	99.6	HESKETT - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24751	99.6	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2458	99.6	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2458	99.6	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24835	99.5	RUGBY - RUGBY OTP 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24835	99.5	RUGBY - RUGBY OTP 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24835	99.5	RUGBY (RUGBY230/115) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.5	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.5	ANTELOP-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.5	BENSON 7 - FIBROMINN GENERATION 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.5	EDGETOWN - EDGETOWN TAP 115KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.5	GEN 10568 1-J290_GEN 0.6900
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.5	GEN652007 1-G14_001IS_3 0.6900
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.5	GEN672383 1-MLTC 1G 13.800
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.5	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.5	GRE-STNYCRK7115.00 (STNYCR115-69) 115/69/12.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.5	LANSING WEST 161/22.0KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.5	ORTONVILLE 115/41.6KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24793	99.5	FRONTER4 230.00 - WAHPETON 230KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24789	99.5	DENISON - EXIRA 161KV CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24789	99.5	DENISON (DN KV1A) 230/161/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24788	99.5	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.15733	99.5	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24881	99.5	BALTA - RUGBY 230KV CKT 1
FDNSLock	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.5	ANTELOP-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	16ALL_G16_044	0	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24805	99.5	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.28297	102.9549	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.28297	102.329	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.28297	102.329	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.28297	102.3014	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.28297	100.8412	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.28297	100.7533	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.28297	100.7533	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	0	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.28297	100.7291	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.04217	107.8678	BASE CASE
FDNS	16ALL_G16_044	2	25SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.03984	105.7844	BASE CASE
FDNS	16ALL_G16_044	2	20SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.0398	100.8414	BASE CASE
FDNS	16ALL_G16_044	2	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2156	102.6153	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	112.1658	BASE CASE
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30955	111.7192	FORMAN - HANKINSON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.31253	108.0779	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30519	107.1618	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30519	107.1618	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.31727	107.1389	BRISTOL - GROTON 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.31253	107.0336	G13_001IST 115.00 - SUMMIT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30579	106.8285	CARPENTER - HURON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.31727	106.7736	BRISTOL - SUMMIT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30579	106.6486	HURON - WATERTOWN 230KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30579	106.6486	HURON - WATERTOWN 230KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.3059	106.558	HANLON - STORLA 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30579	106.4936	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30579	106.4936	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	25SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34547	106.0098	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_044	2	25SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34547	106.0077	BROADLAND - HURON 230KV CKT 1
FDNS	16ALL_G16_044	2	25SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34547	106.0074	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	25SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34547	106.0074	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30815	105.9979	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30569	105.3779	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30569	105.3779	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.3054	105.3635	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30565	105.0846	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30565	105.0846	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.31435	105.0683	GROTON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30568	105.0267	FARGO - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.31435	105.0252	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30563	104.9613	FARGO - JAMES TOWN 230KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30736	104.9379	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.3076	104.9087	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30565	104.7528	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.3076	104.6679	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.3049	104.6407	CENTER - COYOTE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.31428	104.5995	HURON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30544	104.5574	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30849	104.4144	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30849	104.4144	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30663	104.34	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30663	104.34	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30759	104.3066	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30663	104.3008	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30759	104.1617	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30759	104.1617	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30759	104.115	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30759	104.098	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30759	104.0681	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.3055	104.0516	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.3055	104.0516	P12:230:UMZW:# 158 #: MH IN ND.
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.3055	103.9848	MOOREHEAD - MORRIS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30474	103.9799	BISMARK - HILKEN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	103.9359	GEN652173 1-G09_001IS_2 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30759	103.898	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30702	103.849	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30474	103.841	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30474	103.7503	JAMES TOWN - WEBER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30474	103.7465	BISMARK - WEBER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30803	103.711	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30803	103.711	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30856	103.6544	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30803	103.6495	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30803	103.6322	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30849	103.5867	REDFIELD - WEST PARK B TAP 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.36341	103.4245	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30922	103.3684	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30922	103.3684	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30511	103.2698	GRANITE FALLS - MORRIS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30511	103.2698	GRANITE FALLS - MORRIS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30429	103.2664	HANKINSON - WAHPETON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	103.2204	GEN336821 1-GRAND GULF UNIT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	103.2135	GEN344225 1-1CAL G1 25.000
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	103.2121	GEN635213 3-NEAL UNIT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.3048	103.1861	FARGO - MOOREHEAD 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	103.1516	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30702	103.1409	BOWMAN - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	103.1161	GEN640009 1-COOPER NUCLEAR STATION
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	103.0725	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30514	103.054	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30477	103.0257	BALTA - MCHENRY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.9988	GEN620315 1-BIG STONE GEN
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30464	102.9691	CENTER - SQUARE BUTTE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.9561	GEN336153 1-WATERFORD UNIT#3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30422	102.9431	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.9391	ANSON - SPLIT ROCK 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.939	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30455	102.9292	COAL CREEK - UNDERWOOD 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.9279	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	16ALL_G16_044	2	20SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34477	102.9266	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.9182	GEN645012 2-NEBRASKA CITY 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.305	102.9002	MINGO - RED WILLOW 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.305	102.9002	MINGO - RED WILLOW 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30424	102.8989	RICHER - ROSEAU 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30579	102.8973	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30424	102.8961	MORANVILLE - ROSEAU 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30454	102.8877	ELM CREEK - PARKERS LAKE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30579	102.8876	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30579	102.8847	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30422	102.8785	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30422	102.8785	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.8782	GEN542962 2-IATAN UNIT #2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30422	102.8781	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30422	102.8781	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30422	102.8768	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30422	102.8768	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30466	102.8744	HENNING - INMANN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30457	102.8586	MCCOOL - MOORE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30418	102.8568	FT THOMPSON - OAHE 230KV CKT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30418	102.8568	FT THOMPSON - OAHE 230KV CKT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30418	102.8568	FT THOMPSON - OAHE 230KV CKT 4
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30418	102.8568	FT THOMPSON - OAHE 230KV CKT 4
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.8568	GEN645011 1-NEBRASKA CITY 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30455	102.8566	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30418	102.8538	FT THOMPSON - OAHE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30418	102.8538	FT THOMPSON - OAHE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30418	102.8538	FT THOMPSON - OAHE 230KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30418	102.8538	FT THOMPSON - OAHE 230KV CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30475	102.8479	GRAND FORKS - PICKERT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30432	102.8462	MARTIN - VETAL TAP 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.837	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30481	102.8242	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.8214	GEN335831 1-RIVERBEND UNIT#1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30422	102.8116	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.8012	GEN300003 1-THOMAS HILL UNIT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30432	102.8011	GRAND FORKS (GK KV1A) 230/115/12.47KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.31652	102.7993	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30432	102.7959	MISSION - ST FRANCIS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30432	102.7937	MISSION - VETAL TAP 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.782	GEN636641 1-LOUISA UNIT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30432	102.7743	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30445	102.7697	AXTELL - SWEETWATER 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30432	102.7688	P12:115:UMZW:# 159 #: MS-VE-MR IN SD. VETAL TAP IS A TAP WITH NON-FAULT INTERUPTERS
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30512	102.7576	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30512	102.7576	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30453	102.7567	AS KING - CHISAGO COUNTY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.7531	ANSON - SPLIT ROCK 115KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.7525	ANSON 115/17.5KV TRANSFORMER CKT 4
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30512	102.7523	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30424	102.7485	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.7182	GEN542957 1-IATAN UNIT #1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30424	102.7093	LUND - MORANVILLE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30432	102.7077	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30465	102.704	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30437	102.6955	FALCONER - GRAND FORKS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30437	102.6955	FALCONER - GRAND FORKS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30424	102.6918	LUND - RUNNING 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.6775	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.6726	GEN542955 1-LACYGNE UNIT #1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.6697	GROTON 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.6694	GROTON 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.6668	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.6668	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.6645	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30455	102.6595	HARVEY - UNDERWOOD 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30454	102.6392	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30599	102.6341	MONTICELLO - WAITE PARK 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30434	102.6317	FT RANDAL - SPENCER 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30534	102.6301	LOGAN - MALLARD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30534	102.6301	LOGAN - MALLARD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30434	102.63	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30434	102.63	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30455	102.6126	BALTA - HARVEY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30411	102.5931	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30434	102.5806	ONEILL - SPENCER 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.5801	GEN542956 2-LACYGNE UNIT #2
FDNS	16ALL_G16_044	2	20SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34477	102.5761	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34477	102.5761	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34477	102.5727	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_044	2	20SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34477	102.5704	BROADLAND - HURON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.3056	102.5606	HURON - WOONSOCKET 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.548	GEN300007 1-NEW MADRID UNIT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.5471	GEN300006 1-NEW MADRID UNIT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.5339	GEN509403 1-PIRKEY GENERATION
FDNSLock	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.3953	WATERTOWN 230KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.3948	WATERTOWN 230KV SWITCHED SHUNT
FDNSLock	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.3282	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.3278	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.3278	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.3056	102.3063	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.2941	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30421	102.2401	BURR - CANBY 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.1735	BURR - J493 115.00 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.1735	J493 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.1571	MINNESOTA VALLEY - MINVALY CAP7115.00 115KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.1516	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.1253	GEN-2016-044345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.1253	GEN-2016-044345.00 345/34.5KV TRANSFORMER CKT 2
FDNSLock	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.1051	GRANITE FALLS 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.1049	GRANITE FALLS 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.0715	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.0581	BROOKINGS 115KV SWITCHED SHUNT
FDNSLock	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.0577	BROOKINGS 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.0511	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.0511	WATERTOWN 230/20.0KV TRANSFORMER CKT 1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.0477	WATERTOWN SVC 20KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	102.0476	WATERTOWN SVC 20KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30306	102.0422	RAUN - SIOUX CITY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30306	102.0422	RAUN - SIOUX CITY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30008	102.0269	BLAIR - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30008	102.0269	BLAIR - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30323	101.9991	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30323	101.9991	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.3041	101.9978	BIG STONE - HIGHWAY 12 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30451	101.9834	BROOKINGS - WHITE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30451	101.9834	BROOKINGS - WHITE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30451	101.9698	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	101.9302	2516-WATERTNCAP 4230.00
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	101.9302	2525-GROTON
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30405	101.8824	GRACEVT7 - ORTONVILLE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	101.8125	WATERTN-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	101.8125	WATERTN-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30313	101.6993	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	101.5398	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	101.5316	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	101.5018	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30337	101.4715	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30374	101.4459	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30374	101.4459	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30364	101.4425	PAYNSVILLE - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30364	101.4139	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30307	101.3204	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30307	101.3172	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30789	101.2893	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30284	101.2666	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30284	101.2666	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	101.2623	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	101.2553	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	101.2439	GEN652544 5-BIG BEND
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30789	101.2373	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	101.2087	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	101.2027	GEN672339 16-QE 16G 13.800
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	101.2027	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	101.1846	GEN672393 2-NBECST2G 13.800
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	101.0152	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.9539	GEN652410 3-FT PECK
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.9277	GEN615015 1-GRE-SPRITWDG13.200
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.9212	GEN652556 2-OAHE
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.9212	GEN652557 4-OAHE
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.9212	GEN652558 6-OAHE
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30156	100.9091	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30156	100.9091	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.8995	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30211	100.8975	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30425	100.8695	CULBERTSN E7115.00 - WILISTON 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30156	100.868	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30156	100.868	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.8638	GEN620115 4-HRDLKGEN 0.6000
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.8506	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.7917	GEN652414 4-FT PECK
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.7917	GEN652415 5-FT PECK
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30604	100.7879	DRAYTON - LETELLIER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.7784	GEN659156 2-LONESMCRK 2G13.800
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.7784	GEN659157 3-LONESMCRK 3G13.800

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.7738	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.7738	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.7704	GEN659158 2-PIONEER G213.800
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.7704	GEN659159 3-PIONEER G313.800
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.7634	GEN659031 1-G12_014IS_4 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.7625	GEN659289 1-DAYCNTYWND W0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.7576	GEN563312 1-G15097_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.7441	GEN672392 1-NBECGT1G 18.000
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.7166	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30419	100.6647	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.6414	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.6414	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.6313	GEN659273 2-GROTON SYNC COND
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.6313	GEN659294 1-WILTONCOL9
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.4801	GEN 11104 1-J262_GEN 0.6000
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.4801	GEN 11108 1-J263_GEN 0.6000
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.28306	100.3966	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.28306	100.3966	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.3643	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.29979	100.3089	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.29979	100.3089	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.29979	100.2711	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.29979	100.2098	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100.0978	GEN 10572 2-J290_MK10 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30789	100	ABERDEEN JCT - ELLENDALE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	100	GEN910006 1-G12_012IS_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.9	GEN 10648 1-G830_GEN 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.9	GEN657745 1-MPC02100GEN90.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.9	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.9	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.9	GEN672321 1-SHAND GENERATOR 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.9	J290_SUB 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.9	MPC02100TAP4230.00 - MPC2100WIND4230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.9	MPC2100WIND4230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30418	99.8	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.8	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.8	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.8	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.7	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.7	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.7	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.7	GEN659010 4-G07_027IS_2 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.7	GEN659270 1-WEST SW
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.7	GEN659366 3-WILTON 3 W0.6900
FDNS	16ALL_G16_044	2	25SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.31623	99.7	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.6	GEN652460 4-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.6	GEN652461 5-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.6	GEN659018 1-G14_003IS_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.6	RGBYWND4 230.00 - RUGBY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.6	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.39796	99.5	EMMONSCO 345.00 - G16-044-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30789	99.5	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.5	GEN652457 1-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.5	GEN652458 2-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30417	99.5	GEN652459 3-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	117.909	BASE CASE
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30955	117.1355	FORMAN - HANKINSON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31253	113.3624	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30519	112.5899	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30519	112.5899	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31727	112.4076	BRISTOL - GROTON 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31253	112.2941	G13_001IST 115.00 - SUMMIT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30579	112.0573	CARPENTER - HURON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31727	112.0378	BRISTOL - SUMMIT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.3059	111.9352	HANLON - STORLA 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30579	111.8932	HURON - WATERTOWN 230KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30579	111.8932	HURON - WATERTOWN 230KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30579	111.7317	CARPENTER - WATERTOWN 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30579	111.7317	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30815	111.3478	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34547	111.0943	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34547	111.0919	BROADLAND - HURON 230KV CKT 1
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34547	111.0917	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34547	111.0917	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30569	110.7271	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30569	110.7271	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.3054	110.6668	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30463	110.4311	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30565	110.422	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30565	110.422	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31435	110.3255	GROTON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30568	110.325	FARGO - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30463	110.3203	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31435	110.2809	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30563	110.2584	FARGO - JAMES TOWN 230KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30736	110.2474	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30463	110.199	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.3076	110.1685	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30565	110.0765	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.3076	109.9257	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30464	109.9181	PRAIRIE - RAMSEY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.3049	109.9158	CENTER - COYOTE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30544	109.8604	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31428	109.851	HURON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30504	109.8199	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30452	109.7838	BALTA - RAMSEY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30849	109.6714	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30849	109.6714	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30663	109.616	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30663	109.616	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30663	109.5754	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30759	109.5564	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	109.5462	SHEYENNE SVC - SHEYNNE 115KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30491	109.4658	PRAIRIE - WINGER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30468	109.4394	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30468	109.4394	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30759	109.4057	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30759	109.4057	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30759	109.3597	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30759	109.3411	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.3055	109.3173	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.3055	109.3173	P12:230:UMZW:# 158 #: MH IN ND.
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30759	109.3105	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.3055	109.2476	MOOREHEAD - MORRIS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30474	109.2351	BISMARK - HILKEN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30502	109.1486	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30759	109.1377	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30474	109.1145	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30702	109.1075	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30512	109.0901	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30474	109.0204	JAMES TOWN - WEBER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30474	109.0156	BISMARK - WEBER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30446	109.0082	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30495	108.9809	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30803	108.9525	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30803	108.9525	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.9508	GEN635214 4-NEAL UNIT 4
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30856	108.9008	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30803	108.8901	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30803	108.8715	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30488	108.8488	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30456	108.8472	SIDNEY - STEGALL 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30849	108.8308	REDFIELD - WEST PARK B TAP 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30511	108.8266	KARLSTAD - WINGER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30479	108.7661	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30519	108.6904	FARGO - SHEYNNE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30519	108.6904	FARGO - SHEYNNE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30456	108.6759	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.658	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.6468	GEN659353 1-DEERCREK CTG18.000
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.6416	GEN659354 1-DEERCREK STG18.000
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30488	108.6165	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30922	108.613	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30922	108.613	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30492	108.6099	AUDUBON - HUBBARD 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30912	108.5704	GROTON - ORDWAY 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30575	108.5296	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30575	108.5296	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30511	108.5225	GRANITE FALLS - MORRIS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30511	108.5225	GRANITE FALLS - MORRIS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.4984	GEN336821 1-GRAND GULF UNIT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.4925	GEN635213 3-NEAL UNIT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.4902	GEN344225 1-1CAL G1 25.000
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30475	108.4878	JAMES TOWN - PICKERT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.36341	108.4671	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.3048	108.429	FARGO - MOOREHEAD 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30449	108.428	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.4262	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30465	108.3874	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30702	108.3834	BOWMAN - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.374	GEN640009 1-COOPER NUCLEAR STATION
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30453	108.3692	EAGLE - PHILIP 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30466	108.3633	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.3232	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30453	108.3023	EAGLE - MARTIN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30514	108.2946	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30466	108.2801	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.2783	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30477	108.2781	BALTA - MCHENRY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.2766	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30464	108.2241	CENTER - SQUARE BUTTE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30422	108.2027	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.1948	ANSON - SPLIT ROCK 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.1947	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.1889	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30455	108.1764	COAL CREEK - UNDERWOOD 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.1715	GEN620315 1-BIG STONE GEN
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.1695	GEN645012 2-NEBRASKA CITY 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.305	108.157	MINGO - RED WILLOW 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.305	108.157	MINGO - RED WILLOW 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30579	108.154	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30424	108.1507	RICHER - ROSEAU 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30424	108.1479	MORANVILLE - ROSEAU 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30579	108.1448	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30579	108.1408	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30466	108.138	HENNING - INMANN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30454	108.136	ELM CREEK - PARKERS LAKE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30422	108.1356	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30422	108.1356	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30422	108.1353	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30422	108.1352	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30422	108.1339	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30422	108.1338	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.1251	GEN542962 2-IATAN UNIT #2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30457	108.1156	MCCOOL - MOORE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.1059	GEN645011 1-NEBRASKA CITY 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30432	108.1015	MARTIN - VETAL TAP 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30475	108.0965	GRAND FORKS - PICKERT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30422	108.0662	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30575	108.0552	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30575	108.0552	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30432	108.0537	MISSION - ST FRANCIS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30481	108.0507	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30432	108.0468	MISSION - VETAL TAP 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30432	108.0467	GRAND FORKS (GK KV1A) 230/115/12.47KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	108.0435	GEN300003 1-THOMAS HILL UNIT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31652	108.0233	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30445	108.0226	AXTELL - SWEETWATER 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30432	108.0211	P12:115:UMZW:# 159 #: MS-VE-MR IN SD. VETAL TAP IS A TAP WITH NON-FAULT INTERUPTERS
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30512	108.009	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30512	108.009	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30512	108.0035	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30453	108.0027	AS KING - CHISAGO COUNTY 345KV CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34477	107.9834	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	107.9604	GEN542957 1-IATAN UNIT #1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30465	107.9581	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30424	107.9543	LUND - MORANVILLE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30437	107.9391	FALCONER - GRAND FORKS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30437	107.9391	FALCONER - GRAND FORKS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	107.9125	GEN542955 1-LACYGNE UNIT #1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	107.9068	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	107.9067	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	107.9044	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30455	107.8985	HARVEY - UNDERWOOD 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30534	107.8633	LOGAN - MALLARD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30534	107.8633	LOGAN - MALLARD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.3056	107.8038	HURON - WOONSOCKET 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	107.7822	GEN300007 1-NEW MADRID UNIT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	107.7812	GEN300006 1-NEW MADRID UNIT 1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	107.7153	WATERTOWN 230KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	107.7148	WATERTOWN 230KV SWITCHED SHUNT
FDNSLock	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	107.6349	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	107.6346	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	107.6346	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34477	107.5934	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34477	107.5934	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34477	107.59	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34477	107.5874	BROADLAND - HURON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	107.329	GEN-2016-044345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	107.329	GEN-2016-044345.00 345/34.5KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30323	107.3241	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30323	107.3241	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	107.3027	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	107.1492	2516-WATERTNCAP 4230.00
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30313	106.9494	NOBLES - SPLIT ROCK 345KV CKT 1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.9243	WATERTN-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.9236	WATERTN-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.813	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.7886	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.7804	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30337	106.693	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30374	106.6755	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30374	106.6755	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30364	106.665	PAYNSVILLE - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30364	106.6294	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30307	106.554	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30307	106.5509	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.5192	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30789	106.5061	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30284	106.4833	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30284	106.4833	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.4635	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30789	106.4494	ABERDEEN JCT - ABERDEEN SIEBRECHT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.4034	GEN672339 16-QE 16G 13.800
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.4034	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.3848	GEN672393 2-NBECST2G 13.800
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.2035	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30156	106.1964	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30156	106.1964	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.1466	GEN652410 3-FT PECK
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30156	106.1381	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30156	106.1381	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.1192	GEN615015 1-GRE-SPRITWDG13.200
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30211	106.1164	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.1012	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.101	GEN652556 2-OAHE
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.101	GEN652557 4-OAHE
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.101	GEN652558 6-OAHE
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30425	106.0732	CULBERTSN E7115.00 - WILISTON 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.0575	GEN620115 4-HRDLKGEN 0.6000
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	106.0359	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.9843	GEN652414 4-FT PECK
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.9843	GEN652415 5-FT PECK
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.9752	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.9752	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30604	105.9731	DRAYTON - LETELLIER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.9719	GEN659156 2-LONESMCRK 2G13.800
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.9719	GEN659157 3-LONESMCRK 3G13.800
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.9628	GEN659158 2-PIONEER G213.800
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.9628	GEN659159 3-PIONEER G313.800
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.951	GEN659031 1-G12_014IS_4 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.9501	GEN659289 1-DAYCNTYWND W0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.9453	GEN563312 1-G15097_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.9447	GEN672392 1-NBECGT1G 18.000
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.8978	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30419	105.8948	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.8908	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.8908	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.8175	GEN659273 2-GROTON SYNC COND
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.8175	GEN659294 1-WILTONCOL9
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.28306	105.7616	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.28306	105.7616	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.6712	GEN 11104 1-J262_GEN 0.6000
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.6712	GEN 11108 1-J263_GEN 0.6000
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.5367	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29979	105.5156	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29979	105.5156	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29979	105.475	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29979	105.404	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.2822	GEN 10572 2-J290_MK10 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.1862	GEN910006 1-G12_012IS_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.1782	MPC02100TAP4230.00 - MPC2100WIND4230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.1763	MPC2100WIND4230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30789	105.1718	ABERDEEN JCT - ELLENDALE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.1118	GEN672321 1-SHAND GENERATOR 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.0879	GEN 10648 1-G830_GEN 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.0777	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.0777	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.0659	GEN657745 1-MPC02100GEN90.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.046	J290_SUB 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	105.0112	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.9567	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.9431	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30418	104.9263	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.8822	GEN659270 1-WEST SW
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.8796	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.8779	GEN659366 3-WILTON 3 W0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.8773	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.87	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.8676	GEN659010 4-G07_027IS_2 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.8509	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.809	RGBYWND4 230.00 - RUGBY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.7977	GEN659018 1-G14_003IS_3 0.6900
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31623	104.7833	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.7442	GEN652460 4-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.7442	GEN652461 5-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30789	104.7324	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.39796	104.658	EMMONSCO 345.00 - G16-044-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.6325	GEN652457 1-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.6325	GEN652458 2-GARRISON

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.6325	GEN652459 3-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.611	GEN659403 1-NDSUNFLWR W0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.4344	GEN563342 1-G15098_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.4077	GEN563252 1-G15091_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	104.3968	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31623	104.2882	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31623	104.2882	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31623	104.196	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31623	104.1871	2801X
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29816	103.992	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	103.9359	GEN652173 1-G09_001IS_2 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	103.6607	GEN659453 1-GI1414GEN W0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	103.6438	GEN563302 1-G15096_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29816	103.5504	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	103.4521	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	103.2804	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	103.225	GEN659141 1-K10215A
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	103.2239	GEN615010 1-STANTON4
FDNSLock	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29816	103.103	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.2982	102.9952	BASE CASE
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	102.934	GEN657749 1-YOUNG 1 GENERATOR
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30291	102.9095	488489510526345.00 - BSSOUTH3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	102.7732	GEN659272 2-GROTON 2G13.800
FDNS	16ALL_G16_044	2	17G	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.35248	102.5334	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	102.4423	GEN659274 1-GROTON
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	102.4246	GEN659407 1-ANTELPHILLSW0.6900
FDNS	16ALL_G16_044	2	17G	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.35248	101.9576	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_044	2	17G	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.35248	101.9566	BROADLAND - HURON 230KV CKT 1
FDNS	16ALL_G16_044	2	17G	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.35248	101.9563	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17G	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.35248	101.9563	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	101.8639	GEN659110 1-LELAND OLDS UNIT1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31555	101.82	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31555	101.6071	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31555	101.6071	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30175	101.5901	BROOKING COUNTY - BSSOUTH3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31555	101.5753	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31555	101.4398	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31555	101.3736	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31555	101.3386	2810X2
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.31555	101.0427	2801X
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	100.8216	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	100.6796	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	100.6764	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29757	100.6118	BASE CASE
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30546	100.0559	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.32547	100	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	99.9	GEN661015 1-COYOTE
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30205	99.9	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30546	99.8	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30546	99.8	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	99.6	GEN562872 1-G15046_3 0.6900
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30546	99.6	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30417	99.5	GEN657748 1-YOUNG 2 GENERATOR
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30225	99.5	488489510526345.00 - BSSOUTH3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30291	99.5	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30291	99.5	488489510526345.00 - ELLENDLMVP3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30291	99.5	ELLENDLMVP3 345.00 (1) 345/230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.2156	122.8491	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	2	17G	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.21889	120.1808	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	2	17G	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.21889	119.1907	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.2156	118.7822	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	2	17G	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.21889	116.6026	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	2	17G	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.21889	115.5897	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	2	16WP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.22027	111.7186	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	2	16WP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.22027	110.6817	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	2	16WP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.22027	109.0522	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	2	16WP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.22027	107.9886	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.21575	105.3052	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.21575	105.3052	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.21549	103.0632	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.21549	103.0632	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.21575	102.0746	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.21575	102.0746	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.15818	100.3771	BASE CASE
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.21549	100.0966	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.21549	100.0966	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.15777	99.6	BASE CASE
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24971	115.3688	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24971	115.3688	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	112.7708	BASE CASE
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24205	112.4903	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24205	112.4903	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24392	112.417	HANLON - STORLA 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25354	112.4056	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25354	112.4056	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25354	111.6815	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25354	111.6815	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24292	109.5232	HANKINSON - WAHPETON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24234	109.4556	FORMAN - HANKINSON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24329	109.2392	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24329	109.2392	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24614	108.939	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2432	108.7482	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2432	108.7482	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24279	108.3119	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2432	108.1682	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24046	107.509	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24853	107.4584	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	107.4318	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	107.4263	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24853	107.4262	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24853	107.4132	HAZEL CREEK - LYON COUNTY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24046	107.3473	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24046	107.1717	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24115	107.1533	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	107.0012	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24129	106.818	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24086	106.78	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24086	106.78	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	106.7726	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24199	106.7641	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24205	106.6032	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	106.3687	GEN659354 1-DEERCREK STG18.000
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2444	106.3682	BROOKINGS - WATERTOWN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2444	106.3682	BROOKINGS - WATERTOWN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	106.3648	GEN659353 1-DEERCREK CTG18.000
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24043	106.2956	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24289	106.2772	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24056	106.063	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24413	105.9808	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24413	105.9808	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24148	105.9787	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24121	105.8327	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24345	105.7936	ARLINGTON - WATERTOWN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	105.7747	SHEYENNE SVC - SHEYNNE 115KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24138	105.6874	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24076	105.6829	FARGO - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24012	105.6794	PRAIRIE - RAMSEY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24073	105.6243	FARGO - JAMES TOWN 230KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24072	105.5934	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24138	105.4768	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24148	105.4459	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24003	105.4186	BALTA - RAMSEY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	105.3755	GEN635214 4-NEAL UNIT 4
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24052	105.2158	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24239	105.1914	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24036	105.1687	SIDNEY - STEGALL 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24138	105.1604	HENNING - INMANN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24345	105.0738	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24345	105.0738	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24345	105.0738	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24345	105.0221	ARLINGTON - BROOKINGS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2403	104.9865	PRAIRIE - WINGER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24173	104.9847	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24173	104.9847	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.28306	104.9594	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.28306	104.9594	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24173	104.9523	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.9502	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24413	104.9432	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24413	104.9432	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24085	104.8911	AUDUBON - HUBBARD 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2403	104.8685	CENTER - COYOTE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24093	104.8646	KARLSTAD - WINGER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.8186	ANSON - SPLIT ROCK 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.8184	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2407	104.8183	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24093	104.7293	FARGO - SHEYNNE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24093	104.7293	FARGO - SHEYNNE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.6682	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24017	104.6492	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24041	104.6431	BIG STONE - HIGHWAY 12 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.6317	GEN635213 3-NEAL UNIT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.5724	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.5691	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24017	104.5345	JAMES TOWN - WEBER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.5249	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24017	104.5207	BISMARK - WEBER 230KV CKT 1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.4967	WATERTOWN 230KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.4959	WATERTOWN 230KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24236	104.4947	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24025	104.4834	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24038	104.441	EAGLE - PHILIP 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24163	104.4234	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24117	104.4195	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.3639	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.3409	ANSON - SPLIT ROCK 115KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.34	ANSON 115/17.5KV TRANSFORMER CKT 4
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24038	104.3385	EAGLE - MARTIN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24399	104.3327	HURON - WOONSOCKET 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24041	104.3148	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24163	104.3059	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.2918	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24185	104.2908	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.2457	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24055	104.2402	MCCOOL - MOORE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24046	104.2382	ELM CREEK - PARKERS LAKE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24011	104.229	BISMARK - HILKEN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24024	104.2259	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.2199	GEN635023 3-WALTER SCOTT UNIT 3
FDNSLock	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.2157	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.2153	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.2153	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.2144	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24112	104.2042	MINGO - RED WILLOW 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24112	104.2042	MINGO - RED WILLOW 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.193	RGBYWND4 230.00 - RUGBY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.1908	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24193	104.1747	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24038	104.173	JAMES TOWN - PICKERT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23986	104.1537	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.0889	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	104.0578	GEN640009 1-COOPER NUCLEAR STATION
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23986	104.0502	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23986	104.0501	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23986	104.0495	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23986	104.0495	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23986	104.048	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23986	104.0479	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24217	104.0405	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24027	104.029	AXTELL - SWEETWATER 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24217	104.028	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24217	104.025	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24003	103.9948	MISSION - ST FRANCIS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24162	103.9855	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24022	103.9848	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24022	103.9848	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24022	103.9847	FT RANDAL - SPENCER 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24003	103.9656	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24	103.9437	MARTIN - VETAL TAP 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23986	103.9435	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.9239	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.9239	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24399	103.9192	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24239	103.8944	FIELD SOUTH - WILMARTH 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24022	103.8923	ONEILL - SPENCER 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24239	103.8734	FIELD NORTH - LKFLDXL3 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24022	103.8727	GRACEVT7 - ORTONVILLE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24239	103.8706	FIELD NORTH - FIELD SOUTH 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24399	103.8617	STORLA - WOONSOCKET 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24	103.8592	MISSION - VETAL TAP 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.8581	GEN600045 4-ANSON
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24031	103.8541	BALTA - MCHENRY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24003	103.8449	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.8347	GEN645012 2-NEBRASKA CITY 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24029	103.8342	CENTER - SQUARE BUTTE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24119	103.8266	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24119	103.8266	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24045	103.8249	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24045	103.8249	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24	103.8179	P12:115:UMZW:# 159 #: MS-VE-MR IN SD. VETAL TAP IS A TAP WITH NON-FAULT INTERUPTERS
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24119	103.8163	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24162	103.8098	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24162	103.8098	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24162	103.7976	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23985	103.79	RICHER - ROSEAU 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23985	103.7859	MORANVILLE - ROSEAU 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24004	103.7665	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24004	103.7665	P12:230:UMZW:# 158 #: MH IN ND.
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24209	103.7658	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24209	103.7658	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24162	103.7656	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.7517	GEN645011 1-NEBRASKA CITY 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.7514	MEC345 - WILMARTH 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.7508	MEC345 345/19.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24321	103.7468	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24038	103.7426	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24191	103.7338	BRISTOL - GROTON 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24077	103.7316	MT VERN - STORLA 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24162	103.7314	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24327	103.7237	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24327	103.7237	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24072	103.7229	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24209	103.7168	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24321	103.7085	GROTON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.7078	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24026	103.7073	AS KING - CHISAGO COUNTY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.6967	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2401	103.6946	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.6877	GEN344225 1-1CAL G1 25.000
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.6836	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24209	103.6828	LELAND OLDS - WASHBURN 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.6815	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24038	103.6789	GRAND FORKS - PICKERT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.6709	MEC115 - WILMARTH 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.6706	MEC115 115/15.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.25976	103.6699	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24004	103.6689	MOOREHEAD - MORRIS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24314	103.6653	MONTICELLO - WAITE PARK 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24003	103.6626	HARMONY - VALENTINE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.6576	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2406	103.6458	GRANT - MITCHELL 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2406	103.6458	GRANT - MITCHELL 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24002	103.6328	BURR - CANBY 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.6274	GEN542962 2-IATAN UNIT #2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24162	103.6242	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24191	103.6203	BRISTOL - SUMMIT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.6199	FT THOMPSON - OAHE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.6199	FT THOMPSON - OAHE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.6199	FT THOMPSON - OAHE 230KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.6199	FT THOMPSON - OAHE 230KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24185	103.6109	BOWMAN - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2401	103.6109	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.6092	FT THOMPSON - OAHE 230KV CKT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.6092	FT THOMPSON - OAHE 230KV CKT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.6092	FT THOMPSON - OAHE 230KV CKT 4
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.6092	FT THOMPSON - OAHE 230KV CKT 4
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24013	103.6091	COAL CREEK - UNDERWOOD 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24003	103.5794	CHADRON - WAYSIDE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24003	103.5794	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24003	103.5725	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.5675	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23992	103.5671	DICKINSON - PARKERS LAKE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24029	103.5496	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24029	103.5496	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24007	103.5434	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23972	103.5379	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2405	103.5374	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23985	103.5367	LUND - MORANVILLE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.5237	MINNESOTA VALLEY - MINVALY CAP7115.00 115KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.5215	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.5215	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.5193	JAMES TOWN 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.5186	JAMES TOWN 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.5178	AS KING 345/20.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24072	103.5163	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23985	103.5139	LUND - RUNNING 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23989	103.5068	GRAND FORKS (GK KV1A) 230/115/12.47KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24319	103.5066	HURON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23988	103.497	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23988	103.497	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24101	103.4939	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24101	103.4939	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23988	103.4922	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23988	103.4922	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23995	103.4775	MAXWELL - STAPLETON 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24188	103.4759	HELENA - SHEAS LK3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24001	103.4657	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23996	103.4648	FALCONER - GRAND FORKS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23996	103.4648	FALCONER - GRAND FORKS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24015	103.4605	GRANITE FALLS - MORRIS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24015	103.4605	GRANITE FALLS - MORRIS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24042	103.4542	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24042	103.4542	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.4471	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.4468	GEN300003 1-THOMAS HILL UNIT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.442	GEN542957 1-IATAN UNIT #1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24257	103.4326	GROTON - ORDWAY 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24022	103.4196	GRACEVT7 - MORRIS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24022	103.4196	GRACEVT7 - MORRIS 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.4003	H081 345.00 - H081-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.4003	H081 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24026	103.3991	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.3882	GEN587593 1-J460-GEN1 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23999	103.3869	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.3806	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24043	103.3722	PAYNSVILLE - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.372	BURR - J493 115.00 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.372	J493 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.372	PRAIRIE - PRAIRIE SVC 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2401	103.3534	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24072	103.339	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24132	103.3347	MCLEOD - PANTHER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24082	103.3335	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2399	103.3325	ARROWHEAD - FORBES 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24016	103.3316	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.3273	FORBES - FORBESDB 2 500.00 500KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.3273	FORBES SVC - FORBESDB 2 500.00 500KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.3265	GEN542955 1-LACYGNE UNIT #1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24109	103.3249	GRANITE FALLS - S3 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24109	103.3249	GRANITE FALLS - S3 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.3201	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.32	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24037	103.3168	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.3157	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2401	103.3103	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24083	103.3102	AURORA - BROOKINGS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24083	103.3102	AURORA - BROOKINGS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2398	103.3081	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24013	103.3078	HARVEY - UNDERWOOD 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24003	103.3071	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24124	103.3041	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24106	103.2807	MARSHALL ERIE ROAD - S3 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24106	103.2807	MARSHALL ERIE ROAD - S3 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.2755	MPC02100TAP4230.00 - MPC2100WIND4230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24056	103.275	MINGO - SETAB 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24056	103.275	MINGO - SETAB 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.2731	MPC2100WIND4230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2406	103.2689	CHERRY CREEK - GRANT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.2667	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.2632	GEN587663 1-H081-GEN1 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.2625	SIBLEY 4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.2533	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24013	103.2518	BALTA - HARVEY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.2515	SHERBURNE CO 345/26.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23997	103.2483	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24043	103.2432	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.2428	GEN542951 5-HAWTHORN UNIT #5
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23988	103.2332	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23988	103.233	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23988	103.2329	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.2319	GEN600021 3-ANGUS ANSON2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23974	103.2319	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.2255	GEN542956 2-LACYGNE UNIT #2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.2248	GEN600020 2-ANGUS ANSON1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23997	103.2237	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24021	103.2191	CLEARWATER - ONEILL 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23952	103.2163	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24048	103.2126	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24002	103.2121	BIG STONE - MARIETTA 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24082	103.1991	FRANKLIN - REDWOOD FALLS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24021	103.1902	CLEARWATER - NELIGH 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24021	103.1883	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23975	103.1866	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23997	103.184	COAL CREEK - MCHENRY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24001	103.1733	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.1725	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.17	YANKEE 115/34.5KV TRANSFORMER CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24077	103.167	ARMOUR - MT VERN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24066	103.1633	LOGAN - MALLARD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24066	103.1633	LOGAN - MALLARD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.1565	YANKEE 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24166	103.148	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23952	103.1475	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23952	103.1475	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24002	103.1324	BURR - MARIETTA 115KV CKT 1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23996	103.1225	HENSEL - LANGDON 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23991	103.1173	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24034	103.1149	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.1096	BROOKING COUNTY - J432 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.1096	J432 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23988	103.1087	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24101	103.1085	REDFIELD - WEST PARK B TAP 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23959	103.1077	BLUE LAKE - SCOTTCO3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24018	103.0974	BADOURA - HUBBARD 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.0955	GEN300007 1-NEW MADRID UNIT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.0935	GEN300006 1-NEW MADRID UNIT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.0661	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.0582	GEN587583 1-J432-GEN1 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.053	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24083	103.0433	AURORA - FLANDRU 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24083	103.0433	AURORA - FLANDRU 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24045	103.0368	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24045	103.0368	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.0286	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.0286	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	103.0165	LANGDON - LANGWIN7 115.00 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24038	102.9774	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24038	102.9774	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23904	102.9474	BIG STONE - BROWNS VALLEY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	102.5189	2516-WATERTNCAP 4230.00
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	102.5189	2546-JAMES TOWN
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	102.5189	2560-BRDLAND-LNX3345.00
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	102.5189	2561-BRDLAND-LNX3345.00
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23667	102.3593	RAUN - SIOUX CITY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23667	102.3593	RAUN - SIOUX CITY 345KV CKT 1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	102.2816	WATERTN-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	102.2726	WATERTN-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23885	102.2457	HOSKINS - RAUN 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23885	102.2457	HOSKINS - RAUN 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2402	102.1708	FRANKLIN - GRE-CEDARMT7115.00 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2402	102.1664	GRE-CEDARMT3345.00 () 345/115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23871	102.1426	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23871	102.1404	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	102.1372	GEN600003 1-PRAIRIE ISLAND G1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	102.137	GEN600004 2-PRAIRIE ISLAND G2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	102.133	GEN587623 1-J493-GEN1 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24064	102.0853	MBPP1 - SUMMIT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24064	102.0731	FORMAN - MBPP1 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	102.0329	GEN620323 2-HOOT LAKE 2 GEN
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	102.0064	DONALDSON - DONALDSON PIPE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	102.0059	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23846	101.9701	GRIMES - LEHIGH 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.942	GEN615021 1-GRE-ER 14G 16.000
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.9106	FRONTER4 230.00 (FRONTIER) 230/69/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.9067	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.9039	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.9034	GEN652559 1-OAHE
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.9031	GEN652004 1-G13_001IS_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.8989	GEN659296 1-SDPRAIRWND1W0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.8937	GEN672370 1-COTEAU CREEK GENERATOR 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.8937	GEN672371 2-COTEAU CREEK GENERATOR 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.8937	GEN672372 3-COTEAU CREEK GENERATOR 3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.8832	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.8789	GEN620324 3-HOOT LAKE 3 GEN
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.8761	GEN659194 1-NDPRAIRWND1W0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23941	101.8757	HESKETT - WISHEK 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.8669	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.8669	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.8629	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.8451	GEN672369 3-MERIDIAN GENERATOR 3 ST
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23843	101.8262	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.8162	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.8133	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 4
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.8133	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 5
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23941	101.81	MERRCRT4 230.00 - WISHEK 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.7755	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.27614	101.7753	EMMONSCO 345.00 - G16-044-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23925	101.7711	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.7465	GEN672384 1-CENTENNIAL WINDFARM
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.742	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.742	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23984	101.7351	CULBERTSN E7115.00 - WILISTON 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.7203	GEN657988 1-ROFRGEN9 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.6935	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.672	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.6719	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.6568	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.6568	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.633	BAGLEY - CLEARBROOK 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.6303	GEN660003 3-HURON WEST PARK
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24183	101.5708	ABERDEEN JCT - ELLENDALE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.5697	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.5697	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.5697	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.5628	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.5577	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.5206	GEN659031 1-G12_014IS_4 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.5197	GEN659289 1-DAYCNTYWND W0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.514	GEN563312 1-G15097_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.4812	GEN672339 16-QE 16G 13.800
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.4812	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.458	GEN672393 2-NBECST2G 13.800
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.4332	GEN600006 1-AS KING
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.412	GEN652410 3-FT PECK
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23967	101.4055	HELENA - SCOTTCO3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.4004	GEN657964 1-ASH2GEN9 0.5750
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23619	101.398	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.3863	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23745	101.3752	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23745	101.3752	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	16ALL_G16_044	2	25SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.2397	101.3686	BROOKING COUNTY - BSSOUTH3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.359	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24183	101.358	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.3454	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.3276	GEN652545 7-BIG BEND
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.2981	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.2888	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23743	101.2697	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23742	101.2633	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23675	101.2607	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23675	101.2607	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.2571	GEN659156 2-LONESMCRK 2G13.800
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.2571	GEN659157 3-LONESMCRK 3G13.800
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.2397	GEN659158 2-PIONEER G213.800
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.2397	GEN659159 3-PIONEER G313.800
FDNSLock	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.238	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.2372	GEN652414 4-FT PECK
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.2372	GEN652415 5-FT PECK
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.216	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.1984	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.1786	GEN620115 4-HRDLKGEN 0.6000
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.1455	GEN652543 3-BIG BEND
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.1443	GEN652542 1-BIG BEND

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.084	GEN615015 1-GRE-SPRITWDG13.200
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.081	GEN652544 5-BIG BEND
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.0789	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.0789	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	101.0299	GEN672392 1-NBECGT1G 18.000
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.9941	GEN659273 2-GROTON SYNC COND
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.9941	GEN659294 1-WILTONCOL9
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.9506	GEN600005 1-MONTICELLO
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23642	100.9317	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.9194	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24203	100.844	DRAYTON - LETELLIER 230KV CKT 1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.8107	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24365	100.7905	BROOKINGS - WHITE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24365	100.7905	BROOKINGS - WHITE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.7234	GEN600000 1-SHERBURNECNTY G1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.6952	GEN 11104 1-J262_GEN 0.6000
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.6952	GEN 11108 1-J263_GEN 0.6000
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.5676	GEN652556 2-OAHE
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.5676	GEN652557 4-OAHE
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.5676	GEN652558 6-OAHE
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.5133	GEN600001 2-SHERBURNE CNTY G2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.24365	100.4928	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.4921	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.3924	GEN600002 3-SHERBURNE CNTY G3
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.389	GEN 10572 2-J290_MK10 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.3679	GEN910006 1-G12_012IS_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.3433	GEN 10648 1-G830_GEN 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.3235	GEN652173 1-G09_001IS_2 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.2995	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.2576	GEN659270 1-WEST SW
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.233	GEN657745 1-MPC02100GEN90.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.1631	GEN659018 1-G14_003IS_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.1213	GEN659366 3-WILTON 3 W0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.1183	GEN659010 4-G07_027IS_2 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.0589	J290_SUB 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.0528	GEN652461 5-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	100.0527	GEN652460 4-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23819	100	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23819	100	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23819	100	HURON - WATERTOWN 230KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23819	100	HURON - WATERTOWN 230KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	99.9	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	99.9	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	99.9	GEN652457 1-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	99.9	GEN652458 2-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	99.9	GEN652459 3-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	99.9	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	99.9	GEN659403 1-NDSUNFLWR W0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	99.8	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	99.8	GEN563342 1-G15098_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	99.8	GEN672321 1-SHAND GENERATOR 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	99.7	GEN563252 1-G15091_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	99.7	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	99.7	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23979	99.7	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23819	99.6	CARPENTER - HURON 230KV CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23895	99.5	BROOKING COUNTY - BSSOUTH3 345.00 345KV CKT 1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.21477	99.5	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24971	116.458	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24971	116.458	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	114.0274	BASE CASE
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24205	113.8028	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24205	113.8028	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24392	113.6453	HANLON - STORLA 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25354	113.483	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25354	113.483	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25354	112.7323	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.25354	112.7323	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24234	110.8577	FORMAN - HANKINSON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24292	110.7072	HANKINSON - WAHPETON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24329	110.4999	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24329	110.4999	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24614	110.213	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2432	109.9966	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2432	109.9966	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24279	109.4995	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2432	109.4001	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24046	108.7833	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	108.6329	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	108.6271	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24046	108.6168	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24853	108.5569	HAZEL CREEK - MN VALLEY TAP 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24853	108.5227	HAZEL CREEK () 345/230/13.8KV TRANSFORMER CKT 6
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24853	108.504	HAZEL CREEK - LYON COUNTY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24046	108.4382	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24115	108.3622	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	108.2157	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24129	108.0203	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24086	108.0024	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24086	108.0024	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24199	107.9709	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	107.9392	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24205	107.7877	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24289	107.5451	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24043	107.4771	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2444	107.4711	BROOKINGS - WATERTOWN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2444	107.4711	BROOKINGS - WATERTOWN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	107.4385	GEN659354 1-DEERCREK STG18.000
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	107.4282	GEN659353 1-DEERCREK CTG18.000
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24056	107.3697	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24148	107.1512	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24413	107.1197	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24413	107.1197	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	107.0634	SHEYENNE SVC - SHEYNNE 115KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24121	107.0048	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24012	106.9457	PRAIRIE - RAMSEY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24076	106.94	FARGO - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24345	106.9078	ARLINGTON - WATERTOWN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24073	106.8788	FARGO - JAMES TOWN 230KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24138	106.8582	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24072	106.8074	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24003	106.6759	BALTA - RAMSEY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24138	106.6439	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24148	106.6204	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	106.5459	GEN635214 4-NEAL UNIT 4
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.28306	106.4591	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.28306	106.4591	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24052	106.383	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24036	106.3757	SIDNEY - STEGALL 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24138	106.3204	HENNING - INMANN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24239	106.3154	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2403	106.2243	PRAIRIE - WINGER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24173	106.2145	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24173	106.2145	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24173	106.1818	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24345	106.1695	P12:115:UMZW:# 1586 #: AG IN SD. AG-BR LINE FAULT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24345	106.1695	P12:115:UMZW:# 1587 #: AG IN SD. AG-WT LINE FAULT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24345	106.1695	P13:115:UMZW:# 1588 #: AG IN SD. LOSS OF TRANSFORMER (KY1A).
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24345	106.1561	ARLINGTON - BROOKINGS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2403	106.1125	CENTER - COYOTE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24085	106.0881	AUDUBON - HUBBARD 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	106.0792	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24413	106.0753	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24413	106.0753	MITCHELL - MITCHELL NW 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24093	106.0675	KARLSTAD - WINGER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2407	105.9896	GRAND ISLAND - MCCOOL 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.9622	ANSON - SPLIT ROCK 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.962	ANSON (ANS 1) 115/13.8/13.8KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24093	105.9305	FARGO - SHEYNNE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24093	105.9305	FARGO - SHEYNNE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24017	105.8808	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.8643	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.8326	WATERTOWN 230KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.8317	WATERTOWN 230KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24041	105.7943	BIG STONE - HIGHWAY 12 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.7943	GEN635213 3-NEAL UNIT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24017	105.7608	JAMES TOWN - WEBER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24017	105.7457	BISMARK - WEBER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.7358	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.7325	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.7149	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24025	105.675	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24163	105.6626	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24038	105.6323	EAGLE - PHILIP 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24117	105.5793	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24236	105.5785	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24163	105.5379	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.5316	BARNES 4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.5264	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.526	WATERTNCAP 4230.00 - WATERTOWN 230KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.526	WATERTNCAP 4230.00 230KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24038	105.5251	EAGLE - MARTIN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24185	105.5027	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.4837	ANSON - SPLIT ROCK 115KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.4828	ANSON 115/17.5KV TRANSFORMER CKT 4
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24399	105.4694	HURON - WOONSOCKET 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24041	105.4585	HIGHWAY 12 - ORTONVILLE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24011	105.4547	BISMARK - HILKEN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.4492	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24055	105.412	MCCOOL - MOORE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.4029	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24046	105.3979	ELM CREEK - PARKERS LAKE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24024	105.3807	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24112	105.3793	MINGO - RED WILLOW 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24112	105.3793	MINGO - RED WILLOW 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24038	105.3683	JAMES TOWN - PICKERT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.3683	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.3648	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23986	105.3375	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.3097	RGBYWND4 230.00 - RUGBY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.2933	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.2697	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24193	105.2626	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.2337	GEN640009 1-COOPER NUCLEAR STATION
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23986	105.2318	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23986	105.2317	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23986	105.2311	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23986	105.2311	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23986	105.2295	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23986	105.2294	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24217	105.2219	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24217	105.2073	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24217	105.2065	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24162	105.201	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24027	105.1971	AXTELL - SWEETWATER 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24003	105.1718	MISSION - ST FRANCIS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24022	105.1439	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24022	105.1439	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24022	105.1432	FT RANDAL - SPENCER 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24003	105.142	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24	105.1261	MARTIN - VETAL TAP 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23986	105.1217	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.0604	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.0604	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24022	105.0499	ONEILL - SPENCER 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24399	105.0442	P12:115:UMZW:# 152 #: HU-WO-ST IN SD. WOONSOCKET IS A TAP
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24031	105.0428	BALTA - MCHENRY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24	105.0393	MISSION - VETAL TAP 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24239	105.0305	FIELD SOUTH - WILMARTH 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24029	105.0282	CENTER - SQUARE BUTTE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24022	105.0232	GRACEVT7 - ORTONVILLE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24003	105.0194	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24162	105.0167	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24162	105.0167	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24239	105.0084	FIELD NORTH - LKFLDXL3 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24239	105.0061	FIELD NORTH - FIELD SOUTH 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24162	105.0057	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.0039	GEN645012 2-NEBRASKA CITY 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	105.0031	GEN600045 4-ANSON
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24119	105.003	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24119	105.003	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24399	105.0001	STORLA - WOONSOCKET 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24004	104.9988	P12:230:UMZW:# 156 #: MDOE IN MN. LINE FAULT CAUSES LOSS OF MH 230KV BUS
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24004	104.9988	P12:230:UMZW:# 158 #: MH IN ND.
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24	104.9965	P12:115:UMZW:# 159 #: MS-VE-MR IN SD. VETAL TAP IS A TAP WITH NON-FAULT INTERUPTERS
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24045	104.9928	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24045	104.9928	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24119	104.9918	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23985	104.974	RICHER - ROSEAU 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24162	104.9706	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23985	104.9698	MORANVILLE - ROSEAU 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24209	104.9575	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24209	104.9575	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24162	104.9346	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24191	104.9282	BRISTOL - GROTON 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.9192	GEN645011 1-NEBRASKA CITY 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24327	104.9147	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24327	104.9147	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24321	104.9106	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24038	104.9102	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24209	104.9059	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.9003	MEC345 - WILMARTH 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.8997	MEC345 345/19.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24004	104.8954	MOOREHEAD - MORRIS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.8949	GEN344225 1-1CAL G1 25.000
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24077	104.8876	MT VERN - STORLA 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.8868	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.8783	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24321	104.8764	GROTON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24026	104.876	AS KING - CHISAGO COUNTY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24072	104.871	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24209	104.8703	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24038	104.8576	GRAND FORKS - PICKERT 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2401	104.843	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24314	104.8365	MONTICELLO - WAITE PARK 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24003	104.8325	HARMONY - VALENTINE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.8321	GRE-LKFDGEN3345.00 (LGS1345/13.8) 345/13.8/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.83	GRE-LKFDGEN3345.00 - LKFLDXL3 345KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24162	104.8219	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.8211	FT THOMPSON - OAHE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.8211	FT THOMPSON - OAHE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.8211	FT THOMPSON - OAHE 230KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.8211	FT THOMPSON - OAHE 230KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.8198	MEC115 - WILMARTH 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.8194	MEC115 115/15.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.8103	FT THOMPSON - OAHE 230KV CKT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.8103	FT THOMPSON - OAHE 230KV CKT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.8103	FT THOMPSON - OAHE 230KV CKT 4
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.8103	FT THOMPSON - OAHE 230KV CKT 4
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.8087	FARIBALT GEN115.00 - FEP TAP 115KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24002	104.808	BURR - CANBY 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24191	104.8079	BRISTOL - SUMMIT 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.7983	GEN542962 2-IATAN UNIT #2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24185	104.7963	BOWMAN - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24013	104.7941	COAL CREEK - UNDERWOOD 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2406	104.793	GRANT - MITCHELL 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2406	104.793	GRANT - MITCHELL 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2401	104.79	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24003	104.7513	CHADRON - WAYSIDE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24003	104.7513	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24003	104.7442	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2405	104.72	DAGLUM 4230.00 - RHAME 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23992	104.7186	DICKINSON - PARKERS LAKE 345KV CKT 1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.7185	JAMES TOWN 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.7178	JAMES TOWN 115KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.717	BARNES 4 230.00 - SIBLEY 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.7148	MINNESOTA VALLEY - MINVALY CAP7115.00 115KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23985	104.7128	LUND - MORANVILLE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23972	104.7082	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24007	104.6904	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23985	104.6891	LUND - RUNNING 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23989	104.6887	GRAND FORKS (GK KV1A) 230/115/12.47KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.6689	AS KING 345/20.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24029	104.6684	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24029	104.6684	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24319	104.6666	HURON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24101	104.6652	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24101	104.6652	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24072	104.6615	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24015	104.6606	GRANITE FALLS - MORRIS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24015	104.6606	GRANITE FALLS - MORRIS 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23995	104.6501	MAXWELL - STAPLETON 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.649	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.649	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23996	104.6401	FALCONER - GRAND FORKS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23996	104.6401	FALCONER - GRAND FORKS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24001	104.6304	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.617	GEN300003 1-THOMAS HILL UNIT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23988	104.6153	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23988	104.6153	WATERTOWN (WT KV8A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24188	104.6148	HELENA - SHEAS LK3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24042	104.6114	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24042	104.6114	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23988	104.6106	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23988	104.6106	WATERTOWN (WT KV2A) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.6081	GEN542957 1-IATAN UNIT #1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.5883	PROSE CAP7 115.00 - SPLIT ROCK 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24257	104.5836	GROTON - ORDWAY 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24022	104.5694	GRACEVT7 - MORRIS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24022	104.5694	GRACEVT7 - MORRIS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.5526	PRAIRIE - PRAIRIE SVC 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.5523	BURR - J493 115.00 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.5523	J493 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23999	104.5519	CHISAGO COUNTY - KOHLMAN LAKE 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24026	104.5394	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.533	H081 345.00 - H081-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.533	H081 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.5239	GEN587593 1-J460-GEN1 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.5223	PROSE CAP7 115.00 - PROSE WIND7 115.00 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2401	104.5086	BLACKBERRY - HILLTOP 98 LINE TP 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24072	104.5017	CASS LK4 230.00 - KARLSTAD 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2399	104.4968	ARROWHEAD - FORBES 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.4938	FORBES - FORBESDB 2 500.00 500KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.4938	FORBES SVC - FORBESDB 2 500.00 500KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.4926	GEN636641 1-LOUISA UNIT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.4925	GEN542955 1-LACYGNE UNIT #1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.4858	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.4858	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24043	104.4845	PAYNSVILLE - WILLMAR 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.4814	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24013	104.4802	HARVEY - UNDERWOOD 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24016	104.4781	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2398	104.4738	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24003	104.4706	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24037	104.4618	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24109	104.4594	GRANITE FALLS - S3 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24109	104.4594	GRANITE FALLS - S3 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24124	104.4592	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24082	104.458	MINNESOTA VALLEY - REDWOOD FALLS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2401	104.4557	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24132	104.4339	MCLEOD - PANTHER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24056	104.4319	MINGO - SETAB 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24056	104.4319	MINGO - SETAB 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24083	104.4233	AURORA - BROOKINGS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24083	104.4233	AURORA - BROOKINGS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24013	104.4223	BALTA - HARVEY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24106	104.4202	MARSHALL ERIE ROAD - S3 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24106	104.4202	MARSHALL ERIE ROAD - S3 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.4166	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2406	104.4163	CHERRY CREEK - GRANT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.414	SHERBURNE CO 345/26.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.4134	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.4071	SIBLEY 4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.4043	GEN542951 5-HAWTHORN UNIT #5
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.4034	GEN587663 1-H081-GEN1 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.403	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23997	104.3984	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23974	104.3939	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23988	104.3926	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23988	104.3924	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23988	104.3923	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.3891	MPC02100TAP4230.00 - MPC2100WIND4230.00 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.3886	GEN542956 2-LACYGNE UNIT #2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.3866	MPC2100WIND4230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23952	104.3809	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.3771	GEN600021 3-ANGUS ANSON2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23997	104.374	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24002	104.3737	BIG STONE - MARIETTA 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24021	104.3727	CLEARWATER - ONEILL 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.3701	GEN600020 2-ANGUS ANSON1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24048	104.3693	GRE-WINGRIV4230.00 - RIVERTON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24043	104.3481	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23997	104.3477	COAL CREEK - MCHENRY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23975	104.3474	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24021	104.3469	CLEARWATER - NELIGH 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24021	104.3418	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24001	104.3308	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24066	104.3293	LOGAN - MALLARD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24066	104.3293	LOGAN - MALLARD 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24082	104.3276	FRANKLIN - REDWOOD FALLS 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24077	104.323	ARMOUR - MT VERN 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.3198	FARIBALT GEN115.00 115/18.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23952	104.3117	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23952	104.3117	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.3084	YANKEE 115/34.5KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.2925	YANKEE 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24002	104.289	BURR - MARIETTA 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24166	104.288	SHEAS LK3 345.00 - WILMARTH 345KV CKT 1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23996	104.2854	HENSEL - LANGDON 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24008	104.2746	OAHE - PHILIP TAP 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23991	104.2697	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23988	104.268	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24101	104.263	REDFIELD - WEST PARK B TAP 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.2595	GEN300007 1-NEW MADRID UNIT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24034	104.258	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.2575	GEN300006 1-NEW MADRID UNIT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23959	104.257	BLUE LAKE - SCOTTCO3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24018	104.2518	BADOURA - HUBBARD 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.2514	P13:230:UMZW:# 265 #: WTS IN SD. LOSS OF TRANSFORMER (KV1A).
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.2457	BROOKING COUNTY - J432 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.2457	J432 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.2444	GEN509403 1-PIRKEY GENERATION
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.2188	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23991	104.2153	P12:115:NPPD:TSGT1:SNAKECK7:W.HORSE7:BTB
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.1958	GEN587583 1-J432-GEN1 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24045	104.1835	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24045	104.1835	MITCHELL - TRIPP JCT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.1824	GEN600046 1-MECST
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.1754	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.1754	CANNON FALLS 115/18.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	104.1576	LANGDON - LANGWIN7 115.00 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24083	104.15	AURORA - FLANDRU 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24083	104.15	AURORA - FLANDRU 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24038	104.1133	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24038	104.1133	GRANITE FALLS - MN VALLEY TAP 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23904	104.0624	BIG STONE - BROWNS VALLEY 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.6613	2516-WATERTNCAP 4230.00
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.6613	2546-JAMES TOWN
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.6613	2560-BRDLAND-LNX3345.00
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.6613	2561-BRDLAND-LNX3345.00
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23667	103.5048	RAUN - SIOUX CITY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23667	103.5048	RAUN - SIOUX CITY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23885	103.4123	HOSKINS - RAUN 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23885	103.4123	HOSKINS - RAUN 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.3136	GEN600003 1-PRAIRIE ISLAND G1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.3133	GEN600004 2-PRAIRIE ISLAND G2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.2999	GEN587623 1-J493-GEN1 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23871	103.2939	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23871	103.2917	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24064	103.247	MBPP1 - SUMMIT 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24064	103.2322	FORMAN - MBPP1 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.1921	GEN620323 2-HOOT LAKE 2 GEN
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.1527	CLEARBROOK - CLEARBROOK PIPE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.1477	DONALDSON - DONALDSON PIPE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23846	103.1168	GRIMES - LEHIGH 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.0993	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.0915	GEN615021 1-GRE-ER 14G 16.000
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.0623	GEN652004 1-G13_001IS_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.0559	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.0484	WILTON (WILTON) 115/69/41.6KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.0451	FRONTER4 230.00 (FRONTIER) 230/69/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.0446	GEN620324 3-HOOT LAKE 3 GEN
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.0434	GEN652559 1-OAHE
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.04	GEN659296 1-SDPRAIRWND1W0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.0213	GEN672372 3-COTEAU CREEK GENERATOR 3
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.0212	GEN672370 1-COTEAU CREEK GENERATOR 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.0212	GEN672371 2-COTEAU CREEK GENERATOR 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23941	103.0199	HESKETT - WISHEK 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.0005	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	103.0002	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.9961	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.9866	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.9866	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.9712	GEN672369 3-MERIDIAN GENERATOR 3 ST
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23843	102.9697	BUFFALO RIDGE - PIPESTONE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23941	102.9474	MERRCRT4 230.00 - WISHEK 230KV CKT 1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.9335	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.9301	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 4
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.9301	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 5
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.27614	102.9291	EMMONSCO 345.00 - G16-044-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23925	102.9156	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.9003	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.8803	MORANVILLE (MORANVILLE1) 115/69/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.8803	MORANVILLE (MORANVILLE2) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.8701	GEN672384 1-CENTENNIAL WINDFARM
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.848	GEN657988 1-ROFRGEN9 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23984	102.8405	CULBERTSN E7115.00 - WILISTON 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.8359	BEMIDJI (BEMIDJI #2) 115/69/41.6KV TRANSFORMER CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.815	GEN660003 3-HURON WEST PARK
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.7945	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.7945	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.7772	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.7772	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.7765	BAGLEY - CLEARBROOK 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24183	102.7249	ABERDEEN JCT - ELLENDALE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.6995	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.6898	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.6898	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.6898	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.6771	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.6564	GEN659031 1-G12_014IS_4 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.6555	GEN659289 1-DAYCNTYWND W0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.6493	GEN563312 1-G15097_3 0.6900
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2397	102.6075	BROOKING COUNTY - BSSOUTH3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.6061	GEN600006 1-AS KING
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.5977	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.5976	GEN672339 16-QE 16G 13.800
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.5738	GEN672393 2-NBECST2G 13.800
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23967	102.5439	HELENA - SCOTTCO3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23619	102.5304	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.5211	GEN657964 1-ASH2GEN9 0.5750
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24183	102.5167	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.5147	GEN652410 3-FT PECK
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23745	102.5054	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23745	102.5054	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.4727	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.4653	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.459	GEN652545 7-BIG BEND
FDNSLock	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.4334	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23675	102.4142	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23675	102.4142	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23743	102.402	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.3967	BISONMP4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23742	102.3955	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.3697	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.3521	GEN659156 2-LONESMCRK 2G13.800
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.3521	GEN659157 3-LONESMCRK 3G13.800
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.3359	GEN659158 2-PIONEER G213.800
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.3359	GEN659159 3-PIONEER G313.800
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.3318	GEN652414 4-FT PECK
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.3318	GEN652415 5-FT PECK
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.3206	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.3206	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.2831	GEN620115 4-HRDLKGEN 0.6000
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.2663	GEN652543 3-BIG BEND
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.2651	GEN652542 1-BIG BEND
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.2081	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.1976	GEN652544 5-BIG BEND
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.1956	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.1956	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.1891	GEN615015 1-GRE-SPRITWDG13.200
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.1459	GEN672392 1-NBECGT1G 18.000
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.1406	GEN600005 1-MONTICELLO
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24365	102.1008	BROOKINGS - WHITE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24365	102.1008	BROOKINGS - WHITE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.081	GEN659273 2-GROTON SYNC COND
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.081	GEN659294 1-WILTONCOL9
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23642	102.0752	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	102.0147	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24203	101.9448	DRAYTON - LETELLIER 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.9238	GEN600000 1-SHERBURNECNTY G1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.24365	101.8105	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.797	GEN 11104 1-J262_GEN 0.6000
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.797	GEN 11108 1-J263_GEN 0.6000

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.7873	BRDLAND-LNX3345.00 345KV SWITCHED SHUNT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.7235	GEN600001 2-SHERBURNE CNTY G2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.676	GEN652556 2-OAHE
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.676	GEN652557 4-OAHE
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.676	GEN652558 6-OAHE
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.6154	GEN600002 3-SHERBURNE CNTY G3
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.601	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.5178	GEN652173 1-G09_001IS_2 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.4785	GEN 10572 2-J290_MK10 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.4419	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.43	GEN910006 1-G12_012IS_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.4295	GEN 10648 1-G830_GEN 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.324	GEN659270 1-WEST SW
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23819	101.3137	HURON - WATERTOWN 230KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23819	101.3137	HURON - WATERTOWN 230KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.313	GEN657745 1-MPC02100GEN90.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23819	101.2435	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23819	101.2435	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.2233	GEN659018 1-G14_003IS_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.1926	GEN659366 3-WILTON 3 W0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.188	GEN659010 4-G07_027IS_2 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.1381	J290_SUB 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.1196	GEN652461 5-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.1195	GEN652460 4-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.0068	GEN652457 1-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.0068	GEN652458 2-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	101.0068	GEN652459 3-GARRISON
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	100.9961	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	100.9938	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	100.9753	GEN659118 1-LARAMIE RIVER UNIT1
FDNSLock	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.21477	100.9303	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	100.9276	GEN659403 1-NDSUNFLWR W0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	100.8839	GEN672321 1-SHAND GENERATOR 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	100.8433	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	100.8062	GEN563342 1-G15098_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23819	100.7997	CARPENTER - HURON 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	100.797	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	100.797	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	100.7827	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	100.7659	GEN563252 1-G15091_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.21483	100.6478	2809X2
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.21483	100.6478	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23895	100.5672	BROOKING COUNTY - BSSOUTH3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23362	100.5021	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	100.3181	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	100.2837	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.21483	100.1469	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	100	GEN659272 2-GROTON 2G13.800
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	99.9	GEN563302 1-G15096_3 0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	99.9	GEN659453 1-GI1414GEN W0.6900
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	99.8	GEN659274 1-GROTON
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.2564	99.6	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	16ALL_G16_044	2	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23979	99.5	GEN659141 1-K10215A
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.24136	116.3043	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.24136	116.3043	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.24136	116.2914	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.24136	116.2718	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.2409	114.8416	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.2409	114.5889	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.2409	114.5889	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.24136	114.5597	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.24136	114.5597	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.2409	114.5483	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.24136	114.5334	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	2	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.24136	114.0015	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.2409	112.8877	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.2409	112.8877	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.2409	112.8521	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	2	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.2409	112.5829	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	2	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.24309	102.8377	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	2	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.24309	102.7785	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	2	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.24309	102.7785	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.24309	102.7356	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	2	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.24309	101.5278	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	2	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.24309	101.5278	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	2	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.24309	101.4896	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	2	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.24309	101.0983	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.04001	106.8217	BASE CASE
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.03861	105.0215	BASE CASE
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.03854	100.2644	BASE CASE
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25697	132.2895	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25644	129.9346	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25644	127.9136	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17598	126.9239	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21575	126.653	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21575	126.5582	2810X2
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21575	126.5563	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21575	125.9959	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21575	125.9959	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21575	125.7359	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21575	125.6439	2801X
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21575	125.3902	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17488	124.0412	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17488	121.7851	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.26081	121.0806	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21397	119.9471	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21397	119.8824	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21397	119.8408	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21397	119.8408	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21397	119.7817	2810X2
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21397	119.7473	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21397	119.6276	2801X
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21397	119.5276	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.26081	119.1036	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19336	118.1595	BASE CASE
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22211	118.1135	2809X2
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22211	118.1135	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22211	118.0599	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22217	117.8781	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2066	117.4447	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17598	117.167	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2066	116.6861	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2066	116.6861	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2066	116.6523	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19531	116.6178	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19644	116.2242	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21351	116.0187	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21351	115.9416	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21351	115.9416	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21351	115.9356	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21351	115.8813	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21351	115.8705	2810X2
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21351	115.8092	2801X
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21351	115.7031	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19962	114.9073	BISON - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19962	114.5719	BISON - MAURINE 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2016	113.9899	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2016	113.9899	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19811	112.6597	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	3	16WP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.26176	112.5656	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25657	112.1776	LELANDO3-GROTON-LINE-REACTOR-345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25657	112.1776	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19811	112.1438	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19232	111.9331	BASE CASE
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19605	111.847	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19808	111.7143	GLENHAM - WHITLOK 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22081	111.6447	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19808	111.6117	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19808	111.6117	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19808	111.5161	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19808	111.4949	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19808	111.4948	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22088	111.4921	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19808	111.3809	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19546	111.3809	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22081	111.2091	2809X2
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22081	111.2085	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13264	110.2952	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20138	110.2845	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20138	110.2845	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13264	110.1821	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13264	110.1776	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13264	110.1707	2801X
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13264	110.1635	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13264	110.1635	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.196	110.1324	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.196	110.1324	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13264	110.1231	2810X2
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.196	110.0805	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	3	16WP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.26176	110.0704	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13264	109.9468	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19535	109.8428	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19583	109.8412	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19655	109.8138	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19824	109.6506	GROTON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19617	109.6379	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19617	109.6379	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19824	109.5407	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19821	109.37	HURON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19687	109.3317	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19687	109.3317	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19687	109.2546	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19687	109.2495	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19952	109.2224	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19952	109.2224	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19191	109.1642	BASE CASE
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19546	109.0233	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19617	109.0135	REDFIELD - WEST PARK B TAP 115KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19613	108.9796	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19655	108.9124	BOWMAN - HETINGER 230KV CKT 1
FDNSLock	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19822	108.909	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17418	108.8789	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22037	108.6049	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19534	108.5366	BRISTOL - GROTON 115KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22043	108.4791	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19534	108.4484	BRISTOL - SUMMIT 115KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19726	108.3076	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19726	108.3076	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22037	108.2143	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22037	108.2128	2809X2
FDNSLock	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19822	107.9334	BISON - MAURINE 230KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20092	107.8948	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20092	107.8948	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21394	107.6591	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21394	107.6179	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21394	107.6021	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21394	107.6021	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21394	107.5603	2810X2
FDNS	16ALL_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21394	107.5491	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21394	107.4747	2801X
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17447	107.4115	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21394	107.3976	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1967	106.5745	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20197	106.5233	WATERTN-LNX3345.00 - WHITE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20197	106.1439	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20197	106.1287	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20197	106.1287	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1967	106.035	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25594	105.8684	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25594	105.8684	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19779	105.694	BISON - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	105.5768	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	105.4861	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	105.4861	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	105.3769	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	105.3517	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	105.3516	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19888	105.127	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19888	105.127	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	105.0493	OAHE - SULLEY BUTTE 230KV CKT 1
FDNSLock	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19779	104.8206	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13769	104.5571	2801X
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13769	104.5571	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13769	104.5496	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13769	104.5407	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13769	104.5407	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13769	104.532	2810X2
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13769	104.5126	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13769	104.5007	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19535	104.3335	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14643	104.3044	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14648	103.9734	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1971	103.7861	GROTON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19605	103.766	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19605	103.766	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14643	103.7514	2809X2
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20153	103.7452	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20772	103.7332	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14643	103.7324	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19605	103.6911	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1971	103.679	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19605	103.6589	BISMARK - WASHBURN 230KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12417	103.5915	BASE CASE
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1963	103.5234	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19707	103.4928	HURON - REDFIELD 115KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12406	103.4472	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20153	103.4304	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20153	103.4133	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20153	103.4133	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1963	103.0685	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25552	103.0415	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25552	103.0415	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19535	103.0394	BOWMAN - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19618	102.7705	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19628	102.649	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19628	102.5663	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19628	102.5663	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19628	102.4673	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19628	102.4525	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19628	102.4525	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19846	102.3894	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19846	102.3894	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19628	102.163	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13203	102.0504	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13203	102.0504	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22052	101.6474	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21595	101.5651	2809X1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21595	101.5651	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13774	101.395	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13774	101.3465	2810X2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13774	101.3369	2801X
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13774	101.3262	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22058	101.3242	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21595	101.323	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13774	101.3186	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13774	101.3106	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13774	101.3106	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13774	101.2839	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19506	101.2591	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	101.2118	GROTON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19563	101.208	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19563	101.208	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22052	101.1321	2809X2
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19563	101.1313	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	101.1137	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19563	101.1094	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22052	101.1049	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13285	101.0153	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19203	101.0046	BASE CASE
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19665	100.9634	HURON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20732	100.9361	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12779	100.6877	BASE CASE
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12781	100.6369	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13285	100.6113	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13285	100.608	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13285	100.608	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12404	100.5761	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12411	100.2562	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19577	100.2197	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19597	100.1819	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19597	100.1819	LELAND OLDS - STANTON 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13799	100.0941	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13799	100.0914	2801X
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13799	100.0914	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13799	100	2810X2
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13799	100	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13799	100	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13799	100	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13799	99.9	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12752	99.8	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13606	99.6	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13106	99.6	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13106	99.6	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12752	99.5	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111	111	0.04062	130.452	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111	111	0.04528	117.2283	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111	111	0.04528	112.5674	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111	111	0.04062	109.044	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111	111	0.04062	125.8537	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111	111	0.04528	112.0461	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111	111	0.04528	107.4236	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111	111	0.04062	104.6101	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.344	104.8411	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.344	104.3905	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30562	103.4087	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30562	103.3419	2810X2
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30562	102.9486	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30562	102.7817	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30562	102.6839	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30562	102.6839	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30562	102.439	2801X
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30562	102.2081	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30333	102.0796	HURON - SPLIT ROCK 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30333	102.0796	HURON - SPLIT ROCK 345KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34332	101.276	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34332	101.1206	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.29003	100.9044	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.28733	100.5033	BASE CASE
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.29136	100.396	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.24287	114.9629	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.24287	114.6987	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.3092	110.6975	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	16ALL_G16_044	3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.344	109.8834	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.344	109.3911	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30914	108.4817	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30562	108.4703	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30562	108.4054	2810X2
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30562	107.9855	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30562	107.8402	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30562	107.7207	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30562	107.7207	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30562	107.4798	2801X
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30333	107.3402	HURON - SPLIT ROCK 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30333	107.3402	HURON - SPLIT ROCK 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30562	107.2349	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34332	106.2446	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29003	106.091	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34332	106.0541	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.28733	105.9424	BASE CASE
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29136	105.4913	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29053	104.0709	ELLENDALE - OAKES 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29053	104.0709	ELLENDALE - OAKES 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29043	103.8762	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20824	103.4699	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20824	103.4699	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20144	103.3244	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20142	103.034	BASE CASE
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29207	102.8168	FORMAN - HANKINSON 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29323	102.6799	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.25224	102.6548	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.25224	102.4203	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.24232	102.3717	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.28723	102.3397	BIG STONE - BLAIR 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.28723	102.3397	BIG STONE - BLAIR 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29323	102.2818	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29323	102.2814	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.24232	101.9101	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29515	101.8279	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20951	101.7479	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20951	101.7479	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20951	101.7163	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20951	101.711	2801X
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20951	101.711	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20951	101.7068	2810X2
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20951	101.6943	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20951	101.5259	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29323	101.4482	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29233	101.2445	BISON - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29117	101.0823	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29233	101.01	BISON - MAURINE 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29323	100.9548	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29323	100.8947	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20164	100.8868	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29323	100.8828	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.24265	100.8676	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29323	100.8658	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29515	100.8644	G13_001IST 115.00 - SUMMIT 115KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29953	100.7513	BRISTOL - GROTON 115KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.39974	100.6358	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_044	3	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.24265	100.5168	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20167	100.481	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20167	100.481	ELLENDALE - OAKES 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29953	100.4223	BRISTOL - SUMMIT 115KV CKT 1
FDNS	16ALL_G16_044	3	17G	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34981	100.378	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20162	100.3222	FORMAN - OAKES 230KV CKT 1
FDNS	16ALL_G16_044	3	17G	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34981	100.2284	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29002	100.1971	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29869	100	GROTON - REDFIELD 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29869	100	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20145	100	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20142	100	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.2884	99.9	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20256	99.7	FORMAN - HANKINSON 230KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29862	99.6	HURON - REDFIELD 115KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.03292	148.4054	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.03292	128.65	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.03613	117.8038	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.03613	113.6261	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.0313	110.7185	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.03139	108.9688	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	3	16WP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.03621	101.9556	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03064	105.0392	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03064	104.842	2801X
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03064	104.8361	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03064	104.7845	LELAND03-FTTHOMP3-T-LINE-REACTOR-345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03064	104.7845	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03064	104.7609	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03064	104.6851	2810X2
FDNS	16NR_G16_044	3	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03064	104.413	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	GROTON - REDFIELD 115KV CKT 1	120	120.7	0.04128	110.1755	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	HURON - REDFIELD 115KV CKT 1	120.7	120.7	0.03983	102.7709	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04422	135.9959	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.044	134.0463	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04267	119.7802	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04067	115.5879	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04245	115.3908	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04067	113.79	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04046	112.7678	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04113	111.2724	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	110.7951	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04046	110.7349	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04095	108.6485	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	108.3461	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0428	108.2973	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	108.1698	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03999	108.0565	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03999	107.8684	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03999	107.7858	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03999	107.7552	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03999	107.7552	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	107.4873	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03697	106.7571	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	106.4634	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03697	106.183	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03857	106.0001	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03674	105.8632	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04035	105.837	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	105.7287	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04023	105.2832	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0398	105.266	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0398	105.266	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0398	105.266	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0398	105.2294	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03983	105.1119	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03988	105.1012	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04352	105.0669	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0398	104.876	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	104.8496	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0437	104.7935	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	104.477	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03938	104.3353	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	104.2952	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03933	103.9915	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03679	103.9367	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	103.8391	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04044	103.8192	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	103.6529	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03983	103.6475	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	103.6325	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0384	103.5774	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03955	103.5248	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03946	103.4896	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03946	103.4896	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03679	103.3661	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04016	103.3652	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03939	103.3497	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03945	103.3456	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03945	103.3456	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03657	103.2873	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03974	103.2425	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03973	103.2385	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNSLock	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04261	103.2113	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	103.1888	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03945	103.1725	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04005	103.1622	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	103.0692	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_044	3	20WP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04441	103.0422	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03918	102.9995	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03857	102.9779	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03931	102.9371	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04041	102.9134	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03963	102.8659	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03963	102.8659	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	102.7795	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0397	102.7795	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	102.7626	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	102.7578	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03943	102.7377	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03974	102.7018	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03954	102.6869	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03935	102.6773	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03774	102.6758	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03954	102.6619	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	102.6529	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03962	102.5447	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	102.5098	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03774	102.4903	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03774	102.4739	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	102.4499	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	102.4301	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	102.4274	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03919	102.4034	DAN JUHL - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	102.3654	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03937	102.3293	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03919	102.3133	DAN JUHL - SPLIT ROCK 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03919	102.3119	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03851	102.3003	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	102.2661	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	102.2225	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03921	102.1667	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03802	102.1316	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03964	102.1208	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	102.1145	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03943	102.0954	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03943	102.0954	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03973	102.0578	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	102.0517	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	102.0366	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.9953	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.9857	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.9834	GEN501813 1-RODEMACHER UNIT 3
FDNSLock	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03905	101.9786	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04021	101.9347	KOSSUTH 3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03905	101.9336	MISSION - ST FRANCIS 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.9318	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.9297	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.9296	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.9294	GEN344896 3-1LAB G3 20.000
FDNSLock	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.039	101.919	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03973	101.9116	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	101.8957	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03973	101.8934	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03959	101.8646	CAYLER5 161.00 - WISDOM5 161.00 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03959	101.8646	CAYLER5 161.00 - WISDOM5 161.00 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03905	101.8564	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	101.8553	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.835	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.8295	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03938	101.7865	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.7753	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	101.7725	2810X2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	101.7725	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04028	101.7472	LEHIGH - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03921	101.7279	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.7152	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03857	101.6765	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	101.6741	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03964	101.6673	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04154	101.6524	SPLIT ROCK (SPLT 10) 345/115/13.8KV TRANSFORMER CKT 10
FDNSLock	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03905	101.6446	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03943	101.6301	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.628	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03898	101.6208	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03898	101.6208	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03898	101.6201	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03942	101.6198	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.6078	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.5888	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04144	101.5857	SPLIT ROCK (SPLT 11) 345/115/13.8KV TRANSFORMER CKT 11
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03959	101.5791	CAYLER5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03929	101.5658	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03769	101.5653	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	101.5649	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	101.5649	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	101.5576	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	101.5536	2801X
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.5496	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03898	101.549	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03916	101.4965	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03802	101.481	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.4532	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	101.4517	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.4516	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.4423	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.4376	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.437	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03905	101.4137	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.4051	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03844	101.4014	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.3748	GEN542962 2-IATAN UNIT #2
FDNSLock	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03902	101.3617	BIG STONE - BLAIR 230KV CKT 1
FDNSLock	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03902	101.3617	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03925	101.3533	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.3479	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.3373	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03941	101.3308	MCLEOD - PANTHER 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03887	101.307	AXTELL - SWEETWATER 345KV CKT 1
FDNSLock	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04021	101.2973	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03913	101.284	ELK - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.2732	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03938	101.2713	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.2668	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.2665	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03962	101.263	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.2501	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.2472	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03922	101.2433	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03939	101.2172	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	101.2155	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.2053	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03922	101.1866	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03921	101.1764	BIG STONE - BROWNS VALLEY 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.169	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.1677	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03953	101.151	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03953	101.151	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.1121	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03879	101.1119	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03865	101.1091	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.1072	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.1071	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03977	101.1019	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	101.0994	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03922	101.0947	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03953	101.0857	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03953	101.0857	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03915	101.0854	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03865	101.0832	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.079	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	101.0746	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03928	101.0568	PAYNSVILLE - WILLMAR 230KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04411	101.0515	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03917	101.0509	HELENA - SCOTTCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.0499	GEN303007 1-1BC2 U2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03932	101.0476	ARNOLD - HAZLETON 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.0448	GEN303006 1-1BC2 U1
FDNSLock	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04021	101.0274	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03928	101.0202	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.0198	GEN645025 5-NORTH OMAHA 5
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03928	101.019	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03928	101.019	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03925	101.0157	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03925	101.0157	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03921	101.0133	BROWNS VALLEY - HANKINSON 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04143	101.0112	SIOUX FALLS - VFODNES 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03881	101.0016	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.9982	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.9926	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.9722	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03881	100.9704	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04214	100.9682	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04214	100.9682	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.9666	GEN303008 1-1BC2 U3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03948	100.9604	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.9554	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.9554	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03925	100.9392	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.9341	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0389	100.9164	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0387	100.904	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03881	100.8843	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03922	100.8806	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.8785	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.8785	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.8632	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03915	100.8625	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04024	100.8616	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.8562	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03914	100.8499	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03819	100.8191	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0399	100.8086	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0399	100.8075	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.7955	GENOA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0399	100.7931	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.7892	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04146	100.789	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04146	100.789	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.7852	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04159	100.7773	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04159	100.7773	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04159	100.775	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03895	100.7719	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0392	100.7691	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03923	100.7566	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03915	100.7459	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03915	100.7459	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.7426	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.7407	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0387	100.74	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0387	100.74	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0387	100.7399	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0387	100.7399	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0387	100.7396	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0387	100.7396	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.739	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.7389	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0437	100.7315	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.7209	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.7096	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03957	100.7024	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.6998	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.6934	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03914	100.6889	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03964	100.6823	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03964	100.6821	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.6821	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03916	100.682	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.6812	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03923	100.6807	ARNOLD - MORGANV3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03887	100.6795	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03887	100.6795	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03887	100.6781	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03964	100.6776	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03923	100.6766	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.676	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	100.6665	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.666	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.6649	GEN345756 H-1SIOUX 1 18.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.661	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03917	100.6605	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03953	100.6567	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.652	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03917	100.6485	GRACEVT7 - ORTONVILLE 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03928	100.6472	MORGANV3 345.00 - TIFFIN 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.039	100.6468	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0392	100.6466	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03911	100.6359	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.6357	GEN334431 1-SABINE UNIT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.6352	GEN334432 1-SABINE UNIT 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03923	100.6276	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03914	100.6227	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.6219	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.6218	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.6203	GEN345832 1-1TS G1 13.800
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.62	GEN345841 2-1TS G2 13.800
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.6191	GEN336446 1-MICHOUD UNIT #2
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.6189	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.6166	AS KING 345/20.0KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03917	100.6163	MAGNOLIA 5 161/69KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03914	100.6072	LAWERENCE CREEK - SHAEFER 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.6008	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.5955	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.5955	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.5832	GEN645042 2-CASS COUNTY 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.5827	GEN336242 1-1NMIL ST1 18.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.5809	GEN645041 1-CASS COUNTY 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.5762	GEN501823 1-TECHE UNIT 3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.5659	OTTUMWA - PLSNT CRNR 5161.00 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.5467	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.537	GEN336944 1-REX BROWN
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03913	100.5363	BREWSTER - ELK 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.5354	GEN334030 1-FRONTIER UNIT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.5352	GEN334031 1-FRONTIER UNIT 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.5327	RUNNING 230/118KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03914	100.5324	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.5261	GEN501970 1-EVANGELINE UNIT 7
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	100.5257	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.52	GEN335612 1-WILLOW GLENN UNIT#2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04001	100.5172	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04196	100.517	BERSFORD - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03911	100.5154	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03911	100.5138	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.507	GEN337430 1-PERYVILLE UNIT #3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.5067	GEN337428 1-PERYVILLE UNIT #1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03918	100.5042	EMERY - SHEFFLD5 161.00 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03918	100.5042	EMERY - SHEFFLD5 161.00 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04001	100.4974	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04001	100.4974	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04001	100.4902	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03962	100.4834	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03962	100.4834	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04001	100.4833	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04001	100.4832	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03922	100.4691	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04006	100.4673	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03947	100.4605	LAWRENCE - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03865	100.4537	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04001	100.4302	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03977	100.4194	ARMOUR - MT VERN 115KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0384	100.3619	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03945	100.3586	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03945	100.3586	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	100.3267	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03914	100.2965	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03756	100.2846	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03756	100.236	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	100.2	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	100.2	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03936	100.1754	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03957	100.1663	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03936	100.1588	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	100.1332	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	100.1	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03834	100.0846	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	100.0531	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100	BASE CASE
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04024	100	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	100	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03756	100	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.039	99.8	DAN JUHL - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	99.8	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	99.8	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03879	99.8	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03879	99.8	MINGO - RED WILLOW 345KV CKT 1
FDNSLock	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03839	99.8	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.7	2518-DENISON

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.7	2519-DENISON
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.7	DENISON 69KV SWITCHED SHUNT
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.7	WEBSTER () 345/161/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03925	99.7	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03925	99.7	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03917	99.7	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03903	99.7	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.039	99.7	DAN JUHL - SPLIT ROCK 161KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.039	99.7	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03895	99.7	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	99.7	GEN336252 1-NINEMILE POINT UNIT#5
FDNSLock	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.7	DENISON 69KV SWITCHED SHUNT
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03924	99.6	CLIPPER - LITTLE SIOUX 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03917	99.6	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03925	99.6	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03919	99.6	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	99.6	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	99.6	GEN336831 1-BAXTER WILSON SES
FDNSLock	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03888	99.6	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04196	99.5	MANNING - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03917	99.5	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03917	99.5	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	NOBLES 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03893	99.5	PIPESTONE - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03942	99.5	CAYLER5 161.00 - WISDOM5 161.00 161KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03942	99.5	CAYLER5 161.00 - WISDOM5 161.00 161KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	99.5	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	99.5	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03785	99.5	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNSLock	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03956	99.5	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNSLock	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03945	99.5	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04422	134.8868	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.044	132.9614	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04267	118.98	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04067	114.745	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04245	114.6385	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04067	112.9883	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04046	111.9349	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04113	110.6356	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	109.9969	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04046	109.9494	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04095	108.0126	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0428	107.5878	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	107.5729	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	107.3859	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03999	107.3648	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03999	107.1745	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03999	107.0897	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03999	107.0598	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03999	107.0598	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	106.7533	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03697	106.0808	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	105.7464	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03697	105.5161	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03857	105.2813	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03674	105.2039	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04035	105.1289	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	104.9696	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0398	104.5902	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0398	104.5902	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0398	104.5902	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04023	104.5686	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0398	104.5568	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03983	104.4229	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03988	104.3978	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04352	104.3378	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0398	104.1963	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	104.1341	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0437	104.0785	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	103.8162	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03938	103.6667	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	103.6356	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03933	103.3382	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03679	103.2774	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04044	103.2029	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	103.1406	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	103	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03983	102.9825	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	102.9823	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03955	102.9347	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03946	102.8831	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03946	102.8831	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0384	102.8686	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03945	102.744	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03945	102.744	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03679	102.7141	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03939	102.69	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04016	102.6679	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03657	102.6407	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03973	102.5841	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03974	102.5749	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03945	102.5692	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNSLock	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04261	102.5546	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	102.5444	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04005	102.4541	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	102.4246	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03857	102.3223	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	3	20WP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04441	102.311	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03931	102.2827	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04041	102.279	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03963	102.2379	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03963	102.2379	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	102.2231	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	102.1175	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	102.1123	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03943	102.0954	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	102.0924	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0397	102.0882	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03954	102.0652	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03974	102.0455	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03954	102.0413	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03774	102.0381	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03935	102.0251	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.8719	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03962	101.8682	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03774	101.8532	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03774	101.839	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.8136	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.7951	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.7924	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03919	101.7682	DAN JUHL - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.7214	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03937	101.6925	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03919	101.6814	DAN JUHL - SPLIT ROCK 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03919	101.6799	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03851	101.6602	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.6315	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.5814	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03921	101.5724	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03943	101.5017	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03943	101.5017	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03802	101.4907	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03964	101.4866	BYRON - NORTH ROCHESTER 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.4836	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03973	101.4443	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.421	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.4152	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.4081	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.3656	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.3528	GEN501813 1-RODEMACHER UNIT 3
FDNSLock	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03905	101.3524	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNSLock	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.039	101.3453	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03905	101.3069	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04021	101.3036	KOSSUTH 3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.303	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.301	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.3008	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.3007	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03973	101.3003	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03973	101.2823	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04175	101.278	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	101.2511	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03905	101.231	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03959	101.2295	CAYLER5 161.00 - WISDOM5 161.00 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03959	101.2295	CAYLER5 161.00 - WISDOM5 161.00 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.2081	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.2026	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04175	101.1976	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04175	101.1969	2810X2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03938	101.1541	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.1471	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04028	101.1046	LEHIGH - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.0882	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03921	101.0731	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03857	101.0474	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03964	101.0391	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04154	101.0379	SPLIT ROCK (SPLT 10) 345/115/13.8KV TRANSFORMER CKT 10
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	101.0307	GEN344225 1-1CAL G1 25.000
FDNSLock	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03905	101.0225	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03943	101.0146	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.0056	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03942	101.0041	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04175	100.9907	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04175	100.9907	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03898	100.9864	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03898	100.9864	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03898	100.9845	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04175	100.9828	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.9823	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04175	100.9781	2801X
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04144	100.9717	SPLIT ROCK (SPLT 11) 345/115/13.8KV TRANSFORMER CKT 11
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.9641	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03929	100.9634	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03959	100.9487	CAYLER5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03769	100.9441	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.9259	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03898	100.9167	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04175	100.8824	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03802	100.8586	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03916	100.8556	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.8299	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.8288	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.8216	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.8197	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.8145	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.8144	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03905	100.7937	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03844	100.7803	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03925	100.7525	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.7509	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.7499	GEN542962 2-IATAN UNIT #2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.7356	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03941	100.7156	MCLEOD - PANTHER 230KV CKT 1
FDNSLock	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04021	100.6955	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03938	100.6945	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03887	100.6799	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03913	100.6641	ELK - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.6523	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.6466	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.6463	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03922	100.6401	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.6294	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.6283	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03962	100.6085	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03939	100.595	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.5906	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.5858	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03922	100.5839	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03921	100.5748	BIG STONE - BROWNS VALLEY 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.5475	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03953	100.5452	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03953	100.5452	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03977	100.4921	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03922	100.4919	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.4904	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.4889	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.4889	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03879	100.4884	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03865	100.4816	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03953	100.4783	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03953	100.4783	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	100.4651	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.4585	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03865	100.4546	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03928	100.4446	PAYNSVILLE - WILLMAR 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	100.4375	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.4323	GEN303007 1-1BC2 U2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.4273	GEN303006 1-1BC2 U1
FDNSLock	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04021	100.4257	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03932	100.4222	ARNOLD - HAZLETON 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03928	100.4215	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03928	100.4215	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03917	100.4207	HELENA - SCOTTCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03921	100.4102	BROWNS VALLEY - HANKINSON 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03928	100.4069	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03925	100.4058	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03925	100.4058	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.3963	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.3961	GEN645025 5-NORTH OMAHA 5
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03881	100.3936	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.3906	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04143	100.3874	SIOUX FALLS - VFODNES 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03881	100.3653	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.3558	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.3502	GEN303008 1-1BC2 U3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04214	100.3379	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04214	100.3379	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.3371	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.337	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03925	100.3169	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.3165	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.3147	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
FDNS	00NR_G16_044	3	17SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04411	100.3077	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0389	100.2971	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0387	100.2875	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.2853	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.2853	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03881	100.2821	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04024	100.2662	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.2479	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.2409	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03922	100.2342	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03819	100.2054	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	100.2	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0399	100.1964	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0399	100.1949	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04146	100.1914	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04146	100.1914	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0399	100.1814	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.1808	GENOA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.1747	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.1707	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03895	100.155	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03923	100.1498	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04159	100.1444	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04159	100.1444	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04159	100.142	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.1295	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03915	100.1278	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03915	100.1278	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0387	100.1266	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0387	100.1265	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0387	100.1264	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0387	100.1264	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0387	100.1262	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0387	100.1262	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.1255	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.1252	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0437	100.1216	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.1	GEN334431 1-SABINE UNIT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.1	GEN334432 1-SABINE UNIT 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.1	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	100.1	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.0957	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.0867	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.0806	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03887	100.077	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03887	100.077	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03914	100.0767	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03887	100.0754	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.039	100.0749	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03964	100.0709	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.0709	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03964	100.0707	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03923	100.0696	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.0648	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03923	100.0634	ARNOLD - MORGANV3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.0527	GEN345756 H-1SIOUX 1 18.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03928	100	MORGANV3 345.00 - TIFFIN 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03923	100	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03917	100	MAGNOLIA 5 161/69KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03914	100	LAWERENCE CREEK - SHAEFER 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03914	100	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100	GEN334030 1-FRONTIER UNIT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100	GEN334031 1-FRONTIER UNIT 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100	GEN336242 1-1NMIL ST1 18.000
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100	GEN336446 1-MICHOUD UNIT #2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100	GEN336944 1-REX BROWN
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100	GEN345832 1-1TS G1 13.800
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100	GEN345841 2-1TS G2 13.800
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100	GEN501823 1-TECHE UNIT 3
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100	GEN645041 1-CASS COUNTY 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100	GEN645042 2-CASS COUNTY 2
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100	OTTUMWA - PLSNT CRNR 5161.00 161KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03911	100	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03957	100	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03953	100	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04196	99.9	BERSFORD - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04006	99.9	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04001	99.9	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04001	99.9	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04001	99.9	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04001	99.9	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04001	99.9	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04001	99.9	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03918	99.9	EMERY - SHEFFLD5 161.00 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03918	99.9	EMERY - SHEFFLD5 161.00 161KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.9	GEN501970 1-EVANGELINE UNIT 7
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.9	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03911	99.9	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04001	99.8	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03947	99.8	LAWRENCE - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03915	99.8	HAZLETON - HCKRYCK3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03913	99.8	BLACKHAWK 3 345.00 - KILLDEER3 345.00 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03865	99.8	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.7	2568-SIOUXCY-LNX3345.00
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.7	SIOUXCY-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03945	99.7	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03945	99.7	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03914	99.7	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	99.7	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0384	99.7	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03756	99.7	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNSLock	00NR_G16_044	3	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.7	SIOUXCY-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03936	99.6	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03936	99.6	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	99.6	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	99.6	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	99.6	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	99.6	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03756	99.6	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03957	99.5	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03834	99.5	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	1202	1202	0.0567	99.7	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23845	103.1125	HURON - SPLIT ROCK 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	TO->FROM	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z	720	792	0.23845	103.1125	HURON - SPLIT ROCK 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23845	104.2987	HURON - SPLIT ROCK 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	WATERTN-LNX3345.00 - WHITE 345KV CKT 1	720	792	0.23845	104.2987	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16754	117.6127	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16754	117.5559	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16754	117.5559	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16754	117.5281	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23305	116.1457	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23305	116.0774	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23305	116.0774	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16754	116.0087	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16754	116.0087	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16754	115.9859	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23305	115.8488	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_044	3	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16754	115.5906	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23305	114.6519	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23305	114.5923	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23305	114.5923	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	3	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23305	113.836	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23299	112.889	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23299	112.4715	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23299	112.4715	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23299	112.4346	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23299	110.6003	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23299	110.6003	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23299	110.5683	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23299	110.4707	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23257	110.3338	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23257	109.7772	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23257	109.7772	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23257	109.7689	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23257	108.0816	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23257	108.0724	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23257	108.0724	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23257	108.0659	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1692	106.8034	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_044	3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1692	106.8034	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16944	106.7945	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_044	3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16944	106.7945	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1692	106.7367	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_044	3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16944	106.7357	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1692	106.6654	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16944	106.6104	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_044	3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16944	106.1918	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_044	3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16944	106.1918	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16944	106.1455	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_044	3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1692	106.0555	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_044	3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1692	106.0555	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1692	106.0003	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_044	3	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16944	105.5761	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_044	3	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1692	105.486	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1764	100.2709	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16NR_G16_044	3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1764	99.8	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16NR_G16_044	3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1764	99.8	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16NR_G16_044	3	17G	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1764	99.7	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.04001	105.6804	BASE CASE
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.03859	103.7259	BASE CASE
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2621	145.2881	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2621	142.8571	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25697	132.5526	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25697	130.2449	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25644	128.3735	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21575	127.4909	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21575	127.4013	2810X2
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21575	127.4013	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21575	127.3775	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21575	127.3775	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21575	127.1667	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21575	127.0285	2801X
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21575	127.0285	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25644	126.4041	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17598	125.6856	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17488	123.7435	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17488	120.6689	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock	16ALL_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.26081	120.2675	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21397	120.209	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21397	120.098	2810X2
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21397	120.098	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21397	120.0763	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21397	120.0763	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21397	119.9869	2801X
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21397	119.9869	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21397	119.944	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19336	118.3744	BASE CASE
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22211	118.1103	2809X2
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22211	118.1103	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.26081	118.0303	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22217	117.7764	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22211	117.7145	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21351	116.6915	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21351	116.6086	2810X2
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21351	116.6086	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21351	116.5844	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21351	116.5844	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21351	116.4833	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17418	116.4792	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21351	116.4095	2801X
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21351	116.4095	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17598	116.1724	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19531	115.4034	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17447	115.1932	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19962	115.1554	BISON - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19644	115.0795	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19531	114.996	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2066	114.9698	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2066	114.9698	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2066	114.9698	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2066	114.9484	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19962	114.8375	BISON - MAURINE 230KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19554	114.7525	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2016	113.1722	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2016	113.1722	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19811	113.073	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19811	112.5552	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25657	112.3851	LELAND03-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25657	112.3851	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19808	112.1182	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19232	112.1067	BASE CASE
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19808	112.0242	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19808	112.0242	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19808	111.9141	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19808	111.893	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19808	111.8929	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19605	111.7631	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22081	111.7561	2809X2
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22081	111.7561	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19808	111.5811	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22088	111.4533	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13264	111.425	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22081	111.3708	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13264	111.2969	2810X2
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13264	111.2969	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19546	111.2701	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13264	111.1422	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	16WP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.26177	111.0896	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13264	111.0569	2801X
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13264	111.0569	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13264	110.7458	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13264	110.7458	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.196	110.246	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.196	110.246	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.196	110.1914	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19655	109.9711	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNSLock	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19952	109.8498	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19952	109.8498	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19824	109.8428	GROTON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19617	109.7993	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19617	109.7993	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19824	109.7513	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19583	109.6952	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19821	109.5828	HURON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19687	109.5257	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19687	109.5257	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19687	109.4548	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19687	109.4407	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19535	109.4387	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16ALL_G16_044	4	16WP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.26177	109.4049	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20138	109.292	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20138	109.292	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19617	109.2437	REDFIELD - WEST PARK B TAP 115KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19191	109.228	BASE CASE
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19613	109.1929	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19655	109.0769	BOWMAN - HETINGER 230KV CKT 1
FDNSLock	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19821	109.042	BISON - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19546	109.0144	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19502	108.7807	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22037	108.7071	2809X2
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22037	108.7071	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19534	108.6129	BRISTOL - GROTON 115KV CKT 1
FDNS	16ALL_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21393	108.597	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19534	108.5375	BRISTOL - SUMMIT 115KV CKT 1
FDNS	16ALL_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21393	108.4568	2810X2
FDNS	16ALL_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21393	108.4568	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21393	108.4303	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21393	108.4303	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22043	108.4166	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22037	108.326	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21393	108.3133	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21393	108.23	2801X
FDNS	16ALL_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21393	108.23	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19821	108.1004	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17418	107.277	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20092	106.9368	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20092	106.9368	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1967	106.8233	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25593	106.5859	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25593	106.5859	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1967	106.2672	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17447	106.1678	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19779	105.843	BISON - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	105.8043	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	105.7109	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	105.7109	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	105.5965	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	105.5753	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	105.5753	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20197	105.5008	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20197	105.4927	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20197	105.4927	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20197	105.4927	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19888	105.4414	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19888	105.4414	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	105.263	OAHE - SULLEY BUTTE 230KV CKT 1
FDNSLock	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19779	104.969	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13769	104.7614	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13769	104.6515	2810X2
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13769	104.6515	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13769	104.6175	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13769	104.6175	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13769	104.5401	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14643	104.5158	2809X2
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14643	104.5158	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19535	104.4913	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13769	104.4859	2801X
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13769	104.4859	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14648	104.175	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12417	104.1329	BASE CASE
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14643	104.0914	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1971	103.9384	GROTON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19605	103.9231	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19605	103.9231	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25552	103.8901	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25552	103.8901	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1971	103.8369	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19605	103.8369	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19605	103.8115	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19629	103.7222	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20772	103.6772	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19707	103.6555	HURON - REDFIELD 115KV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12406	103.256	BUFFALO - JAMESTOWN 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19629	103.2535	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19535	103.2022	BOWMAN - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20153	102.8621	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20153	102.8501	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20153	102.8501	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20153	102.8501	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19618	102.8417	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19627	102.8213	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19627	102.7347	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19627	102.7347	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19627	102.633	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19627	102.6164	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19627	102.6164	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNSLock	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19846	102.6028	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19846	102.6028	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21595	102.5493	2809X1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21595	102.5493	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19627	102.3151	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21595	102.0147	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22052	101.9466	2809X2
FDNS	16ALL_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22052	101.9466	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1318	101.7302	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1318	101.7302	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19203	101.6464	BASE CASE
FDNS	16ALL_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22058	101.6271	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16ALL_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22052	101.5183	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	101.2616	GROTON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19562	101.2604	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19562	101.2604	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19562	101.1822	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19668	101.1645	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19562	101.1562	BISMARK - WASHBURN 230KV CKT 1
FDNSLock	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13285	101.0761	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13285	101.0362	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13285	101.0362	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13285	101.0362	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19665	101.0035	HURON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19506	100.938	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12404	100.8591	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20732	100.7979	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12411	100.712	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13774	100.6239	2801X
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13774	100.6239	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13774	100.6198	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13774	100.592	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13774	100.592	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13774	100.5855	2810X2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13774	100.5855	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13774	100.5733	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13203	100.394	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13203	100.394	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12779	100.2069	BASE CASE
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19577	100.1906	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19597	100.1458	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19597	100.1458	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12752	100.1404	BISON - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	4	16WP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21545	100	2810X2
FDNS	16ALL_G16_044	4	16WP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21545	100	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	16WP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21545	100	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	16WP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21545	99.9	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	4	16WP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21545	99.9	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	4	16WP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21545	99.8	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12752	99.8	BISON - MAURINE 230KV CKT 1
FDNS	16ALL_G16_044	4	16WP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21545	99.7	2801X
FDNS	16ALL_G16_044	4	16WP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21545	99.7	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12781	99.7	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.18785	99.6	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.18785	99.6	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111	111	0.04062	128.2921	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock	16NR_G16_044	4	17G	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111	111	0.04528	114.4468	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111	111	0.04077	112.0868	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111	111	0.0407	111.7538	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111	111	0.04528	109.0894	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111	111	0.04062	107.3858	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111	111	0.04062	123.7878	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock	16NR_G16_044	4	17G	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111	111	0.04528	109.1688	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111	111	0.0407	107.2892	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111	111	0.04077	107.2332	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111	111	0.04528	103.9186	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111	111	0.04062	103.0161	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock	16ALL_G16_044	4	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.35004	116.7552	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.35004	116.2142	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.40448	106.9188	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock	16ALL_G16_044	4	25SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34401	103.2985	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_044	4	25SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34401	102.8233	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30562	101.7691	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30562	101.7691	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30562	101.7147	2810X2
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30562	101.7147	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30562	101.6601	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30562	101.5907	2801X
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30562	101.5907	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.30562	101.5281	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34333	99.7	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34333	99.7	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNSLock	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.35004	121.9188	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.35004	121.3163	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.24287	114.0652	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.24287	113.9853	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.40448	111.8574	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.3092	110.3455	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock	16ALL_G16_044	4	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34401	108.2776	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30914	107.845	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	16ALL_G16_044	4	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34401	107.7299	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30562	106.6544	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30562	106.6544	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30562	106.5958	2810X2
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30562	106.5958	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30562	106.5513	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30562	106.4854	2801X
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30562	106.4854	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30562	106.3945	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34333	104.6259	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_044	4	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34333	104.5517	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30333	104.326	HURON - SPLIT ROCK 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30333	104.326	HURON - SPLIT ROCK 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.28733	103.9617	BASE CASE
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29003	102.9308	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29003	102.5398	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29136	102.1704	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29053	102.1641	ELLENDALE - OAKES 230KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29053	102.1641	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20824	102.0085	HURON - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20824	102.0085	HURON - SPLIT ROCK 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29043	101.9532	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20142	101.8631	BASE CASE
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29024	101.8324	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20144	101.7897	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20175	101.3162	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20175	101.3162	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20175	101.3112	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29207	100.9501	FORMAN - HANKINSON 230KV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.25224	100.9294	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16NR_G16_044	4	17G	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.25224	100.726	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.24232	100.7222	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.24232	100.6376	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20951	100.6167	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20951	100.6167	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20951	100.5986	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20951	100.5799	2810X2
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20951	100.5799	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20951	100.5793	2801X
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20951	100.5793	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20951	100.4887	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.28723	100.3403	BIG STONE - BLAIR 230KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.28723	100.3403	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.24265	100.2168	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29323	100.1508	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29323	100.1508	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.24265	100.1486	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29323	100	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29515	99.9	G13_001IST 115.00 - WATERTOWN 115KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.40137	99.8	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.20164	99.7	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29323	99.5	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29323	99.5	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29323	99.5	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.29323	99.5	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.03292	145.924	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.03292	126.7389	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.0313	126.2107	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.03139	124.6733	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock	16NR_G16_044	4	17G	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.03613	114.3205	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.03613	109.5601	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.0313	108.554	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.03139	107.2395	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03064	105.0014	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03064	104.7915	2810X2
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03064	104.7915	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03064	104.5819	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03064	104.444	2801X
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03064	104.444	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03064	103.7541	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_044	4	17G	G16_044	TO->FROM	GLENHAM - L3 HAWDON 230KV CKT 1	210	210	0.03064	103.7541	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	GROTON - REDFIELD 115KV CKT 1	120	120.7	0.04128	108.9485	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	FROM->TO	GROTON - REDFIELD 115KV CKT 1	120	120.7	0.04086	102.6997	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	FROM->TO	GROTON - REDFIELD 115KV CKT 1	120	120.7	0.04092	101.4677	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	HURON - REDFIELD 115KV CKT 1	120.7	120.7	0.03983	101.7247	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04422	133.5011	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.044	132.3666	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04267	117.9446	NOBLES - SPLIT ROCK 345KV CKT 1
FDNSLock	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04113	114.6455	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04067	114.335	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04245	114.0726	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04067	112.4913	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04113	112.0525	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04046	111.9307	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04095	111.705	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03867	111.4292	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04046	110.0403	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	109.6154	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04113	109.0547	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04095	107.5653	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	107.5024	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03999	107.3473	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03999	107.3473	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03999	107.3473	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03999	107.3283	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	107.1812	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03999	106.9598	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0428	106.8777	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	106.2611	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03697	105.546	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	105.2904	GEN635023 3-WALTER SCOTT UNIT 3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	105.0624	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03697	105.0166	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0398	104.8391	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0398	104.8391	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0398	104.8391	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0398	104.7933	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04035	104.6151	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03674	104.5894	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0398	104.4492	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04352	104.353	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03857	104.1898	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04023	104.0727	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	104.0364	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03988	103.8934	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0437	103.6322	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03983	103.6165	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03679	103.2196	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	103.1798	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	103.0943	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	103.0855	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03938	103.003	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03933	102.7724	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04044	102.7157	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1
FDNSLock	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03918	102.6658	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03679	102.6566	RASMUSN - SIOUX CITY 230KV CKT 1
FDNSLock	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04016	102.6391	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20WP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04441	102.5578	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	102.4835	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	102.4583	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03983	102.4439	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03657	102.397	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04005	102.3558	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04261	102.3537	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03946	102.2636	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03946	102.2636	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0384	102.2547	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03939	102.1629	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03945	102.1536	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03945	102.1536	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03974	102.1191	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	102.0712	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0397	102.06	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNSLock	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03918	102.0048	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03973	101.9937	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03955	101.9766	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03945	101.9416	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.9169	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03931	101.7474	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03857	101.6911	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03962	101.6572	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03963	101.6393	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03963	101.6393	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.6312	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.6303	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03974	101.6069	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03935	101.4848	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04041	101.4724	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03954	101.4536	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03954	101.4382	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.3536	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.3235	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.302	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.3006	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.2747	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03919	101.2716	DAN JUHL - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.2273	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03919	101.1855	DAN JUHL - SPLIT ROCK 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03919	101.1832	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.1491	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03937	101.1416	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.136	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	101.1099	2801X
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	101.1099	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	101.108	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	101.108	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	101.1024	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	101.0632	2810X2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	101.0632	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	101.042	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03851	101.0225	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	101.0046	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03802	101.0024	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03774	100.9542	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03964	100.9425	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.9151	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.8967	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	100.8934	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.8912	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03774	100.8833	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03973	100.8794	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04411	100.8711	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03921	100.8592	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.8456	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.8354	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	100.8309	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04021	100.8133	KOSSUTH 3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.8045	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.8023	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.8022	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.802	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03959	100.7773	CAYLER5 161.00 - WISDOM5 161.00 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03959	100.7773	CAYLER5 161.00 - WISDOM5 161.00 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03973	100.7735	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03943	100.7501	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03943	100.7501	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03774	100.7497	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03943	100.7425	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03973	100.7259	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.7102	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.705	GEN345670 1-1RUSH G1 18.000
FDNSLock	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03905	100.6948	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03921	100.6712	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03905	100.6643	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03938	100.657	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04028	100.6521	LEHIGH - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.6429	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04154	100.6085	SPLIT ROCK (SPLT 10) 345/115/13.8KV TRANSFORMER CKT 10
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03916	100.5914	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.5882	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03905	100.5495	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04144	100.5295	SPLIT ROCK (SPLT 11) 345/115/13.8KV TRANSFORMER CKT 11
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03964	100.5206	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.4985	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.4895	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03959	100.4836	CAYLER5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03943	100.4744	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03769	100.4742	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.472	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03942	100.4709	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03857	100.4539	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03898	100.45	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03898	100.45	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03898	100.4481	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.4376	GEN338388 1-1PLUM PT U1 23.000
FDNSLock	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03905	100.4075	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03962	100.4066	ADAMS - MITCHLCO3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03802	100.3904	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03898	100.3838	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.3733	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.3463	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.3454	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.3379	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.3327	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.3325	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.2901	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	100.2765	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	100.2554	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03929	100.2526	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNSLock	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04021	100.2404	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03938	100.2392	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.2353	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.2259	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03941	100.2031	MCLEOD - PANTHER 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.1962	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.1959	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.1885	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.1809	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03905	100.1779	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.1708	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03925	100.1702	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03913	100.1627	ELK - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.1592	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.1561	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03844	100.1477	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03928	100.1331	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03928	100.1331	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.1177	GEN336222 1-LITTLE GYPSY UNIT#2
FDNSLock	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.039	100.1042	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03922	100.1002	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.1	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.1	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	100.1	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.0965	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03922	100.0954	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04024	100.0926	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03887	100.0822	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100.0612	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03879	100.0516	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04143	100	SIOUX FALLS - VFODNES 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03977	100	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03953	100	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03953	100	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03953	100	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03953	100	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03932	100	ARNOLD - HAZLETON 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03928	100	PAYNSVILLE - WILLMAR 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03922	100	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03922	100	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03921	100	BIG STONE - BROWNS VALLEY 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03917	100	HELENA - SCOTTCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100	GEN303006 1-1BC2 U1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100	GEN303007 1-1BC2 U2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100	GEN645025 5-NORTH OMAHA 5
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03865	100	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03865	100	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03957	100	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNSLock	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04021	100	BISON - MAURINE 230KV CKT 1
FDNSLock	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	100	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNSLock	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03953	100	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04127	99.9	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03939	99.9	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03928	99.9	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03925	99.9	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03925	99.9	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03925	99.9	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03921	99.9	BROWNS VALLEY - HANKINSON 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.9	GEN303008 1-1BC2 U3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.9	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.9	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.9	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.9	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.9	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03902	99.9	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03902	99.9	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03881	99.9	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03881	99.9	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.039	99.9	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	99.9	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	99.9	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04214	99.8	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04214	99.8	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04146	99.8	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04146	99.8	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03915	99.8	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.8	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.8	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.8	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.8	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.8	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.8	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0389	99.8	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03881	99.8	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.8	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	99.8	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04159	99.7	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04159	99.7	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04159	99.7	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03948	99.7	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0392	99.7	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03915	99.7	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03915	99.7	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03914	99.7	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.7	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.7	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.7	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.7	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.7	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.7	GENOA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03819	99.7	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04001	99.6	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04001	99.6	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04001	99.6	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0399	99.6	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0399	99.6	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0399	99.6	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03965	99.6	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03965	99.6	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03965	99.6	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03965	99.6	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03965	99.6	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03964	99.6	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03964	99.6	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03964	99.6	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03928	99.6	MORGANV3 345.00 - TIFFIN 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03923	99.6	ARNOLD - MORGANV3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03923	99.6	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03923	99.6	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03917	99.6	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03917	99.6	MAGNOLIA 5 161/69KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03916	99.6	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03915	99.6	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03914	99.6	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.6	GEN334431 1-SABINE UNIT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.6	GEN334432 1-SABINE UNIT 2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.6	GEN336242 1-1NMIL ST1 18.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.6	GEN336446 1-MICHOUD UNIT #2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.6	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.6	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.6	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.6	GEN345756 H-1SIOUX 1 18.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.6	GEN345832 1-1TS G1 13.800
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.6	GEN345841 2-1TS G2 13.800
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.6	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.6	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.6	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.6	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.6	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.6	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03895	99.6	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03887	99.6	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03887	99.6	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03887	99.6	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0387	99.6	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03945	99.6	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03945	99.6	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	99.6	GEN640009 1-COOPER NUCLEAR STATION
FDNSLock	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03911	99.6	WINNER - WITTEN 115KV CKT 1
FDNSLock	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03914	99.6	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04196	99.5	BERSFORD - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04006	99.5	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04001	99.5	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04001	99.5	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04001	99.5	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04001	99.5	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03923	99.5	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0392	99.5	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03918	99.5	EMERY - SHEFFLD5 161.00 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03918	99.5	EMERY - SHEFFLD5 161.00 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03917	99.5	GRACEVT7 - ORTONVILLE 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03914	99.5	LAWERENCE CREEK - SHAEFER 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03914	99.5	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03914	99.5	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	AS KING 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN334030 1-FRONTIER UNIT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN334031 1-FRONTIER UNIT 2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN335612 1-WILLOW GLENN UNIT#2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN336240 1-1NMIL CT1 18.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN336241 1-1NMIL CT2 18.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN336944 1-REX BROWN
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN337428 1-PERYVILLE UNIT #1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN337430 1-PERYVILLE UNIT #3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN338443 1-PANDA S1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN345156 H-1MER 4 18.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN501823 1-TECHE UNIT 3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN501911 1-ACADIA UNIT CT1A
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN501912 1-ACADIA UNIT CT1B
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN501970 1-EVANGELINE UNIT 7
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN562517 1-G14_021_S2 0.6900
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN645041 1-CASS COUNTY 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	GEN645042 2-CASS COUNTY 2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03912	99.5	OTTUMWA - PLSNT CRNR 5161.00 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0387	99.5	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0387	99.5	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0387	99.5	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0387	99.5	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0387	99.5	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0387	99.5	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0387	99.5	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	99.5	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0384	99.5	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04422	132.3775	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.044	131.2641	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04267	117.104	NOBLES - SPLIT ROCK 345KV CKT 1
FDNSLock	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04113	113.9519	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04067	113.472	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04245	113.2838	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04067	111.6672	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04113	111.347	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04046	111.0747	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04095	111.0176	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03867	110.6273	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04046	109.2278	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	108.7903	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04113	108.3873	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04095	106.9076	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	106.6903	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03999	106.6125	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03999	106.6125	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03999	106.6125	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03999	106.5954	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	106.3813	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03999	106.2208	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0428	106.1426	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	105.5034	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03697	104.8414	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	104.5511	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03697	104.3185	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	104.2751	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0398	104.1287	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0398	104.1287	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0398	104.1287	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0398	104.0845	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03674	103.9003	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04035	103.8862	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0398	103.7355	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04352	103.6019	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03857	103.447	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04023	103.3329	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	103.2975	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03988	103.1701	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03983	102.9092	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0437	102.8994	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03679	102.5317	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	102.4955	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	102.4097	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	102.3642	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03938	102.3129	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03933	102.0956	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04044	102.0636	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1
FDNSLock	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03918	102.0524	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03679	101.9762	RASMUSN - SIOUX CITY 230KV CKT 1
FDNSLock	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04016	101.9161	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.8084	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_044	4	20WP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04441	101.7854	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.781	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03983	101.7562	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03657	101.7212	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04261	101.6694	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03946	101.6261	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03946	101.6261	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04005	101.6223	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0384	101.5241	KELLY - MEADOWGROVE4230.00 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03945	101.52	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03945	101.52	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03939	101.4795	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03974	101.425	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.4005	GEN335831 1-RIVERBEND UNIT#1
FDNSLock	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03918	101.3907	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03955	101.356	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0397	101.3409	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03973	101.317	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03945	101.3076	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	101.246	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03931	101.0683	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03857	101.0102	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03963	100.9833	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03963	100.9833	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.9651	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03962	100.958	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.9552	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03974	100.9222	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04041	100.8152	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03935	100.8083	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03954	100.8039	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03954	100.7892	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.6903	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.6605	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.6398	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.6384	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03919	100.6059	DAN JUHL - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.6039	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03919	100.5236	DAN JUHL - SPLIT ROCK 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03919	100.5212	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04175	100.4972	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04175	100.4972	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04175	100.4971	2801X
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04175	100.4971	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04175	100.4903	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.4871	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03937	100.4799	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.4677	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04175	100.4522	2810X2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04175	100.4522	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	100.3701	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03851	100.3578	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.3461	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03802	100.3339	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03774	100.2989	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03964	100.2826	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04175	100.2816	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.2815	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.2577	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.2395	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03973	100.2386	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03774	100.2288	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.189	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03921	100.1811	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.1782	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	100.162	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04021	100.1532	KOSSUTH 3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.1485	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.1464	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.1463	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.1461	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03973	100.1326	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03943	100.1265	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03943	100.1265	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03959	100.1131	CAYLER5 161.00 - WISDOM5 161.00 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03959	100.1131	CAYLER5 161.00 - WISDOM5 161.00 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.1	GEN335206 1-NELSON UNIT 6

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03774	100.0976	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	4	17SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04411	100.0894	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03973	100.0856	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03943	100.084	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.0557	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100.0505	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04154	100	SPLIT ROCK (SPLT 10) 345/115/13.8KV TRANSFORMER CKT 10
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04028	100	LEHIGH - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03938	100	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03921	100	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	100	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03905	100	MISSION - ST FRANCIS 115KV CKT 1
FDNSLock	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03905	100	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04144	99.9	SPLIT ROCK (SPLT 11) 345/115/13.8KV TRANSFORMER CKT 11
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03964	99.9	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.9	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.9	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.9	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03905	99.9	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03916	99.9	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03959	99.8	CAYLER5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03943	99.8	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03942	99.8	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.8	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.8	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.8	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.8	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.8	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.8	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03898	99.8	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03898	99.8	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03898	99.8	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03857	99.8	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03769	99.8	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	99.8	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	99.8	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNSLock	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03905	99.8	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.7	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03898	99.7	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03802	99.7	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03962	99.7	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03941	99.6	MCLEOD - PANTHER 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03929	99.6	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.6	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.6	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.6	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03938	99.6	HANKINSON - WAHPETON 230KV CKT 1
FDNSLock	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04021	99.6	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.5	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03925	99.5	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03922	99.5	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03913	99.5	ELK - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.5	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.5	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.5	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.5	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.5	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03912	99.5	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03905	99.5	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03844	99.5	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04024	99.5	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03928	99.5	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03928	99.5	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock	00NR_G16_044	4	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.039	99.5	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNSLock	00NR_G16_044	4	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	1202	1202	0.0567	107.0335	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	1202	1202	0.05673	103.4761	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	1202	1202	0.0567	103.1557	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16754	118.3049	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16754	118.2238	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16754	118.2238	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16754	118.2238	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16754	116.8286	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16754	116.7611	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16754	116.7611	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_044	4	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16754	116.7611	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23305	116.5054	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23305	116.4083	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23305	116.4083	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23305	116.4083	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23305	114.925	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23305	114.8406	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23305	114.8406	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	4	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23305	114.8406	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	4	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.233	112.9731	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	4	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.233	112.9199	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	4	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.233	112.9199	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.233	112.9199	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	4	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.233	111.3874	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	4	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.233	111.3406	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	4	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.233	111.3406	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	4	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.233	111.3406	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	4	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23257	110.0999	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	4	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23257	110.0494	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	4	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23257	110.0494	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23257	110.0494	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	4	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23257	108.6462	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	4	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23257	108.6033	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	4	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23257	108.6033	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	4	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23257	108.6033	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	4	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1692	107.4112	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1692	107.2551	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_044	4	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1692	107.2551	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1692	107.2551	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	4	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16944	106.966	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_044	4	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16944	106.7954	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_044	4	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16944	106.7954	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16944	106.7954	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	4	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1692	106.6503	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_044	4	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1692	106.5246	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_044	4	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1692	106.5246	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_044	4	20SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.1692	106.5246	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	4	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16944	106.1969	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_044	4	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16944	106.06	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_044	4	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16944	106.06	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_044	4	25SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16944	106.06	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	5	17SP	G16_044	TO->FROM	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1	120	129	0.05971	115.0172	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.0394	102.9621	BASE CASE
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25611	135.6942	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25611	133.5594	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21341	122.4094	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21341	122.1635	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21341	122.1151	2810X2
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21341	122.1151	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21341	122.0831	2801X
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21341	122.0831	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21341	122.0778	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21341	122.0778	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17338	119.0848	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17217	115.6444	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19169	114.4298	BASE CASE
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22012	114.086	2809X2
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22012	114.086	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17217	113.9101	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22019	113.805	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22012	113.7225	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25489	113.0319	G09_001IST 345.00 - WATERTOWN 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25489	111.3274	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20082	111.144	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20082	111.144	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19772	110.9209	BISON - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19772	110.6256	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17338	109.7099	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25529	108.7608	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25529	108.7608	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1961	108.76	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1961	108.2814	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20129	107.9813	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20129	107.9813	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20129	107.9813	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20129	107.9732	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19608	107.8873	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19608	107.8016	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19608	107.8016	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19608	107.7022	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19608	107.6819	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19608	107.6819	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19608	107.3961	OAHE - SULLEY BUTTE 230KV CKT 1
FDNSLock	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19824	107.274	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19824	107.274	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13225	106.9686	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13225	106.7935	2810X2
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13225	106.7935	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13225	106.7588	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13225	106.7588	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13225	106.6466	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13225	106.5672	2801X
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13225	106.5672	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1954	106.1642	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1954	106.1642	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1954	106.0985	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1954	106.0816	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19646	106.037	GROTON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19646	105.9369	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19643	105.7749	HURON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20713	105.6602	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	5	16WP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25582	105.342	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19555	105.0013	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19573	104.9324	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19573	104.9324	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21164	104.498	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21164	104.3181	2810X2
FDNS	16ALL_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21164	104.3181	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21164	104.2809	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21164	104.2809	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21164	104.1795	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21164	104.1052	2801X
FDNS	16ALL_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21164	104.1052	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	5	16WP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25582	103.639	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13727	101.3465	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13727	101.2865	2810X2
FDNS	00NR_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13727	101.2865	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13727	101.2544	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13727	101.2544	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13727	101.1722	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13727	101.109	2801X
FDNS	00NR_G16_044	5	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13727	101.109	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14605	100.6964	2809X2
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14605	100.6964	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14611	100.4121	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12397	100.3893	BASE CASE
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14605	100.297	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12386	99.6	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_044	5	17SP	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111	111	0.04034	125.6159	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111	111	0.04497	109.8081	G09_001IST 345.00 - WATERTOWN 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16NR_G16_044	5	17G	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111	111	0.04497	105.5605	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	5	17SP	G16_044	TO->FROM	BRISTOL - GROTON 115KV CKT 1	111	111	0.04034	104.2265	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	5	17SP	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111	111	0.04034	121.2031	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	5	17G	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111	111	0.04497	104.7432	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	5	17G	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111	111	0.04497	100.5229	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	5	17SP	G16_044	FROM->TO	BRISTOL - SUMMIT 115KV CKT 1	111	111	0.04034	99.9	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock	16ALL_G16_044	5	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34272	106.6358	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_044	5	17SP	G16_044	TO->FROM	G09_001IST 345.00 - GROTON 345KV CKT 1	717	789	0.34272	106.2434	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNSLock	16ALL_G16_044	5	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34272	111.6107	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_044	5	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.34272	111.1542	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	00NR_G16_044	5	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.24092	106.7813	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_044	5	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.24092	106.7044	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.40018	103.8303	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_044	5	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30864	102.4296	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	16ALL_G16_044	5	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.39857	101.8682	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_044	5	17SP	G16_044	FROM->TO	G09_001IST 345.00 - WATERTOWN 345KV CKT 1	717	789	0.30859	100.7013	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_044	5	17SP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.03099	123.5928	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	5	17SP	G16_044	TO->FROM	G13_001IST 115.00 - SUMMIT 115KV CKT 1	120	121	0.03099	106.2031	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_044	5	17SP	G16_044	FROM->TO	GROTON - REDFIELD 115KV CKT 1	120	120.7	0.04057	101.0209	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	5	17SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04446	104.2405	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	5	17SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04446	103.4125	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	5	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16825	117.7061	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_044	5	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16825	117.6564	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_044	5	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16825	117.6564	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_044	5	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16825	117.6564	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	5	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16825	116.0437	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_044	5	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16825	116.0019	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_044	5	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16825	116.0019	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_044	5	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.16825	116.0019	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	5	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23215	115.8858	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	5	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23215	115.7739	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	5	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23215	115.7739	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23215	115.7739	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	5	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23215	114.1247	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	5	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23215	114.0277	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	5	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23215	114.0277	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	5	17SP	G16_044	FROM->TO	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1	400	500	0.23215	114.0277	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25607	135.6851	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25607	133.554	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25694	132.5471	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25694	130.2427	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2564	128.3612	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.2564	126.3954	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21391	122.4729	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21391	122.4362	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21391	122.3877	2810X2
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21391	122.3877	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21391	122.3557	2801X
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21391	122.3557	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21391	122.3495	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21391	122.3495	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21447	120.5014	2810X2
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21447	120.5014	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21447	120.4714	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21447	120.4714	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21447	120.2857	2801X
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21447	120.2857	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21447	120.2779	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21447	120.2423	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17334	118.9321	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21401	116.9256	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21401	116.8453	2810X2
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21401	116.8453	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21401	116.821	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21401	116.821	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21401	116.7598	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21401	116.6861	2801X
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21401	116.6861	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17414	116.3854	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16NR_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17212	115.6265	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17443	115.0799	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19211	114.6617	BASE CASE
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19505	114.3037	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22038	114.2333	2809X2
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22038	114.2333	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22045	113.9495	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16NR_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17212	113.9054	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22038	113.868	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25485	113.0119	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19275	112.3584	BASE CASE
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22107	111.917	2809X2
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22107	111.917	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1951	111.6673	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22114	111.6138	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22107	111.5322	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20145	111.4999	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20145	111.4999	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25485	111.3087	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19815	111.1492	BISON - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19815	110.8537	BISON - MAURINE 230KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1953	109.9992	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17334	109.9737	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20201	109.6764	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20201	109.6764	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19578	109.5528	CENTER - JAMESTOWN 345KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19233	109.4632	BASE CASE
FDNSLock	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19865	109.2926	BISON - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19654	108.9889	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25568	108.8974	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25568	108.8974	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22063	108.8569	2809X2
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22063	108.8569	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20298	108.7806	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20298	108.7806	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20298	108.7806	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20298	108.7748	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22069	108.5636	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19654	108.5096	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.22063	108.4772	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19865	108.3477	BISON - MAURINE 230KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19652	108.1138	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19652	108.0277	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19652	108.0277	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19652	107.9283	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19652	107.9081	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19652	107.9081	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19652	107.6221	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20156	107.3058	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20156	107.3058	SPLIT ROCK - WHITE 345KV CKT 1
FDNSLock	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19824	107.2739	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19824	107.2739	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17414	107.2077	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16NR_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13267	107.1654	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19714	107.0718	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16NR_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13267	106.9834	2810X2
FDNS	16NR_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13267	106.9834	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16NR_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13267	106.9478	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16NR_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13267	106.9478	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16NR_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13267	106.8404	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13267	106.7626	2801X
FDNS	16NR_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13267	106.7626	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25632	106.7402	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25632	106.7402	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19714	106.5142	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19521	106.4234	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19535	106.4017	CENTER - JAMESTOWN 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19584	106.382	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19584	106.382	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19584	106.3162	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19584	106.2992	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20366	106.2864	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19695	106.2785	GROTON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20366	106.2783	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20366	106.2783	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20366	106.2783	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19695	106.1777	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNSLock	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19823	106.0749	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.17443	106.0675	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19712	106.0402	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19692	106.0131	HURON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19712	105.956	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19712	105.956	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20787	105.945	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19712	105.8413	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19712	105.8205	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19712	105.8204	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19521	105.7883	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19521	105.6378	BOWMAN - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19712	105.5077	OAHE - SULLEY BUTTE 230KV CKT 1
FDNSLock	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19888	105.4417	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19888	105.4417	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	6	16WP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25579	105.3254	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19602	105.2298	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
FDNSLock	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19823	105.1995	BISON - MAURINE 230KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19617	105.1476	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19617	105.1476	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19578	104.7311	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	16ALL_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21215	104.675	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21215	104.4935	2810X2
FDNS	16ALL_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21215	104.4935	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21215	104.4559	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345KV CKT 1
FDNS	16ALL_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21215	104.4559	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21215	104.3547	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19521	104.2995	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19521	104.2995	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21215	104.2804	2801X
FDNS	16ALL_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.21215	104.2804	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19521	104.2287	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19759	104.1993	GROTON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19648	104.1583	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19648	104.1583	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19759	104.0974	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19648	104.0718	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19648	104.0465	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25591	104.0313	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25591	104.0313	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20847	103.9858	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19673	103.9541	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19756	103.9323	HURON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19522	103.6583	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19522	103.6583	ABERDEEN SIEBRECHT - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	6	16WP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.25579	103.6227	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20322	103.6037	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20322	103.5927	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20322	103.5927	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20322	103.5927	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19673	103.4839	BISMARK - L3 HAWDON 230KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19578	103.4367	BOWMAN - HETINGER 230KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19522	103.3009	REDFIELD - WEST PARK B TAP 115KV CKT 1
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19518	103.2953	P12:115:UMZZ:# 234 #: HU IN SD. HURON TAP IS A TAP (HU-HUT-WPK & HUT-RDF).
FDNS	16ALL_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19665	103.0888	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19671	103.0506	GLENHAM - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19671	102.9633	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19671	102.9633	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19671	102.8618	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19671	102.8451	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19671	102.8451	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNSLock	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19846	102.6032	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19846	102.6032	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19671	102.5432	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13228	102.257	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13228	102.257	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19535	101.7921	BOWMAN - RHAME 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13767	101.627	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13767	101.5665	2810X2
FDNS	00NR_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13767	101.5665	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13767	101.5364	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13767	101.5364	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19717	101.5071	GROTON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19606	101.482	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19606	101.482	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	00NR_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13767	101.4546	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19717	101.41	P12:115:UMZW:# 151 #: HU-RF-GR IN SD. ERC REDFIELD IS A TAP
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19606	101.403	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	00NR_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13767	101.3919	2801X
FDNS	00NR_G16_044	6	17SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13767	101.3919	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19606	101.3775	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19714	101.264	HURON - REDFIELD 115KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.20807	101.0839	GROTON (GROTON KU2A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13814	100.8721	2801X
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13814	100.8721	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13814	100.8689	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13814	100.8396	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13814	100.8396	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13814	100.8343	2810X2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13814	100.8343	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13251	100.8239	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13251	100.8239	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.13814	100.8233	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16NR_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14629	100.7811	2809X2
FDNS	16NR_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14629	100.7811	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19535	100.5729	BOWMAN - HETINGER 230KV CKT 1
FDNS	16NR_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12434	100.5461	BASE CASE
FDNS	16NR_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14634	100.4987	G16-044-TAP 345.00 - GROTON 345KV CKT 2
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19624	100.4242	ABERDEEN SIEBRECHT - GROTON 115KV CKT 1
FDNS	16NR_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14629	100.3839	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1964	100.3643	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16ALL_G16_044	6	20SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1964	100.3643	LELAND OLDS - STANTON 230KV CKT 1
FDNS	16NR_G16_044	6	17G	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.12423	99.7	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1384	99.6	2801X
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1384	99.6	2810X2
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1384	99.6	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1384	99.6	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1384	99.6	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1384	99.6	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1384	99.6	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1384	99.6	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04442	133.6005	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04419	132.4471	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04286	118.0097	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04082	114.3868	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04263	114.1418	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04082	112.5444	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04139	112.2668	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0412	112.0131	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04061	111.9701	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0412	111.4799	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03881	111.4563	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04061	110.0918	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	109.6626	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04139	109.1656	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0412	107.7674	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03909	107.5531	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04013	107.3931	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04013	107.3931	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04013	107.3931	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04013	107.3709	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	107.224	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04013	107.0054	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04295	106.93	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	106.2995	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03711	105.5957	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	105.3379	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03909	105.1088	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03711	105.0663	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03995	104.8793	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03995	104.8793	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03995	104.8793	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03995	104.8404	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04051	104.668	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03689	104.6414	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03995	104.4934	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04368	104.4431	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_044	6	17SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04466	104.3156	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03872	104.2373	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04039	104.1442	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03909	104.0842	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04004	103.9287	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04386	103.6881	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03998	103.6729	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03694	103.2724	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	103.23	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	103.1422	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03953	103.0544	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03948	102.8249	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04059	102.7696	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04032	102.7021	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03694	102.6824	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	6	20WP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0446	102.6349	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	102.5335	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	102.5077	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03998	102.5005	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03672	102.432	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04021	102.4112	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04277	102.4102	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0396	102.3139	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0396	102.3139	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03855	102.3047	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03954	102.2158	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0396	102.2086	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0396	102.2086	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0399	102.1801	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	102.1214	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03985	102.1183	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNSLock	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03933	102.0471	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03988	102.0465	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0397	102.0316	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0396	101.9889	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	101.9656	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03946	101.799	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03872	101.7456	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03977	101.7095	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03978	101.6976	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03978	101.6976	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	101.6797	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	101.6782	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0399	101.6596	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03933	101.5608	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0395	101.5264	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04056	101.5178	NUNDRWD - WAYSIDE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0397	101.5109	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03969	101.4972	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	101.4026	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	101.3706	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	101.3513	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	101.3495	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03934	101.3258	DAN JUHL - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	101.323	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	101.2712	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03934	101.2398	DAN JUHL - SPLIT ROCK 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03934	101.2368	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	101.1981	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03952	101.1947	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	101.1845	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04192	101.1791	2801X
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04192	101.1791	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04192	101.1782	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04192	101.1782	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04192	101.1673	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04192	101.133	2810X2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04192	101.133	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03909	101.0825	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03866	101.0729	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03818	101.0553	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	101.0542	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03789	101.0093	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03979	100.9915	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04192	100.9645	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.9641	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.9459	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03789	100.9335	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03988	100.9317	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03936	100.9217	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.916	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.8947	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.8847	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03909	100.8802	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04036	100.8673	KOSSUTH 3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.8539	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.8519	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.8516	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.8516	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03975	100.8314	CAYLER5 161.00 - WISDOM5 161.00 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03975	100.8314	CAYLER5 161.00 - WISDOM5 161.00 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03988	100.8245	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03789	100.8002	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03958	100.7918	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03956	100.7791	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03956	100.7791	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03988	100.7782	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.7595	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.7543	GEN345670 1-1RUSH G1 18.000
FDNSLock	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03921	100.7454	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03936	100.7267	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03921	100.7153	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04043	100.7115	LEHIGH - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03953	100.7098	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.6927	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04171	100.6686	SPLIT ROCK (SPLT 10) 345/115/13.8KV TRANSFORMER CKT 10
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03931	100.653	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.637	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04161	100.6024	SPLIT ROCK (SPLT 11) 345/115/13.8KV TRANSFORMER CKT 11
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03921	100.6005	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03979	100.5736	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.5467	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03975	100.539	CAYLER5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.5389	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03784	100.53	GAVINS POINT - SPIRIT MOUND 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03957	100.5219	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.5209	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03957	100.5101	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03872	100.5062	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03913	100.502	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03913	100.502	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03913	100.4999	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.4868	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03977	100.466	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNSLock	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03921	100.4584	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03818	100.4429	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03913	100.4362	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.4309	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.3961	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.3958	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.3869	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.3816	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.3812	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.3395	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03909	100.324	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03945	100.3056	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03953	100.3043	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03909	100.304	GEN336153 1-WATERFORD UNIT#3
FDNSLock	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04036	100.3004	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.2858	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.2759	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03928	100.2525	ELK - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03955	100.2475	MCLEOD - PANTHER 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.2457	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.2454	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.2379	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.2299	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03921	100.2294	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0394	100.2227	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.2193	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03942	100.2119	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03859	100.1995	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.1965	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03943	100.1827	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03943	100.1827	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.1662	GEN336222 1-LITTLE GYPSY UNIT#2
FDNSLock	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03915	100.1577	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03938	100.1545	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04039	100.1468	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.146	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03937	100.1431	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03902	100.1235	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.1105	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03894	100.1043	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.1	GEN303006 1-1BC2 U1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.1	GEN303007 1-1BC2 U2
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03909	100.1	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03938	100.0886	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0388	100.0883	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03992	100.0878	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03936	100.0861	BIG STONE - BROWNS VALLEY 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03942	100.0732	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03942	100.0732	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.0726	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100.0726	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0388	100.0606	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNSLock	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03968	100.0542	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03947	100.0505	ARNOLD - HAZLETON 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04158	100	SIOUX FALLS - VFODNES 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03965	100	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03965	100	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03965	100	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03965	100	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03943	100	PAYNSVILLE - WILLMAR 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03943	100	PAYNSVILLE () 230/115/13.8KV TRANSFORMER CKT 9
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03939	100	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03939	100	GRANITE FALLS - WILLMAR 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03938	100	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03932	100	HELENA - SCOTTCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100	GEN303008 1-1BC2 U3
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100	GEN635691 1-GREATER DES MOINES ENERGY CENTERGT1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100	GEN635692 2-GREATER DES MOINES ENERGY CENTERGT2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100	GEN645025 5-NORTH OMAHA 5
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	100	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03918	100	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03918	100	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03896	100	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03896	100	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03972	100	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNSLock	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04036	100	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04231	99.9	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04231	99.9	LAWRENCE - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04142	99.9	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03954	99.9	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03941	99.9	GRE-CHUBLAK3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03936	99.9	BROWNS VALLEY - HANKINSON 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0393	99.9	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.9	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.9	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.9	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.9	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03915	99.9	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03909	99.9	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	99.8	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	99.8	SIOUX FALLS - SPLIT ROCK 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04175	99.8	SPLIT ROCK () 230/115/13.8KV TRANSFORMER CKT 7
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04146	99.8	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04146	99.8	WATERTOWN (WT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.8	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.8	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.8	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.8	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.8	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.8	GENOA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03905	99.8	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03896	99.8	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03942	99.8	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04005	99.7	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04005	99.7	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04005	99.7	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03963	99.7	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03943	99.7	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03939	99.7	ARNOLD - MORGANV3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03938	99.7	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03935	99.7	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0393	99.7	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0393	99.7	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0393	99.7	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03929	99.7	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.7	GEN334431 1-SABINE UNIT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.7	GEN334432 1-SABINE UNIT 2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.7	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.7	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.7	GEN345756 H-1SIOUX 1 18.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.7	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.7	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.7	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.7	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.7	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.7	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03885	99.7	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03834	99.7	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03909	99.7	GEN640009 1-COOPER NUCLEAR STATION
FDNSLock	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03929	99.7	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04022	99.6	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04017	99.6	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04017	99.6	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04017	99.6	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04017	99.6	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04017	99.6	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04017	99.6	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0398	99.6	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0398	99.6	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0398	99.6	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0398	99.6	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0398	99.6	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03979	99.6	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03979	99.6	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03979	99.6	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03943	99.6	MORGANV3 345.00 - TIFFIN 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03938	99.6	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03938	99.6	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03935	99.6	BIG STONE (BIGST230/115) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03932	99.6	BIG STONE - HIGHWAY 12 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03932	99.6	BUFFALO RIDGE - LAKE YANKTON 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03932	99.6	GRACEVT7 - ORTONVILLE 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03932	99.6	MAGNOLIA 5 161/69KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03931	99.6	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03929	99.6	CHISAGO COUNTY - LINDSTROM FUTURE 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03929	99.6	LAWERENCE CREEK - SHAEFER 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03929	99.6	LINDSTROM FUTURE - SHAEFER 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	AS KING 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	GEN334030 1-FRONTIER UNIT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	GEN334031 1-FRONTIER UNIT 2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	GEN336242 1-1NMIL ST1 18.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	GEN336446 1-MICHOUD UNIT #2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	GEN336944 1-REX BROWN
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	GEN345832 1-1TS G1 13.800
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	GEN345841 2-1TS G2 13.800
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	GEN501823 1-TECHE UNIT 3
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	GEN629071 1-BURLINGTON GENERATOR FOR UNIT NO 1 E
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	GEN645041 1-CASS COUNTY 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	GEN645042 2-CASS COUNTY 2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	OTTUMWA - PLSNT CRNR 5161.00 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.6	PLEASANT VALLEY 161/16.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0391	99.6	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03902	99.6	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03902	99.6	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03902	99.6	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03885	99.6	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03885	99.6	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03885	99.6	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03885	99.6	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03885	99.6	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03885	99.6	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03885	99.6	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03961	99.6	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03961	99.6	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03909	99.6	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03855	99.6	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNSLock	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03926	99.6	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04386	99.5	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04211	99.5	BERSFORD - SIOUX FALLS 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.04017	99.5	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03992	99.5	ARMOUR - MT VERN 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03977	99.5	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03977	99.5	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03962	99.5	LAWRENCE - SPLIT ROCK 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03933	99.5	EMERY - SHEFFLD5 161.00 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03933	99.5	EMERY - SHEFFLD5 161.00 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03929	99.5	LAWERENCE CREEK - ST CROIX FALLS 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03929	99.5	LAWERENCE CREEK (82578T7IC002) 161/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03929	99.5	POPLAR LAKE 161 - ST CROIX FALLS 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03928	99.5	BREWSTER - ELK 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.5	GEN335612 1-WILLOW GLENN UNIT#2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.5	GEN336240 1-1NMIL CT1 18.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.5	GEN336241 1-1NMIL CT2 18.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.5	GEN337428 1-PERYVILLE UNIT #1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.5	GEN337430 1-PERYVILLE UNIT #3
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.5	GEN338443 1-PANDA S1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.5	GEN345156 H-1MER 4 18.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.5	GEN501911 1-ACADIA UNIT CT1A
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.5	GEN501912 1-ACADIA UNIT CT1B
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.5	GEN501970 1-EVANGELINE UNIT 7
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.5	GEN501971 1-EVANGELINE UNIT 7-1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.5	GEN501972 1-EVANGELINE UNIT 7-2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.5	GEN562517 1-G14_021_S2 0.6900
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.5	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03926	99.5	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03926	99.5	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.0388	99.5	ANTELOPE 7115.00 - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03972	99.5	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03952	99.5	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03909	99.5	GEN337652 1-WHITE BLUFF UNIT #1
FDNSLock	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z	717	717	0.03927	99.5	INTRNATIONL FALLS7 - LITTLE FORK 118KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04442	132.4782	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04419	131.3445	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04286	117.172	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04082	113.524	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04263	113.3531	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04082	111.7198	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04139	111.5619	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0412	111.3116	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04061	111.1151	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0412	110.7905	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03881	110.6525	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04061	109.2795	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	108.8378	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04139	108.498	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0412	107.1107	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03909	106.7415	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04013	106.6587	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04013	106.6587	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04013	106.6587	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04013	106.638	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	106.4245	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04013	106.2669	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04295	106.1952	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	105.5419	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03711	104.8912	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	104.599	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03711	104.3683	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03909	104.3219	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03995	104.1697	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03995	104.1697	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03995	104.1697	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03995	104.1317	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03689	103.9524	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04051	103.9393	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03995	103.7799	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04368	103.6919	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03872	103.494	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	6	17SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04466	103.4876	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04039	103.405	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03909	103.3456	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04004	103.2046	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03998	102.9659	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04386	102.9556	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03694	102.5844	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	102.5461	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	102.4579	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03953	102.3645	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03948	102.1484	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04059	102.1176	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03694	102.0029	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04032	101.9797	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20WP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0446	101.8622	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	101.8587	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	101.8307	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03998	101.8129	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03672	101.7567	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04277	101.7261	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04021	101.6783	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0396	101.6761	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0396	101.6761	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0396	101.5754	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0396	101.5754	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03855	101.5748	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03954	101.5326	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0399	101.4869	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	101.451	GEN335831 1-RIVERBEND UNIT#1
FDNSLock	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03933	101.433	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0397	101.4112	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03985	101.3995	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03988	101.37	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0396	101.3548	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	101.295	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03946	101.1201	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03872	101.0646	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03978	101.0419	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03978	101.0419	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	101.0138	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03977	101.0106	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	101.004	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0399	100.9757	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03933	100.9517	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0397	100.862	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04056	100.8609	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0395	100.8502	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03969	100.8484	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.7396	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.7074	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.6895	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.6876	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03934	100.6604	DAN JUHL - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.6526	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03934	100.5781	DAN JUHL - SPLIT ROCK 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03934	100.5751	SPLIT ROCK () 161/115/36.2KV TRANSFORMER CKT 6
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04192	100.5676	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04192	100.5676	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04192	100.5666	2801X
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04192	100.5666	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04192	100.5555	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.5365	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03952	100.5333	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04192	100.5223	2810X2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04192	100.5223	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.5166	GEN645011 1-NEBRASKA CITY 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03909	100.4122	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03866	100.4087	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.396	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03818	100.387	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03789	100.354	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04192	100.3531	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03979	100.3323	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.307	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.306	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03988	100.291	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.2889	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03789	100.2792	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03936	100.2442	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.2384	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.2277	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03909	100.2113	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04036	100.2074	KOSSUTH 3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.1981	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.1962	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.1959	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.1959	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03988	100.1841	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03975	100.1675	CAYLER5 161.00 - WISDOM5 161.00 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03975	100.1675	CAYLER5 161.00 - WISDOM5 161.00 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03956	100.1556	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03956	100.1556	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03789	100.148	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03988	100.1381	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03958	100.1336	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.1054	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03936	100.1026	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.1002	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.1	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100.1	GEN335206 1-NELSON UNIT 6
FDNSLock	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03921	100.0933	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03921	100.0634	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03953	100.0508	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04171	100	SPLIT ROCK (SPLT 10) 345/115/13.8KV TRANSFORMER CKT 10
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04161	100	SPLIT ROCK (SPLT 11) 345/115/13.8KV TRANSFORMER CKT 11
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04043	100	LEHIGH - WEBSTER 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	100	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03931	100	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03979	99.9	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03975	99.9	CAYLER5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03957	99.9	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03957	99.9	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.9	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.9	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03921	99.9	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03872	99.9	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03784	99.9	GAVINS POINT - SPIRIT MOUND 115KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03909	99.9	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03909	99.9	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.8	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.8	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.8	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.8	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.8	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.8	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03913	99.8	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03913	99.8	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03913	99.8	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03913	99.8	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03818	99.8	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03977	99.8	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNSLock	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03921	99.8	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03945	99.7	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.7	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03953	99.7	HANKINSON - WAHPETON 230KV CKT 1
FDNSLock	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04036	99.7	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03955	99.6	MCLEOD - PANTHER 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03942	99.6	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.0394	99.6	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03928	99.6	ELK - MAGNOLIA 5 161KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.6	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.6	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.6	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.6	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.6	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.6	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.6	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.6	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03921	99.6	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03859	99.6	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03943	99.6	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03943	99.6	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNSLock	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03915	99.6	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03938	99.5	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03938	99.5	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03936	99.5	BIG STONE - BROWNS VALLEY 230KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.5	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.5	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.5	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03927	99.5	GEN635693 3-GREATER DES MOINES ENERGY CENTER ST
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03902	99.5	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03894	99.5	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.04039	99.5	EAGLE 4 230.00 - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03942	99.5	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03942	99.5	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1	717	717	0.03937	99.5	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	1202	1202	0.05807	104.6984	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_044	6	20SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	1202	1202	0.05804	103.8094	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_044	6	25SP	G16_044	TO->FROM	SPLIT ROCK - WHITE 345KV CKT 1	1202	1202	0.05807	103.5404	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	01ALL_G16_045	0	16WP	G16_045	-	Non-Converged Contingency	1035	1035	0.05321	-	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
FDNSLock-Blown up	01ALL_G16_045	0	16WP	G16_045	-	Non-Converged Contingency	956	956	0.03338	-	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
FDNSLock-Blown up	03ALL_G16_046	0	16WP	G16_046	-	Non-Converged Contingency	0	0	0.14171	-	CLARKCOUNTY7-IRONWOOD7-345kV CKT 1
FDNSLock-Blown up	03ALL_G16_046	0	17G	G16_046	-	Non-Converged Contingency	0	0	0.14542	-	CLARKCOUNTY7-IRONWOOD7-345kV CKT 1
FDNSLock-Blown up	03ALL_G16_046	0	17SP	G16_046	-	Non-Converged Contingency	0	0	0.14045	-	CLARKCOUNTY7-IRONWOOD7-345kV CKT 1
FDNSLock-Blown up	03ALL_G16_046	0	20L	G16_046	-	Non-Converged Contingency	0	0	0.12657	-	CLARKCOUNTY7-IRONWOOD7-345kV CKT 1
FDNSLock-Blown up	03ALL_G16_046	0	20SP	G16_046	-	Non-Converged Contingency	0	0	0.14175	-	CLARKCOUNTY7-IRONWOOD7-345kV CKT 1
FDNSLock-Blown up	03ALL_G16_046	0	20WP	G16_046	-	Non-Converged Contingency	0	0	0.13868	-	CLARKCOUNTY7-IRONWOOD7-345kV CKT 1
FDNSLock-Blown up	03ALL_G16_046	0	25SP	G16_046	-	Non-Converged Contingency	0	0	0.14252	-	CLARKCOUNTY7-IRONWOOD7-345kV CKT 1
FDNSLock-Blown up	00_G16_048	0	16WP	G16_048	-	Non-Converged Contingency	2075	2075	0.03068	-	LACYGNE - WEST GARDNER 345KV CKT 1
FDNS	08NR_G16_048	0	20L	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305	371	0.03533	108.9966	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08NR_G16_048	0	20L	G16_048	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305	371	0.03533	108.9966	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08ALL_G16_048	0	17SP	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194	222	0.10159	100.3299	BASE CASE
FDNS	08NR_G16_048	0	17G	G16_048	TO->FROM	KINZE - MCELROY 138KV CKT 1	194	222	0.10908	99.8	CLEVELAND - G15066_T 345.00 345KV CKT 1
FDNS	08NR_G16_048	0	20L	G16_048	FROM->TO	OSAGE - WEBB CITY TAP 138KV CKT 1	152	180	0.06003	99.9	CLEVELAND - G15066_T 345.00 345KV CKT 1
FDNSLock-Blown up	03ALL_G16_049	0	16WP	G16_049	-	Non-Converged Contingency	0	0	0.39428	-	SPERVIL7-POSTROCK7-345kV CKT 1
FDNSLock-Blown up	03ALL_G16_049	0	17G	G16_049	-	Non-Converged Contingency	0	0	0.92004	-	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNSLock-Blown up	03ALL_G16_049	0	17G	G16_049	-	Non-Converged Contingency	0	0	0.38006	-	SPERVIL7-POSTROCK7-345kV CKT 1
FDNSLock-Blown up	03ALL_G16_049	0	17SP	G16_049	-	Non-Converged Contingency	0	0	0.39148	-	SPERVIL7-POSTROCK7-345kV CKT 1
FDNSLock-Blown up	03ALL_G16_049	0	20L	G16_049	-	Non-Converged Contingency	0	0	0.36108	-	SPERVIL7-POSTROCK7-345kV CKT 1
FDNSLock-Blown up	03ALL_G16_049	0	20SP	G16_049	-	Non-Converged Contingency	0	0	0.92394	-	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNSLock-Blown up	03ALL_G16_049	0	20SP	G16_049	-	Non-Converged Contingency	0	0	0.38591	-	SPERVIL7-POSTROCK7-345kV CKT 1
FDNSLock-Blown up	03ALL_G16_049	0	20WP	G16_049	-	Non-Converged Contingency	0	0	0.92592	-	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNSLock-Blown up	03ALL_G16_049	0	20WP	G16_049	-	Non-Converged Contingency	0	0	0.38888	-	SPERVIL7-POSTROCK7-345kV CKT 1
FDNSLock-Blown up	03ALL_G16_049	0	25SP	G16_049	-	Non-Converged Contingency	0	0	0.38898	-	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_050	0	17SP	G16_050	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.02996	142.7428	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_050	0	17SP	G16_050	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.02996	141.7531	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_050	0	20SP	G16_050	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04011	108.7409	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_050	0	25SP	G16_050	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.04068	107.5359	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_050	0	20SP	G16_050	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04011	108.9224	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_050	0	25SP	G16_050	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.04068	107.8052	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_050	2	17SP	G16_050	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.03977	101.4965	AXTELL - G16-050-TAP 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_050	2	17SP	G16_050	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.03977	101.6518	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.48166	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.48166	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.37797	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.37797	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.35741	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.26806	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.26806	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.25044	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.25044	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.24083	-	2801X
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.24083	-	2810X2
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.22901	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.22901	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.18898	-	2809X1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.18898	-	2809X2
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	720	792	0.12522	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	720	792	0.12522	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	717	789	0.12041	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	717	789	0.12041	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	717	789	0.12041	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.12041	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	720	720	0.11451	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	720	720	0.11451	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	720	720	0.11451	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	720	720	0.11451	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	720	720	0.11451	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	720	720	0.11451	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	720	720	0.11451	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	717	789	0.10141	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	717	789	0.10141	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	717	789	0.09449	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	717	789	0.09449	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.09449	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.09449	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.08935	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	478	526	0.08935	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	0	0	0.08935	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	732	732	0.08935	-	BROADLAND - HURON 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	400	400	0.08935	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	17SP	G16_052	-	Non-Converged Contingency	400	400	0.08935	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	25SP	G16_052	-	Non-Converged Contingency	0	0	0.36424	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	25SP	G16_052	-	Non-Converged Contingency	0	0	0.36424	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_052	0	25SP	G16_052	-	Non-Converged Contingency	0	0	0.18212	-	2809X1
FDNSLock-Blown up	16ALL_G16_052	0	25SP	G16_052	-	Non-Converged Contingency	0	0	0.18212	-	2809X2
FDNSLock-Blown up	16ALL_G16_052	0	25SP	G16_052	-	Non-Converged Contingency	717	789	0.09106	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	25SP	G16_052	-	Non-Converged Contingency	717	789	0.09106	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	0	25SP	G16_052	-	Non-Converged Contingency	0	0	0.09106	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_052	0	25SP	G16_052	-	Non-Converged Contingency	0	0	0.09106	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	0	0	0.45134	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	0	0	0.37392	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	0	0	0.37392	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	0	0	0.36451	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	0	0	0.25232	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	0	0	0.25232	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	0	0	0.19556	-	2809X2
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	720	792	0.12616	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	720	792	0.12616	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	717	789	0.1205	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	717	789	0.1205	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	720	720	0.1146	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	720	720	0.1146	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	720	720	0.1146	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	720	720	0.1146	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	717	789	0.10362	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	717	789	0.10362	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	717	789	0.09778	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	0	0	0.09778	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	16ALL_G16_052	2	17SP	G16_052	-	Non-Converged Contingency	478	526	0.08683	-	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	3	17SP	G16_052	-	Non-Converged Contingency	0	0	0.37197	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_052	3	17SP	G16_052	-	Non-Converged Contingency	0	0	0.37197	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_052	3	17SP	G16_052	-	Non-Converged Contingency	0	0	0.25268	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_052	3	17SP	G16_052	-	Non-Converged Contingency	0	0	0.19421	-	2809X2
FDNSLock-Blown up	16ALL_G16_052	3	17SP	G16_052	-	Non-Converged Contingency	720	720	0.12634	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	3	17SP	G16_052	-	Non-Converged Contingency	720	720	0.12634	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_052	3	17SP	G16_052	-	Non-Converged Contingency	717	789	0.12226	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	3	17SP	G16_052	-	Non-Converged Contingency	717	789	0.10347	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	3	17SP	G16_052	-	Non-Converged Contingency	717	789	0.10347	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	3	17SP	G16_052	-	Non-Converged Contingency	717	789	0.09711	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_052	3	17SP	G16_052	-	Non-Converged Contingency	0	0	0.09711	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_052	0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67761	117.6365	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67952	117.5259	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67916	115.9825	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_052	0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62416	107.5742	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_052	0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62416	107.5643	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_052	0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62416	107.5643	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_052	0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62416	107.4696	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62718	107.175	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62718	107.127	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62718	107.127	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62718	107.008	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62685	106.405	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62685	106.3343	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62685	106.3343	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_052	0	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.6755	106.3196	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62685	106.2286	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_052	0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66054	104.0869	CENTER - COYOTE 345KV CKT 1
FDNS	16ALL_G16_052	0	16WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67605	103.8519	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_052	0	20L	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66437	103.8187	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.64201	103.649	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.64201	103.649	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66782	103.4674	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66782	103.4208	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66782	103.4208	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66782	103.3823	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66782	103.3397	2810X2
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66782	103.2721	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66782	103.162	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66782	103.0999	2801X
FDNS	16ALL_G16_052	0	20WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67736	102.9832	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66228	102.8268	CENTER - COYOTE 345KV CKT 1
FDNS	16ALL_G16_052	0	20L	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.73092	102.693	GARRISON - LELAND OLDS 230KV CKT 1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63124	102.4634	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66557	102.4236	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66557	102.4147	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66753	102.4092	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66753	102.3132	2810X2
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66753	102.2955	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66753	102.2955	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66557	102.2946	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66557	102.2946	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66557	102.2919	2809X1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66557	102.2898	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66557	102.2855	2809X2
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66753	102.2753	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66557	102.2738	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66753	102.2123	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	102.2094	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	102.1545	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	102.1545	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	102.154	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66753	102.1235	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66753	102.0983	2801X
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66199	102.0104	CENTER - COYOTE 345KV CKT 1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	101.9934	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	101.9718	BRDLAND-LNX3345.00 - HURON 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	101.9713	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	101.9713	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	101.9691	BROADLAND - HURON 230KV CKT 1
FDNS	16ALL_G16_052	0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63063	101.8807	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_052	0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63886	101.6	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_052	0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63886	101.6	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	101.1823	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_052	0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.65317	101.0393	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.64176	100.9757	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.64176	100.9757	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	100.9644	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	100.9644	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	100.9641	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	100.9199	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	100.9043	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	100.9043	BROADLAND - HURON 230KV CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	100.904	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	100.904	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_052	0	20SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63098	100.3995	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_052	0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63063	100.2674	BISMARK - GRANTE FALLS 230KV CKT 1
FDNS	16ALL_G16_052	0	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.75291	100.245	GARRISON - LELAND OLDS 230KV CKT 1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63124	100.1999	BISMARK - GRANTE FALLS 230KV CKT 1
FDNS	16ALL_G16_052	0	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.65546	99.7	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_052	0	17SP	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.08935	100.7735	BASE CASE
FDNS	16ALL_G16_052	0	25SP	G16_052	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.08694	99.5	BASE CASE
FDNS	16ALL_G16_052	2	17SP	G16_052	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09543	105.818	BASE CASE
FDNS	16ALL_G16_052	2	25SP	G16_052	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09234	100.6175	BASE CASE
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67757	117.1679	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67949	116.7913	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62422	107.178	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62422	107.1501	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62422	107.1501	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62422	107.0652	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62716	106.5497	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62716	106.4923	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62716	106.4923	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62716	106.3774	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_052	2	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67548	105.4221	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66045	103.9948	CENTER - COYOTE 345KV CKT 1
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66597	103.577	2810X2
FDNS	16ALL_G16_052	2	16WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67601	103.5521	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66597	103.4996	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66597	103.4996	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66597	103.407	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66597	103.3369	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66597	103.2613	2801X
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.642	103.148	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.642	103.148	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66586	103.0651	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66586	103.0651	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66781	102.872	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66781	102.7351	2810X2
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66781	102.6992	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66781	102.6992	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66781	102.6635	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66781	102.5619	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66781	102.4492	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66498	102.4123	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66781	102.3997	2801X
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66498	102.2876	2809X2
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66498	102.2607	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66226	102.2441	CENTER - COYOTE 345KV CKT 1
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63122	101.9573	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	101.8714	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	101.871	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63058	101.8464	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63882	101.4256	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63882	101.4256	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.75256	100.8513	GARRISON - LELAND OLDS 230KV CKT 1
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.65315	100.7896	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66215	100.6176	BROADLAND - HURON 230KV CKT 1
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66215	100.6172	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66215	100.6164	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66215	100.6164	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63058	100.1872	BISMARK - GRANTE FALLS 230KV CKT 1
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66117	100.1838	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66396	100.0787	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_052	2	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66117	100.0676	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66396	99.7	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66396	99.7	BROADLAND - HURON 230KV CKT 1
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66396	99.7	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66396	99.7	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_052	2	25SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63122	99.7	BISMARK - GRANTE FALLS 230KV CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09537	105.7483	BASE CASE
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67751	117.0141	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62415	107.0228	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62415	106.9935	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62415	106.9935	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62415	106.9085	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_052	3	17G	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67542	105.3739	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66041	103.886	CENTER - COYOTE 345KV CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66603	103.5133	2810X2
FDNS	16ALL_G16_052	3	16WP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67596	103.504	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66603	103.4632	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66603	103.4186	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66603	103.4186	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66603	103.3807	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66603	103.2956	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66603	103.2552	2801X
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66303	102.6088	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66303	102.608	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63059	101.7521	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63882	101.3462	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63882	101.3462	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.7526	100.8733	GARRISON - LELAND OLDS 230KV CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66212	100.7736	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.65312	100.7073	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66212	100.284	BROADLAND - HURON 230KV CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66212	100.283	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66212	100.2825	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66212	100.2825	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63059	100.1006	BISMARK - GRANTE FALLS 230KV CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66113	100.0581	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_052	3	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66113	100	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	16ALL_G16_052	4	17SP	G16_052	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09174	102.1893	BASE CASE
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67945	118.5078	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62704	109.3975	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62704	109.3471	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62704	109.3471	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62704	109.2642	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66579	105.7712	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66579	105.7712	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66226	105.4201	CENTER - COYOTE 345KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66777	105.1026	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66777	104.9872	2810X2
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66491	104.9741	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66777	104.9544	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66777	104.9544	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66777	104.9212	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66491	104.8822	2809X2
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66491	104.8526	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66777	104.8385	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66777	104.7492	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66777	104.7044	2801X
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.6648	104.1589	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.6648	104.1575	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.64203	104.044	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.64203	104.044	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.65538	102.6152	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66391	102.1728	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66391	101.9616	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66391	101.9616	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66391	101.9559	BROADLAND - HURON 230KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66391	101.9536	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63125	101.951	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.75343	101.5166	GARRISON - LELAND OLDS 230KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66293	101.4677	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66262	101.3813	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66293	101.3744	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66262	100.9798	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66324	100.6522	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66324	100.5285	2809X1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66324	100.5114	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63125	100.3329	BISMARK - GRANTE FALLS 230KV CKT 1
FDNS	16ALL_G16_052	4	17SP	G16_052	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.64203	99.9	CENTER - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_052	5	17SP	G16_052	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0917	102.1932	BASE CASE
FDNSLock-Blown up	16ALL_G16_053	0	16WP	G16_053	-	Non-Converged Contingency	717	789	0.09237	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.48166	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.48166	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.37797	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.37797	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.35741	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.26806	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.26806	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.25044	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.25044	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.24083	-	2801X
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.24083	-	2810X2
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.22901	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.22901	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.18898	-	2809X1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.18898	-	2809X2
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	720	792	0.12522	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	720	792	0.12522	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	717	789	0.12041	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	717	789	0.12041	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	717	789	0.12041	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.12041	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	720	720	0.11451	-	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	720	720	0.11451	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	720	720	0.11451	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	720	720	0.11451	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	720	720	0.11451	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	720	720	0.11451	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	720	720	0.11451	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	717	789	0.10141	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	717	789	0.10141	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	717	789	0.09449	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	717	789	0.09449	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.09449	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.09449	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.08935	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	478	526	0.08935	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	0	0	0.08935	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	732	732	0.08935	-	BROADLAND - HURON 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	400	400	0.08935	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	17SP	G16_053	-	Non-Converged Contingency	400	400	0.08935	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	25SP	G16_053	-	Non-Converged Contingency	0	0	0.36424	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	25SP	G16_053	-	Non-Converged Contingency	0	0	0.36424	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_053	0	25SP	G16_053	-	Non-Converged Contingency	0	0	0.18212	-	2809X1
FDNSLock-Blown up	16ALL_G16_053	0	25SP	G16_053	-	Non-Converged Contingency	0	0	0.18212	-	2809X2
FDNSLock-Blown up	16ALL_G16_053	0	25SP	G16_053	-	Non-Converged Contingency	717	789	0.09106	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	25SP	G16_053	-	Non-Converged Contingency	717	789	0.09106	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	0	25SP	G16_053	-	Non-Converged Contingency	0	0	0.09106	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	16ALL_G16_053	0	25SP	G16_053	-	Non-Converged Contingency	0	0	0.09106	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_053	0	25SP	G16_053	-	Non-Converged Contingency	717	789	0.08967	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	0	0	0.45134	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	0	0	0.37392	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	0	0	0.37392	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	0	0	0.36451	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	0	0	0.25232	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	0	0	0.25232	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	0	0	0.19556	-	2809X2
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	720	792	0.12616	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	720	792	0.12616	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	717	789	0.1205	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	717	789	0.1205	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	720	720	0.1146	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	720	720	0.1146	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	720	720	0.1146	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	720	720	0.1146	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	717	789	0.10362	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	717	789	0.10362	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	717	789	0.09778	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	0	0	0.09778	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_053	2	17SP	G16_053	-	Non-Converged Contingency	478	526	0.08683	-	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	3	17SP	G16_053	-	Non-Converged Contingency	0	0	0.37197	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_053	3	17SP	G16_053	-	Non-Converged Contingency	0	0	0.37197	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_053	3	17SP	G16_053	-	Non-Converged Contingency	0	0	0.25268	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_053	3	17SP	G16_053	-	Non-Converged Contingency	0	0	0.19421	-	2809X2
FDNSLock-Blown up	16ALL_G16_053	3	17SP	G16_053	-	Non-Converged Contingency	720	720	0.12634	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	3	17SP	G16_053	-	Non-Converged Contingency	720	720	0.12634	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_053	3	17SP	G16_053	-	Non-Converged Contingency	717	789	0.12226	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	3	17SP	G16_053	-	Non-Converged Contingency	717	789	0.10347	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	3	17SP	G16_053	-	Non-Converged Contingency	717	789	0.10347	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	3	17SP	G16_053	-	Non-Converged Contingency	717	789	0.09711	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_053	3	17SP	G16_053	-	Non-Converged Contingency	0	0	0.09711	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_053	0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67761	117.6365	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67952	117.4293	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67916	115.9825	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_053	0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62416	107.5742	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_053	0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62416	107.5643	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_053	0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62416	107.5643	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_053	0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62416	107.4697	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62718	107.2065	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62718	107.1564	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62718	107.1564	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62718	107.0396	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62685	106.4051	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62685	106.3342	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62685	106.3342	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_053	0	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.6755	106.3196	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62685	106.2286	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_053	0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66054	104.0869	CENTER - COYOTE 345KV CKT 1
FDNS	16ALL_G16_053	0	16WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67605	103.8519	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_053	0	20L	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66437	103.8187	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66782	103.4562	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.64201	103.3678	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.64201	103.3678	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66782	103.3191	2810X2
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66782	103.2939	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66782	103.2939	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66782	103.2729	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66782	103.1926	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66782	103.0675	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66782	103.0448	2801X
FDNS	16ALL_G16_053	0	20WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67736	102.9832	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66228	102.7554	CENTER - COYOTE 345KV CKT 1
FDNS	16ALL_G16_053	0	20L	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.73092	102.693	GARRISON - LELAND OLDS 230KV CKT 1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66557	102.4235	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66557	102.4147	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66753	102.4092	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63124	102.402	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66753	102.3132	2810X2
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66753	102.2955	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66753	102.2955	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66557	102.2946	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66557	102.2946	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66557	102.2919	2809X1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66557	102.2898	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66557	102.2855	2809X2
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66753	102.2753	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66557	102.2738	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66753	102.2123	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66753	102.1234	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66753	102.0983	2801X
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	102.0587	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	101.8814	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	16ALL_G16_053	0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63063	101.8807	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	101.8695	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	101.8695	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	101.8497	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	101.8189	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	101.8189	BROADLAND - HURON 230KV CKT 1
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	101.8185	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	101.8185	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_053	0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63886	101.6	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_053	0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63886	101.6	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	101.1823	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_053	0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.65317	101.0393	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.64176	100.9757	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	100.9644	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	100.9644	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	100.9641	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	100.9199	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	100.9042	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	100.9042	BROADLAND - HURON 230KV CKT 1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	100.904	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66458	100.904	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_053	0	20SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63098	100.3995	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_053	0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63063	100.2674	BISMARK - GRANTE FALLS 230KV CKT 1
FDNS	16ALL_G16_053	0	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.75291	100.245	GARRISON - LELAND OLDS 230KV CKT 1
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63124	100.1411	BISMARK - GRANTE FALLS 230KV CKT 1
FDNS	16ALL_G16_053	0	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.65546	99.7	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_053	0	17SP	G16_053	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.08935	100.7736	BASE CASE
FDNS	16ALL_G16_053	2	17SP	G16_053	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09543	105.818	BASE CASE
FDNS	16ALL_G16_053	2	25SP	G16_053	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09233	100.4746	BASE CASE
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67757	117.1679	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67948	116.7127	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62422	107.178	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62422	107.1502	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62422	107.1502	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62422	107.0652	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62715	106.5871	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62715	106.5306	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62715	106.5306	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62715	106.416	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_053	2	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67548	105.4221	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66045	103.9948	CENTER - COYOTE 345KV CKT 1
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66597	103.577	2810X2
FDNS	16ALL_G16_053	2	16WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67601	103.552	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66597	103.4997	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66597	103.4997	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66597	103.4071	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66597	103.3369	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66597	103.2614	2801X
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.642	103.103	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.642	103.103	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66586	102.9756	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66586	102.9756	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66781	102.8017	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66781	102.681	2810X2
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66781	102.6242	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66781	102.6242	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66781	102.5902	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66781	102.5045	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66781	102.4111	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66781	102.3652	2801X
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66498	102.2946	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66498	102.2098	2809X2
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66226	102.1956	CENTER - COYOTE 345KV CKT 1
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66498	102.1852	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63122	101.9128	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63058	101.8464	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	101.6984	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66487	101.6979	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63882	101.4256	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63882	101.4256	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.75256	100.8513	GARRISON - LELAND OLDS 230KV CKT 1
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.65315	100.7896	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66215	100.6176	BROADLAND - HURON 230KV CKT 1
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66215	100.6172	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66215	100.6164	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66215	100.6164	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63058	100.1872	BISMARK - GRANTE FALLS 230KV CKT 1
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66117	100.1838	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_053	2	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66117	100.0676	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66396	99.8	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66396	99.7	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66396	99.7	BROADLAND - HURON 230KV CKT 1
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66396	99.7	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66396	99.7	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_053	2	25SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63122	99.7	BISMARK - GRANTE FALLS 230KV CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09537	105.7485	BASE CASE
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67751	117.0141	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62415	107.0228	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62415	106.9935	P12:230:UMZB:# 171 #: WB IN ND.
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62415	106.9935	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62415	106.9085	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_053	3	17G	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67542	105.3739	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66041	103.886	CENTER - COYOTE 345KV CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66603	103.6894	2810X2
FDNS	16ALL_G16_053	3	16WP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67596	103.5039	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66603	103.4632	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66603	103.4186	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66603	103.4186	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66603	103.3807	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66603	103.2956	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66603	103.2552	2801X
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66303	102.6088	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66303	102.608	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63059	101.7521	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63882	101.3462	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63882	101.3462	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.7526	100.8733	GARRISON - LELAND OLDS 230KV CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66212	100.7736	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.65312	100.7073	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66212	100.284	BROADLAND - HURON 230KV CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66212	100.283	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66212	100.2826	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66212	100.2826	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63059	100.1006	BISMARK - GRANTE FALLS 230KV CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66113	100.0581	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_053	3	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66113	100	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	16ALL_G16_053	4	17SP	G16_053	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.09174	102.1893	BASE CASE
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.67945	118.5078	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62704	109.3979	LELAND OLDS - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62704	109.3471	P12:230:UMZB:# 171 #: WB IN ND.

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62704	109.3471	P12:230:UMZW:# 170 #: WB IN ND. 230 LINE FAULT (TAP)
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.62704	109.2643	BISMARK - WASHBURN 230KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66579	105.7712	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66579	105.7712	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66226	105.4201	CENTER - COYOTE 345KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66777	105.1026	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66777	104.9872	2810X2
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66491	104.9741	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66777	104.9544	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66777	104.9544	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66777	104.9212	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66491	104.8822	2809X2
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66491	104.8526	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66777	104.8385	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66777	104.7492	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66777	104.7044	2801X
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.6648	104.1589	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.6648	104.1575	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.64203	104.044	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.64203	104.044	MANDAN 4 230.00 - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.65538	102.6154	HEBRON 4 230.00 - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66391	102.1728	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66391	101.9615	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66391	101.9615	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66391	101.9559	BROADLAND - HURON 230KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66391	101.9536	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63125	101.9511	GRANTE FALLS - MANDAN 4 230.00 230KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.75343	101.5168	GARRISON - LELAND OLDS 230KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66293	101.4677	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66262	101.3813	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66293	101.3722	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66262	100.9799	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66324	100.6522	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66324	100.5285	2809X1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.66324	100.5114	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.63125	100.3331	BISMARK - GRANTE FALLS 230KV CKT 1
FDNS	16ALL_G16_053	4	17SP	G16_053	TO->FROM	BISMARK - HILKEN 4 230.00 230KV CKT 1	373	373	0.64203	99.9	CENTER - MPC02100TAP4230.00 230KV CKT 1
FDNS	16ALL_G16_053	5	17SP	G16_053	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.0917	102.1932	BASE CASE
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159	160	0.06563	124.2226	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159	160	0.06563	124.2226	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_056	0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165	177	0.19365	122.764	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	16WP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165	177	0.19365	122.764	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159	160	0.05588	105.3086	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159	160	0.13236	103.8691	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.267	126.1285	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.267	124.2356	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.13696	106.087	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.13696	106.087	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00_G16_056	0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.23981	103.892	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00_G16_056	0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.23981	102.3715	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.13696	101.8988	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.13696	101.8988	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.11325	101.7369	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.11325	101.7369	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
FDNS	00NR_G16_056	0	17SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.27942	101.2992	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.11325	100.6601	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.11325	100.6601	ALLEN SUB - LUBBOCK SOUTH INTERCHANGE 115KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.10733	100.4118	STANTON SUB - TUCO INTERCHANGE 115KV CKT 1
FDNS	00NR_G16_056	0	17SP	G16_056	FROM->TO	CARLISLE INTERCHANGE (WH XHS70711) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.27942	99.6	CARLISLE INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_056	0	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.3259	158.6109	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	0	20WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.3259	155.4148	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	0	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29879	154.4539	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	0	17G	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.33679	154.3431	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	0	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29879	151.7708	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	0	17G	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.33679	151.5618	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	0	16WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.34541	144.9355	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	0	16WP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.34541	143.169	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	0	20SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.33089	138.6985	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL_G16_056	0	20SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.33089	137.3831	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	0	17SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.33163	136.9195	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	0	17SP	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.33163	135.8029	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G16_056	0	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.08911	129.6137	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G16_056	0	20L	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.08911	128.8563	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G16_056	0	17G	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.10972	122.9295	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G16_056	0	17G	G16_056	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.10972	120.3429	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	0	17G	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.45743	152.2077	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	0	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.40379	147.8615	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	0	20SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.43155	144.5177	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	0	17SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.42859	141.2566	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	0	20WP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.42708	132.575	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G16_056	0	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.19795	127.3245	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	0	16WP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.46572	122.1489	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G16_056	0	17G	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.27056	120.9221	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	0	20L	G16_056	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.11025	102.3987	BASE CASE
FDNS	06ALL_G16_056	0	20WP	G16_056	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.12703	100.5746	BASE CASE
FDNS	06ALL_G16_056	0	16WP	G16_056	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.13555	99.5	BASE CASE
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	G15079_T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	318.7	350.57	0.08063	104.2907	HOBBS - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_056	0	16WP	G16_056	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165	180	0.19365	115.044	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	16WP	G16_056	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165	180	0.19365	115.044	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	16WP	G16_056	FROM->TO	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1	165	180	0.19365	108.7162	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	16WP	G16_056	FROM->TO	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1	165	180	0.19365	108.7162	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	TO->FROM	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1	318.7	350.57	0.27712	106.6382	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.06257	118.1941	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.06257	118.1941	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.06257	113.9819	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.06257	113.9819	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.05734	105.313	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.05734	105.313	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.03109	105.1083	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.03109	105.0874	LAMB COUNTY INTERCHANGE (WH_ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.03109	105.0874	LAMB COUNTY INTERCHANGE (WH_ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.03109	105.0874	P12:230:SPS:K37.1.TOLK.LAMB
FDNS	00NR_G16_056	0	17SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.0897	101.8246	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	17SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.0897	101.8246	AMOCO SWITCHING STATION - SUNDOWN INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.05734	101.5824	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.05734	101.5824	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.03109	99.9	LAMB COUNTY INTERCHANGE - TOLK STATION WEST 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.03109	99.9	LAMB COUNTY INTERCHANGE (WH_ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.03109	99.9	LAMB COUNTY INTERCHANGE (WH_ALM20172) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	SUNDOWN INTERCHANGE (WH_XDS70381) 230/115/13.8KV TRANSFORMER CKT 1	187	187	0.03109	99.9	P12:230:SPS:K37.1.TOLK.LAMB
FDNS	00NR_G16_056	0	25SP	G16_056	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.09159	112.3529	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.12586	100	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.12586	100	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.06264	125.4257	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.06264	118.9964	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.06264	114.6737	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.06264	109.1442	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1
FDNS	00NR_G16_056	0	17SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	120	154	0.07819	106.5692	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.06264	106.3338	P12:115:SPS:T71.1.CRLSLE.YUMA
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.06264	104.8243	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1
FDNS	00NR_G16_056	0	17SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	120	154	0.07819	103.3682	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.06264	101.6829	P12:115:SPS:T71.1.CRLSLE.YUMA
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.07686	100.7667	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.07686	100.7667	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	0	25SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.06264	100.2453	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1
FDNS	00NR_G16_056	0	20SP	G16_056	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	120	154	0.06319	99.9	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
FDNS	06ALL_G16_056	2	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.40318	134.9046	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	2	17G	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.46686	133.3011	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	2	20SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.40956	131.4241	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	2	17SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.40571	124.4215	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	2	20WP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.40787	123.0407	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G16_056	2	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.29921	117.9437	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	2	16WP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.47029	109.584	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G16_056	2	17G	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.38396	104.1357	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	2	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.39728	103.4618	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL_G16_056	2	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.39728	103.4618	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL_G16_056	2	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.39728	103.4618	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
FDNS	06ALL_G16_056	2	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.39728	103.4618	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
FDNS	06ALL_G16_056	2	20L	G16_056	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.11061	102.5038	BASE CASE
FDNS	06ALL_G16_056	2	20WP	G16_056	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.12739	100.6902	BASE CASE
FDNS	06ALL_G16_056	2	16WP	G16_056	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.13613	99.8	BASE CASE
FDNS	06ALL_G16_056	3	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.40319	134.9128	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	3	20WP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.40789	123.0697	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	3	25SP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.41445	112.1866	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	3	16WP	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.47038	109.6352	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_056	3	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.39729	103.4953	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL_G16_056	3	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.39729	103.4953	TUCO INTERCHANGE (GE M1022338) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL_G16_056	3	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.39729	103.4953	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
FDNS	06ALL_G16_056	3	20L	G16_056	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.39729	103.4953	TUCO INTERCHANGE (SIEM 8743066) 345/230/13.2KV TRANSFORMER CKT 2
FDNS	00NR_G16_056	3	16WP	G16_056	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165	180	0.19286	116.3433	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	3	16WP	G16_056	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	165	180	0.19286	116.3433	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	3	25SP	G16_056	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	159	175	0.066	101.9315	WOLFFORTH INTERCHANGE (WOLFFORTH_XF) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_056	3	25SP	G16_056	FROM->TO	LP-DOUD_TP 3115.00 - SP-WOLF_TP 3115.00 115KV CKT 1	159	175	0.066	101.9315	WOLFFORTH INTERCHANGE (WOLFFORTH_XF) 230/115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_056	3	16WP	G16_056	FROM->TO	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1	165	180	0.19286	109.6929	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	3	16WP	G16_056	FROM->TO	SP-WOLF_TP 3115.00 - YUMA INTERCHANGE 115KV CKT 1	165	180	0.19286	109.6929	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_056	3	25SP	G16_056	TO->FROM	SUNDOWN INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1	318.7	350.57	0.27643	106.3925	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNSLock-Blown up	01ALL_G16_057	0	16WP	G16_057	-	Non-Converged Contingency	1035	1035	0.05321	-	EMPORIA ENERGY CENTER - G14_001T 345.00 345KV CKT 1
FDNSLock-Blown up	01ALL_G16_057	0	16WP	G16_057	-	Non-Converged Contingency	956	956	0.03338	-	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
FDNS	06ALL_G16_058	0	20WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2981	157.2227	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	20WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2981	154.1844	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	20L	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.27095	153.5357	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	17G	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28476	152.1404	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	20L	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.27095	150.9486	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	17G	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28476	149.5417	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	16WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29333	142.92	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	16WP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29333	141.3475	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	20SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.30312	137.7006	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	20SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.30312	136.4718	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	17SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2936	135.3092	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	17SP	G16_058	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2936	134.3294	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	20L	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.33421	145.5952	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	17G	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.28016	145.2911	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	20SP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.36211	142.1471	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	17SP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.29879	136.4657	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	20WP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.35762	129.9659	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	16WP	G16_058	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.28834	116.5376	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_058	0	20L	G16_058	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.10934	102.376	BASE CASE
FDNS	06ALL_G16_058	0	20WP	G16_058	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.12613	100.5207	BASE CASE
FDNS	06ALL_G16_058	2	20L	G16_058	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.10899	102.4656	BASE CASE
FDNS	06ALL_G16_058	2	20WP	G16_058	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.1258	100.596	BASE CASE
FDNS	06ALL_G16_058	2	16WP	G16_058	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.13277	99.7	BASE CASE
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	478	502	0.18709	-	CHERRY1 - HARRINGTON STATION 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	478	502	0.18709	-	CHERRY1 - HARRINGTON STATION 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	318.7	350.57	0.18585	-	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	318.7	350.57	0.18585	-	Harrington Station East Bus - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	478	502	0.15926	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	478	502	0.15926	-	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	318.7	350.57	0.14186	-	AMARILLO SOUTH INTERCHANGE - G15031_T 230.00 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	318.7	350.57	0.14186	-	G15031_T 230.00 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	478	502	0.13422	-	NEWHART 230 - POTTER COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	435.82	501.55	0.1124	-	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	435.82	501.55	0.1124	-	Harrington Station Mid Bus - RANDALL COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	0	0	0.11156	-	P12:115:SPS:W40.1.WCANYON.DFSMTH
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	685	796	0.10054	-	TOLK STATION EAST - TOLK STATION TAP 230KV CKT @1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	343.79	343.79	0.0991	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	343.79	343.79	0.0991	-	JONES STATION - TUCO INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	0	0	0.08924	-	BADGER-G16-003-TAP-345kV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	0	0	0.08924	-	BADGER-G16-003-TAP-345kV CKT 2
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	0	0	0.08924	-	G16-001-TAP-WOODWARD-345kV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	0	0	0.08924	-	G16-001-TAP-WOODWARD-345kV CKT 2
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	478.05	501.55	0.08421	-	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	478.05	501.55	0.08421	-	AMARILLO SOUTH INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	0	0	0.08273	-	P12:115:SPS:T67.1.HAPPY.KRESS
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	0	0	0.07202	-	P12:115:SPS:V55.1.SUNDWN.TERRY

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	1792	1972	0.0662	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	1792	1972	0.0662	-	BORDER 7345.00 - CRAWFISH_DR 345.00 345KV CKT 2
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	717	926	0.06604	-	CROSSROADS 7345.00 - EDDY COUNTY INTERCHANGE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	318.7	350.57	0.05743	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	318.7	350.57	0.05743	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	0	0	0.0493	-	P12:115:SPS:V15.1.TUCO.INDANA
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	0	0	0.0493	-	P12:115:SPS:V62.1.CRLSLE.INDANA
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	0	0	0.0458	-	P12:115:SPS:T04.1.DFSMTH.CASTRO
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	119.51	153.97	0.04548	-	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	119.51	153.97	0.04548	-	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	1793	1793	0.04462	-	BVRCNTY7 345.00 - G11-14T 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	1716	1793	0.04462	-	BVRCNTY7 345.00 - G11-14T 345.00 345KV CKT 2
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	1793	1793	0.04462	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	1716	1793	0.04462	-	G16-001-TAP 345.00 - G16-003-TAP 345.00 345KV CKT 2
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	1793	1793	0.04462	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	1716	1793	0.04462	-	G16-003-TAP 345.00 - WOODWARD DISTRICT EHV 345KV CKT 2
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	249	274	0.04137	-	HAPPY INTERCHANGE - PALO DURO SUB 115KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	0	0	0.04123	-	P12:115:SPS:V80.1.DC_STH.LE-WAIT
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	318.7	350.57	0.03777	-	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	318.7	350.57	0.03777	-	CHAVES COUNTY INTERCHANGE - SAN JUAN MESA TAP 230KV CKT 1
FDNSLock-Blown up	00NR_G16_059	0	17SP	G16_059	-	Non-Converged Contingency	0	0	0.03427	-	P12:115:SPS:V37.1.CASTRO.PLANTX
FDNSLock-Blown up	02ALL_G16_059	2	16WP	G16_059	-	Non-Converged Contingency	1076	1076	0.03129	-	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
FDNSLock-Blown up	02ALL_G16_059	2	17G	G16_059	-	Non-Converged Contingency	318.7	350.57	0.13274	-	GRAPEVINE INTERCHANGE - NICHOLS STATION 230KV CKT 1
FDNSLock-Blown up	02ALL_G16_059	2	17G	G16_059	-	Non-Converged Contingency	717	789	0.09733	-	G14-057T 345.00 - LAWTON EASTSIDE 345KV CKT 1
FDNSLock-Blown up	02ALL_G16_059	2	17G	G16_059	-	Non-Converged Contingency	675	743	0.09585	-	CHISHOLM7 345.00 (CHISHOLM) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	02ALL_G16_059	0	25SP	G16_059	TO->FROM	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.05253	115.4364	BASE CASE
FDNS	02NR_G16_059	0	17G	G16_059	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96	96	0.06179	134.2215	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	02NR_G16_059	0	17G	G16_059	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	96	96	0.06179	134.2215	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_059	0	25SP	G16_059	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	160	160	0.07156	103.0623	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_059	0	25SP	G16_059	TO->FROM	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1	160	160	0.07156	103.0623	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	02NR_G16_059	0	17G	G16_059	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96	96	0.06179	106.2085	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	02NR_G16_059	0	17G	G16_059	FROM->TO	CANYON WEST SUB - DAWN SUB 115KV CKT 1	96	96	0.06179	106.2085	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_059	0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165	177	0.06068	105.9302	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_059	0	16WP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	165	177	0.06068	105.9302	LUBBOCK SOUTH INTERCHANGE - WOLFFORTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_059	0	25SP	G16_059	FROM->TO	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1	159	160	0.03175	100.9871	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	02NR_G16_059	0	17G	G16_059	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96	96	0.06179	103.1228	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	02NR_G16_059	0	17G	G16_059	FROM->TO	DAWN SUB - Panda Energy Substation Hereford 115KV CKT 1	96	96	0.06179	103.1228	BUSHLAND INTERCHANGE - DEAF SMITH COUNTY INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_059	0	25SP	G16_059	FROM->TO	G15079_T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	318.7	350.57	0.06306	102.8987	HOBBS - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_059	0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11525	116.63	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_059	0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11525	116.63	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_059	0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.11297	102.8653	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_059	0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	100.6339	GEN526333 1-JONES GEN #3 21 KV
FDNS	00NR_G16_059	0	25SP	G16_059	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.09056	100.2241	GEN526334 1-JONES_4 116.500
FDNS	00NR_G16_059	0	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03583	101.5564	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_059	0	25SP	G16_059	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03583	101.5431	P12:LPL:SPS:K64.1.LP-SE.LUBBS
FDNS	02ALL_G16_059	0	25SP	G16_059	FROM->TO	SPSNORTH_STX	1160	1160	0.38867	111.0609	BASE CASE
FDNS	02ALL_G16_059	0	17G	G16_059	FROM->TO	SPSNORTH_STX	1160	1160	0.39757	102.7554	BASE CASE
FDNS	00NR_G16_059	0	25SP	G16_059	TO->FROM	TERRY COUNTY INTERCHANGE - WOLFFORTH INTERCHANGE 115KV CKT 1	119.51	153.97	0.04278	104.8945	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_059	0	17SP	G16_059	FROM->TO	WOLFFORTH INTERCHANGE (WH 7001668) 230/115/13.2KV TRANSFORMER CKT 1	120	154	0.03639	101.1563	CARLISLE INTERCHANGE - LP-DOUD_TP 3115.00 115KV CKT 1
FDNS	02ALL_G16_059	2	17G	G16_059	FROM->TO	SPSNORTH_STX	1160	1160	0.39311	100.862	BASE CASE
FDNSLock-Blown up	00_G16_060	0	16WP	G16_060	-	Non-Converged Contingency	2075	2075	0.03636	-	LACYGNE - WEST GARDNER 345KV CKT 1
FDNS	08ALL_G16_060	0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.6942	103.0169	G15052_T 345.00 - ROSE HILL 345KV CKT 1
FDNS	08ALL_G16_060	0	16WP	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.69838	102.3002	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_060	0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.69319	101.918	G15052_T 345.00 - ROSE HILL 345KV CKT 1
FDNS	08ALL_G16_060	0	17G	G16_060	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.6974	100.6497	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_061	0	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.30565	108.2415	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_061	0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.29887	103.529	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_061	0	16WP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.29887	103.4782	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_061	0	25SP	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.30633	102.1477	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_061	0	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.3009	100.1239	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_061	0	17G	G16_061	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.3009	100.1007	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_061	0	25SP	G16_061	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.30565	104.1105	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNSLock-Blown up	06ALL_G16_062	0	17G	G16_062	-	Non-Converged Contingency	478	502	0.07968	-	NEWHART 230 - SWISHER COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	06ALL_G16_062	0	17G	G16_062	-	Non-Converged Contingency	0	0	0.05147	-	P12:115:SPS:V38.1.NICHLS.RVRVIEW
FDNSLock-Blown up	06ALL_G16_062	0	17G	G16_062	-	Non-Converged Contingency	96	96	0.03306	-	CANYON E_TP3115.00 - RANDALL COUNTY INTERCHANGE 115KV CKT 1
FDNSLock-Blown up	06ALL_G16_062	0	20L	G16_062	-	Non-Converged Contingency	1022	1124	0.18962	-	G14-074T 345.00 - OKLAUNION 345KV CKT 1
FDNS	06ALL_G16_062	0	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168	168	0.50123	130.2254	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168	168	0.50123	129.7439	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL_G16_062	0	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168	168	0.50123	129.6694	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168	168	0.50123	129.6129	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168	168	0.50123	129.2003	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168	168	0.50123	129.1753	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168	168	0.50123	129.1705	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168	168	0.50123	129.1669	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168	168	0.50123	127.9298	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168	168	0.50123	127.3952	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168	168	0.50123	104.459	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168	168	0.50123	103.8055	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.49877	129.5875	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.49877	129.1084	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.49877	129.0342	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.49877	128.978	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20WP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.49877	128.5681	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.49877	128.5433	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.49877	128.5385	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20L	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.49877	128.5349	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.49877	127.3032	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	25SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.49877	126.7719	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.49877	103.9474	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.49877	103.2978	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29626	161.5618	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2937	160.3105	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20L	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.27226	159.2788	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29626	158.1396	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2937	156.9858	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20L	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.26599	156.9123	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20L	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.27226	156.2458	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	17G	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28131	154.7294	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20L	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.26599	154.0343	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	17G	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28136	153.9681	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	17G	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28131	151.9753	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	17G	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28136	151.2359	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	16WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28973	145.7027	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	16WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28978	145.5792	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	16WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28973	143.9243	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	16WP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28978	143.8117	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29968	140.8901	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29886	140.5164	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29968	139.4613	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.29886	139.1154	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	17SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28966	137.1226	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	17SP	G16_062	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28966	136.0122	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20L	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.31864	155.4726	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20L	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.31334	150.0676	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	17G	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.26954	147.6858	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.34279	146.8344	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	17G	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.26962	146.7583	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.34207	145.3874	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	17SP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.28634	137.9157	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20WP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.33982	136.2059	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20WP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.33748	133.1001	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	16WP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.27734	119.3644	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	16WP	G16_062	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.27748	119.0028	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_062	0	20L	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93	103	0.5121	154.845	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93	103	0.51053	144.1369	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	25SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93	103	0.5105	141.0162	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	25SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93	103	0.51049	138.3494	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20WP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	103	114	0.51076	137.2231	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	17G	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93	103	0.64332	106.4464	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	17G	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93	103	0.64333	106.2807	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	17G	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93	103	0.64333	106.2807	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93	103	0.51052	101.2764	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20L	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159	160	0.5121	108.3025	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	25SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159	160	0.5105	104.6715	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159	160	0.51053	104.6421	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	25SP	G16_062	TO->FROM	DRINKARD SUB - National Enrichment Plant Sub 115KV CKT 1	159	160	0.51049	102.945	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	06ALL_G16_062	0	25SP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422	422	1	101.8862	ANDRWSXFMR12
FDNS	06ALL_G16_062	0	25SP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422	422	1	101.8711	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1
FDNS	06ALL_G16_062	0	20L	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422	422	1	101.492	ANDRWSXFMR12
FDNS	06ALL_G16_062	0	20SP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422	422	1	101.479	ANDRWSXFMR12
FDNS	06ALL_G16_062	0	20L	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422	422	1	101.4766	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1
FDNS	06ALL_G16_062	0	20WP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422	422	1	101.4754	ANDRWSXFMR12
FDNS	06ALL_G16_062	0	20SP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422	422	1	101.4635	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1
FDNS	06ALL_G16_062	0	20WP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422	422	1	101.4599	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1
FDNS	06ALL_G16_062	0	25SP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422	422	1	100.4865	ANDRWSXFMR12
FDNS	06ALL_G16_062	0	25SP	G16_062	FROM->TO	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1	422	422	1	100.4714	ANDREWS 3115.00 - National Enrichment Plant Sub 115KV CKT 1
FDNS	06ALL_G16_062	0	20L	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.1099	103.7528	BASE CASE
FDNS	06ALL_G16_062	0	20L	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.10728	103.321	BASE CASE
FDNS	06ALL_G16_062	0	20WP	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.12553	101.4982	BASE CASE
FDNS	06ALL_G16_062	0	20WP	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.12442	101.3303	BASE CASE
FDNS	06ALL_G16_062	0	16WP	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.12613	100.1436	BASE CASE
FDNS	06ALL_G16_062	0	16WP	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.12614	100.1303	BASE CASE
FDNS	06ALL_G16_062	0	17G	G16_062	FROM->TO	G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.44129	115.0851	P12:345:SPS:J15.1.XRDS.TOLK
FDNS	06ALL_G16_062	0	17G	G16_062	FROM->TO	G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.44289	114.7468	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL_G16_062	0	17G	G16_062	FROM->TO	G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.44289	114.7468	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL_G16_062	0	17G	G16_062	FROM->TO	G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.44289	114.7438	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
FDNS	06ALL_G16_062	0	17G	G16_062	FROM->TO	G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.44344	111.9793	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL_G16_062	0	17G	G16_062	FROM->TO	G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.44344	111.9737	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
FDNS	06ALL_G16_062	0	20L	G16_062	FROM->TO	G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.29764	101.8963	HOBBS (HUPDATE DATA) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL_G16_062	0	16WP	G16_062	FROM->TO	G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.44604	101.4014	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL_G16_062	0	16WP	G16_062	FROM->TO	G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.44604	101.4014	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL_G16_062	0	16WP	G16_062	FROM->TO	G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.44604	101.4014	TOLK STATION (ABBXNL844501) 345/230/13.2KV TRANSFORMER CKT 1
FDNS	06ALL_G16_062	0	16WP	G16_062	FROM->TO	G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.44604	101.3987	CROSSROADS 7345.00 - TOLK STATION 345KV CKT 1
FDNS	06ALL_G16_062	0	16WP	G16_062	FROM->TO	G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.44446	101.0203	P12:345:SPS:J15.1.XRDS.TOLK
FDNS	06ALL_G16_062	0	16WP	G16_062	FROM->TO	G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1	329.05	360.92	0.44446	101.0203	P12:345:SPS:J15.1.XRDS.TOLK
FDNS	06ALL_G16_062	0	17G	G16_062	TO->FROM	JOHNSON DRAW - TAYLOR SWITCHING STATION 115KV CKT 1	159	160	0.21364	114.8073	G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	17G	G16_062	TO->FROM	JOHNSON DRAW - TAYLOR SWITCHING STATION 115KV CKT 1	159	160	0.2139	111.9695	G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	17SP	G16_062	TO->FROM	JOHNSON DRAW - TAYLOR SWITCHING STATION 115KV CKT 1	159	160	0.21532	104.8947	G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	16WP	G16_062	TO->FROM	JOHNSON DRAW - TAYLOR SWITCHING STATION 115KV CKT 1	165	177	0.21444	100.5927	G15079_T 230.00 - YOAKUM COUNTY INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	0	20SP	G16_062	FROM->TO	LE-WEST_SUB3115.00 - LEA COUNTY REC-LOVINGTON INTERCHANGE 115KV CKT 1	143.4	179.3	0.04329	100.973	BASE CASE
FDNS	06ALL_G16_062	2	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168	168	0.50123	104.4591	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	2	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM BORDEN) 230/115/13.2KV TRANSFORMER CKT 2	168	168	0.50123	103.8055	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	2	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.49877	103.9475	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	2	20SP	G16_062	FROM->TO	ANDREWS 6230.00 (FROM MIDLAND) 230/115/13.2KV TRANSFORMER CKT 1	168	168	0.49877	103.2978	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	2	17G	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93	103	0.64382	106.9304	ANDREWS 6230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	2	20SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93	103	0.51055	101.2894	G14_012T 230.00 - HOBBS INTERCHANGE 230KV CKT 1
FDNS	06ALL_G16_062	2	20L	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.1071	103.413	BASE CASE
FDNS	06ALL_G16_062	2	20WP	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.12424	101.408	BASE CASE
FDNS	06ALL_G16_062	2	16WP	G16_062	FROM->TO	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1	717	789	0.13159	100.6076	BASE CASE
FDNS	06ALL_G16_062	3	25SP	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93	103	0.51052	128.3076	G14_012T 345.00 - HOBBS 345KV CKT 1
FDNS	06ALL_G16_062	3	17G	G16_062	FROM->TO	DRINKARD SUB - DRINKARD TAP 115KV CKT 1	93	103	0.64382	101.8135	ANDREWS 6345.00 345/230KV TRANSFORMER CKT 1
FDNSLock-Blown up	09ALL_G16_064	0	17G	G16_064	-	Non-Converged Contingency	120	120	0.83595	-	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_064	0	20L	G16_064	-	Non-Converged Contingency	120	120	0.83627	-	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNSLock-Blown up	09ALL_G16_064	2	17G	G16_064	-	Non-Converged Contingency	120	120	0.83597	-	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99	99	0.41332	111.405	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99	99	0.41359	110.277	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99	99	0.40801	109.4468	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99	99	0.40885	107.2985	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	00NR_G16_064	0	20WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99	99	0.409	100.8078	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99	99	0.41273	102.8385	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99	99	0.40389	102.2106	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99	99	0.41297	102.1157	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99	99	0.40341	102.0625	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120	120	1	175.1791	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120	120	1	174.7983	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120	120	1	174.0349	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120	120	1	172.9965	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120	120	1	172.43	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120	120	1	158.3578	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120	120	1	157.2413	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	00NR_G16_064	0	17SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120	120	1	109.5722	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	00NR_G16_064	0	20WP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120	120	1	109.5285	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	00NR_G16_064	0	25SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120	120	1	109.5237	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	00NR_G16_064	0	16WP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120	120	1	109.5194	PAULINE - ROSEMONT 115.00 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_064	0	20SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120	120	1	109.5094	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120	120	1	166.8556	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120	120	1	166.4383	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120	120	1	160.658	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120	120	1	160.1036	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120	120	1	159.3112	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120	120	1	154.6577	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120	120	1	151.0475	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	00NR_G16_064	0	20WP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120	120	1	102.1137	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	00NR_G16_064	0	16WP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120	120	1	102.0549	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120	120	1	152.9411	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120	120	1	152.4605	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120	120	1	148.3913	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120	120	1	141.9113	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120	120	1	141.6913	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120	120	1	140.525	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120	120	1	138.6531	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120	120	1	162.3177	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120	120	1	161.8405	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120	120	1	151.4182	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120	120	1	150.9402	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120	120	1	150.4428	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120	120	1	149.3112	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120	120	1	146.9826	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5972	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5898	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5661	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5636	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5635	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5602	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5562	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5553	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5546	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5541	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5338	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5334	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.511	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5107	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	165.3967	GUIDE ROCK - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	163.1123	GUIDE ROCK - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	162.5256	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	162.5246	HEBRON - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	161.4644	GUIDE ROCK - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	161.376	GUIDE ROCK - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	159.4792	HEBRON - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	159.4338	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	158.7714	HEBRON - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	157.7459	GUIDE ROCK - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	157.4816	GUIDE ROCK - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	157.4301	HEBRON - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	157.4232	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	157.3597	GUIDE ROCK - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	157.2838	HEBRON - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	157.2769	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	154.3281	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	154.3279	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	154.2659	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	154.2643	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86189	153.3105	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86182	153.251	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	152.789	HEBRON - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86863	152.7466	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	151.1541	GUIDE ROCK - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86182	150.4204	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86935	149.9985	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	149.8624	HEBRON - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	149.8603	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	149.5863	HEBRON - SUPERIOR 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	149.5777	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	149.2716	HEBRON - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	149.2715	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	148.8257	GUIDE ROCK - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	148.697	HEBRON - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	148.4196	HEBRON - NORTH HEBRON 115KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	148.1547	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	148.1431	HEBRON - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86186	148.0921	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86164	148.0444	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86935	147.6061	CARLTON JUNCTION - GENEVA 115KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86164	146.7723	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.84449	145.2019	BEATRICE - HARBINE 115KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	145.1537	HEBRON - SUPERIOR 115KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	145.1465	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86863	144.7373	CARLTON JUNCTION - GENEVA 115KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	144.4038	HEBRON - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86185	144.3609	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86166	144.3081	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86187	144.2982	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86168	144.2391	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86868	143.7956	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83966	142.9641	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.84471	142.9381	GENEVA - MCCOOL 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86185	142.7509	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86173	142.6934	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86867	142.6261	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83627	142.0068	GEN641089 2-ENERGY CENTER 2
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83703	142.0024	P12:115:WERE:MARS-SSEN_115::
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83703	142	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83703	141.9862	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86166	141.9818	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83703	141.9618	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86168	141.645	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	140.8195	HEBRON - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86877	140.6754	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	140.4742	HEBRON - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	140.0952	HEBRON - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.844	139.7968	BEATRICE - HARBINE 115KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86307	139.4844	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83627	139.459	BASE CASE
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.869	139.4549	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8618	139.4282	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83433	139.3804	AXTELL - SWEETWATER 345KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83932	139.3737	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	138.5463	HEBRON - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86919	138.5302	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.84418	138.4408	BEATRICE - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86173	138.3963	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83587	137.9928	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86877	137.9532	CARLTON JUNCTION - GENEVA 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83587	137.9152	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83587	137.7233	GEN641089 2-ENERGY CENTER 2
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83679	137.4887	CLIFTON - CONCORDIA 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83679	137.4887	CLIFTON - CONCORDIA 115KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86189	137.3804	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86175	137.3061	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83587	137.2649	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86187	137.2079	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86174	137.1364	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8395	137.1322	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83661	136.8826	P12:115:WERE:MARS-SSEN_115::
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83661	136.8719	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83661	136.8126	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.84434	136.7395	BEATRICE - HARBINE 115KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8618	136.5511	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86868	136.3828	CARLTON JUNCTION - GENEVA 115KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82298	136.1004	G15088_T 345.00 - PAULINE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86324	136.0738	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86155	136.0563	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.869	135.9455	CARLTON JUNCTION - GENEVA 115KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83274	135.9069	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83274	135.9043	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83451	135.8388	AXTELL - SWEETWATER 345KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83274	135.7693	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83627	135.7386	GEN640555 W-S.FLATS.GENW0.6900
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83595	135.675	GEN641089 2-ENERGY CENTER 2
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83774	135.2895	CRETE - FRIEND 115KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86867	135.2868	CARLTON JUNCTION - GENEVA 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86919	135.19	CARLTON JUNCTION - GENEVA 115KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83595	135.1152	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86155	134.8503	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83673	134.7255	P12:115:WERE:MARS-SSEN_115::
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83673	134.719	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83673	134.6813	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8738	134.4552	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8356	134.3745	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83435	134.3007	AXTELL - SWEETWATER 345KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83587	134.279	BASE CASE
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83484	134.1789	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83938	134.1071	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83954	134.0295	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83455	134.001	AXTELL - SWEETWATER 345KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83935	133.8711	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83459	133.8473	AXTELL - SWEETWATER 345KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83606	133.213	GEN641089 2-ENERGY CENTER 2
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8344	133.207	AXTELL - SWEETWATER 345KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86175	133.136	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83606	133.026	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83606	132.9672	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86174	132.936	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83959	132.9096	KNOB HILL - STEELE CITY 115KV CKT 1
FDNSLock	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8359	132.8574	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83785	132.8192	CRETE - FRIEND 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83606	132.7854	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNSLock	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8359	132.7025	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8359	132.5378	GEN641089 2-ENERGY CENTER 2
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83684	132.5146	P12:115:WERE:MARS-SSEN_115::
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83684	132.5089	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83617	132.5081	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83684	132.4777	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83591	132.4377	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83617	132.4325	GEN641089 2-ENERGY CENTER 2
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83684	132.4316	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
FDNSLock	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83617	132.2958	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83591	132.22	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83617	132.2192	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83682	132.2189	CLIFTON - CONCORDIA 115KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83682	132.2189	CLIFTON - CONCORDIA 115KV CKT 1
FDNSLock	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8359	132.1796	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83595	132.178	BASE CASE
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83795	132.1735	CRETE - FRIEND 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83569	132.1672	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8738	132.0573	CARLTON JUNCTION - GENEVA 115KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83664	131.8701	P12:115:WERE:MARS-SSEN_115::
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83664	131.86	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83694	131.8164	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83664	131.8047	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83591	131.745	GEN641089 2-ENERGY CENTER 2
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83664	131.7236	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83591	131.6177	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83506	131.3664	MINGO - RED WILLOW 345KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83506	131.3664	MINGO - RED WILLOW 345KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83556	131.1545	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83236	130.8867	ENERGY CENTER - SUTTON 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83587	130.8473	GEN640012 1-HEBRON CT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.84784	130.4336	BEATRICE - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83587	130.4019	GEN640555 W-S.FLATS.GENW0.6900
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83606	129.9505	BASE CASE
FDNSLock	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83981	129.8628	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
FDNSLock	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83981	129.8628	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.87338	129.6874	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83496	129.4889	MINGO - RED WILLOW 345KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83496	129.4889	MINGO - RED WILLOW 345KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83627	129.4671	GEN563212 1-G15087_3 0.6900
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83617	129.3701	BASE CASE
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83244	129.3337	GENEVA - SUTTON 115KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8359	129.2359	BASE CASE
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.84168	128.7063	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83228	128.672	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83228	128.6679	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83244	128.6038	ENERGY CENTER - SUTTON 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83228	128.5309	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83595	128.4445	GEN640555 W-S.FLATS.GENW0.6900
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83591	128.3731	BASE CASE
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.84817	128.358	GENEVA - MCCOOL 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83439	128.2152	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78363	128.1676	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78363	128.1676	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.84788	128.0753	BEATRICE - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.7832	127.852	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.7832	127.852	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83514	127.5978	MINGO - RED WILLOW 345KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83514	127.5978	MINGO - RED WILLOW 345KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.84094	127.4447	CRETE - FRIEND 115KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83942	127.3246	GEN641089 2-ENERGY CENTER 2
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83222	127.2646	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83222	127.2602	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83257	127.1305	GENEVA - SUTTON 115KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83222	127.1266	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.87338	126.9596	CARLTON JUNCTION - GENEVA 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.84015	126.8531	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.84015	126.8531	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83269	126.8262	GENEVA - SUTTON 115KV CKT 1
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86185	126.6045	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82266	126.6037	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82243	126.3722	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.84145	126.2746	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83257	126.1326	ENERGY CENTER - SUTTON 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83606	126.0984	GEN640555 W-S.FLATS.GENW0.6900
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83246	125.9851	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83246	125.9804	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83269	125.8444	ENERGY CENTER - SUTTON 115KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83246	125.8426	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83497	125.8065	MINGO - RED WILLOW 345KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83497	125.8065	MINGO - RED WILLOW 345KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83264	125.7575	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83264	125.7529	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83617	125.6315	GEN640555 W-S.FLATS.GENW0.6900
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83264	125.6299	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8324	125.4389	ENERGY CENTER - SUTTON 115KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8359	125.3608	GEN640555 W-S.FLATS.GENW0.6900
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82251	125.1845	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83942	124.8849	BASE CASE
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83985	124.8245	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83985	124.8245	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83231	124.6979	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83596	124.6971	AXTELL - SWEETWATER 345KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83231	124.6946	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83931	124.5793	GEN641089 2-ENERGY CENTER 2
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83231	124.5636	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83591	124.5269	GEN640555 W-S.FLATS.GENW0.6900
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83985	124.5127	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83985	124.5127	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83587	124.1436	GEN563212 1-G15087_3 0.6900
FDNS	09ALL_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82298	124.1401	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83931	124.0973	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8344	124.0594	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83242	124.0469	ENERGY CENTER - SUTTON 115KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.84092	124.0024	CRETE - FRIEND 115KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83226	123.8182	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83226	123.8149	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.84763	123.7937	GENEVA - MCCOOL 115KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83226	123.6669	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83919	123.3589	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78323	123.2872	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78323	123.2872	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82257	123.1177	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8229	122.5467	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83445	122.4773	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83656	122.1921	ENERGY CENTER - SUTTON 115KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83595	122.0861	GEN563212 1-G15087_3 0.6900
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83805	121.695	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83805	121.6925	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83461	121.6872	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83805	121.5782	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86189	121.3156	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83931	121.1786	BASE CASE
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83942	121.1233	GEN640555 W-S.FLATS.GENW0.6900
FDNS	09ALL_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8226	121.1031	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83445	121.0813	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83476	120.9649	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86187	120.9377	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78327	120.4974	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78327	120.4974	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78352	120.3162	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78352	120.3162	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83606	119.936	GEN563212 1-G15087_3 0.6900
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78325	119.6803	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78325	119.6803	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82812	119.4632	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78343	119.3685	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78343	119.3685	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83617	119.3521	GEN563212 1-G15087_3 0.6900
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8359	119.0776	GEN563212 1-G15087_3 0.6900
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83661	118.6668	GENEVA - SUTTON 115KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83591	118.3635	GEN563212 1-G15087_3 0.6900
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8398	118.2845	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83661	117.9399	ENERGY CENTER - SUTTON 115KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83931	117.4261	GEN640555 W-S.FLATS.GENW0.6900
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83797	117.0203	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83797	117.0163	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83797	116.8771	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82805	115.5112	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83942	114.8562	GEN563212 1-G15087_3 0.6900
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78808	114.3999	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78808	114.3999	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82266	114.3517	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	09ALL_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82243	114.1339	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83943	113.437	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	09ALL_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82251	112.7899	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83931	111.131	GEN563212 1-G15087_3 0.6900
FDNS	09ALL_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82257	110.789	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	110.4295	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	00NR_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	110.4293	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8229	110.3999	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	110.3982	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	00NR_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	110.3981	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	00NR_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	110.3761	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	00NR_G16_064	0	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	110.3698	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	00NR_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	110.361	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	00NR_G16_064	0	20SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	110.3536	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	110.3076	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	00NR_G16_064	0	25SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	110.2985	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.7885	110.0224	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.7885	110.0224	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09NR_G16_064	0	20L	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82812	107.4363	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_064	0	20WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	103.3945	GUIDE ROCK - SUPERIOR 115KV CKT 1
FDNS	00NR_G16_064	0	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	103.2897	GUIDE ROCK - SUPERIOR 115KV CKT 1
FDNS	09NR_G16_064	0	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82805	103.2098	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99	99	0.41355	110.4482	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	FAIRBURY - G15087_T 115.00 115KV CKT 1	99	99	0.40869	107.1147	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99	99	0.41293	102.2579	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	FROM->TO	FAIRBURY - HARBINE 115KV CKT 1	99	99	0.40325	101.8764	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120	120	1	174.8712	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120	120	1	174.0809	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120	120	1	157.217	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	00NR_G16_064	2	17SP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120	120	1	109.5607	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	00NR_G16_064	2	16WP	G16_064	TO->FROM	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1	120	120	1	109.5163	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120	120	1	166.5042	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120	120	1	160.6929	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120	120	1	151.0255	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	00NR_G16_064	2	16WP	G16_064	FROM->TO	GUIDE ROCK - SUPERIOR 115KV CKT 1	120	120	1	102.0589	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120	120	1	152.5215	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120	120	1	141.95	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	FROM->TO	HEBRON - NORTH HEBRON 115KV CKT 1	120	120	1	138.6336	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120	120	1	161.9005	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120	120	1	150.9788	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	HEBRON - SUPERIOR 115KV CKT 1	120	120	1	146.9636	PAULINE - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5733	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5678	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5443	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5439	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5198	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	168.5195	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	163.1216	GUIDE ROCK - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	161.3869	GUIDE ROCK - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	159.4519	HEBRON - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	159.4441	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	157.5097	GUIDE ROCK - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	157.2956	HEBRON - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	157.2887	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	154.2764	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	154.2747	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	152.7977	HEBRON - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	149.5897	HEBRON - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	149.5811	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	148.8378	GUIDE ROCK - SUPERIOR 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	148.4307	HEBRON - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86188	147.8665	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86166	147.8232	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86166	146.5453	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	145.1665	HEBRON - SUPERIOR 115KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	145.1593	P12:115:NPPD:1173:SUPEROR7:HEBRN N7:BTB
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86187	144.2789	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86168	144.2263	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86868	142.5413	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86168	141.7481	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86879	140.551	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	140.5002	HEBRON - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.84402	139.603	BEATRICE - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86902	139.4512	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	138.5573	HEBRON - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8442	138.3813	BEATRICE - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86879	137.8268	CARLTON JUNCTION - GENEVA 115KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86189	137.1146	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86176	137.0409	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83951	136.8908	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86902	135.9413	CARLTON JUNCTION - GENEVA 115KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86292	135.8708	FAIRBURY - G15087_T 115.00 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86123	135.8531	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8345	135.7763	AXTELL - SWEETWATER 345KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83597	135.4717	GEN641089 2-ENERGY CENTER 2
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86868	135.2224	CARLTON JUNCTION - GENEVA 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83776	135.0637	CRETE - FRIEND 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83597	134.7096	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86123	134.6209	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83675	134.5061	P12:115:WERE:MARS-SSEN_115::
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83675	134.4998	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83675	134.4619	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83454	133.999	AXTELL - SWEETWATER 345KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83956	133.9575	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83939	133.8575	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83609	133.1651	GEN641089 2-ENERGY CENTER 2
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83439	133.1305	AXTELL - SWEETWATER 345KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86176	132.8729	FAIRBURY - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83787	132.7748	CRETE - FRIEND 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83609	132.7569	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83609	132.711	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83609	132.4995	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83686	132.4536	P12:115:WERE:MARS-SSEN_115::
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83686	132.4479	MARSHAL3 115.00 - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R.E. 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83686	132.4167	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SMITTYVILLE N.M. COOP (NEMAHA MARSHALL R
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83686	132.3706	BAILEYVILLE N.M. STATION (NEMAHA MARSHALL R - SOUTH SENECA 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83597	131.9536	BASE CASE
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83592	131.8871	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83592	131.7386	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83592	131.4979	GEN641089 2-ENERGY CENTER 2
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83592	131.1943	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83609	129.8884	BASE CASE
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8732	129.5838	CARLTON JUNCTION - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8351	129.5302	MINGO - RED WILLOW 345KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8351	129.5302	MINGO - RED WILLOW 345KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83247	129.0747	GENEVA - SUTTON 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83247	128.3459	ENERGY CENTER - SUTTON 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83597	128.2281	GEN640555 W-S.FLATS.GENW0.6900
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83592	128.1486	BASE CASE
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.84761	127.9061	BEATRICE - HARBINE 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8326	127.0599	GENEVA - SUTTON 115KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83225	127.0385	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83225	127.033	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83225	126.8985	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8732	126.874	CARLTON JUNCTION - GENEVA 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8326	126.0726	ENERGY CENTER - SUTTON 115KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8411	126.0634	KNOB HILL - STEELE CITY 115KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83609	126.0467	GEN640555 W-S.FLATS.GENW0.6900
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82261	126.0167	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83249	125.9349	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83249	125.9303	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83509	125.8187	MINGO - RED WILLOW 345KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83509	125.8187	MINGO - RED WILLOW 345KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83249	125.7881	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82267	124.8058	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83574	124.6459	AXTELL - SWEETWATER 345KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.839	124.4082	GEN641089 2-ENERGY CENTER 2
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83987	124.3864	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83987	124.3864	MCCOOL (MCCOOL T2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83592	124.3086	GEN640555 W-S.FLATS.GENW0.6900
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83442	123.9169	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83243	123.8397	ENERGY CENTER - SUTTON 115KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.8406	123.8223	CRETE - FRIEND 115KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.839	123.7343	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.84741	123.6781	GENEVA - MCCOOL 115KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83228	123.6119	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83228	123.6087	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83228	123.4681	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82276	123.0669	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83597	121.8682	GEN563212 1-G15087_3 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83463	121.6874	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.86189	121.0793	G15087_T 115.00 - NORTH HEBRON 115KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83446	121.0003	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.839	120.9914	BASE CASE
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78325	120.4181	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78325	120.4181	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83609	119.8823	GEN563212 1-G15087_3 0.6900
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78324	119.5921	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78324	119.5921	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78341	119.3608	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78341	119.3608	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83625	118.4405	GENEVA - SUTTON 115KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83592	118.1482	GEN563212 1-G15087_3 0.6900
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83625	117.7138	ENERGY CENTER - SUTTON 115KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.839	117.2463	GEN640555 W-S.FLATS.GENW0.6900
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83764	116.8288	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83764	116.8243	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83764	116.6954	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82758	115.0919	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	09ALL_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82261	113.9011	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.83924	113.3264	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	09ALL_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82267	112.5719	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.839	110.9539	GEN563212 1-G15087_3 0.6900
FDNS	09ALL_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82276	110.8616	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	110.5454	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	00NR_G16_064	2	17SP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	110.5387	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	00NR_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	110.4228	GUIDE ROCK - ROSEMONT 115.00 115KV CKT 1
FDNS	00NR_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	110.4225	P12:115:NPPD:1171B:SUPEROR7:PAULINE7:BTB
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78835	109.9211	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.78835	109.9211	PAULINE (PAULINE T1) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_064	2	16WP	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	1	103.3234	GUIDE ROCK - SUPERIOR 115KV CKT 1
FDNS	09NR_G16_064	2	17G	G16_064	TO->FROM	PAULINE - ROSEMONT 115.00 115KV CKT 1	120	120	0.82758	103.0262	G15088_T 345.00 - MOORE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.50777	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.50777	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.47451	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.43861	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.43861	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.35588	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.35588	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.2594	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.2594	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.25389	-	2801X
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.25389	-	2810X2
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.23513	-	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.23513	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.2193	-	2809X1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.2193	-	2809X2
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	720	792	0.1297	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	720	792	0.1297	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	717	789	0.12694	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	717	789	0.12694	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	717	789	0.12694	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.12694	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.11863	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	478	526	0.11863	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.11863	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	732	732	0.11863	-	BROADLAND - HURON 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	400	400	0.11863	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	400	400	0.11863	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	720	720	0.11756	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	720	720	0.11756	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	720	720	0.11756	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	720	720	0.11756	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	720	720	0.11756	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	720	720	0.11756	-	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	717	789	0.10965	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	717	789	0.10965	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.10965	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	0	0	0.10965	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	717	789	0.10573	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	17SP	G16_065	-	Non-Converged Contingency	717	789	0.10573	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	25SP	G16_065	-	Non-Converged Contingency	0	0	0.42724	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	25SP	G16_065	-	Non-Converged Contingency	0	0	0.42724	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_065	0	25SP	G16_065	-	Non-Converged Contingency	0	0	0.21362	-	2809X1
FDNSLock-Blown up	16ALL_G16_065	0	25SP	G16_065	-	Non-Converged Contingency	0	0	0.21362	-	2809X2
FDNSLock-Blown up	16ALL_G16_065	0	25SP	G16_065	-	Non-Converged Contingency	720	720	0.12394	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	25SP	G16_065	-	Non-Converged Contingency	717	789	0.10681	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	25SP	G16_065	-	Non-Converged Contingency	717	789	0.10681	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	0	25SP	G16_065	-	Non-Converged Contingency	0	0	0.10681	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_065	0	25SP	G16_065	-	Non-Converged Contingency	0	0	0.10681	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	0	0	0.61195	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	0	0	0.50892	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	0	0	0.50892	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	0	0	0.50523	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	0	0	0.41838	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	0	0	0.41838	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	0	0	0.26683	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	0	0	0.26683	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	0	0	0.25446	-	2810X2
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	0	0	0.24835	-	2809X2
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	720	792	0.13342	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	717	789	0.12723	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	717	789	0.12723	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	717	789	0.12418	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	0	0	0.12418	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	720	720	0.11716	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	720	720	0.11716	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	720	720	0.11716	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	720	720	0.11716	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	717	789	0.11545	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	717	789	0.11545	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	2	17SP	G16_065	-	Non-Converged Contingency	478	526	0.10673	-	BRDLAND-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	3	17SP	G16_065	-	Non-Converged Contingency	0	0	0.6129	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	16ALL_G16_065	3	17SP	G16_065	-	Non-Converged Contingency	0	0	0.50586	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock-Blown up	16ALL_G16_065	3	17SP	G16_065	-	Non-Converged Contingency	0	0	0.417	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_065	3	17SP	G16_065	-	Non-Converged Contingency	0	0	0.417	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_065	3	17SP	G16_065	-	Non-Converged Contingency	0	0	0.26475	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	16ALL_G16_065	3	17SP	G16_065	-	Non-Converged Contingency	0	0	0.26475	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_065	3	17SP	G16_065	-	Non-Converged Contingency	0	0	0.25607	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_065	3	17SP	G16_065	-	Non-Converged Contingency	0	0	0.24737	-	2809X2
FDNSLock-Blown up	16ALL_G16_065	3	17SP	G16_065	-	Non-Converged Contingency	720	792	0.13238	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_065	3	17SP	G16_065	-	Non-Converged Contingency	720	792	0.13238	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	3	17SP	G16_065	-	Non-Converged Contingency	717	789	0.12888	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	3	17SP	G16_065	-	Non-Converged Contingency	720	720	0.12803	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_065	3	17SP	G16_065	-	Non-Converged Contingency	717	789	0.12368	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	3	17SP	G16_065	-	Non-Converged Contingency	0	0	0.12368	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_065	3	17SP	G16_065	-	Non-Converged Contingency	717	789	0.11513	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_065	3	17SP	G16_065	-	Non-Converged Contingency	717	789	0.11513	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_065	0	25SP	G16_065	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.14545	99.6	BASE CASE
FDNS	16ALL_G16_065	0	17SP	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.11863	100.8906	BASE CASE
FDNS	16ALL_G16_065	0	25SP	G16_065	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.11653	99.5	BASE CASE
FDNS	16ALL_G16_065	2	17SP	G16_065	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19596	140.0642	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_065	2	17SP	G16_065	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19596	139.8313	2809X1
FDNS	16ALL_G16_065	2	17SP	G16_065	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19596	139.8172	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_065	2	17SP	G16_065	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14589	106.0224	BASE CASE
FDNS	16ALL_G16_065	2	25SP	G16_065	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14313	100.6714	BASE CASE
FDNS	16ALL_G16_065	2	17SP	G16_065	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.14762	99.6	BASE CASE
FDNS	16ALL_G16_065	3	17SP	G16_065	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19583	139.8857	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_065	3	17SP	G16_065	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19583	139.6791	2809X1
FDNS	16ALL_G16_065	3	17SP	G16_065	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19583	139.6721	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_065	3	17SP	G16_065	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1459	105.953	BASE CASE
FDNS	16ALL_G16_065	4	17SP	G16_065	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14291	102.3818	BASE CASE
FDNSLock-Blown up	16ALL_G16_066	0	16WP	G16_066	-	Non-Converged Contingency	0	0	0.10756	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.50775	-	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.50775	-	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.47448	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.43858	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.43858	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.35586	-	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.35586	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.25938	-	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.25938	-	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.25387	-	2801X
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.25387	-	2810X2
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.2351	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.21929	-	2809X1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.21929	-	2809X2
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	720	792	0.12969	-	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	720	792	0.12969	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	717	789	0.12694	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	717	789	0.12694	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	717	789	0.12694	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.12694	-	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.11862	-	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	478	526	0.11862	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.11862	-	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	732	732	0.11862	-	BROADLAND - HURON 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	400	400	0.11862	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	400	400	0.11862	-	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	720	720	0.11755	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	720	720	0.11755	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	720	720	0.11755	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	720	720	0.11755	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	720	720	0.11755	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	717	789	0.10965	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	717	789	0.10965	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.10965	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	0	0	0.10965	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	717	789	0.10572	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	717	789	0.10572	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	17SP	G16_066	-	Non-Converged Contingency	319	341	0.07791	-	NUNDRWD - WAYSIDE 230KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	25SP	G16_066	-	Non-Converged Contingency	0	0	0.42722	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	25SP	G16_066	-	Non-Converged Contingency	0	0	0.42722	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_066	0	25SP	G16_066	-	Non-Converged Contingency	0	0	0.21361	-	2809X1
FDNSLock-Blown up	16ALL_G16_066	0	25SP	G16_066	-	Non-Converged Contingency	0	0	0.21361	-	2809X2
FDNSLock-Blown up	16ALL_G16_066	0	25SP	G16_066	-	Non-Converged Contingency	720	720	0.12393	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	25SP	G16_066	-	Non-Converged Contingency	478	526	0.11652	-	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	25SP	G16_066	-	Non-Converged Contingency	717	789	0.10681	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	25SP	G16_066	-	Non-Converged Contingency	717	789	0.10681	-	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	0	25SP	G16_066	-	Non-Converged Contingency	0	0	0.10681	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_066	0	25SP	G16_066	-	Non-Converged Contingency	0	0	0.10681	-	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_066	0	25SP	G16_066	-	Non-Converged Contingency	717	789	0.09591	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	0	0	0.61192	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	0	0	0.5052	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	0	0	0.41836	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	0	0	0.41836	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	0	0	0.25445	-	2810X2
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	0	0	0.24834	-	2809X2
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	720	792	0.13341	-	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	717	789	0.12722	-	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	717	789	0.12722	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	717	789	0.12722	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	717	789	0.12417	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	0	0	0.12417	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	720	720	0.11715	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	720	720	0.11715	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	720	720	0.11715	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	720	720	0.11715	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	717	789	0.11544	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	2	17SP	G16_066	-	Non-Converged Contingency	717	789	0.11544	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	2	25SP	G16_066	-	Non-Converged Contingency	0	0	0.24661	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	16ALL_G16_066	2	25SP	G16_066	-	Non-Converged Contingency	720	720	0.12331	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_066	3	17SP	G16_066	-	Non-Converged Contingency	0	0	0.61286	-	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNSLock-Blown up	16ALL_G16_066	3	17SP	G16_066	-	Non-Converged Contingency	0	0	0.50584	-	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	16ALL_G16_066	3	17SP	G16_066	-	Non-Converged Contingency	0	0	0.41697	-	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNSLock-Blown up	16ALL_G16_066	3	17SP	G16_066	-	Non-Converged Contingency	0	0	0.41697	-	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNSLock-Blown up	16ALL_G16_066	3	17SP	G16_066	-	Non-Converged Contingency	0	0	0.24735	-	2809X2
FDNSLock-Blown up	16ALL_G16_066	3	17SP	G16_066	-	Non-Converged Contingency	717	789	0.12887	-	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	3	17SP	G16_066	-	Non-Converged Contingency	717	789	0.12887	-	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	3	17SP	G16_066	-	Non-Converged Contingency	720	720	0.12802	-	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	3	17SP	G16_066	-	Non-Converged Contingency	720	720	0.12802	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	3	17SP	G16_066	-	Non-Converged Contingency	717	789	0.12368	-	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	3	17SP	G16_066	-	Non-Converged Contingency	0	0	0.12368	-	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNSLock-Blown up	16ALL_G16_066	3	17SP	G16_066	-	Non-Converged Contingency	717	789	0.11512	-	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNSLock-Blown up	16ALL_G16_066	3	17SP	G16_066	-	Non-Converged Contingency	717	789	0.11512	-	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	16ALL_G16_066	0	25SP	G16_066	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.14545	100	BASE CASE
FDNS	16ALL_G16_066	0	17SP	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.11862	101.0519	BASE CASE
FDNS	16ALL_G16_066	0	25SP	G16_066	FROM->TO	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1	400	400	0.11652	99.7	BASE CASE
FDNS	16ALL_G16_066	2	17SP	G16_066	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19595	140.383	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_066	2	17SP	G16_066	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19595	140.1482	2809X1
FDNS	16ALL_G16_066	2	17SP	G16_066	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19595	140.1327	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_066	2	17SP	G16_066	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14588	106.2255	BASE CASE
FDNS	16ALL_G16_066	2	25SP	G16_066	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14313	100.8942	BASE CASE
FDNS	16ALL_G16_066	2	17SP	G16_066	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.14762	100.2161	BASE CASE
FDNS	16ALL_G16_066	3	17SP	G16_066	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19582	140.2109	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	16ALL_G16_066	3	17SP	G16_066	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19582	140.0012	2809X1
FDNS	16ALL_G16_066	3	17SP	G16_066	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.19582	139.905	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	16ALL_G16_066	3	17SP	G16_066	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.14589	106.174	BASE CASE
FDNS	16ALL_G16_066	3	17SP	G16_066	TO->FROM	BISON - HETINGER 230KV CKT 1	215	236	0.14697	99.6	BASE CASE
FDNS	16ALL_G16_066	4	17SP	G16_066	FROM->TO	ANTELOP-LNX3345.00 - EMMONSCO 345.00 345KV CKT 1	478	526	0.1429	102.5894	BASE CASE
FDNS	08NR_G16_068	0	20L	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305	371	0.03833	111.0608	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08NR_G16_068	0	20L	G16_068	TO->FROM	CLEAVELAND - CLEVLND 4 138.00 138KV CKT Z1	305	371	0.03833	111.0608	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08ALL_G16_068	0	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.38607	109.8862	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_068	0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.37819	105.151	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_068	0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.37819	105.1164	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_068	0	25SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.38675	103.7925	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_068	0	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.38021	101.7554	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_068	0	17G	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.38021	101.7434	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_068	0	16WP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.43005	100.7413	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_068	0	17SP	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.3821	100.5087	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_068	0	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.37025	99.8	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_068	0	20L	G16_068	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.37025	99.6	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_068	0	25SP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.38607	106.1467	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_068	0	16WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.37819	100.2174	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_068	0	16WP	G16_068	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.37819	100.1722	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNSLock-Blown up	06ALL_G16_069	2	20WP	G16_069	-	Non-Converged Contingency	0	0	0.03854	-	P12:230:SPS:K43.1.PRNGLE.HARR_E
FDNS	06ALL_G16_069	0	20WP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28249	147.6442	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_069	0	20WP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28249	145.4691	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_069	0	20L	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2575	142.0039	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_069	0	17G	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.27458	140.9221	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_069	0	20L	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2575	140.3385	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_069	0	17G	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.27458	139.2365	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_069	0	16WP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28271	134.524	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_069	0	16WP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28271	133.5162	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_069	0	20SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2873	127.1869	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_069	0	20SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.2873	126.318	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_069	0	17SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28108	125.1134	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_069	0	17SP	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.28108	124.3686	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G16_069	0	20L	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.04553	118.0854	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G16_069	0	20L	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.04553	117.6669	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G16_069	0	17G	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.0469	110.0632	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G16_069	0	17G	G16_069	FROM->TO	CRAWFISH_DR 345.00 (TUCO_2 XFMR) 345/230/13.2KV TRANSFORMER CKT 1	560	560	0.0469	108.2839	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_069	0	17G	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.24645	132.2084	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_069	0	20L	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.27361	129.4683	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_069	0	20SP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.29866	128.4023	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_069	0	17SP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.25984	124.8205	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_069	0	20WP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.29433	118.174	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G16_069	0	20L	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.06505	111.7261	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06ALL_G16_069	0	16WP	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	552	608	0.25426	107.7929	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	06NR_G16_069	0	17G	G16_069	TO->FROM	CRAWFISH_DR2230.00 - TUCO INTERCHANGE 230KV CKT 1	497	547	0.05899	102.3632	CRAWFISH_DR 345.00 - TUCO INTERCHANGE 345KV CKT 1
FDNS	00NR_G16_069	0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05435	116.5339	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_069	0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.05435	116.5339	CARLISLE INTERCHANGE - TUCO INTERCHANGE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_069	0	25SP	G16_069	TO->FROM	JONES STATION - TUCO INTERCHANGE 230KV CKT 1	343.79	343.79	0.03571	102.4292	TUCO INTERCHANGE - YOAKUM_345 345.00 345KV CKT 1
FDNS	00NR_G16_069	0	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03579	101.0751	LUBBOCK POWER & LIGHT-SOUTHEAST - LUBBOCK SOUTH INTERCHANGE 230KV CKT 1
FDNS	00NR_G16_069	0	25SP	G16_069	FROM->TO	LUBBOCK POWER & LIGHT-HOLLY PLANT (SHIH T101039) 230/69/13.5KV TRANSFORMER CKT 1	224	224	0.03579	101.0618	P12:LPL:SPS:K64.1.LP-SE.LUBBS
FDNSLock-Blown up	02ALL_G16_070	0	17G	G16_070	-	Non-Converged Contingency	956.09	1051.7	0.18336	-	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNSLock-Blown up	02ALL_G16_070	2	16WP	G16_070	-	Non-Converged Contingency	1420	1775	0.09627	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 2
FDNSLock-Blown up	02ALL_G16_070	2	16WP	G16_070	-	Non-Converged Contingency	1420	1775	0.096	-	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNSLock-Blown up	02ALL_G16_070	2	16WP	G16_070	-	Non-Converged Contingency	552.14	607.12	0.04037	-	AMARILLO SOUTH INTERCHANGE - RANDALL COUNTY INTERCHANGE 230KV CKT 1
FDNSLock-Blown up	02ALL_G16_070	2	16WP	G16_070	-	Non-Converged Contingency	177	177	0.03223	-	AMARILLO SOUTH INTERCHANGE - ARROWHEAD SUB 115KV CKT 1
FDNSLock-Blown up	02ALL_G16_070	2	16WP	G16_070	-	Non-Converged Contingency	177	177	0.03223	-	ARROWHEAD SUB - OSAGE SWITCHING STATION 115KV CKT 1
FDNS	02ALL_G16_070	0	20L	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120	154	1	101.7394	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	20L	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120	154	1	101.7394	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	17G	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120	154	1	101.3498	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	17SP	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120	154	1	100.1644	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	17SP	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120	154	1	100.1644	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	25SP	G16_070	TO->FROM	BUSHLAND INTERCHANGE - POTTER COUNTY INTERCHANGE 230KV CKT 1	318.7	350.57	0.0375	111.5901	BASE CASE
FDNS	02ALL_G16_070	0	17SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120	154	1	108.7104	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	17SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120	154	1	108.7104	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	17G	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120	154	1	108.667	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	20L	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120	154	1	108.3004	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	20L	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120	154	1	108.3004	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	25SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120	154	1	107.4646	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	25SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120	154	1	107.4646	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	20SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120	154	1	107.461	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	20SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120	154	1	107.461	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	25SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159	160	1	104.1643	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	25SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159	160	1	104.1643	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	20SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159	160	1	104.013	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	20SP	G16_070	FROM->TO	MARTIN SUB - PANTEX NORTH SUB 115KV CKT 1	159	160	1	104.013	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	25SP	G16_070	FROM->TO	PANTEX NORTH SUB - PANTEX SOUTH SUB 115KV CKT 1	160	160	1	103.7154	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	25SP	G16_070	FROM->TO	PANTEX NORTH SUB - PANTEX SOUTH SUB 115KV CKT 1	160	160	1	103.7154	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	20SP	G16_070	FROM->TO	PANTEX NORTH SUB - PANTEX SOUTH SUB 115KV CKT 1	160	160	1	103.5654	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	20SP	G16_070	FROM->TO	PANTEX NORTH SUB - PANTEX SOUTH SUB 115KV CKT 1	160	160	1	103.5654	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	0	25SP	G16_070	FROM->TO	SPSNORTH_STX	1160	1160	0.33714	102.6914	BASE CASE
FDNS	02ALL_G16_070	2	17G	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120	154	1	101.3499	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	2	17SP	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120	154	1	100.1644	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	2	17SP	G16_070	TO->FROM	ASARCO_TP 3115.00 - HIGHLAND PARK TAP 115KV CKT 1	120	154	1	100.1644	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	2	17SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120	154	1	108.7104	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	2	17SP	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120	154	1	108.7104	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	2	17G	G16_070	TO->FROM	HIGHLAND PARK TAP - PANTEX SOUTH SUB 115KV CKT 1	120	154	1	108.6628	HUTCHINSON COUNTY INTERCHANGE S. - MARTIN SUB 115KV CKT 1
FDNS	02ALL_G16_070	3	25SP	G16_070	FROM->TO	SPSNORTH_STX	1160	1160	0.33693	102.8678	BASE CASE
FDNSLock-Blown up	00_G16_071	0	16WP	G16_071	-	Non-Converged Contingency	2075	2075	0.0311	-	LACYGNE - WEST GARDNER 345KV CKT 1
FDNS	08ALL_G16_071	0	20L	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106	130	1	183.7551	BASE CASE
FDNS	08ALL_G16_071	0	17G	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106	130	1	183.1519	BASE CASE
FDNS	08ALL_G16_071	0	17SP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106	130	1	183.0238	BASE CASE
FDNS	08ALL_G16_071	0	20SP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106	130	1	181.911	BASE CASE
FDNS	08ALL_G16_071	0	16WP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106	130	1	181.841	BASE CASE
FDNS	08ALL_G16_071	0	25SP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106	130	1	181.7398	BASE CASE
FDNS	08ALL_G16_071	0	20WP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106	130	1	180.5996	BASE CASE
FDNS	08ALL_G16_071	0	20WP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106	130	1	149.7008	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	20WP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106	130	1	149.6762	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	20WP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106	130	1	149.6733	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	20WP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106	130	1	149.4953	P12:138:OKGE:3TERM7
FDNS	08ALL_G16_071	0	20WP	G16_071	FROM->TO	CHILOCCO4 138.00 - MIDLTNT4 138.00 138KV CKT 1	106	130	1	149.4937	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.69386	153.1719	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.69386	151.4785	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.69386	149.7338	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.69386	146.2804	P12:138:OKGE:3TERM7
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.69386	146.2708	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.6935	144.0799	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.6935	142.5961	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.69297	141.6669	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.6935	140.2214	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.69297	140.1092	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.6935	137.6447	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.69297	137.1969	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.69297	133.896	P12:138:OKGE:3TERM7
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.69297	133.8872	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43668	127.4807	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL_G16_071	0	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43668	126.8382	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43668	125.756	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43668	125.3885	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43684	125.0845	P12:138:OKGE:3TERM7
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25356	123.3624	G15052_T 345.00 - ROSE HILL 345KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25846	123.3077	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.35328	122.4757	KILDARE4 - WHITE EAGLE 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25251	122.1678	G15052_T 345.00 - ROSE HILL 345KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25744	121.3749	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25787	118.0281	SUMNER 4 - TIMBJCT4 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.35274	117.8257	KILDARE4 - WHITE EAGLE 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25711	117.3699	SUMNER 4 - TIMBJCT4 138KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25425	116.8203	G15052_T 345.00 - ROSE HILL 345KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27894	116.1039	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
FDNS	08ALL_G16_071	0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43681	115.9734	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27894	115.7758	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27894	115.598	P12:069:WERE:BELL-CRSW_69::
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2838	115.2992	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	115.2297	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	08ALL_G16_071	0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43615	114.6259	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43681	114.532	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28682	114.5033	TIMBER JUNCTION - UDALL 69KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28682	114.2723	P12:069:WERE:TIMJ-WEAV_69::
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25909	113.9473	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27829	113.5849	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28682	113.5099	RICHLAND - UDALL 69KV CKT 1
FDNS	08ALL_G16_071	0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43681	113.4644	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25787	113.4323	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
FDNS	08ALL_G16_071	0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43615	113.3732	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2838	113.3188	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27829	113.2883	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25356	113.1686	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.3532	113.1686	KILDARE4 - WHITE EAGLE 138KV CKT 1
FDNS	08ALL_G16_071	0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43611	112.8613	MIDLTNT4 138.00 - PECKHAM TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27894	112.8258	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25711	112.7142	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28295	112.4164	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	112.4052	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27791	112.273	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28682	112.203	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25251	112.0512	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25838	111.8809	SUMNER 4 - TIMBJCT4 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28597	111.8442	TIMBER JUNCTION - UDALL 69KV CKT 1
FDNS	08ALL_G16_071	0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43611	111.7404	NEWKIRK4 - PECKHAM TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43615	111.4837	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43694	111.1316	P12:138:OKGE:3TERM7
FDNS	08ALL_G16_071	0	20WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43681	110.8313	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28682	110.6234	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28597	110.5792	RICHLAND - UDALL 69KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28295	110.5545	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27894	110.3536	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
FDNS	08ALL_G16_071	0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43611	109.8502	NEWKIRK4 - NWKRKAT4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25547	109.3222	P12:138:OKGE:3TERM2
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25504	109.2436	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25541	109.2406	MORISNT4 138.00 - STILLWATER 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28597	109.2259	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
FDNS	08ALL_G16_071	0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43627	109.0693	P12:138:OKGE:3TERM7
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27894	108.9766	BELL - PECK 69KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27894	108.849	P12:069:WERE:BELL-MURR_69::
FDNS	08ALL_G16_071	0	20SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43615	108.8168	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27791	108.7306	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.26803	108.4788	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25985	108.348	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25985	108.2944	OSAGE - WEBB CITY TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.24855	108.229	EL PASO - ROSE HILL 138KV CKT 1
FDNS	08ALL_G16_071	0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43623	107.6164	P12:138:OKGE:3TERM7
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25504	107.5838	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25505	107.5621	CLEVELAND - TULSA NORTH 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25505	107.5621	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25471	107.5173	CLEVELAND - G15066_T 345.00 345KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27923	107.4849	CITY OF WELLINGTON - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27894	107.4103	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28597	107.3954	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
FDNS	08ALL_G16_071	0	25SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.43611	107.3795	KILDARE4 - NWKRKAT4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25985	107.2766	FAIRFAX TAP - SHIDLER 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25985	107.2765	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27791	107.2232	BELL - PECK 69KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25838	107.1687	TIMBJCT4 (TIMJ TX-1) 138/69/13.2KV TRANSFORMER CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28726	107.0872	TIMBER JUNCTION - UDALL 69KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	107.005	GEN640009 1-COOPER NUCLEAR STATION
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25427	106.918	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	106.8793	GEN542955 1-LACYGNE UNIT #1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25462	106.8402	MORISNT4 138.00 - STILLWATER 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	106.8291	GEN542962 2-IATAN UNIT #2
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25425	106.7941	G15052_T 345.00 - OPENSKY7 345.00 345KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25552	106.7671	4REMNGTON 138.00 - FAIRFAX 138KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28726	106.7216	P12:069:WERE:TIMJ-WEAV_69::
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25471	106.6178	917X
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.24779	106.6028	EL PASO - ROSE HILL 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	106.5833	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	106.5815	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	106.5813	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.26707	106.5232	SOONER (SOONER5) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	106.4857	GEN542956 2-LACYGNE UNIT #2
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2546	106.4755	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25565	106.472	SHIDLER - WEST PAWHUSKA 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25471	106.4417	G15066_T 345.00 - SOONER 345KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25565	106.4185	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2546	106.4054	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	106.3792	GEN542957 1-IATAN UNIT #1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	106.3156	GEN562902 1-G15052_3 0.6900
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25466	106.2588	MORISNT4 138.00 - SOONER 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25449	106.2372	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25448	106.2137	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25565	106.2135	DOMES - PAWHUSKA TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25449	106.2042	P12:138:WFEC:MSL15
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	106.1629	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25448	106.1628	MCELROY - UNVRSTY4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25565	106.1513	P12:138:AEPW:MOUNDRD4:SHIDLER4
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25565	106.06	DOMES - MOUND ROAD 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25374	106.0519	P12:069:WERE:ARKA-OAK_69::
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25449	106.0501	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25905	105.9977	OSAGE - WEBB CITY TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25448	105.9774	KINZE - MCELROY 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25448	105.9663	P12:138:OKGE:3TERM47
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	105.9468	GEN542951 5-HAWTHORN UNIT #5
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	105.9339	GEN532720 1-CANEYWF1 0.6900
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25766	105.9172	MARLAND TAP - OSAGE 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25425	105.665	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25391	105.5365	CLEVELAND - G15066_T 345.00 345KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27791	105.4797	GILL ENERGY CENTER WEST - PECK 69KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28431	105.1915	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25427	105.1883	G15063_T 345.00 - WOODRING 345KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28726	105.1166	RICHLAND - UDALL 69KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25905	104.9882	FAIRFAX TAP - SHIDLER 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25905	104.9881	FAIRFAX TAP - WEBB CITY TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27975	104.6752	CRESWELL - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
FDNS	08ALL_G16_071	0	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.24319	104.5886	KILDARE4 - WHITE EAGLE 138KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27923	104.5783	P12:069:WERE:BELL-CRSW_69::
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	104.5334	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	104.531	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	104.5307	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25486	104.5143	SHIDLER - WEST PAWHUSKA 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	104.5064	GEN542955 1-LACYGNE UNIT #1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25486	104.4747	PAWHUSKA TAP - WEST PAWHUSKA 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25391	104.4244	G15066_T 345.00 - SOONER 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25382	104.4052	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	104.3687	GEN542962 2-IATAN UNIT #2
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25382	104.2825	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27975	104.25	CITY OF WELLINGTON - SUMNER COUNTY NO. 4 ROME 69KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25486	104.2057	DOMES - PAWHUSKA TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	104.159	GEN542956 2-LACYGNE UNIT #2
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25433	104.14	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25486	104.0909	DOMES - MOUND ROAD 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25387	104.0574	MORISNT4 138.00 - SOONER 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	104.0221	GEN562902 1-G15052_3 0.6900
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	104.0214	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25371	104.0169	WAKITA4 138.00 - WAKITAS4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	104.0026	GEN542957 1-IATAN UNIT #1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	103.9587	BASE CASE
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25369	103.9217	STILLWATER - UNVRSTY4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25369	103.8688	MCELROY - UNVRSTY4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25371	103.8343	SANDY_CN_138138.00 - WAKITA4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25369	103.7031	KINZE - MCELROY 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	103.6802	GEN532720 1-CANEYWF1 0.6900
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25297	103.664	DELAWARE - NORTHEAST STATION 345KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25201	103.6163	ROSE HILL (ROSE TX-5) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	103.6096	GEN542951 5-HAWTHORN UNIT #5
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	103.5404	GEN563052 1-G15069_3 0.6900
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27923	103.3185	BELL - SUMNER COUNTY NO. 3 MILLER 69KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28726	103.1268	RICHLAND - ROSE HILL JUNCTION 69KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28431	102.7505	MDFRDTP4 138.00 - RENFROW4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25403	101.886	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.26437	101.8736	DMNCRKT4 - WHITE EAGLE 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	101.8592	GEN336821 1-GRAND GULF UNIT
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	101.8584	GEN562882 1-G15047_3 0.6900
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25358	101.8486	BLACKBERRY - NEOSHO 345KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25358	101.8486	BLACKBERRY - NEOSHO 345KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	101.8082	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	101.7686	BASE CASE
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.26437	101.7076	DMNCRKT4 - MILLER 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.26437	101.5903	MILLER - SOONER 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	101.571	GEN562429 1-G13-029 0.6900
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.29735	101.5507	CHIKASKIA - KILDARE4 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25193	101.4711	LATHAMS7 345.00 - ROSE HILL 345KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.26112	101.4262	OSAGE - SOONER PUMP TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.26112	101.3519	SOONER - SOONER PUMP TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25591	101.2868	P12:138:OKGE:3TERM2
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25309	101.2552	BOEING - STEARMAN 138KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25585	101.1833	MORISNT4 138.00 - STILLWATER 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	101.1808	GEN514806 1-SOONER UNIT 2
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27923	101.1639	BELL - PECK 69KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	101.0069	GEN301382 1-1OSAGEWINDG10.6900
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.27923	100.985	P12:069:WERE:BELL-MURR_69::
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	100.8132	GEN515483 1-BLKWLWD1 0.6900
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.26462	100.7529	WEAVER (WEAV TX-2) 138/69/13.2KV TRANSFORMER CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	100.6561	GEN563032 1-G15067_3 0.4180
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	100.6372	4OSAGEWIND 138.00 - 4REMNGTON 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	100.6366	4OSAGEWIND 138.00 138/34.5KV TRANSFORMER CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.28726	100.5382	ROSE HILL JUNCTION - WEAVER 69KV CKT 1
FDNS	08ALL_G16_071	0	20L	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25231	100.5355	SUMNER 4 - VIOLA 4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2539	100.4434	GEN562611 1-G14_064_3 0.6900
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.26025	100.3468	P12:138:AEPW-OGE:SHIDLER4:OSAGE 4
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25549	100.3461	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.26025	100.2926	OSAGE - WEBB CITY TAP 138KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.24909	100.2819	EL PASO - ROSE HILL 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	99.8	GEN336821 1-GRAND GULF UNIT
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	99.8	GEN562992 1-G15063_3 0.6900
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2838	99.7	CHIKASKIA - COYOTE 4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	16WP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2838	99.7	COYOTE 4 138.00 - G15-015T 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	99.7	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25281	99.7	BLACKBERRY - NEOSHO 345KV CKT 1
FDNS	08ALL_G16_071	0	17G	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.25312	99.6	GEN562882 1-G15047_3 0.6900
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	FARBER - SUMNER COUNTY NO. 10 BELLE PLAIN 138KV CKT 1	160	160	0.2551	99.5	CLEVELAND - G15066_T 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	08ALL_G16_071	0	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194	222	0.39723	110.8698	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	08ALL_G16_071	0	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194	222	0.46235	101.1643	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
FDNS	08ALL_G16_071	0	17SP	G16_071	TO->FROM	KINZE - MCELROY 138KV CKT 1	194	222	0.0367	100.1753	BASE CASE
FDNS	08ALL_G16_071	3	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194	222	0.39709	110.8018	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	08ALL_G16_071	3	20L	G16_071	FROM->TO	KILDARE4 - WHITE EAGLE 138KV CKT 1	194	222	0.46217	101.0845	G15-015T 138.00 - MDFRDTP4 138.00 138KV CKT 1
FDNS	08ALL_G16_072	0	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.25598	108.2698	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_072	0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.25926	103.7128	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_072	0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.25926	103.6676	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_072	0	25SP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.25665	102.1841	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_072	0	16WP	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.38686	101.4534	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_072	0	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.26129	100.3651	SOONER - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_072	0	17G	G16_072	FROM->TO	G15063_T 345.00 - MATHWSN7 345.00 345KV CKT 1	1192	1192	0.26129	100.3421	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_072	0	25SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.25598	104.1468	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_072	0	25SP	G16_072	TO->FROM	RENFROW4 138.00 - RENFROW4 138.00 138KV CKT 1	179	179	0.03317	107.8125	BASE CASE
FDNS	08ALL_G16_072	0	25SP	G16_072	FROM->TO	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1	183	228	0.03317	100.692	BASE CASE
FDNS	08ALL_G16_072	0	16WP	G16_072	FROM->TO	VIOLA 7 345.00 - WICHITA 345KV CKT 1	1076	1076	0.74595	104.9739	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	08ALL_G16_072	0	17G	G16_072	FROM->TO	VIOLA 7 345.00 - WICHITA 345KV CKT 1	1076	1076	0.74442	104.8997	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	08ALL_G16_072	0	17SP	G16_072	FROM->TO	VIOLA 7 345.00 - WICHITA 345KV CKT 1	1076	1076	0.74759	101.163	HUNTERS7 345.00 - WOODRING 345KV CKT 1
FDNS	08ALL_G16_072	0	20SP	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448	492.8	0.25414	102.6008	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_072	0	20SP	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448	492.8	0.25414	101.7239	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_072	3	25SP	G16_072	TO->FROM	G15063_T 345.00 - WOODRING 345KV CKT 1	956	956	0.25485	103.5987	NORTHWEST - SPRING CREEK 345KV CKT 1
FDNS	08ALL_G16_072	3	25SP	G16_072	FROM->TO	RENFROW4 138.00 - WAKITAS4 138.00 138KV CKT 1	183	228	0.03369	102.4024	BASE CASE
FDNS	08ALL_G16_072	3	20SP	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448	492.8	0.25833	104.3278	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_072	3	20SP	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448	492.8	0.25833	103.4757	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_072	3	17G	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448	492.8	0.25269	102.6301	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNS	08ALL_G16_072	3	17G	G16_072	FROM->TO	VIOLA 7 345.00 (VIOLA 1X) 345/138/13.8KV TRANSFORMER CKT 1	448	492.8	0.25269	102.0856	VIOLA 7 345.00 - WICHITA 345KV CKT 1
FDNSLock-Blown up	00NR_G16_073	0	17SP	G16_073	-	Non-Converged Contingency	766	923	0.05104	-	CANEYRV7 345.00 - NEOSHO 345KV CKT 1
FDNSLock-Blown up	00NR_G16_073	0	17SP	G16_073	-	Non-Converged Contingency	1000	1136	0.04666	-	EASTOWN7 345.00 - ST JOE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_073	0	17SP	G16_073	-	Non-Converged Contingency	956	956	0.04268	-	EMPORIA ENERGY CENTER - SWISSVALE 345KV CKT 1
FDNSLock-Blown up	00NR_G16_073	0	17SP	G16_073	-	Non-Converged Contingency	1135	1195	0.03435	-	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNSLock-Blown up	00NR_G16_073	0	17SP	G16_073	-	Non-Converged Contingency	1135	1195	0.03435	-	CLEVELAND - TULSA NORTH 345KV CKT 1
FDNSLock-Blown up	00NR_G16_073	0	17SP	G16_073	-	Non-Converged Contingency	0	0	0.03314	-	P12:161:WERE-OPPD:S1399-KELLY
FDNS	00NR_G16_073	0	20SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400	430	0.06438	102.3453	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_073	0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400	430	0.11536	99.7	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_073	0	20SP	G16_073	FROM->TO	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1	400	430	0.06438	99.5	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_073	0	20SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400	430	0.06878	109.3339	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_073	0	20SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400	430	0.06878	106.566	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_073	0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400	430	0.12265	106.008	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_073	0	17SP	G16_073	FROM->TO	WICHITA (WICH TX-12) 345/138/13.8KV TRANSFORMER CKT 1	400	430	0.12265	104.1302	WICHITA (WICH TX-11) 345/138/13.8KV TRANSFORMER CKT 1
FDNSLock-Blown up	09ALL_G16_075	0	16WP	G16_075	-	Non-Converged Contingency	720	720	0.56801	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_075	0	16WP	G16_075	-	Non-Converged Contingency	720	720	0.56801	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	0	16WP	G16_075	-	Non-Converged Contingency	720	720	0.46606	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_075	0	16WP	G16_075	-	Non-Converged Contingency	720	720	0.46606	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	09ALL_G16_075	0	17G	G16_075	-	Non-Converged Contingency	720	720	0.57253	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_075	0	17G	G16_075	-	Non-Converged Contingency	720	720	0.57253	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	09NR_G16_075	0	17G	G16_075	-	Non-Converged Contingency	720	720	0.47358	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	09NR_G16_075	0	17G	G16_075	-	Non-Converged Contingency	720	720	0.47358	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	0	17SP	G16_075	-	Non-Converged Contingency	0	0	0.92268	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	09ALL_G16_075	0	17SP	G16_075	-	Non-Converged Contingency	720	720	0.57199	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	09ALL_G16_075	0	17SP	G16_075	-	Non-Converged Contingency	720	720	0.57199	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	0	17SP	G16_075	-	Non-Converged Contingency	720	720	0.46134	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_075	0	17SP	G16_075	-	Non-Converged Contingency	720	720	0.46134	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	0	17SP	G16_075	-	Non-Converged Contingency	720	720	0.46134	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	0	17SP	G16_075	-	Non-Converged Contingency	720	720	0.46134	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_075	0	17SP	G16_075	-	Non-Converged Contingency	0	0	0.02967	-	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNSLock-Blown up	00NR_G16_075	0	20SP	G16_075	-	Non-Converged Contingency	0	0	1.02325	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_075	0	20SP	G16_075	-	Non-Converged Contingency	720	720	0.51163	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	0	20SP	G16_075	-	Non-Converged Contingency	720	720	0.51163	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_075	0	20SP	G16_075	-	Non-Converged Contingency	720	720	0.34376	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_075	0	20SP	G16_075	-	Non-Converged Contingency	720	720	0.34376	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	0	25SP	G16_075	-	Non-Converged Contingency	0	0	1.02315	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_075	0	25SP	G16_075	-	Non-Converged Contingency	720	720	0.51158	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	0	25SP	G16_075	-	Non-Converged Contingency	720	720	0.51158	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_075	0	25SP	G16_075	-	Non-Converged Contingency	720	720	0.34379	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_075	0	25SP	G16_075	-	Non-Converged Contingency	720	720	0.34379	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	0	25SP	G16_075	-	Non-Converged Contingency	1792	1792	0.16779	-	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	0	25SP	G16_075	-	Non-Converged Contingency	956	956	0.15031	-	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	0	25SP	G16_075	-	Non-Converged Contingency	956	956	0.13872	-	MCCOOL - MOORE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock-Blown up	00NR_G16_075	0	25SP	G16_075	-	Non-Converged Contingency	956	956	0.05298	-	AXTELL - SWEETWATER 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	0	25SP	G16_075	-	Non-Converged Contingency	785	785	0.03236	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	0	25SP	G16_075	-	Non-Converged Contingency	785	785	0.03236	-	MINGO - RED WILLOW 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	2	17SP	G16_075	-	Non-Converged Contingency	0	0	1.01907	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_075	2	17SP	G16_075	-	Non-Converged Contingency	720	720	0.50953	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	2	17SP	G16_075	-	Non-Converged Contingency	720	720	0.50953	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_075	2	17SP	G16_075	-	Non-Converged Contingency	720	720	0.34193	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_075	2	17SP	G16_075	-	Non-Converged Contingency	720	720	0.34193	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	3	17SP	G16_075	-	Non-Converged Contingency	0	0	1.01907	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_075	3	17SP	G16_075	-	Non-Converged Contingency	956	956	0.50953	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	3	17SP	G16_075	-	Non-Converged Contingency	956	956	0.50953	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_075	3	17SP	G16_075	-	Non-Converged Contingency	956	956	0.34193	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	3	20SP	G16_075	-	Non-Converged Contingency	0	0	1.02325	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_075	3	20SP	G16_075	-	Non-Converged Contingency	956	956	0.51163	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	3	20SP	G16_075	-	Non-Converged Contingency	956	956	0.51163	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_075	3	20SP	G16_075	-	Non-Converged Contingency	956	956	0.34376	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_075	3	20SP	G16_075	-	Non-Converged Contingency	956	956	0.34376	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	3	25SP	G16_075	-	Non-Converged Contingency	0	0	1.02315	-	GRANDPRAIRIE-HOLT-TLINE-REACTOR-CKT1
FDNSLock-Blown up	00NR_G16_075	3	25SP	G16_075	-	Non-Converged Contingency	956	956	0.51158	-	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNSLock-Blown up	00NR_G16_075	3	25SP	G16_075	-	Non-Converged Contingency	956	956	0.51158	-	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z
FDNSLock-Blown up	00NR_G16_075	3	25SP	G16_075	-	Non-Converged Contingency	956	956	0.34379	-	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z
FDNSLock-Blown up	00NR_G16_075	3	25SP	G16_075	-	Non-Converged Contingency	956	956	0.34379	-	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45692	167.4719	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46281	166.186	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46178	164.3739	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45856	164.2642	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46284	163.4624	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46284	163.4624	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45845	162.0637	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46004	161.4216	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4626	161.259	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4626	161.259	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46263	161.1674	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46263	161.1674	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45657	160.4741	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4626	160.4538	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45657	160.0798	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45657	159.9229	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45692	159.7599	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45937	159.6871	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45937	159.6198	2809X1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45937	159.6	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45937	159.5984	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45937	159.3651	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45937	159.3651	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45937	159.3571	2809X2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45937	159.3443	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46182	159.2289	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	158.8683	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46095	158.6815	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45859	158.5769	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45859	158.5769	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46095	158.5613	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	158.5501	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45819	158.5128	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45819	158.5128	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46075	158.4826	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46095	158.2369	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46009	158.2281	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	158.2276	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45859	158.1128	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46016	158.0497	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNSLock	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.44858	158.0138	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45859	157.9745	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	157.7756	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	157.748	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46084	157.7199	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	157.7062	GEN336153 1-WATERFORD UNIT#3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4609	157.6537	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46095	157.6337	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46089	157.4355	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46089	157.4355	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46162	157.3617	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	157.2025	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	157.1219	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	157.0676	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46087	157.0615	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45869	157.0282	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	156.976	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46132	156.804	FT RANDAL - UTICA JCT 230KV CKT 1
FDNSLock	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46096	156.6046	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46077	156.565	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46016	156.4844	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46095	156.4836	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46065	156.4229	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46065	156.4229	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46065	156.4149	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46304	156.3721	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46304	156.3721	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46198	156.2733	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46087	156.2366	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46198	156.224	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46198	156.224	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46065	156.2107	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	156.1601	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	156.1588	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46052	156.1446	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46104	156.119	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46198	156.0785	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46198	156.0785	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	156.0735	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	156.0629	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46104	156.0389	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46039	156.0364	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	155.9694	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46075	155.9364	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46013	155.9166	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNSLock	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46012	155.9159	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46013	155.8834	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46013	155.8794	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45791	155.8466	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45942	155.5587	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45942	155.5587	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46052	155.5145	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	155.4705	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	155.4535	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46076	155.4432	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45975	155.4265	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45975	155.4265	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46077	155.3611	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46077	155.361	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46112	155.3199	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46112	155.3199	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46077	155.3013	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	155.2837	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46042	155.2831	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	155.2672	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46079	155.2499	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46079	155.2295	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	155.1811	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	155.1686	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	155.1479	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46012	155.1456	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	155.1433	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	155.1433	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46042	155.1169	J290_SUB 230.00 - RUGBY 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46049	155.1058	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46076	155.0871	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46055	155.0743	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	155.0682	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	155.0489	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	155.0488	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46012	155.0356	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46012	155.0352	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46012	155.034	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46012	155.0339	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46012	155.0275	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46012	155.0275	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46104	154.9991	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.9833	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.9724	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46125	154.9622	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.9456	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.944	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.9426	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46012	154.9193	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46128	154.9149	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46104	154.842	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46078	154.798	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46036	154.7961	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.7341	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46141	154.7266	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46141	154.7266	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46125	154.7037	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46112	154.6726	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46125	154.6373	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46056	154.6342	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.6201	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45998	154.6075	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.584	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.5783	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.5629	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.5529	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.5512	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.5428	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46101	154.5256	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46133	154.4929	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46102	154.4797	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46513	154.4755	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46513	154.4755	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46513	154.4755	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46513	154.4755	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46111	154.462	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4612	154.4595	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4612	154.4595	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46103	154.4484	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.4149	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.4042	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.4038	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46108	154.3779	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.3621	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46108	154.3549	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46103	154.3521	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46108	154.324	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46111	154.3148	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46089	154.3093	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.3028	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4612	154.2968	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4612	154.2968	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46089	154.2675	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.2664	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.2433	GEN303007 1-1BC2 U2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.2374	GEN303006 1-1BC2 U1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46117	154.2311	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46264	154.2025	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46123	154.1838	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46118	154.17	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.1507	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.1502	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46117	154.1426	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46147	154.142	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46147	154.142	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46089	154.1416	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.1358	GEN303008 1-1BC2 U3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46113	154.1352	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.1337	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46147	154.133	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46147	154.132	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46147	154.132	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46089	154.11	EAGLE - PHILIP 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.0922	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46016	154.0877	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4604	154.0817	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4604	154.0817	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46113	154.057	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	154.0541	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46113	154.0466	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46123	154.0455	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46113	154.0408	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46113	154.0256	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46117	154.0237	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46125	154.0204	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46125	154.0204	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46089	154.0179	EAGLE - MARTIN 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46115	153.9933	PRAIRIE - WINGER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4628	153.9781	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4628	153.9781	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46111	153.9754	AUDUBON - HUBBARD 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46127	153.9746	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46172	153.9658	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46113	153.9641	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46106	153.9448	KARLSTAD - WINGER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.9341	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46118	153.9281	DKSN_CO5 161.00 - LAKEFIELD 5 NO1 + NO 2 161KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46107	153.9233	PALXFRASBTHI
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46065	153.9217	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46103	153.9205	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46103	153.9205	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46068	153.8989	SIDNEY (SDQ KV2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46068	153.8988	SIDNEY - SIDNEY TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46068	153.8987	P13:230-345:NPPD:SIDNEY 3:KV2A
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46075	153.8747	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46107	153.8646	7PALM TAP 345.00 - SUB T 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46122	153.8582	PRAIRIE - RAMSEY 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46077	153.8402	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46109	153.8373	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.8241	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.8167	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46113	153.8077	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.7987	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46079	153.7937	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46044	153.7784	LELAND OLDS - STANTON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46044	153.7784	LELAND OLDS - STANTON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46077	153.7731	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46136	153.7715	FT RANDAL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46118	153.7656	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46123	153.7584	GENOA 161 - SENECA 161 161KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46119	153.7543	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46136	153.7424	TYNDALL - WHITE SWAN 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46077	153.7383	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46133	153.7231	GRANT - MITCHELL 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46133	153.7231	GRANT - MITCHELL 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.7228	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46126	153.7188	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNSLock	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4606	153.7128	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46122	153.7097	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46091	153.7072	ARNOLD - HAZLETON 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46122	153.7051	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46117	153.7026	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46126	153.7013	NORTH LA CROSSE (10008630_001) 345/161/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46118	153.7012	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46118	153.7012	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46101	153.7006	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46101	153.7006	HURON WEST PARK - MITCHELL NW 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46121	153.6983	JAMES TOWN - PICKERT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46116	153.6959	BALTA - MCHENRY 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.6951	GEN525562 1-TOLK GEN #2 24 KV
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46113	153.6886	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.6803	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.6775	GEN525561 1-TOLK GEN #1 24 KV
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46137	153.6731	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46074	153.6693	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46083	153.6662	HIGHLND 3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46131	153.6637	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46131	153.6637	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46122	153.6637	BISMARK - HILKEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.6577	GEN345765 H-1SIOUX 2 18.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46043	153.6555	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46043	153.6555	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.6373	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.6373	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46117	153.6268	CENTER - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.6195	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46075	153.6143	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46098	153.6125	LYNN 7 115.00 - SNAKECK7 115.00 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46098	153.6089	P12:115:TSGT:COVALT7-SNAKECK7
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46126	153.6083	FRANKS - HUBEN 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.6074	GEN345756 H-1SIOUX 1 18.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46079	153.6012	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.598	GEN336221 1-LITTLE GYPSY UNIT#1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.5806	GEN334432 1-SABINE UNIT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.58	GEN334431 1-SABINE UNIT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.5739	GEN336242 1-1NMIL ST1 18.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.5732	GEN337757 1-DUKE HOTSPRINGS STG1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.564	GEN334030 1-FRONTIER UNIT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.5636	GEN334031 1-FRONTIER UNIT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.563	AS KING 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.5621	RUNNING 230/118KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.5491	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.5423	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.54	GEN345832 1-1TS G1 13.800
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.5396	GEN345841 2-1TS G2 13.800
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.5367	GEN336446 1-MICHOUD UNIT #2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46069	153.5274	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46069	153.5272	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46069	153.5272	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.5183	GEN501970 1-EVANGELINE UNIT 7
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.4743	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.4143	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	153.4143	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46077	153.3837	NELIGH - PETERSBRG.N7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46081	153.2264	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46081	153.2207	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46081	153.2207	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46116	152.85	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.8241	BASE CASE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.8147	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.8147	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45337	152.7675	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45988	152.6963	G15088_T 345.00 - PAULINE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45992	152.6836	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4613	152.6716	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.671	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46092	152.6307	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46092	152.6292	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45917	152.5647	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45917	152.5647	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46099	152.4984	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46099	152.4984	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46099	152.4965	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46099	152.4965	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46099	152.4357	AURORA - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46045	152.4099	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46045	152.4099	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46122	152.3844	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46122	152.3844	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46245	152.3823	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.3791	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45981	152.3426	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46118	152.3207	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46118	152.3207	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46025	152.2979	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46025	152.2979	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46025	152.2968	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46025	152.2968	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45945	152.2218	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45945	152.2218	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46253	152.1803	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46253	152.1803	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46253	152.1746	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4612	152.1609	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.1593	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46129	152.1431	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46046	152.1371	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.134	GEN652548 5-FT RANDAL
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.134	GEN652549 7-FT RANDAL
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4607	152.1308	LOUP CITY - NORTH LOUP 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.1292	GEN590011 2-ERCOT EQUIVALENCE
FDNSLock	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46124	152.1055	COPSTJCPFRSJ
FDNSLock	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46124	152.1055	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46124	152.1055	STMDSJFAFACO
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46253	152.0927	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.0902	GEN600125 2-FEP ST G 13.800
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46253	152.0872	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46253	152.0871	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46253	152.0871	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.0787	GEN615031 1-PLEASANT VALLEY
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.072	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.0683	GEN652547 3-FT RANDAL
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.0648	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45972	152.0529	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45972	152.0529	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46098	152.0493	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.0473	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.0421	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.0383	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.0302	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.0302	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4613	152.03	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46122	152.0281	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46122	152.0281	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	152.0208	GEN620115 1-HRDLKGEN 0.6000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46019	152.0143	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4613	151.9922	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.9907	GEN600020 2-ANGUS ANSON1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.9897	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4611	151.9711	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4611	151.9711	MINGO - SETAB 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.9662	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.9662	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4613	151.963	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.9519	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.9519	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.9519	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.9453	GEN600021 3-ANGUS ANSON2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46133	151.9418	P12:115:UMZZ:# 232 #: AB IN SD. ABERDEEN A TAP BETWEEN ELLENDALE AND ABERDEEN-SIEBRECHT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.9327	GEN657964 1-ASH2GEN9 0.5750
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.931	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.923	GEN563302 1-G15096_3 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4608	151.9168	DRAYTON - LETELLIER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.8994	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.8881	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.8739	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.8707	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.8647	GEN659290 1-EDGECOL
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.862	SQUARE BUTTE 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46115	151.8595	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.8507	GEN660003 3-HURON WEST PARK
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.843	GEN659156 2-LONESMCRK 2G13.800
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.843	GEN659157 3-LONESMCRK 3G13.800
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46115	151.8403	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46115	151.8403	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.8217	GEN659158 2-PIONEER G213.800
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.8217	GEN659159 3-PIONEER G313.800
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46104	151.8064	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.8059	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.8059	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.8022	EMERY 161/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.7955	GEN652410 3-FT PECK
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45337	151.7845	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.7642	GEN600045 4-ANSON
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.7509	GEN600046 1-MECST
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.7242	GEN600047 1-MECCT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.7186	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.7053	GEN600050 1-FEP
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.6756	GEN652414 4-FT PECK
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.6756	GEN652415 5-FT PECK
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.6322	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.5807	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.5796	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.5796	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.5638	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.5638	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46095	151.5116	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46095	151.5116	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.5095	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.5067	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.5067	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.5016	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.4913	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.491	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.4715	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.4445	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.4275	GEN659192 6-LYNN
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.4268	GEN659162 4-RED WLCK
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.4268	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.4256	GEN600017 C-LS POWER CT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.4168	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.4167	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.3394	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.3196	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.3129	GEN681522 3-GENOA 3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.3059	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46253	151.2988	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.2658	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.2457	GEN660016 1-B_H WIND 0.7000

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.2324	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.2314	GEN659274 1-GROTON
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.1648	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.1618	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.1618	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.1503	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.0923	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.0876	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.0848	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.0522	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.0522	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	151.014	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.9795	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.9488	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.9082	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.8981	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.8813	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.8802	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.8757	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46392	150.8739	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.8737	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.823	GEN659270 1-WEST SW
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.7591	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46381	150.7518	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45996	150.7073	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46392	150.685	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46392	150.6672	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46392	150.6669	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.6503	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45988	150.6462	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.6376	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46392	150.6333	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46392	150.6333	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46392	150.57	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.4596	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.4525	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.4515	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.4435	GEN652545 7-BIG BEND
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.4101	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.2275	GEN652544 5-BIG BEND
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.2249	GEN652543 3-BIG BEND
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.2241	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.1827	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.1709	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.16	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.1478	GEN652460 4-GARRISON
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.1477	GEN652461 5-GARRISON
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.0657	GEN652457 1-GARRISON
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.0657	GEN652458 2-GARRISON
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	150.0657	GEN652459 3-GARRISON
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	149.9553	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45937	149.9151	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45937	149.8362	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45937	149.8323	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	149.6612	GEN652559 1-OAHE
FDNSLock	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	149.5532	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	149.5407	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	149.534	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	149.4829	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	149.3901	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	149.3257	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	149.2507	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	149.051	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	149.0186	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	149.0186	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	148.9527	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	148.946	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	148.9195	GEN672306 6-BOUNDARY DAM GENERATOR 6

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.44223	148.8163	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	148.815	GEN615010 1-STANTON4
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	148.794	GEN652556 2-OAHE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	148.794	GEN652557 4-OAHE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	148.794	GEN652558 6-OAHE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	148.7199	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	148.5598	GEN659141 1-K10215A
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	148.5414	GEN600006 1-AS KING
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	148.5369	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	148.5282	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	148.4723	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	148.4367	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	147.8888	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	147.8535	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.41717	147.8125	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	147.8119	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.41716	147.6946	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	146.8969	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	146.6928	GEN579459 1-G16-075-GEN10.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34308	146.2691	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	145.936	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	145.7878	GEN661015 1-COYOTE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33958	145.69	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	145.5212	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34325	145.5028	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	145.4543	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.43833	145.249	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	145.2116	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34458	144.7062	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.48502	143.7965	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.48502	143.5645	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.48502	143.5379	2810X2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	143.2873	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34129	143.1942	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34129	143.1942	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	143.0799	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34434	143.0771	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34434	143.0771	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.48502	143.0586	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.48502	143.0384	2801X
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.48502	142.9335	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.48502	142.9335	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34433	142.8637	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34433	142.8637	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34229	142.8372	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33961	142.809	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	142.7664	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34129	142.6701	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	142.5548	GEN659125 1-COVEY
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3448	142.5484	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.48502	142.4202	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	142.3365	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	142.3365	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34129	142.2795	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34433	142.0374	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34179	142.0363	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	141.8607	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34351	141.8326	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34229	141.8232	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	141.7487	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	141.6461	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34402	141.4704	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34303	141.4359	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34105	141.4183	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34105	141.4183	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34364	141.1102	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34364	141.1102	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34175	141.0666	G09_001IST 345.00 - WATERTOWN 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	141.058	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3433	140.9905	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	140.9289	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34337	140.9146	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34396	140.8547	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	140.8416	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	140.8241	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3459	140.8104	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3459	140.8104	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3433	140.4056	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	140.4008	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34469	140.3173	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34469	140.3173	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34264	140.2925	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34222	140.071	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3454	140.0147	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34321	139.9873	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	139.985	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	139.9421	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34307	139.9066	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.32958	139.8805	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34382	139.6383	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	139.6162	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34199	139.5354	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33958	139.4755	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	139.4371	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	139.3588	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34222	139.3306	2809X1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	139.3132	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34287	139.2872	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34222	139.282	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3433	139.2284	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3433	139.2259	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3433	139.2255	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34212	139.2034	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3433	139.1924	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3433	139.1825	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34222	139.1792	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34394	139.1597	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34268	139.1453	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34222	139.1191	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34222	139.1191	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34222	139.1097	2809X2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3433	139.1076	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34222	139.1021	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34299	139.0547	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	139.0388	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	139.0282	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34345	139.0098	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34127	138.9999	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34127	138.9999	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34431	138.891	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34431	138.891	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	138.8205	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34194	138.8189	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34194	138.8189	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34338	138.7961	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34127	138.7692	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	138.7498	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	138.741	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34338	138.7331	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34338	138.7331	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34212	138.6801	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	138.668	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34127	138.6376	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	138.6304	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34429	138.5647	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34429	138.5647	FT THOMPSON - LAKE PLATT 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34307	138.52	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34348	138.5198	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34304	138.504	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34374	138.4461	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34374	138.4461	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34338	138.4284	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	138.4259	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34374	138.3933	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	138.3918	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34311	138.3633	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34335	138.3239	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34366	138.2894	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34293	138.2849	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34212	138.2834	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34344	138.2579	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34311	138.2573	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34103	138.2471	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34103	138.2471	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34299	138.2428	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	138.2231	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34429	138.197	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3433	138.17	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34413	138.1649	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34366	138.1629	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34318	138.1321	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	138.1066	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	138.1046	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34501	138.0604	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	138.043	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34896	138.0273	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	138.0231	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34484	138.012	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34484	138.012	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	137.9972	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.956	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.9504	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34319	137.9394	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.9332	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.9233	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.9229	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.916	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	137.9093	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34364	137.9091	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.9087	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34364	137.8988	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34364	137.8988	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34225	137.8967	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34366	137.7686	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34318	137.7614	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34358	137.7509	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34354	137.7469	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34366	137.7339	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34354	137.7275	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.7115	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.683	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34362	137.6824	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34362	137.6824	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNSLock	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.679	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.6768	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.6746	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.6745	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34596	137.6687	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34378	137.6665	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34378	137.6665	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.6557	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.6546	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34364	137.6395	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34364	137.6395	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34279	137.6334	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34372	137.63	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34369	137.6272	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34501	137.6077	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34354	137.6066	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34326	137.5957	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34398	137.5914	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.5895	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34352	137.5763	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34225	137.5732	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.5706	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34347	137.5578	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.5535	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34332	137.5516	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34353	137.5364	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.5308	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34501	137.5022	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34569	137.4943	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.4939	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.4935	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.493	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34361	137.4887	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34225	137.487	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34225	137.487	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34451	137.4803	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34451	137.4803	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34369	137.4719	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34378	137.4504	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34349	137.4398	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34351	137.4394	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3437	137.3853	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.3519	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34417	137.3518	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34417	137.3518	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34372	137.3375	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34378	137.3298	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.3173	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34292	137.3116	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.3109	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.3102	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34418	137.3083	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.3044	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3435	137.2937	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34501	137.2928	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.2854	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34418	137.2845	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34418	137.2845	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34327	137.2772	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34372	137.2633	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34369	137.2268	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.2089	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34357	137.192	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34368	137.1835	PRAIRIE - RAMSEY 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34418	137.1823	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34418	137.1823	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34378	137.1782	BURR - CANBY 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34365	137.1558	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.1463	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	137.1384	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34357	137.1274	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.115	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34366	137.1117	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.1032	HOOT LAKE 115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34357	137.0965	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34194	137.0959	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3439	137.0955	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	137.0662	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34375	137.0601	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.0398	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34351	137.0382	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.0374	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34365	137.0256	PRAIRIE - WINGER 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	137.0193	SHEYENNE SVC - SHEYNNE 115KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34309	137.0178	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34328	137.0018	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34334	136.9493	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34364	136.9245	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	136.9122	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	136.9122	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3437	136.9117	BUFFALO RIDGE - YANKEE 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34361	136.8886	AUDUBON - HUBBARD 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34301	136.8765	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	136.8712	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34501	136.8312	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	136.831	GEN303007 1-1BC2 U2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34364	136.8298	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	136.8256	GEN303006 1-1BC2 U1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34377	136.8039	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34377	136.8039	CANBY - GRANITE FALLS 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3439	136.7956	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3439	136.7912	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34269	136.7904	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	136.7888	LUVERNE4 230.00 - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34353	136.7884	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34353	136.7884	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34368	136.7718	MCLEOD - PANTHER 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34358	136.7675	KARLSTAD - WINGER 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34355	136.7357	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	136.735	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	136.7289	GEN303008 1-1BC2 U3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	136.7227	LUVERNE4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34364	136.7044	BALTA - MCHENRY 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	136.7041	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34369	136.7033	JAMES TOWN - PICKERT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	136.7015	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34325	136.6996	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.343	136.6833	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34364	136.6815	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34368	136.672	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	136.6648	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.344	136.6621	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.344	136.661	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.344	136.661	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.344	136.6516	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.344	136.6516	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34328	136.648	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34413	136.6393	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34281	136.6139	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34281	136.6139	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34371	136.5742	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	136.5741	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34285	136.5354	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34569	136.5326	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34364	136.5063	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	136.4932	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	136.493	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34309	136.4739	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34325	136.4445	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34342	136.4298	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34391	136.3612	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34175	136.3471	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34285	136.3423	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34399	136.3011	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34399	136.3011	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	136.2751	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	136.264	P13:230-345:NPPD:NUCOR-1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	136.2318	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34296	136.2158	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34285	136.1955	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34285	136.1938	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	136.1818	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34328	136.1689	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34328	136.1688	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34328	136.1629	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3439	136.1138	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	136.0034	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34191	135.9918	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34191	135.9918	RAUN - SIOUX CITY 345KV CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34345	135.9744	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34319	135.9636	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34319	135.9519	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34319	135.9519	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33566	135.9234	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34361	135.8817	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34361	135.8817	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34261	135.8493	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.7908	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34489	135.7702	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34489	135.7702	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.7641	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34345	135.7527	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.7309	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.7272	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34284	135.6424	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.343	135.6349	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34342	135.6277	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.6166	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34296	135.5993	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	135.5805	BASE CASE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.5795	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3438	135.521	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34301	135.5179	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3442	135.5169	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34334	135.4986	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34345	135.4954	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34334	135.4836	SPERVIL7-POSTROCK7-345kV CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.4776	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.4741	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34213	135.4689	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34334	135.467	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34334	135.4582	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.4557	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34315	135.4447	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.35834	135.4249	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.35838	135.4237	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.4232	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34334	135.421	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3429	135.4204	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	135.41	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	135.41	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34218	135.4003	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34334	135.3994	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34308	135.3596	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34166	135.3424	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34166	135.3424	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.3206	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.2971	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.2732	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.2728	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.2709	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34313	135.2643	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.2631	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34263	135.2509	CENTRAL CITY - CLARKS 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34344	135.2429	AURORA - GRAND ISLAND 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.2386	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.2332	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.2275	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3448	135.2189	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3448	135.2189	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34317	135.2151	LOUP CITY - ST LIBORY 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3419	135.2041	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3419	135.2041	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34498	135.1931	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3441	135.1831	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34355	135.181	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34218	135.1739	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34218	135.1652	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34218	135.1652	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34218	135.1624	2809X2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34218	135.1601	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34218	135.1453	2809X1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34216	135.1351	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34218	135.1319	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.1159	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34315	135.1085	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.0919	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.0842	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34338	135.0803	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34338	135.0803	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34348	135.0789	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34338	135.0782	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34338	135.0782	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.0679	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.067	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3435	135.0656	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.0649	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.0647	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34363	135.0452	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3435	135.033	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	135.0063	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.9935	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34371	134.9909	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34371	134.9909	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.9876	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34334	134.9857	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34334	134.9857	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34893	134.9819	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34272	134.9776	GRAND ISLAND - HASTINGS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34361	134.9682	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.943	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34301	134.9429	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.9362	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34565	134.9206	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34272	134.9166	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34272	134.9166	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34322	134.9164	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34371	134.9089	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34371	134.9089	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34334	134.9067	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3446	134.8908	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33566	134.878	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.8324	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34251	134.8309	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34251	134.8309	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34334	134.8297	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34371	134.8295	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34251	134.8294	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34251	134.8294	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34326	134.8273	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34361	134.825	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34361	134.825	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34326	134.82	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34326	134.8198	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34326	134.8197	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.8183	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.8136	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34369	134.7992	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34326	134.7863	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34326	134.7862	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34369	134.7835	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34341	134.7833	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34363	134.7776	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34498	134.7756	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34366	134.7713	STMDSJFAFACO
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34366	134.771	COPSTJCPFRSJ
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34366	134.771	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34347	134.7687	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34374	134.7675	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34374	134.7675	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.7673	GEN542957 1-IATAN UNIT #1
FDNSLock	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34263	134.7651	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.7569	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34299	134.7471	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3435	134.7282	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34346	134.7142	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34361	134.7138	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34361	134.7138	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.7081	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34359	134.7059	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34359	134.7059	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34371	134.6894	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34282	134.6851	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.6725	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34357	134.6665	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.6663	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34371	134.6623	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34363	134.661	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.6587	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.6542	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34498	134.6525	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34363	134.652	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.6499	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34292	134.6324	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34365	134.6248	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34371	134.6157	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34414	134.6069	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34369	134.6008	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.5979	GEN660001 2-ABERDEEN SIEBRECHT
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.5962	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34396	134.5903	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34396	134.5903	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34414	134.5714	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34414	134.5714	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34369	134.5667	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.5533	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34498	134.549	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34365	134.5473	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.531	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.531	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.5242	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34414	134.5197	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34414	134.5197	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.5189	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.5189	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.5109	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34447	134.5105	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34447	134.5105	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34323	134.5097	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34375	134.5063	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34326	134.5018	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34306	134.4984	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.4962	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.4961	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34358	134.4938	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34375	134.4929	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34414	134.4913	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34414	134.4913	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.4895	GEN659162 4-RED WLCK
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.4895	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.488	GEN659192 6-LYNN
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.4838	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3419	134.4678	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3419	134.4678	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34348	134.448	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34349	134.4298	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.427	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34266	134.4156	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34329	134.4087	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34365	134.4046	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34361	134.3855	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.3805	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34348	134.38	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.372	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34362	134.3629	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.3603	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.349	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34387	134.3467	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34303	134.3419	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.3397	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.3396	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.3371	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34362	134.3284	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34361	134.3117	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34354	134.3078	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34593	134.3009	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34352	134.3009	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.2905	SPLIT ROCK - SPLITRK CAP7115.00 115KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.2863	GEN303007 1-1BC2 U2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.2856	GEN657705 X-DRAYTON
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.2825	GEN303006 1-1BC2 U1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34367	134.2771	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.2748	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34354	134.2699	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34354	134.2683	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.266	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34282	134.265	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34355	134.2528	KARLSTAD - WINGER 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.2474	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34323	134.2471	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.2451	GEN659274 1-GROTON
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3441	134.2429	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34282	134.2327	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34498	134.2316	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34289	134.2258	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34361	134.2216	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.2175	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.2148	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.2141	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34282	134.2139	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.2119	GEN303008 1-1BC2 U3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34358	134.2076	AUDUBON - HUBBARD 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34565	134.2059	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.1995	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.1928	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.1888	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.1888	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.1859	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.1835	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.182	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.1768	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.1767	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.1767	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34387	134.1763	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34357	134.1704	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34387	134.1662	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.1617	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34357	134.1501	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34372	134.148	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34365	134.1413	GRE-WINGRIV4230.00 - INMANN 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.1412	GEN672356 1-FUT-WL1X 18.000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.132	GEN672389 1-FUT-SW1X 18.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3436	134.1317	PRAIRIE - WINGER 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34349	134.1303	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34349	134.1303	FARGO - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34364	134.1261	MCLEOD - PANTHER 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34392	134.1259	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34324	134.1221	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	134.1207	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34306	134.1127	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.1107	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3458	134.1099	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34367	134.1043	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34397	134.0896	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34397	134.0896	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34397	134.0896	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34397	134.0792	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34397	134.0792	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34324	134.0659	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	134.0646	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34399	134.0544	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34399	134.0544	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34324	134.0499	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34368	134.0227	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	133.9968	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.9751	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3458	133.9625	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.9568	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3458	133.9543	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.9364	GEN659270 1-WEST SW
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34571	133.9357	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3458	133.9319	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	133.9245	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	133.9122	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.8931	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.8839	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.8836	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3458	133.8816	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3458	133.8816	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.8394	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3458	133.809	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34278	133.8064	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34278	133.8064	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.7706	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34186	133.754	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34322	133.6997	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.6566	GEN652545 7-BIG BEND
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.5873	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.5842	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.5688	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.5665	GEN652460 4-GARRISON
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.5664	GEN652461 5-GARRISON
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.5592	GEN652543 3-BIG BEND
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.5587	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.53	GEN652544 5-BIG BEND
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.4992	GEN652457 1-GARRISON
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.4992	GEN652458 2-GARRISON

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.4992	GEN652459 3-GARRISON
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34186	133.4579	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34186	133.4298	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34316	133.384	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.3749	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34316	133.3625	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34316	133.3625	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33563	133.3275	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	133.3093	BASE CASE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.2672	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.2584	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34322	133.1155	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3433	133.1117	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3433	133.1066	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3433	133.1018	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.0984	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.0931	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.0808	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.0785	GEN652559 1-OAHE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.0734	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	133.0438	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34417	132.9838	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.979	GEN600006 1-AS KING
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34313	132.9708	LOUP CITY - ST LIBORY 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3434	132.9436	AURORA - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34163	132.9246	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34163	132.9246	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.35829	132.9053	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.35833	132.9036	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34212	132.8955	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.8857	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.8563	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.8136	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.8014	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.7356	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.7341	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.714	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.7125	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.7125	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.7098	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34335	132.7044	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34335	132.7044	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34334	132.7011	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34334	132.7011	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34269	132.6625	GRAND ISLAND - HASTINGS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34187	132.6581	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34187	132.6581	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34338	132.6144	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3421	132.5954	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34458	132.59	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34458	132.59	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34458	132.5882	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34458	132.5821	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34458	132.5802	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34458	132.5802	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34458	132.5802	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.5682	GEN615010 1-STANTON4
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34248	132.5641	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34248	132.5641	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34248	132.5626	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34248	132.5626	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34368	132.5222	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34368	132.5222	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.5193	GEN652556 2-OAHE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.5193	GEN652557 4-OAHE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.5193	GEN652558 6-OAHE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.5154	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.513	GEN660001 2-ABERDEEN SIEBRECHT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.5117	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.5117	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34259	132.4972	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34354	132.4802	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.4629	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.4614	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.4612	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.4612	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33563	132.4605	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.4493	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.4339	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.4302	GEN659162 4-RED WLCK
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.4302	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.4297	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.4292	GEN659192 6-LYNN
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34363	132.4163	COPSTJCPFRSJ
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34363	132.4163	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34363	132.4162	STMDSJFAFACO
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.3869	GEN659141 1-K10215A
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.3204	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.3045	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.2968	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.296	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.2754	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34458	132.2497	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.2384	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.2361	GEN659274 1-GROTON
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34366	132.2074	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.2065	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.2031	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.2028	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.1987	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34187	132.1986	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34187	132.1986	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.1865	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.1849	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.1788	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.1788	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.1567	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.1567	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.1567	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.1555	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.1547	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.1396	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.136	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	132.107	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	132.1032	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34368	132.088	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34368	132.0815	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.9941	GEN659270 1-WEST SW
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34368	131.9861	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.9853	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	131.9625	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.9579	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	131.9567	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.934	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34578	131.929	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	131.9009	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.9004	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.8902	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.8556	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.8172	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34569	131.817	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34578	131.7925	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34578	131.7815	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34578	131.7814	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34578	131.7436	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34578	131.7436	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34578	131.7113	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.6788	GEN652545 7-BIG BEND
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.6256	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.6115	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.6067	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.6004	GEN652460 4-GARRISON
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.6004	GEN652461 5-GARRISON
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.5971	GEN652543 3-BIG BEND
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.5968	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.5956	GEN652544 5-BIG BEND
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	131.5788	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.5727	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.55	GEN652457 1-GARRISON
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.55	GEN652458 2-GARRISON
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.55	GEN652459 3-GARRISON
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	131.4595	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.4475	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	131.4048	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.3596	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.3533	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.2406	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.2119	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.195	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.1893	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.1796	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	131.1749	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	131.1471	GEN579459 1-G16-075-GEN10.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.0506	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34183	131.0161	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	131.0063	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.9733	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.9663	GEN652559 1-OAHE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	130.9187	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.9132	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.9132	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34183	130.8821	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34183	130.8811	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.879	GEN600006 1-AS KING
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.8741	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.8673	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.8509	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	130.7567	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.7278	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.6798	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.6796	GEN652556 2-OAHE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.6796	GEN652557 4-OAHE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.6796	GEN652558 6-OAHE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	130.6757	GEN661015 1-COYOTE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.638	GEN615010 1-STANTON4
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.6347	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.563	GEN659141 1-K10215A
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.4554	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.3451	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.1855	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.1854	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.1559	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.1285	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	130.1055	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34375	129.9347	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	129.9328	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	129.9088	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36056	129.7665	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36056	129.5978	2810X2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36056	129.5262	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	129.4311	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	129.3682	GEN579459 1-G16-075-GEN10.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	129.2837	GEN661015 1-COYOTE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	129.1212	GEN600002 3-SHERBURNE CNTY G3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36056	129.0803	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36056	129.0803	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36056	129.0427	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36056	129.0197	2801X
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	128.9807	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	128.9769	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	128.5494	GEN657748 1-YOUNG 2 GENERATOR
FDNSLock	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36056	128.4502	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	128.3984	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46134	128.2647	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	128.1825	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	128.1092	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	128.0687	GEN659125 1-COVEY
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46497	128.0541	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	127.9867	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	127.9867	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3229	127.9773	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	127.8432	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	127.8432	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36056	127.4435	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36056	127.4245	2810X2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36056	127.4035	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	127.1704	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36056	127.1105	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	127.105	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36056	127.1028	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36056	127.1028	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36056	127.0975	2801X
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	126.9784	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	126.8445	GEN659125 1-COVEY
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	126.7867	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	126.7866	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36056	126.7676	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	126.0933	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	126.0413	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	125.9389	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4617	125.8521	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	125.301	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46794	124.8518	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46815	124.1539	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.31851	123.7383	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46688	123.006	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	122.8211	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	122.8211	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46802	122.54	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46802	122.54	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4641	121.8716	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4641	121.753	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4641	121.7445	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4641	121.7445	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46303	121.5878	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46303	121.5878	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46344	121.5325	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46344	121.5325	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46798	121.4872	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46798	121.4872	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46793	121.4745	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46793	121.4745	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46483	121.4077	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46384	121.342	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	121.2974	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46363	121.2822	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	121.2671	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	121.2671	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46108	121.2351	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46793	121.1978	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46108	121.1751	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46108	121.1652	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4617	121.1416	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46684	121.0063	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46558	120.9476	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	120.9195	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	120.915	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	120.8272	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	120.7958	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.41923	120.7081	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNSLock	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46522	120.6573	P13:230-345:NPPD:STEGALL3:KV3A
FDNSLock	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46522	120.6536	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46306	120.6266	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46306	120.6266	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46306	120.5978	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	120.5753	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46483	120.5624	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46306	120.5514	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	120.5324	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	120.5194	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46359	120.4855	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46359	120.4855	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46359	120.4779	2809X1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4651	120.4677	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46559	120.4655	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46359	120.4483	2809X2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46359	120.4483	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46359	120.4444	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46546	120.4397	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46359	120.4346	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46471	120.315	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	120.2743	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	120.2465	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNSLock	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46567	120.2328	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46521	120.2286	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46508	120.2232	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46548	120.2215	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46529	120.1216	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	120.0891	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	120.0771	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46359	120.0443	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46654	120.0114	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46815	119.9971	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46815	119.9971	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46333	119.9544	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.943	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46565	119.937	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46521	119.8797	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46247	119.8759	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46677	119.8626	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.8528	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.8476	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.8427	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46567	119.8164	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.7971	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46615	119.7809	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46567	119.7648	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46564	119.7228	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46564	119.7228	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.7176	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46567	119.7065	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46565	119.6912	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46677	119.6877	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46677	119.6877	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46567	119.6407	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46384	119.622	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.5848	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46525	119.5838	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46539	119.5728	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46539	119.5728	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46542	119.5479	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46539	119.5297	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4648	119.5236	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46581	119.5122	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46567	119.5016	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46511	119.4914	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.4746	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46539	119.433	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.4319	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.4298	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.4297	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.3962	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46526	119.3847	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46479	119.3846	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46567	119.3835	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46565	119.3765	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46997	119.3753	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46997	119.3753	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46997	119.3753	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46997	119.3753	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46565	119.3744	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.3659	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.3658	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46542	119.3569	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46581	119.348	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.3442	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46479	119.3421	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46479	119.3419	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46677	119.3415	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46677	119.3415	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46479	119.3412	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46479	119.3411	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46392	119.3408	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46392	119.3408	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46479	119.3391	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46479	119.3359	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.3031	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46505	119.298	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46505	119.2935	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46505	119.2932	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46479	119.2916	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46355	119.2823	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46605	119.2808	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46511	119.2742	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46574	119.2599	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46525	119.2513	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.2415	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46562	119.2377	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46562	119.2244	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.2174	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46515	119.2039	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45303	119.2035	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.1989	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46562	119.1896	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46515	119.1833	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.1735	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46585	119.1698	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.48691	119.1634	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.48686	119.1616	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46487	119.1584	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46478	119.1358	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.1246	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.1165	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46564	119.1158	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.0816	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.08	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.0792	GEN303007 1-1BC2 U2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.0776	GEN336191 1-LITTLE GYPSY UNIT#3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.0756	GEN303006 1-1BC2 U1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4651	119.0716	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4651	119.0716	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46574	119.0574	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46604	119.0528	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.0318	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.0309	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.0271	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.0253	GEN303008 1-1BC2 U3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.0237	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.0166	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.014	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	119.0134	GEN642067 1-PLATTE
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.9859	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46575	118.9851	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46599	118.9713	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46599	118.9713	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.9668	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46525	118.9615	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4658	118.9602	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46589	118.9577	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46589	118.9577	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.9481	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.9364	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46593	118.9363	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.9287	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46598	118.9277	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46533	118.9274	AINSWORTH - CALAMUS 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46533	118.927	P12:115:NPPD:1090:AINSWND7:THEDFRD7:BTB
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.9242	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46533	118.921	CALAMUS - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46534	118.9201	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46605	118.9167	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.9018	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.8982	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46595	118.8956	GENOA 161 - SENECA 161 161KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46598	118.8915	NORTH LA CROSSE (10008630_001) 345/161/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46533	118.8912	HELENA - SHEAS LK3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46547	118.8757	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46585	118.8694	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.8692	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46547	118.8683	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46536	118.8634	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46547	118.8559	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.8492	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46605	118.8475	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.8368	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.8354	WHITE BLUFF 500/26.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.8349	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.82	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.82	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.8132	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.8123	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46533	118.801	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46612	118.8002	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34098	118.5514	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	118.3689	BASE CASE
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46461	118.2745	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46553	118.162	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46553	118.16	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46553	118.16	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46591	118.0964	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45809	117.9841	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46725	117.946	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46712	117.9369	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46712	117.9369	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46712	117.9369	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46712	117.9369	FT THOMPSON - OAHE 230KV CKT 4

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4657	117.9288	CRETE - FRIEND 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46604	117.9282	G14-057T 345.00 - SUNNYSIDE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46518	117.9091	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46518	117.9091	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46542	117.9067	LOUP CITY - NORTH LOUP 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46602	117.8964	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.8934	GEN659116 1-SPIRIT MOUND UNIT1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.8934	GEN659117 2-SPIRIT MOUND UNIT2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.8884	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.885	GEN620285 1-SOLWAY
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.8803	CLKREACT5 161.00 - CRYSTLK5 161.00 161KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.8773	GEN672369 3-MERIDIAN GENERATOR 3 ST
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46608	117.8757	BROOKINGS - WHITE 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46608	117.8757	BROOKINGS - WHITE 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46608	117.8692	WHITE (WHT KU1A) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46596	117.8586	COPSTJCPFRSJ
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46596	117.8586	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46596	117.8585	STMDSJFAFACO
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.8568	AUBURNTON - BOUNDARY DAM 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46592	117.8537	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46592	117.8537	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.8526	GEN600013 3-BLACK DOG GEN 3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.8479	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.845	GEN620115 1-HRDLKGEN 0.6000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46588	117.8445	7MAYWOOD 345.00 - 7SPENCER 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46588	117.8428	7MONTGMRY 345.00 - 7SPENCER 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46443	117.8425	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46443	117.8425	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.8382	GEN620323 2-HOOT LAKE 2 GEN
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.835	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.834	RGBYWND4 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46608	117.8305	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.8287	RGBYWND4 230.00 230/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.8267	GEN600125 2-FEP ST G 13.800
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46509	117.8214	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.8212	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46593	117.82	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.811	GEN563302 1-G15096_3 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46491	117.8067	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46611	117.8036	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.7992	BENSON 7 - FIBROMINN GENERATION 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46734	117.797	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.7952	GEN672384 1-CENTENNIAL WINDFARM
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.7917	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.7917	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.7636	GEN657964 1-ASH2GEN9 0.5750
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.7617	GEN652548 5-FT RANDAL
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.7617	GEN652549 7-FT RANDAL
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.758	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.758	GEN652546 1-FT RANDAL
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.7565	GEN652547 3-FT RANDAL
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.7479	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4657	117.7463	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.7414	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46734	117.7326	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.7319	GEN659290 1-EDGECOL
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.7254	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46576	117.7203	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.7193	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.7084	GEN652410 3-FT PECK
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46602	117.7007	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.6774	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46581	117.6651	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.6646	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.6637	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.6637	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.6581	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.6581	GEN672351 2-NIPAWIN GENERATOR 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.658	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.6569	GEN657600 1-L1GEN3 9 0.5750
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.647	GEN652414 4-FT PECK
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.647	GEN652415 5-FT PECK
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.6445	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.6375	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.6272	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46465	117.6176	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.6157	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.6065	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_075	0	2SSP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34379	117.5812	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.5801	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.5801	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.5797	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.5766	GEN603185 1-FIBROMINN GENERATION
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.5687	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.5687	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46595	117.5292	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4688	117.529	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4657	117.5176	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.5156	GEN600050 1-FEP
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46868	117.5132	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.4959	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46585	117.4949	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46585	117.4949	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.4846	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.4846	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46393	117.4762	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46393	117.4762	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.4688	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4652	117.4688	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4652	117.4688	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46734	117.4681	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46734	117.4681	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46734	117.4675	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46734	117.4661	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46734	117.4656	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46734	117.4656	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46734	117.4655	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.4475	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4688	117.4426	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4688	117.4418	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4688	117.4417	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.4317	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.4317	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4688	117.4223	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4688	117.4223	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46453	117.4059	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.4001	GEN659192 6-LYNN
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.399	GEN659162 4-RED WLCK
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.399	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.3974	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.3955	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.3925	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.3907	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.3767	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46419	117.375	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46419	117.375	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4688	117.3697	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.3478	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.3471	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.3453	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.3452	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.3431	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.3348	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.3313	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.2885	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.2776	GEN600017 C-LS POWER CT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4652	117.2629	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.2609	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.2533	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.2528	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.2486	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.2399	GEN681522 3-GENOA 3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.2287	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.2287	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.2144	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.2143	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.2028	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.1883	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.1806	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34426	117.1751	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.1699	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.0631	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	117.0331	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.9841	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.9665	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.9607	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.9134	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.9133	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.9133	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.45809	116.8261	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.7589	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.7024	GEN652460 4-GARRISON
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.7024	GEN652461 5-GARRISON
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.6808	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.6721	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.6717	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.6562	GEN652459 3-GARRISON
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.6561	GEN652457 1-GARRISON
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.6561	GEN652458 2-GARRISON
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.6396	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4641	116.6371	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4641	116.6367	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4641	116.635	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.6342	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.6275	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.6037	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.6021	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.5859	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	116.5655	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.5573	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46573	116.5365	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46573	116.5365	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34605	116.4981	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.4488	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.41	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.4099	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46473	116.3266	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.2023	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34257	116.1877	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34257	116.1877	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.0372	GEN652559 1-OAHE
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.0122	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.0082	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.0057	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	116.0034	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	115.9766	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34626	115.8912	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	115.8267	GEN652558 6-OAHE
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	115.8265	GEN652556 2-OAHE
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	115.8	GEN652557 5-OAHE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	115.7877	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34447	115.7424	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	115.709	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	115.7072	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	115.6224	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	115.5728	GEN615010 1-STANTON4
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	115.528	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	115.4156	GEN659141 1-K10215A
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	115.2763	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3454	115.2539	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	115.2283	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46465	115.1939	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	115.1581	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	115.1581	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	115.1253	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	115.029	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34402	114.957	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33063	114.8053	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34615	114.7938	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34615	114.7938	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	114.7453	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	114.7414	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	114.7127	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34721	114.6138	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34721	114.6138	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	114.471	GEN600006 1-AS KING
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34238	114.4489	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34238	114.4489	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34098	114.4362	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	114.2265	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34581	114.0956	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34581	114.0956	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34469	114.0646	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34579	114.0534	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34579	114.0534	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	114.0464	GEN579459 1-G16-075-GEN10.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34672	113.9723	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34469	113.9184	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3426	113.8827	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3426	113.8827	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	113.8785	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34477	113.8584	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3426	113.8486	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3426	113.8436	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34579	113.8334	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	113.8149	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34307	113.6776	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34541	113.6205	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34433	113.3931	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34463	113.3842	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.344	113.3732	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.49078	113.3277	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.49078	113.2791	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.49078	113.2712	2810X2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34437	113.2625	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34446	113.2546	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	113.1938	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34476	113.1846	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	113.155	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.49078	113.1546	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.49078	113.1546	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.49078	113.1497	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.49078	113.148	2801X
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	113.1434	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	113.1017	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34424	113.071	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34469	113.0675	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34363	113.048	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.49078	113.038	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34621	113.0173	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34621	113.0173	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34363	113.0085	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34363	113.0085	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34363	113.0004	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34467	112.9707	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34432	112.8874	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.8861	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.8739	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.8722	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.8391	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.8082	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.7893	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3453	112.7788	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34514	112.7499	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34437	112.7369	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.7184	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	112.7117	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34434	112.6866	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.6503	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.6161	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34478	112.6098	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34327	112.5922	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34327	112.5922	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34432	112.5818	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34451	112.5717	RASMUSN - UTICA JCT 230KV CKT 1
FDNSLock	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34478	112.534	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34428	112.5312	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	112.5016	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	112.4896	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34434	112.4699	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34412	112.4515	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34451	112.4309	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34475	112.4283	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34486	112.4254	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	112.422	GEN661015 1-COYOTE
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34449	112.4121	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34486	112.4073	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.4033	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34486	112.3598	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.3588	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34626	112.3575	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34626	112.3575	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34632	112.3502	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34307	112.3463	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34488	112.3113	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34442	112.3046	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3451	112.2948	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34581	112.2688	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34581	112.2688	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.2685	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.2504	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.225	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.2248	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.2193	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34341	112.219	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34341	112.1964	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34335	112.186	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34347	112.1834	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34495	112.1807	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34495	112.1807	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34437	112.177	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34481	112.169	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34341	112.1463	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34347	112.1339	2809X2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34347	112.1331	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34347	112.1321	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34347	112.1314	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34347	112.1314	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34457	112.1298	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34347	112.1291	2809X1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34347	112.1276	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34437	112.121	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34458	112.1055	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34701	112.1037	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34481	112.1005	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.0928	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3448	112.0708	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34481	112.0443	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	112.0318	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	112.0318	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34632	112.0318	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34529	112.0301	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34529	112.0301	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34632	112.0299	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.0295	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.0292	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.0291	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.0164	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34401	112.0133	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34392	112.0117	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.0036	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	112.0023	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34632	111.9984	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.9966	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.9965	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.9962	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.9931	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3448	111.9874	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.9803	GEN642067 1-PLATTE
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34441	111.9784	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.9732	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.9731	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.9716	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34459	111.9542	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34632	111.953	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.9464	GEN640020 2-SHELDON STATION UNIT 2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.942	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34426	111.9408	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34426	111.9408	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.9307	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	111.929	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.9273	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34632	111.9254	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.35024	111.925	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34555	111.9141	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.9091	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34504	111.9022	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.8951	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34525	111.8903	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34505	111.8822	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34505	111.8822	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	111.8766	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34496	111.8707	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34496	111.8707	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34543	111.8643	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.8613	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.8585	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34486	111.8548	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34505	111.8488	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34497	111.8402	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34497	111.8398	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.8349	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.8327	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34504	111.8302	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34508	111.8295	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34491	111.823	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.818	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34555	111.8165	HURON - WATERTOWN 230KV CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34555	111.8165	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34462	111.8149	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34496	111.8121	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34496	111.8121	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.8085	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34504	111.7997	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34493	111.7942	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34493	111.7942	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34415	111.7799	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34555	111.7765	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34555	111.7765	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.7601	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34469	111.749	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34469	111.749	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34441	111.7386	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.7364	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34525	111.7351	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34525	111.7342	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34701	111.7314	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34488	111.7289	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.7238	GEN563212 1-G15087_3 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34488	111.7227	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34491	111.7184	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34543	111.7162	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34497	111.7148	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34488	111.7133	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34496	111.7132	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34497	111.7117	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.7108	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34416	111.7088	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.7018	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	111.7007	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34496	111.6998	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34437	111.6967	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.6875	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.6843	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.345	111.6815	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34499	111.679	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.6785	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.6766	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34482	111.6758	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.6695	GEN303007 1-1BC2 U2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.6673	GEN303006 1-1BC2 U1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34469	111.6564	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3451	111.647	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34514	111.4508	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	111.2986	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34343	111.2247	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	09ALL_G16_075	0	17G	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	111.2039	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	09ALL_G16_075	0	17G	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	111.1968	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	111.179	BASE CASE
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	110.9969	GEN659125 1-COVEY
FDNS	09ALL_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	110.9751	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	110.9735	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34456	110.9463	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	110.9457	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.44695	110.9268	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34412	110.9118	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34412	110.9118	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.337	110.8605	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3445	110.85	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3445	110.8482	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3445	110.8482	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3448	110.7991	P12:115:NPPD:1175B:FAIRBRY7:HARBINE7:BTB
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34394	110.7969	P12:115:NPPD:1254:CENCITY7:COLMBUS7:BTB
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3448	110.7833	FAIRBURY - G15087_T 115.00 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34468	110.7566	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34468	110.7566	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34503	110.7507	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34472	110.7381	CRETE - FRIEND 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34394	110.7062	CENTRAL CITY - CLARKS 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.6961	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.6931	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.6759	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.6759	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.6759	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.6727	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.671	GEN652414 4-FT PECK
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.671	GEN652415 5-FT PECK
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.6705	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.6705	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.6644	GEN600050 1-FEP
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34487	110.6581	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.6382	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.6306	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.6306	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34484	110.6272	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.6204	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.6155	GEN600046 1-MECST
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.6034	GEN600047 1-MECCT1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.6011	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.6011	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.5872	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.5724	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.5672	GEN659162 4-RED WLCK
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.5672	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.5671	GEN659192 6-LYNN
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.5629	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.5574	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.5574	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.5559	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.5509	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.5475	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.5474	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.5384	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.5347	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34501	110.5309	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34501	110.5309	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34472	110.525	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.5138	GEN600017 C-LS POWER CT
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.5083	GEN681522 3-GENOA 3
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34719	110.4982	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.4866	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34429	110.4776	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34429	110.4776	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34394	110.4724	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34456	110.4663	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3471	110.4637	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.4613	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.4612	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.4258	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.4241	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.4232	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34719	110.4223	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34719	110.4223	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34719	110.4221	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.4194	GEN659274 1-GROTON
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.408	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	110.4069	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.4041	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3432	110.39	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3432	110.39	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.3897	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34719	110.3886	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34719	110.3886	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.3823	GEN 11104 1-J262_GEN 0.6000

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.3823	GEN 11108 1-J263_GEN 0.6000
FDNSLock	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34497	110.38	COPSTJCPFRSJ
FDNSLock	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34497	110.38	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34497	110.38	STMDSJFAFACO
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.3719	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34719	110.3591	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.3542	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.3489	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.3083	GEN659270 1-WEST SW
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.3027	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.3005	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34429	110.2982	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.2811	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34472	110.2789	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.2756	GEN657705 X-DRAYTON
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.2683	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34499	110.2441	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34297	110.2434	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34297	110.2434	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.2342	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.2217	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.2199	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.1925	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.1925	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.1925	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.1772	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34501	110.1377	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34501	110.1359	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.1091	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.0784	GEN652460 4-GARRISON
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.0784	GEN652461 5-GARRISON
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34322	110.0648	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34322	110.0648	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.0605	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.0478	GEN652458 2-GARRISON
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34501	110.0478	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.0477	GEN652457 1-GARRISON
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.0477	GEN652459 3-GARRISON
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.0181	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	110.0127	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	110.0077	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.9944	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.9779	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.9583	GEN652543 3-BIG BEND
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.9582	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	109.9065	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.8955	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.8894	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.8285	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.8261	GEN 11133 1-J442-GEN1 0.6900
FDNS	09NR_G16_075	0	17G	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	109.799	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	109.7643	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	109.7381	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.7279	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.7194	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.6956	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34344	109.6546	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.337	109.6391	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.5989	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.5987	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	09NR_G16_075	0	17G	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	109.5723	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.5609	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.5532	GEN652559 1-OAHE
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.5503	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.3744	GEN652558 6-OAHE
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.3743	GEN652556 2-OAHE
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.3555	GEN652557 5-OAHE
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.2908	GEN659453 1-GI1414GEN W0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.2303	GEN600004 2-PRAIRIE ISLAND G2
FDNSLock	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.2269	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.2234	GEN615010 1-STANTON4
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.1887	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.1878	GEN659141 1-K10215A
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.1797	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34317	109.1527	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34317	109.1356	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34317	109.1323	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.1238	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.0804	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.0288	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNSLock	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.0273	GEN672321 1-SHAND GENERATOR 1
FDNSLock	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	109.0013	GEN600006 1-AS KING
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	108.9951	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	108.9882	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNSLock	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	108.9806	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNSLock	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	108.9806	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	108.9496	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	108.9239	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.44304	108.8341	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	108.657	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	108.3322	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	108.1507	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	108.0432	GEN579459 1-G16-075-GEN10.6900
FDNS	09ALL_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	107.7821	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36233	107.6833	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36233	107.6715	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36233	107.6663	2810X2
FDNS	09ALL_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	107.6657	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36233	107.6393	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36233	107.6393	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36233	107.6219	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36233	107.6216	2801X
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.36233	107.5913	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	107.5897	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	107.5811	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	107.4356	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	107.3428	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	107.3317	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	107.2308	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	107.1017	GEN661015 1-COYOTE
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	107.0379	GEN659111 2-LELAND OLDS UNIT2
FDNS	09ALL_G16_075	0	17G	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	106.9816	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	106.8609	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	106.6955	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	106.6955	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	106.6954	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	106.6794	GEN657748 1-YOUNG 2 GENERATOR
FDNS	09NR_G16_075	0	17G	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	106.5318	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_075	0	17G	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	106.3618	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	09ALL_G16_075	0	17G	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	106.3617	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	106.2923	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	09ALL_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	106.2922	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	106.2339	GEN659125 1-COVEY
FDNS	09NR_G16_075	0	17G	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	106.0918	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	09NR_G16_075	0	17G	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	106.0917	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	106.0288	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	106.0001	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	105.8867	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	09ALL_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	105.7751	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	09ALL_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	105.775	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	105.7456	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	1	105.7414	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	105.2408	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	105.1826	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	103.832	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46606	103.832	GEN562715 1-G15_023_5 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.32423	101.9849	MCCOOL - MOORE 345KV CKT 1
FDNS	09ALL_G16_075	0	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.57433	100.7493	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	100.4324	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	100.4324	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45692	166.4194	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46281	165.101	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46178	163.3268	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45856	163.2343	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46284	162.4154	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46284	162.4154	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45845	161.0569	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46004	160.4146	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4626	160.224	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4626	160.224	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46263	160.1288	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46263	160.1288	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45657	159.4552	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4626	159.4277	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45657	159.036	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45657	158.8958	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45692	158.7208	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	158.6954	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	158.629	2809X1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	158.6253	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	158.6106	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	158.3791	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	158.3791	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	158.3708	2809X2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	158.3579	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46182	158.1841	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	157.8287	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45859	157.5447	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45859	157.5447	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45819	157.4608	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45819	157.4608	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	157.1879	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45859	157.075	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46016	157.0329	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45859	156.9375	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNSLock	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.44858	156.9297	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	156.709	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46084	156.6791	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	156.6649	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46162	156.3267	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	156.1762	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	156.0847	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	156.0407	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46087	156.0235	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45869	155.999	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	155.9391	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46132	155.7661	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46077	155.5311	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46016	155.4622	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46065	155.3803	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46065	155.3803	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46065	155.3757	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46304	155.3367	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46304	155.3367	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46065	155.1743	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	155.1238	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	155.1225	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46052	155.1121	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46104	155.1107	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	155.0394	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46104	155.0302	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	155.0288	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	154.9355	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46075	154.8979	LAKEFIELD 3 - NOBLES 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46013	154.8908	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46013	154.8594	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46013	154.8557	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45791	154.814	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45968	154.6109	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45942	154.5269	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45942	154.5269	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46052	154.478	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	154.4365	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	154.4196	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46076	154.4187	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46077	154.3315	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46077	154.3314	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46077	154.2728	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46049	154.0719	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46076	154.0618	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	153.8974	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	153.8848	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46011	153.7859	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46083	153.3812	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46089	153.2817	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	153.2622	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	153.2328	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	153.0958	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4828	153.0283	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.48274	153.0257	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	152.8025	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46043	152.6273	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46043	152.6273	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46054	152.5854	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46228	152.3773	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46228	152.3773	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46228	152.3773	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46228	152.3773	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46232	152.3097	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46232	152.3097	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46232	152.3097	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46232	152.3097	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	152.2569	GR PRAIRIEG 0.6900 0KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	152.2569	GR PRAIRIEG 0.6900 0KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46081	152.1962	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46081	152.194	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46081	152.194	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46116	151.811	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	151.7989	BASE CASE
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	151.7863	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	151.7863	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45337	151.7322	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45988	151.6571	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	151.6553	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45992	151.6486	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4613	151.6474	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45917	151.524	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45917	151.524	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46099	151.4675	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46099	151.4675	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46099	151.4655	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46099	151.4655	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	151.3546	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45981	151.3137	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46118	151.2943	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46118	151.2943	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46025	151.2663	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46025	151.2663	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46025	151.2652	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46025	151.2652	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	151.2649	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	151.2464	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45945	151.1799	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45945	151.1799	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	151.171	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	151.171	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	151.1653	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4612	151.1274	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4607	151.107	LOUP CITY - NORTH LOUP 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	151.0878	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	151.0823	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	151.0821	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	151.0821	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	151.0231	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45972	151.0177	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45972	151.0177	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	151.0141	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46122	151.003	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46122	151.003	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46019	150.9897	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4611	150.9394	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4611	150.9394	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	150.9275	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46115	150.8308	P12:345:SPS:J07.1.FINN.HITCH
FDNSLock	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	150.8242	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	150.8179	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46115	150.8139	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46115	150.8139	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45337	150.7526	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	150.7468	GEN600045 4-ANSON
FDNSLock	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	150.729	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	150.6844	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	150.6672	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46095	150.4708	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46095	150.4708	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	150.2877	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	150.1385	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	150.0925	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	149.9788	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	149.8905	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	149.8812	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46392	149.8517	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46381	149.7342	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46392	149.6674	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45996	149.665	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46392	149.6495	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46392	149.6492	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45988	149.62	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	149.6155	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46392	149.6147	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46392	149.6147	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46392	149.554	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	149.4365	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	149.4276	GEN652545 7-BIG BEND
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	149.2043	GEN652544 5-BIG BEND
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	149.2015	GEN652543 3-BIG BEND
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	149.2007	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	148.9262	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	148.8954	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	148.8166	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	148.8127	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	148.6395	GEN652559 1-OAHE
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	148.5197	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	148.4594	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	148.3109	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	148.241	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	148.0289	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	147.9966	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	147.9966	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	147.9387	GEN600004 2-PRAIRIE ISLAND G2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	147.932	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	147.8974	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	147.7897	GEN615010 1-STANTON4
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	147.7674	GEN652556 2-OAHE
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	147.7674	GEN652557 4-OAHE
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	147.7674	GEN652558 6-OAHE
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.44223	147.7513	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	147.6961	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	147.535	GEN659141 1-K10215A
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	147.5273	GEN600006 1-AS KING
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	147.5122	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	147.5043	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	147.4508	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	147.4111	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	146.8632	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.41717	146.856	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	146.829	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	146.7987	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.41716	146.7228	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	145.8862	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	145.6786	GEN579459 1-G16-075-GEN10.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34308	145.2201	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	144.9264	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	144.7625	GEN661015 1-COYOTE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33958	144.7561	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	144.508	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34325	144.4622	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	144.4467	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	144.1867	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.43833	144.1691	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34458	143.7734	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.48502	142.818	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.48502	142.578	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.48502	142.5511	2810X2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	142.2776	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34434	142.1214	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34434	142.1214	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	142.0554	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.48502	142.0489	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.48502	142.0284	2801X
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34433	141.9307	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34433	141.9307	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.48502	141.9249	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.48502	141.9249	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34229	141.8994	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33961	141.8439	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	141.7574	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3448	141.6156	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	141.5297	GEN659125 1-COVEY
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.48502	141.3855	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	141.311	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	141.311	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34179	141.0922	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34433	141.0794	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34351	140.81	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	140.7236	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	140.6211	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34402	140.5152	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34105	140.4402	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34105	140.4402	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34303	140.4011	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34175	140.1656	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34364	140.1638	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34364	140.1638	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	140.1082	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34337	139.9589	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34396	139.9104	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	139.8673	GEN336153 1-WATERFORD UNIT#3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3459	139.7554	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3459	139.7554	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3433	139.4521	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	139.4412	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34469	139.3645	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34469	139.3645	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34264	139.3628	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34222	139.1297	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	139.0753	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3454	138.9866	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	138.9859	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34321	138.9812	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.32958	138.851	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	138.6577	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33958	138.5382	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	138.5233	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34222	138.385	2809X1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34222	138.3464	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34212	138.3264	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3433	138.2673	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3433	138.2656	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3433	138.2652	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34222	138.2389	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3433	138.2367	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3433	138.2253	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34222	138.1758	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34222	138.1758	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34222	138.1674	2809X2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3433	138.1505	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	138.1209	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34299	138.0863	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34127	138.067	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34127	138.067	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	138.0386	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34431	137.9534	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34431	137.9534	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34194	137.8579	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34194	137.8579	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34338	137.8488	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34127	137.8321	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34338	137.8044	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34338	137.8044	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34212	137.7888	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	137.7114	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34127	137.7022	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34429	137.6296	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34429	137.6296	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34338	137.4924	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	137.4738	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34212	137.3859	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34311	137.3066	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34103	137.2918	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34103	137.2918	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34299	137.278	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34429	137.26	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3433	137.2305	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34413	137.1779	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	137.1248	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34501	137.0813	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34484	137.0482	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34484	137.0482	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34896	137.0244	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34225	136.9669	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	136.9572	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	136.9376	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	136.9369	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34354	136.7808	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34354	136.7647	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	136.7429	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34321	136.6942	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34398	136.65	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34225	136.6383	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34501	136.6335	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34347	136.564	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34225	136.5536	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34225	136.5536	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34501	136.5309	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34569	136.5171	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34418	136.5114	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34451	136.477	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34451	136.477	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34378	136.4751	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34327	136.329	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34501	136.3199	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34335	136.3095	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34341	136.2168	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34501	136.0974	EMMETE.TAP 7115.00 - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34372	135.9767	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	135.9115	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34301	135.8868	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34501	135.8613	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34438	135.8566	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.343	135.7463	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34325	135.7234	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34413	135.662	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34281	135.6468	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34281	135.6468	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	135.6045	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34569	135.5607	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34325	135.4463	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34399	135.3651	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34399	135.3651	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	135.2859	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34296	135.2751	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34425	135.2521	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34425	135.2521	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34425	135.2521	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34425	135.2521	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34426	135.2106	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34426	135.2106	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34426	135.2106	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34426	135.2106	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3439	135.1774	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34191	135.0601	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34191	135.0601	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34319	134.9978	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34319	134.9866	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34319	134.9866	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33566	134.943	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34388	134.8443	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34388	134.8443	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34489	134.7743	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34489	134.7743	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3446	134.7375	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3446	134.7375	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3446	134.7291	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34392	134.7283	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34392	134.7283	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34392	134.7138	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3446	134.7003	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3446	134.697	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3446	134.697	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3446	134.6862	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34296	134.6591	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	134.658	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	134.6228	BASE CASE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	134.612	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	134.612	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34371	134.5774	ALDA - SUB A 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3442	134.5619	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34334	134.5387	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	134.5275	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34334	134.5241	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3438	134.5101	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34334	134.5051	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34315	134.5035	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34213	134.5005	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	134.4991	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34334	134.4968	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.35834	134.4925	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.35838	134.4914	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3429	134.485	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34388	134.4771	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34388	134.4771	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34334	134.4625	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34326	134.4611	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34334	134.4283	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34308	134.4152	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34166	134.3699	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34166	134.3699	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	134.3466	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	134.3085	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3448	134.2803	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3448	134.2803	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34498	134.2396	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3419	134.2373	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3419	134.2373	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3441	134.2126	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	134.1965	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	134.1796	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34216	134.1778	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34315	134.1641	RASMUSN - SIOUX CITY 230KV CKT 1
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	134.1555	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	134.1317	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3435	134.1241	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34338	134.1143	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34338	134.1143	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34338	134.1139	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34338	134.1139	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3435	134.0912	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34371	134.0382	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34371	134.0382	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	134.0348	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34272	134.0139	GRAND ISLAND - HASTINGS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34893	134.0109	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	133.9887	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	133.9696	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34565	133.9653	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34272	133.9634	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34272	133.9634	HASTINGS (HASTINGS T3) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33566	133.9192	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	133.9164	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	133.9083	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	133.9001	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	133.8859	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34251	133.868	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34251	133.868	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34251	133.8664	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34251	133.8664	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34369	133.8341	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34498	133.8256	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34366	133.8194	STMDSJFAFACO
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34366	133.8191	COPSTJCPFRSJ
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34366	133.8191	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	133.819	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34374	133.8153	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34374	133.8153	P12:115:UMZB:# 119 #: IN NE.
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34263	133.8065	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3435	133.7914	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34371	133.7386	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34371	133.7118	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34498	133.7041	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34371	133.665	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34297	133.6569	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34396	133.629	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34396	133.629	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34498	133.6009	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34375	133.5567	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34447	133.5406	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34447	133.5406	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3419	133.5028	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3419	133.5028	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34415	133.4794	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	133.4227	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	133.4171	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	133.4169	P12:115:TSGT:GRANTNB7-OGALALA7_2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34593	133.3597	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3441	133.2925	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34498	133.2836	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34565	133.2551	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34396	133.2054	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34396	133.2054	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34278	132.8537	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34278	132.8537	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34388	132.8316	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34388	132.8316	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34388	132.8252	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34186	132.7943	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	132.7571	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34385	132.728	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34385	132.728	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34421	132.5668	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34421	132.5668	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34421	132.5668	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34421	132.5668	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34423	132.5522	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34423	132.5522	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34423	132.5522	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34423	132.5522	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34186	132.5017	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34458	132.4917	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34186	132.4743	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34316	132.439	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34316	132.4198	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34316	132.4198	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	132.3758	BASE CASE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	132.2129	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	132.2064	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34322	132.1453	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34417	132.0576	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	132.0242	GEN600006 1-AS KING
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.35829	131.9966	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.35833	131.995	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	131.9838	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34163	131.9829	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34163	131.9829	SUB 3454 - WAGENER 345KV CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	131.9685	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34212	131.9605	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	131.9437	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	131.9377	GEN659296 2-SDPRAIRWND1W0.6900
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	131.9296	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	131.8955	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	131.8779	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34335	131.7708	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34335	131.7708	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34334	131.7675	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34334	131.7675	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34187	131.7107	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34187	131.7107	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34458	131.6677	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34458	131.6677	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34458	131.6658	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34458	131.6593	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34458	131.6573	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34458	131.6573	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34458	131.6573	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3421	131.6526	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34248	131.631	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34248	131.631	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34248	131.6295	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34248	131.6295	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	131.6033	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34368	131.5927	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34368	131.5927	COOPER - FAIRPORT 345KV CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	131.574	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34259	131.5635	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33563	131.5212	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34363	131.4889	COPSTJCPFRSJ
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34363	131.4889	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34363	131.4889	STMDSJFAFACO
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	131.3314	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34458	131.3188	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34366	131.2807	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34187	131.267	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34187	131.267	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	131.2419	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	131.1964	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	131.1778	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34368	131.1622	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	131.1566	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34368	131.1562	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	131.141	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34368	131.0601	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	131.0141	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34578	130.9977	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	130.9476	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34569	130.8839	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34578	130.8595	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34578	130.8484	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34578	130.8484	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34578	130.8127	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34578	130.8127	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34578	130.7779	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	130.7476	GEN652545 7-BIG BEND
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	130.6634	GEN652543 3-BIG BEND
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	130.6631	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	130.661	GEN652544 5-BIG BEND
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	130.6212	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	130.5089	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	130.4537	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	130.4237	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	130.4173	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	130.3821	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	130.3048	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	130.2809	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	130.2622	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	130.2566	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	130.2414	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	130.207	GEN579459 1-G16-075-GEN10.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	130.1156	GEN652907 1-G09_007IS_3 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34183	130.0797	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	130.0709	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	130.0361	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	130.0271	GEN652559 1-OAHE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.9759	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.9759	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	129.9665	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34183	129.9491	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34183	129.948	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.9457	GEN600006 1-AS KING
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.9236	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.9139	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.8819	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	129.8051	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.7421	GEN652556 2-OAHE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.7421	GEN652557 4-OAHE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.7421	GEN652558 6-OAHE
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	129.7136	GEN661015 1-COYOTE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.6988	GEN615010 1-STANTON4
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.6946	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.6212	GEN659141 1-K10215A
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.5167	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.4074	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.2421	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.241	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.2099	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.1957	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.1678	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	129.0012	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34375	129.001	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	128.9749	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36056	128.841	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36056	128.6639	2810X2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36056	128.5924	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	128.4762	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	128.4426	GEN579459 1-G16-075-GEN10.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	128.3398	GEN661015 1-COYOTE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	128.1861	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36056	128.1275	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36056	128.1275	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36056	128.0905	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36056	128.0664	2801X
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	128.0455	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	128.0147	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	127.6052	GEN657748 1-YOUNG 2 GENERATOR
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36056	127.4789	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	127.4297	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	127.4197	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	127.2665	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	127.2298	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	127.1336	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	127.1013	GEN659125 1-COVEY
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46497	127.0966	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	127.0482	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3229	126.9821	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	126.8731	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	126.8731	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36056	126.5253	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36056	126.5062	2810X2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36056	126.4975	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	126.2155	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36056	126.1766	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36056	126.1719	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36056	126.1719	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36056	126.1635	2801X
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	126.141	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	126.0119	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	125.8889	GEN659125 1-COVEY

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	125.83	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	125.83	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36056	125.8045	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	125.1374	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	125.0897	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	124.988	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4617	124.9356	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	124.3573	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46794	123.9466	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46815	123.2533	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.31851	122.7515	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46688	122.1125	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	122.0481	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	122.0481	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46802	121.6506	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46802	121.6506	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4641	120.9921	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4641	120.8743	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4641	120.8658	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4641	120.8658	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46303	120.7038	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46303	120.7038	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46344	120.6606	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46344	120.6606	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46798	120.6156	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46798	120.6156	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46793	120.6034	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46793	120.6034	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46483	120.5326	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	120.5143	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	120.5143	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46384	120.4724	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	120.4255	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46363	120.4201	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46108	120.3682	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46793	120.3287	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46108	120.3091	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46108	120.3018	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4617	120.2741	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46684	120.1329	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46558	120.0781	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	120.0517	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	120.0365	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	119.9579	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	119.9293	GEN336153 1-WATERFORD UNIT#3
FDNSLock	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46522	119.8013	P13:230-345:NPPD:STEGALL3:KV3A
FDNSLock	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46522	119.7977	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.41923	119.7687	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46306	119.76	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46306	119.76	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46306	119.7317	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	119.702	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46483	119.6967	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46306	119.6856	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	119.6687	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	119.6557	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46359	119.6262	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46359	119.6262	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46359	119.6187	2809X1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4651	119.604	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46559	119.5946	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46359	119.5894	2809X2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46359	119.5893	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46359	119.586	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46359	119.5757	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46546	119.5742	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46471	119.4529	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	119.4326	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	119.4083	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNSLock	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46567	119.3735	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46521	119.3657	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46508	119.3614	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46548	119.3598	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46529	119.2582	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	119.2304	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	119.218	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46359	119.1877	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46654	119.1498	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46815	119.1391	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46815	119.1391	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46333	119.0987	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	119.0854	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46565	119.0769	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46247	119.0247	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46521	119.0208	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46677	119.005	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.9959	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.9908	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.9869	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46567	118.962	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.9465	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46615	118.918	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46567	118.9116	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46564	118.8668	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46564	118.8668	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.8625	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46567	118.8537	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46565	118.8355	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46677	118.8322	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46677	118.8322	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46567	118.7885	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46384	118.7675	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.7311	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46525	118.7292	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46539	118.7201	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46539	118.7201	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46542	118.6893	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46539	118.6776	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4648	118.6691	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46581	118.6555	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46567	118.6473	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46511	118.6373	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.622	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46539	118.582	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.5787	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.5766	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.5765	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.5434	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46567	118.5334	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46479	118.5325	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46526	118.5322	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46434	118.5282	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46997	118.5233	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46997	118.5233	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46997	118.5233	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46997	118.5233	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46565	118.5232	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46565	118.5212	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.5135	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.5134	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46542	118.5005	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46581	118.4934	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.4929	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46479	118.4919	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46479	118.4917	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46479	118.491	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46479	118.4909	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46479	118.489	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46677	118.4882	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46677	118.4882	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46392	118.488	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46392	118.488	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46479	118.4859	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.4522	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46505	118.4503	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46505	118.4462	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46505	118.4459	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46479	118.4435	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46355	118.431	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46605	118.4294	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46511	118.4223	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46574	118.4088	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46525	118.4	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.3913	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46562	118.3866	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.381	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46562	118.3735	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.3676	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46515	118.3527	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46562	118.3392	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46515	118.3323	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.324	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.48691	118.3186	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46585	118.3182	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.48686	118.3168	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46487	118.3072	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46478	118.2764	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.2745	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.2657	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46564	118.2653	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.2475	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.2325	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.2315	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.2307	GEN303007 1-1BC2 U2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.2291	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.2271	GEN303006 1-1BC2 U1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4651	118.2158	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4651	118.2158	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46574	118.2086	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46604	118.2021	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.1828	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.1822	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.1791	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.1773	GEN303008 1-1BC2 U3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.1757	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.1687	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.1662	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.166	GEN642067 1-PLATTE
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.1384	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46575	118.1359	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.1285	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46599	118.1235	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46599	118.1235	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.12	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46525	118.114	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4658	118.1125	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46589	118.1082	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46589	118.1082	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.1033	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.0894	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46593	118.0883	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46533	118.0827	AINSWORTH - CALAMUS 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46533	118.082	P12:115:NPPD:1090:AINSWND7:THEDFRD7:BTB
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.0818	GEN334071 1-LEWIS CREEK 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46598	118.0803	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.0774	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46533	118.0761	CALAMUS - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46534	118.0732	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46605	118.0707	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.055	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.0515	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46595	118.0485	GENOA 161 - SENECA 161 161KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46533	118.0449	HELENA - SHEAS LK3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46598	118.0445	NORTH LA CROSSE (10008630_001) 345/161/34.5KV TRANSFORMER CKT 9
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46547	118.0307	PETERSBRG.N7115.00 - PETERSBURG 115KV CKT Z1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46547	118.0233	P12:115:NPPD:1168B:ALBION 7:PETERSBRG.N7:BTB
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.0229	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46585	118.0227	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46536	118.018	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46547	118.0111	ALBION - PETERSBURG 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	118.003	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46605	118.0002	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34098	117.6298	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	117.5278	BASE CASE
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45809	117.1377	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46708	117.131	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46708	117.131	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46708	117.131	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46708	117.131	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46712	117.1029	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46712	117.1029	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46712	117.1029	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46712	117.1029	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4657	117.0867	CRETE - FRIEND 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46518	117.0688	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46518	117.0688	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46542	117.0681	LOUP CITY - NORTH LOUP 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46602	117.0576	G11_051T 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	117.0521	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46596	117.0246	COPSTJCPFRSJ
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46596	117.0246	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46596	117.0246	STMDSJFAFACO
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	117.0171	GEN600013 3-BLACK DOG GEN 3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	117.0122	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	117.0092	GEN620115 1-HRDLKGEN 0.6000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46588	117.0089	7MAYWOOD 345.00 - 7SPENCER 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46592	117.0085	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46592	117.0085	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46588	117.0072	7MONTGMRY 345.00 - 7SPENCER 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	117.0028	GEN620323 2-HOOT LAKE 2 GEN
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.9999	MITCHLCO3 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46443	116.9996	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46443	116.9996	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46608	116.9939	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.9916	GEN600125 2-FEP ST G 13.800
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46509	116.9862	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.9859	GEN672340 1-QUEEN ELIZABETH GENERATOR 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46593	116.9823	SMOKYHL6 230.00 - SUMMIT 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.9754	GEN563302 1-G15096_3 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46734	116.9687	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46491	116.9687	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46611	116.9669	ELLENDALE (ELLENDL TR1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.9621	BENSON 7 - FIBROMINN GENERATION 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.9601	GEN672384 1-CENTENNIAL WINDFARM
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.9542	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.9542	J262_J263 115.00 115/34.5KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.9288	GEN657964 1-ASH2GEN9 0.5750
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.9277	GEN652548 5-FT RANDAL
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.9277	GEN652549 7-FT RANDAL
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.924	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.924	GEN652546 1-FT RANDAL
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.9226	GEN652547 3-FT RANDAL

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4657	116.9126	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.9096	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.9071	GEN600018 S-LS POWER STEAM
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46734	116.9004	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.8972	GEN659290 1-EDGECOL
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.8884	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46576	116.886	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.8812	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.8737	GEN652410 3-FT PECK
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46602	116.8627	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.8425	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46581	116.8324	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.831	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.83	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.83	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.8244	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.8244	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.8243	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.8231	GEN657600 1-L1GEN3 9 0.5750
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.813	GEN652414 4-FT PECK
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.813	GEN652415 5-FT PECK
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.8105	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.8044	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.7942	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.7823	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46465	116.7746	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.7736	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_075	0	2SSP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34379	116.7603	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.7472	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.7472	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.7469	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.742	GEN603185 1-FIBROMINN GENERATION
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.736	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.736	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4688	116.6971	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4657	116.6867	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.6838	GEN600050 1-FEP
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46868	116.6815	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46595	116.6749	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.6645	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.652	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.652	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46585	116.6454	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46585	116.6454	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46393	116.6434	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46393	116.6434	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4652	116.6389	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4652	116.6389	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46734	116.6386	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46734	116.6386	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46734	116.638	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.6373	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46734	116.6365	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46734	116.6359	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46734	116.6359	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46734	116.6359	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.616	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4688	116.6117	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4688	116.6108	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4688	116.6107	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.6007	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.6007	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4688	116.5916	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4688	116.5916	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.5684	GEN659192 6-LYNN
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.5673	GEN659162 4-RED WLCK
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.5673	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.5671	LANSING WEST 161/22.0KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.5639	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46453	116.5616	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.5609	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.5597	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4688	116.5396	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.5347	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46419	116.533	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46419	116.533	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.5178	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.5172	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.5153	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.5152	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.5132	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.5071	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.5015	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.4559	GEN629074 1-ARNOLD LOWSIDE OF GSU XFMR
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.4484	GEN600017 C-LS POWER CT
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4652	116.4343	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.4243	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.4237	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.4196	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.4157	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.4109	GEN681522 3-GENOA 3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.3993	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.3993	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.3883	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.3856	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.3722	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.3587	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.3517	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.3419	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.2327	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34426	116.2204	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.2051	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.158	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.1396	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.1347	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.0875	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.0875	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	116.0875	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45809	115.9905	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.9323	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.8774	GEN652460 4-GARRISON
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.8774	GEN652461 5-GARRISON
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.8574	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.8457	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.8452	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.8316	GEN652459 3-GARRISON
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.8315	GEN652457 1-GARRISON
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.8315	GEN652458 2-GARRISON
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.8178	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.8126	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4641	115.8052	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.8036	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4641	115.8034	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4641	115.7993	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.7781	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.7777	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	115.7623	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.762	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.7337	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46573	115.6801	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46573	115.6801	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.6264	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34605	115.5928	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46473	115.4724	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.3828	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34257	115.2974	SPLIT ROCK - WHITE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34257	115.2974	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.22	GEN652559 1-OAHE
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.1998	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.1957	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	115.1928	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.1901	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.1858	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.1613	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	115.1049	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.0113	GEN652558 6-OAHE
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	115.0112	GEN652556 2-OAHE
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34626	114.9904	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	114.9849	GEN652557 5-OAHE
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	114.8963	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34447	114.8228	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	114.8084	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	114.7605	GEN615010 1-STANTON4
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	114.7144	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	114.6033	GEN659141 1-K10215A
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	114.4667	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	114.4204	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3454	114.3557	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	114.351	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	114.351	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46465	114.3393	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	114.3186	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	114.2201	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34402	114.0661	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	113.9418	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	113.938	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	113.9094	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34615	113.8993	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34615	113.8993	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33063	113.7937	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	113.6704	GEN600006 1-AS KING
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34721	113.6378	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34721	113.6378	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34098	113.5554	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34238	113.5471	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34238	113.5471	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	113.3234	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	113.2475	GEN579459 1-G16-075-GEN10.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34581	113.2155	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34581	113.2155	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34469	113.1785	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34579	113.1743	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34579	113.1743	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	113.0843	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34672	113.0386	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34469	113.0339	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3426	112.9979	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3426	112.9979	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3426	112.9642	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34477	112.9597	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3426	112.9592	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34579	112.9553	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	112.9182	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34307	112.8003	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34541	112.7371	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.49078	112.5486	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34433	112.5157	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34463	112.4991	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.49078	112.4971	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.344	112.496	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.49078	112.4892	2810X2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34437	112.3836	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34446	112.3739	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.49078	112.3653	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.49078	112.3653	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.49078	112.3605	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.49078	112.3587	2801X
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	112.3573	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	112.3191	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34476	112.3072	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	112.276	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.49078	112.2408	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	112.2245	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34469	112.1913	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34424	112.1893	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34363	112.1729	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34363	112.1334	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34363	112.1334	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34363	112.1254	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34621	112.0976	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34621	112.0976	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34467	112.0958	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34432	112.0115	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	112.0008	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.9956	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.9725	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.9676	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	111.9304	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.9195	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.9142	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3453	111.905	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34514	111.8717	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34437	111.8634	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.8272	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34434	111.8156	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.7805	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.7468	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34478	111.7392	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	111.7235	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34327	111.7185	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34327	111.7185	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34432	111.7093	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	111.7061	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34451	111.6975	RASMUSN - UTICA JCT 230KV CKT 1
FDNSLock	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34478	111.6641	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	111.6431	GEN661015 1-COYOTE
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34428	111.6318	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34434	111.6008	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34412	111.5825	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34475	111.5584	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34451	111.5583	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34486	111.5544	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34449	111.5421	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34486	111.5365	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.5189	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.4915	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34486	111.4895	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34626	111.4888	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34626	111.4888	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34307	111.4794	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34632	111.4773	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34488	111.4424	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34442	111.4349	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3451	111.4265	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.4028	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.384	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34581	111.3772	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34581	111.3772	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34341	111.3698	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.3584	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.3582	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34341	111.3475	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.3396	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34335	111.3327	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34347	111.3186	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34495	111.3138	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34495	111.3138	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34437	111.3106	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34481	111.3017	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34341	111.2988	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34347	111.2693	2809X2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34347	111.269	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34347	111.2675	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34347	111.2669	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34347	111.2669	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34347	111.2646	2809X1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34347	111.2631	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34457	111.2622	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34437	111.2552	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	111.253	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	111.253	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34458	111.2388	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34701	111.2366	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34481	111.234	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.2281	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3448	111.2035	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34481	111.1788	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.163	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.1628	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.1626	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34632	111.1615	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34632	111.1606	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	111.1564	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34392	111.1564	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34529	111.1508	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34529	111.1508	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34401	111.1454	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.1415	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.1383	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.1374	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34632	111.1286	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.1272	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.1239	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.1239	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.1237	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3448	111.1213	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.1144	GEN642067 1-PLATTE
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34441	111.1126	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.1075	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.1075	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	111.1036	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.0967	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34459	111.0891	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34632	111.0839	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.0742	GEN640020 2-SHELDON STATION UNIT 2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.0738	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34426	111.0679	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34426	111.0679	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.0671	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.0639	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.35024	111.0579	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34632	111.0566	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34555	111.0498	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34504	111.0392	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.0365	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	111.0317	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34525	111.0272	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34505	111.0185	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34505	111.0185	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34496	111.0064	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34496	111.0064	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	110.9981	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34543	110.9974	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	110.9945	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34486	110.9907	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34505	110.9854	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34107	110.9775	HOSKINS - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34497	110.9768	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34497	110.9763	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	110.9704	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	110.9699	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34504	110.9678	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34508	110.9642	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34491	110.9571	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	110.9545	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34555	110.9534	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34555	110.9534	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34462	110.9523	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34496	110.9484	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34496	110.9484	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	110.9462	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34504	110.9376	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34493	110.9307	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34493	110.9307	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	110.9298	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34415	110.9166	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34555	110.9137	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34555	110.9137	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	110.8967	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34469	110.8895	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34469	110.8895	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34441	110.876	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	110.8744	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34525	110.8731	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34525	110.8724	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34701	110.8674	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34488	110.8667	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	110.8611	GEN563212 1-G15087_3 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34488	110.8606	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34491	110.8562	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34543	110.8529	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34497	110.8521	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34488	110.8513	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34496	110.8506	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	110.8492	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34497	110.849	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34416	110.8467	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	110.8392	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34496	110.8374	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34437	110.8347	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	110.8259	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	110.8228	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	110.8171	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	110.8154	GEN334441 1-SABINE UNIT 5
FDNS	09ALL_G16_075	0	17G	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	110.612	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	09ALL_G16_075	0	17G	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	110.6021	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	110.533	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	09ALL_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	110.3743	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	110.3727	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	110.3219	BASE CASE
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	110.2289	GEN659125 1-COVEY
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	110.2148	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.44695	110.0732	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34472	109.8797	CRETE - FRIEND 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34394	109.8501	CENTRAL CITY - CLARKS 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34487	109.8075	BONDURANT - MONTEZUMA 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.7862	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.7787	GEN672339 16-QE 16G 13.800

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.7787	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34484	109.7748	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.7684	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.764	GEN600046 1-MECST
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.752	GEN600047 1-MECCT1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.7486	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.7486	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.7357	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.7214	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.715	GEN659162 4-RED WLCK
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.715	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.7149	GEN659192 6-LYNN
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.7122	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.7064	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.7064	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.7049	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.7	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.6965	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.6965	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.6875	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.6838	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34501	109.6834	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34501	109.6834	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34472	109.6758	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.6632	GEN600017 C-LS POWER CT
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.6573	GEN681522 3-GENOA 3
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34719	109.6481	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.6355	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34429	109.6298	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34429	109.6298	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34394	109.6172	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3471	109.614	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.6112	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.6109	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.5748	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.5739	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34719	109.5731	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.5731	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34719	109.573	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34719	109.5728	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.5685	GEN659274 1-GROTON
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	109.5588	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.557	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.5532	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34456	109.5427	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34719	109.5398	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34719	109.5398	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.539	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3432	109.5385	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3432	109.5385	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNSLock	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34497	109.5345	COPSTJCPFRSJ
FDNSLock	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34497	109.5345	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34497	109.5345	STMDSJFAFACO
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.5327	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.5327	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.5222	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34719	109.5105	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.5051	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.4996	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.4584	GEN659270 1-WEST SW
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.4541	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.452	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34429	109.4516	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34472	109.4324	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.4319	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.4271	GEN657705 X-DRAYTON
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.4201	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34499	109.4021	COOPER - ST JOE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34297	109.3942	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34297	109.3942	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.385	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.3732	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.3714	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.3449	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.3449	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.3448	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.3294	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34501	109.2955	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34501	109.2929	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.2622	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	109.2598	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.2301	GEN652461 5-GARRISON
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.23	GEN652460 4-GARRISON
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.2141	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34501	109.2064	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34322	109.2063	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34322	109.2063	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	09NR_G16_075	0	17G	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	109.2008	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.1996	GEN652457 1-GARRISON
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.1996	GEN652458 2-GARRISON
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.1996	GEN652459 3-GARRISON
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.1702	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.16	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	109.1548	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.1493	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.1304	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.1133	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.1133	GEN652543 3-BIG BEND
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.0503	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	109.0429	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	108.9906	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.9846	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.9822	GEN 11133 1-J442-GEN1 0.6900
FDNS	09NR_G16_075	0	17G	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	108.9662	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	108.9645	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.8861	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.8763	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.8511	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34344	108.8001	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.337	108.7818	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.721	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.711	GEN652559 1-OAHE
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.7087	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.5333	GEN652556 2-OAHE
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.5333	GEN652558 6-OAHE
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.5146	GEN652557 5-OAHE
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.4496	GEN659453 1-GI1414GEN W0.6900
FDNSLock	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.3923	GEN600004 2-PRAIRIE ISLAND G2
FDNSLock	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.389	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.3847	GEN615010 1-STANTON4
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.3478	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.3471	GEN659141 1-K10215A
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.3387	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.3019	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34317	108.2985	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34317	108.2883	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.2867	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34317	108.2851	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.245	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNSLock	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.191	GEN672321 1-SHAND GENERATOR 1
FDNSLock	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.1656	GEN600006 1-AS KING
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.1649	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.158	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNSLock	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.1448	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNSLock	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.1448	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.1104	GEN659407 1-ANTELPHILLSW0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	108.0888	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.44304	107.9622	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	107.8238	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	107.5029	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	107.3232	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	107.214	GEN579459 1-G16-075-GEN10.6900
FDNS	09ALL_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	107.1734	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	09ALL_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	107.0586	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36233	106.8696	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36233	106.8547	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36233	106.8494	2810X2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	106.8303	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36233	106.8149	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36233	106.8149	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36233	106.7976	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36233	106.7972	2801X
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	106.7591	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.36233	106.759	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	106.7341	FTTHOM2-LNX3345.00 - GRPRAR2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	106.723	FTTHOMPSON-GRANDPRAIRIE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	106.6151	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	106.4128	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	106.2836	GEN661015 1-COYOTE
FDNS	09ALL_G16_075	0	17G	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	106.2562	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	106.2145	GEN659111 2-LELAND OLDS UNIT2
FDNS	09ALL_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	106.1355	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	105.8816	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	105.875	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	105.875	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	105.8653	GEN657748 1-YOUNG 2 GENERATOR
FDNS	09NR_G16_075	0	17G	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	105.8224	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_075	0	17G	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	105.6117	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	09ALL_G16_075	0	17G	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	105.6116	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	105.5495	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	105.5495	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	105.4178	GEN659125 1-COVEY
FDNS	09NR_G16_075	0	17G	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	105.3705	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	09NR_G16_075	0	17G	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	105.3704	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	09ALL_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	105.3562	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	105.3309	FT THOMPSON - FTTHOM2-LNX3345.00 345KV CKT Z
FDNS	09ALL_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	105.0893	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	09ALL_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	105.0892	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	105.0816	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	105.0632	GRANDPRAIRIE-FTTHOMPSON-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	1	105.0595	GRPRAR2-LNX3345.00 - YANKTON 345KV CKT Z
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	104.4407	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	104.3831	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	103.2036	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	0	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46606	103.2036	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.32423	101.1023	MCCOOL - MOORE 345KV CKT 1
FDNS	09ALL_G16_075	0	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.57433	100	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	99.7	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	0	20WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	99.7	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50681	131.0549	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51275	130.4258	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51303	128.3022	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5119	126.4385	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50584	126.4261	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51286	125.9361	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51286	125.9361	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50583	125.8615	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	125.6664	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	125.4341	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	125.4237	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50529	125.1953	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50529	125.0213	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51232	124.9659	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51232	124.9659	FT RANDAL - FT THOMPSON 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5123	124.7968	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5123	124.7968	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50681	124.741	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5095	124.735	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	124.7302	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51237	124.6745	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51237	124.6745	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51235	124.3453	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51235	124.3453	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50676	124.3165	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50853	124.2878	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50853	124.2878	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51025	124.254	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5095	124.1305	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	124.0637	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	124.0637	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50853	124.0335	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50848	123.9789	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5123	123.9486	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51235	123.9355	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50853	123.8984	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5095	123.8906	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50963	123.8539	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50955	123.7853	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	123.7564	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50848	123.681	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50955	123.6648	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51071	123.5798	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	123.4819	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	123.4819	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51107	123.4669	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51077	123.4609	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50955	123.2798	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50831	123.1559	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50831	123.1559	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50963	123.1423	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50967	123.1207	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5095	123.0483	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51188	122.983	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51193	122.9104	LETCHER - SIOUX FALLS 230KV CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50955	122.8808	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	122.8759	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50967	122.8011	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51038	122.7609	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	122.7382	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	122.7344	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50967	122.709	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50967	122.709	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50825	122.6787	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50825	122.6787	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51102	122.277	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51138	122.2152	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51138	122.2152	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	122.1947	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	122.1753	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51097	122.1718	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51105	122.1314	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	122.0171	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50955	121.9798	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50807	121.9762	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5106	121.7923	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51009	121.7691	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51009	121.7691	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51009	121.7525	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51004	121.6848	FT RANDAL - SPENCER 115KV CKT 1
FDNSLock	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5095	121.6507	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51004	121.644	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51004	121.644	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51009	121.5874	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51116	121.5844	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51004	121.3755	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50907	121.3684	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51062	121.3172	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51181	121.2637	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5096	121.2457	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51167	121.1685	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	121.1662	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	121.1472	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50933	121.089	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50933	121.089	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	121.0591	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	121.047	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	121.0348	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	121.0208	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50678	120.9458	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51123	120.9434	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51143	120.9208	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51143	120.9208	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51005	120.8282	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51122	120.7858	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51177	120.7718	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51114	120.7592	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	120.7337	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5106	120.6932	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51062	120.6642	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51038	120.6554	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51056	120.6532	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51043	120.6529	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5096	120.6382	2809X1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	120.6118	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5096	120.5896	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	120.5801	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	120.5326	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51067	120.5047	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	120.5004	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50673	120.4956	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5096	120.4863	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5096	120.4418	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5096	120.4418	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51123	120.4343	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5096	120.4336	2809X2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5096	120.4273	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50927	120.4228	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50927	120.4228	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51087	120.4161	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51051	120.415	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50964	120.3712	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50871	120.3499	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50871	120.3448	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51303	120.3439	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51303	120.3439	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	120.3311	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50871	120.3203	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51078	120.294	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51079	120.2724	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	120.2685	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51132	120.2673	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	120.1982	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51121	120.1746	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51005	120.1453	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51005	120.1452	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51005	120.1439	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51005	120.1403	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51005	120.1313	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51004	120.1259	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	120.1238	GEN344894 1-1LAB G1 20.000

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	120.1227	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	120.1204	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	120.1203	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50964	120.1186	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50964	120.1186	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50964	120.1165	2809X2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50964	120.1146	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50964	120.0982	2809X1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51005	120.092	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50964	120.084	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51004	120.0807	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51087	120.0598	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51004	120.0576	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	120.0558	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	120.0545	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	120.0492	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51146	120.0128	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	120.0072	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51011	119.9902	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51011	119.9785	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51011	119.9775	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51011	119.9774	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51126	119.9754	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51011	119.9628	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51011	119.9627	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51056	119.9016	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51152	119.8993	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51152	119.8993	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51067	119.8926	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.892	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51011	119.8858	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51094	119.8786	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51073	119.8586	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.8571	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51151	119.8452	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51157	119.8426	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51157	119.8426	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.8418	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.8416	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51046	119.8286	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.8193	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51126	119.8178	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.8166	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51143	119.8135	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51143	119.8135	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51154	119.7938	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.786	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51299	119.7706	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51299	119.7706	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51156	119.7547	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51124	119.7393	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51146	119.7146	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51126	119.7041	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51082	119.6979	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	119.6835	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51143	119.6789	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51143	119.6789	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51141	119.6647	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51141	119.6647	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51123	119.6568	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51205	119.6395	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.6346	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51146	119.604	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.5946	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51146	119.593	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51049	119.5712	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51214	119.5617	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.556	GEN641089 2-ENERGY CENTER 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51154	119.554	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51149	119.5464	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.5292	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51154	119.5257	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51214	119.5174	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51214	119.5174	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51221	119.509	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51221	119.509	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.5045	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.4968	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51149	119.4581	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51214	119.4512	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51214	119.4512	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51093	119.412	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.4074	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.4072	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5121	119.3888	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5121	119.3888	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5112	119.3814	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51139	119.3812	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51128	119.3393	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51082	119.3381	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.3345	GEN303007 1-1BC2 U2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.3291	GEN303006 1-1BC2 U1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51129	119.3217	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5108	119.3026	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51149	119.2991	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50868	119.2859	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51162	119.274	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51144	119.2493	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.2354	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.2298	GEN303008 1-1BC2 U3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50868	119.229	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50868	119.2265	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51145	119.2078	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5112	119.2027	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51148	119.1893	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51148	119.1893	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5113	119.176	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51035	119.1652	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51	119.1412	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51	119.1412	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51	119.1347	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.103	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51149	119.1029	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51094	119.095	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.071	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5112	119.062	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51145	119.0356	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	119.0349	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.0332	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	119.028	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51136	119.0271	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51121	119.0068	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51121	118.9925	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50908	118.9898	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51138	118.9879	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	118.9442	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5115	118.9391	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51192	118.9334	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51192	118.9334	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51192	118.9334	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51192	118.9216	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51192	118.9216	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51082	118.8917	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51132	118.8751	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51132	118.8751	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5108	118.8707	BELDEN - HARTINGTON 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51082	118.8518	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51188	118.8511	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51132	118.8321	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51121	118.7549	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51206	118.7091	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51206	118.7091	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51079	118.7084	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	118.6385	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	118.5913	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51075	118.5798	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	118.4416	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51161	118.4176	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	118.4002	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	118.3833	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	118.3829	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	118.3605	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51116	118.3326	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	118.3315	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50903	118.3193	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51085	118.1997	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5114	118.1753	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51166	118.1701	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51116	118.1639	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51048	118.1072	EMMETE.TAP 7115.00 - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51168	118.09	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51127	118.0875	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51127	118.0875	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51127	118.0803	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	118.0642	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51162	118.0588	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51053	118.0472	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51116	118.0074	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51253	118.0021	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51253	118.0021	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51253	118.0021	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51253	118.0021	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51165	117.9869	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51257	117.9769	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51257	117.9769	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51257	117.9769	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51257	117.9769	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.9757	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.9653	GEN642067 1-PLATTE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.9536	BASE CASE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51292	117.9341	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51078	117.9097	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.8977	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51159	117.8967	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.8918	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.868	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.8672	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5114	117.8298	GORDON - SHANNON 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5116	117.8032	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51284	117.774	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.7721	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51161	117.7631	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51161	117.7631	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5066	117.762	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51157	117.746	P12:115:TSGT:GRANTNB7-OGALALA7_2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51078	117.7348	BISON - MAURINE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5107	117.6813	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5107	117.6813	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5107	117.672	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5107	117.6662	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5107	117.6662	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.665	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51053	117.6368	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5112	117.6217	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.6163	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5112	117.616	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNSLock	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.6143	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.6128	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51152	117.6098	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51053	117.6068	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51109	117.6025	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51154	117.5917	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50897	117.5636	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.5565	GEN512688 2-GRDA1 GSU2 22
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51053	117.5494	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51065	117.5242	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50943	117.5165	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50943	117.5165	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.5143	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50655	117.5132	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51148	117.4933	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51148	117.4933	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51053	117.4881	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.4845	GEN515225 1-MUSKOGEE 5G
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.4796	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51154	117.4704	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.4681	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.4333	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51048	117.4301	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53295	117.4237	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.4221	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53301	117.4214	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51154	117.4114	P12:115:NPPD:TSGT5:OGALALA7:ELSIETP7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51147	117.3939	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51111	117.3643	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51111	117.3565	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51111	117.3565	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51062	117.3438	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51062	117.3438	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.3331	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.3191	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.294	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.2904	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51148	117.2511	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51148	117.2511	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.2491	GEN652547 3-FT RANDAL
FDNSLock	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.2463	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51019	117.2324	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.2301	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.2276	GEN509416 1-TURK GENERATION
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50973	117.2274	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50973	117.2274	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.2129	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.2117	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.2097	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.2096	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 2
FDNSLock	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5105	117.1924	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.188	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.1879	GOTHENBURG - JEFFREY 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50891	117.179	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.504	117.1707	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.1548	GEN600045 4-ANSON
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.1529	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.1477	1222-AINSWORTH WIND
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.1477	1303-KEARNEY
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.1477	2367-REDWLCK7 115.00
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.1477	BASE CASE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.1455	GEN509406 1-WELSH #3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.1453	GEN509404 1-WELSH #1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51156	117.1354	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51156	117.1354	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50405	117.129	COLUMWEST - GRAND ISLAND 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.1274	JOHNSON LAKE - JOHNSON NO 1 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51279	117.0904	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.0832	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.0687	GEN509403 1-PIRKEY GENERATION
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51155	117.0657	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.0642	GEN660003 3-HURON WEST PARK
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.0621	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51154	117.0419	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.0373	GEN681522 3-GENOA 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.0363	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.0363	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51124	117.0302	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51124	117.0302	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNSLock	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.03	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.0271	EMERY 161/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51048	117.0175	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51124	117.0172	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	117.0139	P12:115:NPPD:1142:JEFFREY7:COZAD 7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	117.006	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.9986	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.9986	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.9963	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.991	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.9908	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51147	116.986	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.9786	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51048	116.9734	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.9718	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.9714	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.9712	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5106	116.9702	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51147	116.9612	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.9561	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.9561	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.9456	GEN600017 C-LS POWER CT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.9382	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	116.9296	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51286	116.9278	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51286	116.9278	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51292	116.922	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51292	116.922	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51286	116.9208	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51292	116.9196	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51292	116.9126	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51292	116.9102	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51292	116.9102	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51292	116.9102	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51048	116.8968	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51286	116.8962	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51048	116.8932	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51286	116.8929	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51286	116.8929	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51286	116.8827	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51143	116.8697	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51143	116.8697	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.8547	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51048	116.8531	EMMET - EMMETE.TAP 7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51136	116.8468	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51136	116.8468	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51136	116.8453	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51136	116.8453	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51155	116.8419	P12:115:NPPD:1131B:REDWILO7:STOCKVL7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51104	116.8326	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.8254	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.8215	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51097	116.8045	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.8044	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.7997	GEN659273 2-GROTON SYNC COND

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.7997	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.7734	GEN659162 4-RED WLCK
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.7734	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.7719	GEN659192 6-LYNN
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50938	116.7202	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50938	116.7202	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51115	116.7159	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51115	116.7144	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5109	116.707	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5109	116.707	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51089	116.7061	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51089	116.7061	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51014	116.7031	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	116.6984	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	116.6761	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51115	116.6714	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51115	116.6611	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51156	116.6558	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51143	116.6518	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51143	116.6518	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.6492	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51115	116.6461	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51115	116.6458	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51156	116.6444	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNSLock	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	116.634	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	116.6316	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	116.6214	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51156	116.6157	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.6087	GEN600067 9-HIGH BRIDGE
FDNSLock	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	116.606	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.565	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50655	116.5628	P12:115:NPPD:1090:AINSWND7:THEDFRD7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.5531	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.5531	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50655	116.5468	AINSWORTH - CALAMUS 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51059	116.5426	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51059	116.5426	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50655	116.5373	CALAMUS - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50968	116.5366	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50968	116.5366	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.5189	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51124	116.5124	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51124	116.5124	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.4967	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.4967	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.4967	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51057	116.4958	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51057	116.4958	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51292	116.49	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.4839	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.4751	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.4685	GEN659274 1-GROTON
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	116.4509	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.4434	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.4384	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.4327	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.504	116.3827	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNSLock	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51045	116.36	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.3412	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	116.3192	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	116.3133	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51418	116.3024	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.2893	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.2781	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.278	GEN659354 1-DEERCREK STG18.000
FDNSLock	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	116.2725	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	116.2598	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.2553	GEN 10648 1-G830_GEN 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.2416	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.2298	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50724	116.2117	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.1974	GEN659270 1-WEST SW
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.1891	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51105	116.1717	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51105	116.1717	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	116.1695	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.1685	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51407	116.1668	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51105	116.1578	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51286	116.1545	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	116.141	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51418	116.1377	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51091	116.1265	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51418	116.1244	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51418	116.1242	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51418	116.0855	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51418	116.0855	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51418	116.0392	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	116.0387	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.8176	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.801	GEN652545 7-BIG BEND
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.48569	115.7971	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	115.7111	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.6922	GEN652544 5-BIG BEND
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.6837	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	115.6814	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.6777	GEN652543 3-BIG BEND
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.6773	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.6639	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51411	115.657	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.6442	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.6359	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	115.634	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.6265	GEN652460 4-GARRISON
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.6265	GEN652461 5-GARRISON
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.5792	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.561	GEN652458 2-GARRISON
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.561	GEN652459 3-GARRISON
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.5609	GEN652457 1-GARRISON
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51119	115.5596	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51119	115.5596	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51003	115.5399	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51003	115.5399	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.5054	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.4976	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51411	115.4975	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51411	115.488	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51411	115.4751	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.514	115.4706	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	115.4701	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	115.4696	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.4562	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51411	115.4271	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51411	115.4271	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51	115.3991	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50719	115.3902	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51411	115.346	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51054	115.3412	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51054	115.3412	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.48564	115.2879	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	115.2184	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.1274	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.118	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.1111	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51119	115.1084	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51119	115.1084	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	115.1037	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50897	115.0916	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	114.9728	GEN652559 1-OAHE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.9686	GEN652545 7-BIG BEND
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50942	114.9557	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50942	114.9475	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50942	114.9398	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.9314	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.9191	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.9087	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.9022	GEN652460 4-GARRISON
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.9021	GEN652461 5-GARRISON
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	114.8914	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.8551	GEN652543 3-BIG BEND
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.8547	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.8547	GEN652544 5-BIG BEND
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	114.8514	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.8301	GEN652457 1-GARRISON
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.8301	GEN652458 2-GARRISON
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.8301	GEN652459 3-GARRISON
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	114.8149	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	114.8148	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50891	114.7814	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	114.7408	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.7307	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	114.7247	GEN600006 1-AS KING
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.7246	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.7163	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	114.6505	GEN615010 1-STANTON4
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.511	114.6328	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.511	114.6328	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.511	114.541	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	114.5312	GEN652556 2-OAHE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	114.5312	GEN652557 4-OAHE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	114.5312	GEN652558 6-OAHE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	114.4775	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51162	114.4725	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.4718	GEN652559 1-OAHE
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	114.4149	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.4005	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.3749	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.3669	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.3483	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50852	114.3041	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	114.256	GEN659141 1-K10215A
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	114.2431	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.2279	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.0965	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.0912	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.0912	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.0842	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.0706	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50879	114.0137	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50879	114.0137	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.0087	GEN615010 1-STANTON4
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	114.0072	GEN600006 1-AS KING
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	113.9585	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45692	113.9455	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	113.9441	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	113.9368	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	113.7878	GEN652557 4-OAHE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	113.7878	GEN652558 6-OAHE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	113.7877	GEN652556 2-OAHE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50937	113.7401	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	113.7364	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	113.7205	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	113.7117	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50937	113.6825	AXTELL - G16-050-TAP 345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50937	113.6771	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	113.6598	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51157	113.6052	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	113.5767	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	113.5619	GEN659141 1-K10215A
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	113.5118	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	113.366	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	113.3001	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	113.2536	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	113.2407	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	113.1371	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	113.1327	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	113.0183	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.49553	112.9945	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	112.8786	GEN661015 1-COYOTE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	112.8297	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	112.5842	GEN579459 1-G16-075-GEN10.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	112.5248	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46281	112.3928	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	112.3052	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	112.1165	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	111.9579	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	111.7929	GEN661015 1-COYOTE
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	111.7176	GEN579459 1-G16-075-GEN10.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	111.7139	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	111.537	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46178	111.3924	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45856	111.3742	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	111.1822	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46284	110.9315	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46284	110.9315	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	110.8237	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	110.8237	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	110.2692	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	110.2526	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5355	110.0665	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5355	109.9967	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5355	109.974	2810X2
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.49265	109.9602	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53539	109.9286	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53539	109.7643	2810X2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53539	109.6941	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5355	109.5787	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5355	109.5664	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5355	109.5664	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5355	109.5633	2801X
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	109.5497	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4626	109.4762	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4626	109.4762	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46263	109.4443	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46263	109.4443	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53539	109.3454	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53539	109.3454	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53539	109.3038	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53539	109.2843	2801X
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5355	109.1229	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	109.0676	GEN659125 1-COVEY
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45845	109.0122	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4626	108.9635	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	108.9365	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	108.9365	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNSLock	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53539	108.85	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	108.8059	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46004	108.7463	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	108.6735	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45657	108.6697	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45692	108.6614	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	108.6611	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	108.6605	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	108.4443	GEN659125 1-COVEY
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45657	108.4302	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45657	108.3912	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	108.0325	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	108.0325	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46182	108.0009	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	107.9699	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	107.8278	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	107.5577	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	107.4796	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	107.4501	2809X1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	107.4404	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45819	107.433	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45819	107.433	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	107.4242	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51163	107.4125	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45859	107.3955	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45859	107.3955	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	107.2995	LELAND03-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	107.2995	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	107.296	2809X2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	107.2905	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45859	107.1031	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	107.0649	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	107.055	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45859	107.0108	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46016	106.9324	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	106.8699	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	106.7858	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46084	106.7771	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	106.7407	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46162	106.5272	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51158	106.479	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	106.3186	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45869	106.2813	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46087	106.234	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	106.2179	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46132	106.0524	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46077	105.8931	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46065	105.8713	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46065	105.8713	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46304	105.8676	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46304	105.8676	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46065	105.8557	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46016	105.8216	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46065	105.7166	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46052	105.692	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46198	105.6525	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	105.6075	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	105.6066	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46104	105.5882	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	105.5386	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	105.5303	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46104	105.5167	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46013	105.5055	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46013	105.4866	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46039	105.4864	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46013	105.4837	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46075	105.4774	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	105.4766	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45791	105.4722	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46052	105.217	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45942	105.1782	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45942	105.1782	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46076	105.1222	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	105.095	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46077	105.0907	P13:230-345:NPPD:STEGALL3:KV3A

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46077	105.0907	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	105.0852	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46077	105.0448	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	104.9572	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	104.9452	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	104.8848	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46076	104.8627	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46049	104.8598	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	104.7332	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45968	104.7179	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNSLock	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.44858	104.4801	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	104.3203	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46011	104.3085	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	104.3057	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46089	104.2938	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46083	103.9371	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	103.7597	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	103.686	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	103.6334	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4828	103.6037	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.48274	103.6033	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	103.4762	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46054	103.4416	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46043	103.438	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46043	103.438	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	103.2652	GR PRAIRIEG 0.6900 0KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	103.2652	GR PRAIRIEG 0.6900 0KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46228	103.1991	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46228	103.1991	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46228	103.1991	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46228	103.1991	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46232	103.1557	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46232	103.1557	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46232	103.1557	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46232	103.1557	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46081	103.1547	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46081	103.1547	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46081	103.1545	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	103.1077	BASE CASE
FDNSLock	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	103.0661	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	103.0506	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46116	102.9414	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	102.9322	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	102.9322	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45988	102.829	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	102.8181	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45337	102.8109	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45992	102.806	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4613	102.8027	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	102.7735	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	102.7701	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	102.7591	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	102.7453	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45917	102.7253	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45917	102.7253	SUB 3454 - WAGENER 345KV CKT 1
FDNSLock	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	102.7109	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46099	102.6993	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46099	102.6993	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46099	102.697	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46099	102.697	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	102.6465	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	102.5877	GEN300003 1-THOMAS HILL UNIT 3
FDNSLock	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	102.5666	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46025	102.5576	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46025	102.5576	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46025	102.5564	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46025	102.5564	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46118	102.5136	HOLCOMB - SETAB 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46118	102.5136	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4607	102.4751	LOUP CITY - NORTH LOUP 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45981	102.4134	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	102.3946	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45945	102.3917	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45945	102.3917	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	102.3879	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46019	102.3748	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46122	102.3502	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46122	102.3502	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	102.34	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	102.34	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	102.3367	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45972	102.3028	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45972	102.3028	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	102.2924	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	102.2892	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	102.2891	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	102.2891	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	102.2263	GEN600045 4-ANSON
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46115	102.1885	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46115	102.1809	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46115	102.1809	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45337	102.0499	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4611	102.0155	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4611	102.0155	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.8713	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4612	101.8417	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46253	101.7983	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.7925	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.7608	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.6024	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46392	101.5981	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.5958	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46381	101.5054	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46392	101.4509	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46392	101.4383	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46392	101.4381	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46392	101.411	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46392	101.411	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.4096	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46392	101.3584	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.27	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.1731	GEN652545 7-BIG BEND
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.1253	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.1182	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.1077	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46095	101.1076	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46095	101.1076	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.101	GEN652460 4-GARRISON
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.1009	GEN652461 5-GARRISON
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.0654	GEN652543 3-BIG BEND
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.065	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.0633	GEN652544 5-BIG BEND
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.04	GEN652457 1-GARRISON
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.04	GEN652458 2-GARRISON
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	101.04	GEN652459 3-GARRISON
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	100.9514	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45988	100.8717	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	100.7122	GEN652559 1-OAHE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	100.6219	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	100.562	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	100.5297	POSTROCK7-AXTELL3-345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	100.5279	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45937	100.5207	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.45996	100.5138	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	100.3703	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	100.3395	ALMA 161 161/24.0KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	100.2557	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	100.2308	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	100.2308	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	100.1543	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	100.1244	GEN615010 1-STANTON4
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	100.0984	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	100.0932	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	100	GEN652556 2-OAHE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	100	GEN652557 4-OAHE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	100	GEN652558 6-OAHE
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	100	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	99.9	GEN600006 1-AS KING
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	99.9	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	99.9	GEN659141 1-K10215A
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	99.9	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	99.9	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46134	99.7	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50681	131.2726	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51275	130.6221	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51303	128.4982	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5119	126.6535	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50584	126.5534	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51286	126.1531	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51286	126.1531	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50583	126.078	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	125.8975	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	125.6736	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	125.584	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50529	125.4261	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51232	125.2763	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51232	125.2763	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50529	125.2468	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5123	125.1003	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5123	125.1003	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5095	125.0076	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50681	124.9378	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	124.9004	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51237	124.8678	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51237	124.8678	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50848	124.6347	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50848	124.6347	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50676	124.6265	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51235	124.5349	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51235	124.5349	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50853	124.4846	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50853	124.4846	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51025	124.4153	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5095	124.3944	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50848	124.2854	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5123	124.2573	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50853	124.2304	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	124.1708	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	124.1708	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5095	124.16	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51235	124.1278	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50853	124.0952	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50848	123.9889	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	123.961	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50955	123.9378	MISSION - ST FRANCIS 115KV CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50955	123.821	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51071	123.7508	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	123.6825	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	123.6825	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51077	123.6765	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51107	123.6613	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50955	123.4349	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50831	123.3826	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50831	123.3826	RAUN - SUB 3451 FT CAL 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5095	123.3191	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50967	123.3064	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51188	123.2873	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50903	123.2697	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	123.2552	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51193	123.1218	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	123.0769	GEN635024 4-WALTER SCOTT UNIT 4
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50955	123.0338	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50967	122.9888	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50825	122.9857	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50825	122.9857	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	122.9406	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	122.9397	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51038	122.9306	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50967	122.8967	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50967	122.8967	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51102	122.4931	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51097	122.4763	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	122.3932	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	122.3766	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51105	122.3226	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	122.2183	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50807	122.171	SIDNEY - STEGALL 345KV CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50955	122.1433	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5106	121.9902	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51004	121.9898	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51009	121.9555	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51009	121.9555	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51004	121.944	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51004	121.944	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51009	121.9386	FT RANDAL - SPENCER 115KV CKT 1
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5095	121.9349	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51116	121.7816	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51009	121.7733	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51004	121.6767	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51059	121.6192	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50907	121.5381	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5096	121.5249	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51062	121.5227	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51181	121.46	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51167	121.3771	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	121.3633	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	121.3431	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50933	121.2802	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50933	121.2802	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51162	121.2557	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	121.2549	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	121.2429	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	121.2216	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	121.2174	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51005	121.1339	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50678	121.1264	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51123	121.1234	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51143	121.1072	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51143	121.1072	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51177	121.0746	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51122	120.9801	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51056	120.9553	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51114	120.9539	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.928	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5106	120.8853	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51062	120.8659	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5111	120.8432	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51043	120.8333	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.8058	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50673	120.7955	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.774	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.7269	GEN501813 1-RODEMACHER UNIT 3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50927	120.7237	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50927	120.7237	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.6938	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51067	120.6846	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51087	120.6187	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51123	120.617	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51051	120.6151	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51303	120.5417	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51303	120.5417	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50964	120.5366	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50871	120.523	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50871	120.5166	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50871	120.4918	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51078	120.4892	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51079	120.463	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.4614	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51132	120.4598	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.4548	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51005	120.4504	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51005	120.4502	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51005	120.4488	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51005	120.4439	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51005	120.436	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51005	120.3962	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.3909	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51059	120.3706	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51121	120.3672	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51117	120.3588	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.3145	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.3133	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.311	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.3109	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51004	120.3002	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50964	120.2822	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51087	120.2617	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51004	120.2534	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.2467	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.2461	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.2395	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51004	120.2309	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51056	120.2015	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.1989	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51146	120.1953	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51011	120.1909	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51011	120.1806	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51011	120.1796	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51011	120.1796	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51011	120.1644	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51011	120.1644	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51073	120.1578	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51108	120.1532	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51126	120.1505	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51046	120.1286	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.0826	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51011	120.0782	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51067	120.075	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51094	120.0706	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51299	120.0702	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51299	120.0702	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.0483	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.0328	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.0327	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51157	120.0233	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51157	120.0233	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.0102	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	120.0076	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51143	120.0012	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51143	120.0012	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51082	119.9971	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51126	119.9953	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51154	119.9757	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.9705	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51156	119.9381	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51124	119.9276	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51146	119.8967	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51126	119.8868	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51143	119.8676	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51143	119.8676	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51141	119.8524	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51141	119.8524	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51123	119.8497	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	119.839	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.825	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51205	119.8193	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51077	119.8091	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51146	119.7913	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.7903	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51138	119.7872	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51138	119.7872	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51146	119.7804	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51049	119.7586	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.7566	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51214	119.7499	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51154	119.7372	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51149	119.7311	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.7245	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.7193	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51154	119.7084	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51214	119.7039	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51214	119.7039	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.6907	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51221	119.6894	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51221	119.6894	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5112	119.6694	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51128	119.6642	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51149	119.6427	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51214	119.6389	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51214	119.6389	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51082	119.6367	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51093	119.6004	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.5974	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.5973	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5121	119.5764	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5121	119.5764	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50868	119.5681	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51139	119.5661	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51138	119.5352	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51138	119.5352	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.5248	GEN303007 1-1BC2 U2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51128	119.5204	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.5194	GEN303006 1-1BC2 U1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50868	119.5073	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50868	119.5048	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51129	119.5021	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5108	119.4979	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5112	119.493	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51149	119.4826	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51162	119.4658	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51089	119.464	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51144	119.4385	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51057	119.4352	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51057	119.4352	COLUMEAST - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.4257	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51	119.4219	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51	119.4219	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.4201	GEN303008 1-1BC2 U3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51	119.4154	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51145	119.3971	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51148	119.382	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51148	119.382	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5113	119.3665	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51035	119.3608	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5112	119.3577	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	119.336	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51149	119.2995	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.2935	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51094	119.2843	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.2842	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50908	119.2508	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51209	119.2373	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.2238	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51145	119.2201	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.2187	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51136	119.2182	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51121	119.1935	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51138	119.1865	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51121	119.1761	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51188	119.1406	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	119.1348	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5115	119.1234	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51192	119.122	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51192	119.122	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51192	119.122	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51192	119.1103	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51192	119.1103	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51082	119.0844	BLOOMFIELD - GAVINS POINT 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5108	119.0639	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51132	119.0602	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51132	119.0602	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51082	119.0448	BLOOMFIELD - CREIGHTON 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51132	119.0169	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51206	119.0024	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51206	119.0024	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51121	118.9411	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51079	118.8814	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51075	118.8777	P13:115-230:TSGT:SIDNEY-KV1A
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51075	118.87	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	118.7855	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	118.7386	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51161	118.7218	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	118.6973	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	118.6808	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	118.6804	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51116	118.6297	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51029	118.6193	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50903	118.6177	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	118.5142	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51085	118.4965	OGALLALA - SIDNEY 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5114	118.4696	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51116	118.459	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51166	118.4261	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51048	118.4067	EMMETE.TAP 7115.00 - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51127	118.3823	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51127	118.3823	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51127	118.3746	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51162	118.3559	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51168	118.3451	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51116	118.3017	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	118.2721	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51053	118.2549	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51165	118.2242	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51078	118.1808	BISON - HETINGER 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	118.1637	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51253	118.161	FT THOMPSON - OAHE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51253	118.161	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51253	118.161	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51253	118.161	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	118.1447	BASE CASE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51257	118.1369	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51257	118.1369	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51257	118.1369	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51257	118.1369	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5116	118.1042	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51159	118.1034	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51292	118.072	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	118.0653	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	118.0592	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51078	118.0136	BISON - MAURINE 230KV CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51284	118.0115	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51157	117.9794	P12:115:TSGT:GRANTNB7-OGALALA7_2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51161	117.9754	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51161	117.9754	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5107	117.9751	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5107	117.9751	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5107	117.9642	NUNDRWD - NUNDRWD-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5107	117.9592	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5107	117.9592	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5066	117.9482	AINSWORTH - AINSWORTH 115KV CKT 1
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.9085	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.9076	AINSWORTH WIND 34KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51154	117.8879	OGALALA7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.852	GEN512688 2-GRDA1 GSU2 22
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51053	117.836	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51152	117.8231	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.8203	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5112	117.816	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50655	117.8071	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51053	117.805	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51109	117.8024	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.8007	GEN640016 1-KINGSLEY HYDRO
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50897	117.7791	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51154	117.7661	ELSIETP7 115.00 - ROSCOE 7 115.00 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51053	117.7476	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51065	117.7362	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51048	117.7253	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.7218	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50943	117.7158	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50943	117.7158	SUB 3454 - WAGENER 345KV CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.7099	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51154	117.7072	P12:115:NPPD:TSGT5:OGALALA7:ELSIETP7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51148	117.6934	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51148	117.6934	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51053	117.6889	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51249	117.6811	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51249	117.6811	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51249	117.6811	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51249	117.6811	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.6809	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.6693	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51111	117.6586	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51111	117.6507	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51111	117.6507	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51253	117.6339	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51253	117.6339	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51253	117.6339	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51253	117.6339	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.5884	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.5849	REDWLCK7 115.00 115KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53295	117.5587	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53301	117.5562	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.5416	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51062	117.5403	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51062	117.5403	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.524	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.5213	GEN509416 1-TURK GENERATION
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.506	KEARNEY 115KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.5054	GERALD GENTLEMAN STATION - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.4827	GOTHENBURG - JEFFREY 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50891	117.4758	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.504	117.467	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.4578	GEN652548 5-FT RANDAL
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.4578	GEN652549 7-FT RANDAL
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51148	117.4569	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51148	117.4569	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.4407	1222-AINSWORTH WIND
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.4407	1303-KEARNEY
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.4407	2367-REDWLCK7 115.00
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.4407	BASE CASE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51019	117.4398	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.439	GEN509406 1-WELSH #3
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.4389	GEN509404 1-WELSH #1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.4352	GEN652547 3-FT RANDAL
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50973	117.4311	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50973	117.4311	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51156	117.4302	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51156	117.4302	P12:115:UMZB:# 119 #: IN NE.
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5105	117.3858	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51279	117.3847	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.3812	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.3626	GEN509403 1-PIRKEY GENERATION
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51155	117.3568	KEYSTONE - OGALALANPPD7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.3463	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.3377	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51154	117.3357	OGALALA7 115.00 - OGALALANPPD7115.00 115KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.3356	GEN600045 4-ANSON
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.3333	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50405	117.3294	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.319	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51048	117.3108	BASSETT 7115.00 - STUART 115KV CKT 1
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.3051	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51147	117.2814	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.2784	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.2779	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51048	117.2667	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5106	117.2637	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51147	117.2551	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.2507	GEN660003 3-HURON WEST PARK
FDNSLock	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.2505	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.227	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.227	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51124	117.2269	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51124	117.2269	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.2256	GEN681522 3-GENOA 3
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	117.2235	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.2167	EMERY 161/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51124	117.206	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51286	117.2049	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51286	117.2049	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51286	117.198	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.1969	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51048	117.1898	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.1894	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.1894	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.1871	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51048	117.1861	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.1818	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.1816	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51286	117.1746	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.1731	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51286	117.1714	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51286	117.1714	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.1662	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.1642	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51143	117.1638	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51143	117.1638	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.1623	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51286	117.1592	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.1475	J460 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.1475	J460 345.00 345/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51136	117.1408	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51136	117.1408	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51136	117.1396	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51136	117.1396	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.1363	GEN600017 C-LS POWER CT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.1297	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51104	117.1256	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51292	117.0878	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51292	117.0878	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51292	117.0855	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51292	117.0795	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51292	117.0771	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51292	117.0771	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51292	117.0771	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.0477	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.0171	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50938	117.0148	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50938	117.0148	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53292	117.0136	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	117.0128	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53298	117.0114	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51115	117.009	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51115	117.0069	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51097	117.0029	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5109	117.001	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5109	117.001	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51089	117.0001	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51089	117.0001	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.9965	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.9965	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51014	116.9962	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.996	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	116.995	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	116.971	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.9707	GEN659162 4-RED WLCK
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.9707	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.9693	GEN659192 6-LYNN
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51115	116.9668	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51115	116.9515	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51156	116.9486	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51143	116.945	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51143	116.945	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51115	116.939	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51115	116.9384	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	116.9291	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	116.9181	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51156	116.9085	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50655	116.8548	P12:115:NPPD:1090:AINSWND7:THEDFRD7:BTB
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.8482	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50655	116.8383	AINSWORTH - CALAMUS 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50968	116.8295	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50968	116.8295	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50655	116.8286	CALAMUS - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.7997	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51057	116.7902	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51057	116.7902	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.7609	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.751	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.751	GEN 11108 1-J263_GEN 0.6000

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51059	116.7492	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51059	116.7492	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	116.7427	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.7169	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51124	116.7123	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51124	116.7123	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.6927	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.6926	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.6926	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.504	116.6738	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.6719	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51292	116.6705	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	116.669	GEN600045 4-ANSON
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.6659	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.6645	GEN659274 1-GROTON
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51045	116.6519	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.6423	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.629	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.6267	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	116.611	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	116.6051	GEN300006 1-NEW MADRID UNIT 1
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	116.5705	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	116.5583	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	116.5576	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	116.5322	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.5301	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51418	116.4917	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.485	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.468	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.4679	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	116.4612	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.4559	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51286	116.444	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.4437	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	116.4327	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.4319	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51091	116.4175	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50724	116.4135	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.3975	GEN659270 1-WEST SW
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.391	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51105	116.3753	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51105	116.3753	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.3678	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51105	116.3609	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51407	116.3564	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51418	116.327	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51418	116.3138	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51418	116.3136	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51418	116.2743	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51418	116.2743	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.2293	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51418	116.2284	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.48569	116.0914	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	116.0059	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	116.0005	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.9857	GEN652545 7-BIG BEND
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.9711	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51411	115.9479	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.9232	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.8836	GEN652544 5-BIG BEND
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.879	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.879	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.8671	GEN652543 3-BIG BEND
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.8668	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.8657	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51119	115.8489	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51119	115.8489	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.8461	GEN659366 3-WILTON 3 W0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.8384	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.8289	GEN652460 4-GARRISON
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.8289	GEN652461 5-GARRISON
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51411	115.7866	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51411	115.7746	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.7691	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51003	115.7682	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51003	115.7682	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51411	115.7641	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.7639	GEN652458 2-GARRISON
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.7639	GEN652459 3-GARRISON
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.7638	GEN652457 1-GARRISON
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.514	115.7588	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.7587	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.7583	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51411	115.7157	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51411	115.7157	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.7044	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.6967	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51	115.6875	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50719	115.6829	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.6587	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51411	115.6356	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51054	115.631	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51054	115.631	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.48564	115.5842	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.5065	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51119	115.3968	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51119	115.3968	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.3289	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50897	115.3119	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.31	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.2998	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.2924	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.2536	GEN652545 7-BIG BEND
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.2188	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.2059	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.1959	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.1894	GEN652460 4-GARRISON
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.1893	GEN652461 5-GARRISON
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.1728	GEN652559 1-OAHE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50942	115.1584	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50942	115.1577	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50942	115.1427	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.141	GEN652544 5-BIG BEND
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.1402	GEN652543 3-BIG BEND
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.1398	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.1179	GEN652457 1-GARRISON
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.1179	GEN652458 2-GARRISON
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.1179	GEN652459 3-GARRISON
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.0957	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50891	115.073	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.0428	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.0195	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	115.0194	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.0182	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.0119	GEN 11123 1-G736-GEN1 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	115.0037	GEN 11133 1-J442-GEN1 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	114.9457	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.511	114.9205	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.511	114.9205	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	114.9153	GEN600006 1-AS KING
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	114.8587	GEN615010 1-STANTON4
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.511	114.8279	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	114.7567	GEN652559 1-OAHE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	114.7325	GEN652556 2-OAHE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	114.7324	GEN652557 4-OAHE
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	114.7324	GEN652558 6-OAHE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	114.6867	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	114.6732	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51162	114.6688	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	114.6589	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	114.6511	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	114.6331	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	114.6218	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50852	114.5893	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	114.5148	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	114.4649	GEN659141 1-K10215A
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	114.4478	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	114.3797	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	114.3773	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	114.3773	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	114.3697	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	114.3544	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50879	114.3	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50879	114.3	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	114.2947	GEN615010 1-STANTON4
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	114.2928	GEN600006 1-AS KING
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45692	114.2472	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	114.1732	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	114.1446	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	114.1422	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	114.0716	GEN652556 2-OAHE
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	114.0716	GEN652557 4-OAHE
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	114.0716	GEN652558 6-OAHE
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50937	114.0272	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	114.0224	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50937	113.9687	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50937	113.9635	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	113.9348	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	113.9241	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51157	113.8894	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	113.8609	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	113.8551	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	113.8453	GEN659141 1-K10215A
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	113.7966	GEN587653 1-J526-GEN1 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	113.5821	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	113.5617	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	113.5389	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	113.5255	GEN587633 1-J510-GEN1 18.000
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	113.4222	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	113.413	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	113.3031	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.49553	113.2784	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	113.1123	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	113.0974	GEN661015 1-COYOTE
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	112.8073	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	112.7617	GEN579459 1-G16-075-GEN10.6900
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46281	112.6956	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	112.4993	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	112.3106	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	112.1808	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	112.0749	GEN661015 1-COYOTE
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	111.9946	GEN579459 1-G16-075-GEN10.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	111.9937	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	111.8163	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46178	111.6887	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45856	111.6676	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	111.3844	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46284	111.2262	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46284	111.2262	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	111.1073	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	111.1073	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	110.5466	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	110.5304	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.49265	110.2393	GRAND ISLAND - MCCOOL 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5355	110.2096	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53539	110.1709	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5355	110.1603	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5355	110.1382	2810X2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53539	110.0228	2810X2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53539	109.9524	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5355	109.7852	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	109.781	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5355	109.7726	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5355	109.7726	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5355	109.7702	2801X
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.4626	109.7662	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.4626	109.7662	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46263	109.7347	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46263	109.7347	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53539	109.6204	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53539	109.6204	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53539	109.5785	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53539	109.5592	2801X
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5355	109.376	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	109.3041	GEN659125 1-COVEY
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45845	109.2982	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.4626	109.2516	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	109.1755	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	109.1755	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNSLock	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53539	109.1263	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	109.0418	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46004	109.0317	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45657	108.9564	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45692	108.95	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	108.9355	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	108.9337	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	108.91	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45657	108.7191	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	108.7186	GEN659125 1-COVEY
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45657	108.678	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	108.3061	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	108.3061	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46182	108.289	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	108.243	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	108.1002	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	107.8444	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45937	107.7609	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45937	107.7312	2809X1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45937	107.7214	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45819	107.7208	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45819	107.7208	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45937	107.7035	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45859	107.681	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45859	107.681	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	20SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51163	107.6262	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45937	107.5798	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45937	107.5798	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45937	107.5763	2809X2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45937	107.5709	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46075	107.4264	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45859	107.3885	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	107.3484	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	107.3406	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45859	107.2959	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46016	107.2145	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	107.1532	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	107.0707	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46084	107.0621	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	107.0257	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46162	106.8111	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	25SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51158	106.7475	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	106.6024	GEN335831 1-RIVERBEND UNIT#1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45869	106.5641	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46087	106.5175	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	106.5014	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46132	106.3357	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46077	106.1757	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46065	106.1547	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46065	106.1547	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46304	106.15	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46304	106.15	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46065	106.1387	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46016	106.1021	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46065	105.9985	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46052	105.9735	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46198	105.9339	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.8896	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.8887	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46198	105.8784	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46198	105.8784	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46104	105.8668	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.8203	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.812	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46104	105.7952	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46013	105.7861	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46198	105.784	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46198	105.784	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46013	105.767	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46039	105.7664	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46013	105.764	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46075	105.7595	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.7581	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45791	105.7537	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46052	105.4983	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45942	105.4588	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45942	105.4588	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46076	105.402	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.3758	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46077	105.3708	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46077	105.3708	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.366	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46077	105.3253	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.2376	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.2256	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46079	105.1939	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46079	105.1808	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.1649	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.1507	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46076	105.142	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46049	105.1401	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.1168	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.1134	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.1133	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.0579	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.0448	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.0447	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46012	105.0423	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46012	105.042	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46012	105.041	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46012	105.041	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46012	105.0372	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46012	105.0371	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.015	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	105.0088	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45968	104.9995	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	104.9873	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46012	104.9746	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	104.969	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	104.8272	GEN336191 1-LITTLE GYPSY UNIT#3
FDNSLock	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.44858	104.7678	GRAND ISLAND - SWEETWATER 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	104.5997	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	104.5856	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46089	104.5715	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46089	104.5219	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46083	104.2164	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	104.0354	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	103.9611	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	103.9095	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.4828	103.8772	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.48274	103.8768	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46253	103.7476	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46054	103.7193	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46043	103.7144	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46043	103.7144	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	103.5395	GR PRAIRIEG 0.6900 0KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	103.5395	GR PRAIRIEG 0.6900 0KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46228	103.4725	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46228	103.4725	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46228	103.4725	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46228	103.4725	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46081	103.431	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46081	103.4307	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46081	103.4307	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46232	103.429	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46232	103.429	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46232	103.429	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46232	103.429	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	103.3833	BASE CASE
FDNSLock	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	103.3399	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	103.3242	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46116	103.2184	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45988	103.1059	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	103.0958	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45337	103.0872	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45992	103.082	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.4613	103.0776	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	103.0519	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	103.023	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45917	103.002	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45917	103.002	SUB 3454 - WAGENER 345KV CKT 1
FDNSLock	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	102.9888	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46099	102.9744	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46099	102.9744	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46099	102.9721	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46099	102.9721	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	102.9281	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	102.8622	GEN300003 1-THOMAS HILL UNIT 3
FDNSLock	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	102.848	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46025	102.8327	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46025	102.8327	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46025	102.8315	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46025	102.8315	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46118	102.7882	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46118	102.7882	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.4607	102.7493	LOUP CITY - NORTH LOUP 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45981	102.6885	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	102.6687	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45945	102.6681	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45945	102.6681	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	102.6619	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46019	102.6488	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46122	102.6242	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46122	102.6242	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46253	102.6121	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46253	102.6121	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46253	102.6088	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45972	102.5778	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45972	102.5778	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46253	102.5639	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46253	102.5607	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46253	102.5606	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46253	102.5606	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	102.4992	GEN600045 4-ANSON
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46115	102.4627	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46115	102.4547	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46115	102.4547	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNSLock	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	102.4325	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	102.4214	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45337	102.3243	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.4611	102.2897	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.4611	102.2897	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	102.1434	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.4612	102.1164	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46253	102.0697	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	102.0656	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	102.0326	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.9714	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.9027	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.8739	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46392	101.8701	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.8672	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46381	101.7767	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46392	101.7221	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46392	101.7095	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46392	101.7093	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46392	101.6822	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46392	101.6822	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.6812	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46392	101.6291	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.5415	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.4436	GEN652545 7-BIG BEND
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.3965	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.3892	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46095	101.3816	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46095	101.3816	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.3788	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.3721	GEN652460 4-GARRISON
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.372	GEN652461 5-GARRISON
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.3366	GEN652543 3-BIG BEND
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.3363	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.3345	GEN652544 5-BIG BEND
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.311	GEN652457 1-GARRISON
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.311	GEN652458 2-GARRISON
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.311	GEN652459 3-GARRISON
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	101.2229	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45988	101.1429	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.9824	GEN652559 1-OAHE
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.8917	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.8538	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.832	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45937	100.7993	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45937	100.7975	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45937	100.7906	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.45996	100.7867	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.6389	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.6073	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.5249	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.4999	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.4999	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.4233	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.3936	GEN615010 1-STANTON4
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.3663	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.361	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.306	GEN652556 2-OAHE
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.306	GEN652557 4-OAHE
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.306	GEN652558 6-OAHE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.2897	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.2037	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.1966	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.1612	GEN659141 1-K10215A
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.1043	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100.0534	GEN600006 1-AS KING
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	100	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	99.7	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	99.6	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	0	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46134	99.6	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.46158	153.2876	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.41553	139.022	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33768	136.0568	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34261	134.9077	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34287	133.9494	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33952	133.7281	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34106	133.5638	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33952	133.5551	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33952	133.4828	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33952	133.4828	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34115	133.4106	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34198	132.9301	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3427	132.5683	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3427	132.5683	FT THOMPSON - LETCHER 230KV CKT 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34115	132.1379	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34127	131.9953	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33949	131.6432	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33949	131.6432	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34401	131.5878	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34401	131.5878	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34235	131.3571	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34235	131.3571	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33768	131.3485	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34234	131.1403	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34234	131.1403	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34351	131.1329	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34234	130.8483	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34081	130.6772	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	130.6089	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34113	130.3334	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34204	130.3105	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33905	130.2839	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33905	130.2839	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33947	130.2834	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34156	130.1765	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	130.0633	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33945	129.9533	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33945	129.9533	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33945	129.7765	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33945	129.7307	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	129.7287	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34002	129.7246	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	129.6441	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34023	129.6286	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34141	129.5706	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34144	129.5119	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34026	129.447	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34093	129.4254	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34023	129.3903	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34023	129.3895	2809X2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34023	129.3895	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34023	129.3895	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34023	129.3884	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34023	129.3797	2809X1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34023	129.3724	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	129.2986	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34086	129.2594	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34026	129.2026	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34199	129.1975	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	129.1663	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	129.1611	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34154	128.9786	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34154	128.9786	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34185	128.9491	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34155	128.9226	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	128.8572	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34302	128.7728	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34302	128.7728	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34146	128.7672	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	128.7608	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34026	128.7473	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3416	128.742	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34114	128.7107	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34093	128.6645	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	128.6521	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	128.6024	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	128.6002	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34167	128.5983	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34287	128.5818	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34287	128.5818	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	128.4794	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34138	128.4749	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34229	128.4737	CARPENTER - HURON 230KV CKT 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3416	128.4484	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34153	128.4396	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	128.425	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34167	128.4191	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34229	128.4144	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34229	128.4144	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34112	128.4089	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	128.3594	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	128.359	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34229	128.3546	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34229	128.3546	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	128.3403	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	128.3396	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34114	128.3286	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34075	128.3231	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3472	128.3175	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34016	128.3145	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34016	128.3145	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34136	128.2718	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34114	128.2708	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34166	128.2254	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34088	128.1785	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34166	128.1744	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34042	128.1655	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34042	128.1655	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	128.1526	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	128.1203	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	128.1201	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	128.1187	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	128.0746	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34217	128.0671	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34378	128.0654	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34136	128.0595	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34144	128.0496	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34144	128.0435	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34173	128.0382	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34173	128.0382	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34118	128.0045	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	128.0026	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.9773	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34114	127.9688	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.9555	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.9534	GEN344894 1-1LAB G1 20.000

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.9531	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34187	127.9521	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.9113	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.9068	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34166	127.9025	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.8959	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.8851	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.8842	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.8839	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34179	127.8774	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34126	127.8772	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.8528	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.8519	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.8361	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34115	127.8231	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34167	127.8001	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34192	127.795	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34192	127.795	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34182	127.7882	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34149	127.7875	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34149	127.7875	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.7436	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.7436	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34166	127.7419	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34142	127.7263	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34103	127.7054	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34149	127.699	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34182	127.674	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34146	127.6706	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.6678	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34262	127.6668	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34262	127.6668	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34309	127.6636	AINSWORTH - STUART 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34149	127.6628	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34212	127.655	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34212	127.655	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.6532	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34221	127.6391	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34174	127.6354	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34126	127.6318	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34191	127.6314	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.6282	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34192	127.6211	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34142	127.6142	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34142	127.6141	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34142	127.6137	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34142	127.6137	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34182	127.6133	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.6117	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.6065	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34142	127.6058	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34142	127.6058	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34068	127.5899	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.5746	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34167	127.5438	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.5436	GEN642067 1-PLATTE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34179	127.5391	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34179	127.5391	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34199	127.5307	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34164	127.5267	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3417	127.5199	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34165	127.5023	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.4916	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34309	127.4843	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.4814	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.4788	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.4784	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34142	127.4766	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34167	127.4757	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.4686	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.4669	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.4637	GEN635214 4-NEAL UNIT 4
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34196	127.4581	BIG STONE - BLAIR 230KV CKT 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34196	127.4581	BIG STONE - BLAIR 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34171	127.4548	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.341	127.4434	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34179	127.4417	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34179	127.4417	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34083	127.4366	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34171	127.4327	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34173	127.4326	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.341	127.4252	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.4242	GEN532663 1-LAWRENCE ENERGY CENTER UNIT 5
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34171	127.4229	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.341	127.4145	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34179	127.4087	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34179	127.4047	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34378	127.4015	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34469	127.4007	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34469	127.4007	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34469	127.4007	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34469	127.4007	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.3972	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34199	127.3954	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34199	127.3954	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34199	127.3954	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34199	127.3882	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34199	127.3882	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.3719	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34179	127.36	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34184	127.3459	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34173	127.339	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34143	127.3362	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34143	127.3354	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.3317	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.3182	GEN303007 1-1BC2 U2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.3153	GEN303006 1-1BC2 U1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34438	127.3106	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34143	127.3098	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34138	127.2981	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34179	127.2971	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34183	127.2953	ELM CREEK - MONTICELLO 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34217	127.2949	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.2721	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.2719	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.2718	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.2646	GEN303008 1-1BC2 U3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.2638	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34309	127.2513	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.2371	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.2367	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.2278	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	127.2261	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34182	127.2092	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	126.6049	BASE CASE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34134	126.5358	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34134	126.5358	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34134	126.531	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33387	126.4223	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3414	126.2692	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34241	126.2652	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3403	126.1999	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33981	126.1819	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33981	126.1819	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34272	126.1659	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34272	126.1659	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34272	126.1643	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34272	126.1643	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34272	126.1628	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34272	126.1628	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34272	126.1628	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34126	126.1214	LOUP CITY - ST LIBORY 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34152	126.0289	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34152	126.0289	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34152	126.0257	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34152	126.0257	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.9307	GEN600045 4-ANSON
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.9152	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.9149	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34007	125.9103	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34007	125.9103	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.8904	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.8904	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.8854	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.8854	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34032	125.8827	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34066	125.878	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34066	125.878	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34186	125.8769	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34186	125.8769	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34066	125.8765	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34066	125.8765	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.8565	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.8546	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.8546	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.8541	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.8541	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.8514	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34078	125.8465	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.8448	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.8448	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.8337	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.8116	GEN600017 C-LS POWER CT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.7993	GEN659192 6-LYNN
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.7987	GEN659162 4-RED WLCK
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.7987	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.7867	GEN681522 3-GENOA 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34272	125.7792	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.7753	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34181	125.7683	COPSTJCPFRSJ
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34181	125.7683	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34181	125.7683	STMDSJFAFACO
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.7584	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.7388	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.738	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.7304	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.6821	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.6775	GEN659274 1-GROTON
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.6202	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.6027	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.6027	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.6009	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.6006	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.5853	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34184	125.5827	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.5804	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33387	125.5621	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.5498	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.5457	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34005	125.5376	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34005	125.5376	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.5264	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.5264	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.5	GEN672392 1-NBECGT1G 18.000

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.4776	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.4776	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.4737	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.4579	GEN659270 1-WEST SW
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34186	125.4568	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34186	125.4533	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.3867	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34186	125.3678	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.3663	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.3368	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.3239	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.3235	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.3149	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34399	125.2948	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.2531	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3439	125.2226	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.2197	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34399	125.1787	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34399	125.1572	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34399	125.1571	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34399	125.1414	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34399	125.1414	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.1289	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.1126	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.1122	GEN652545 7-BIG BEND
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.1063	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34399	125.1003	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.1	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.096	GEN652460 4-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.0959	GEN652461 5-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.0499	GEN652457 1-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.0499	GEN652458 2-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.0499	GEN652459 3-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.0345	GEN652559 1-OAHE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.0307	GEN652543 3-BIG BEND
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.0304	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	125.0284	GEN652544 5-BIG BEND
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.9898	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.9685	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.7027	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.6967	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.6111	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.6003	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.5366	GEN659296 2-SDPRAIRWND1W0.6900
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.5156	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.496	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.4529	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34008	124.4457	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.4333	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.4333	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.3808	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34008	124.3712	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34008	124.3655	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.3446	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.3411	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.3048	GEN652556 2-OAHE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.3048	GEN652557 4-OAHE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.3048	GEN652558 6-OAHE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.2881	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.2264	GEN615010 1-STANTON4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.2134	GEN659141 1-K10215A
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.1912	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.1005	GEN600006 1-AS KING
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	124.0524	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	123.9141	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	123.8702	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	123.8393	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	123.7944	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	123.7929	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	123.7452	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	123.6737	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	123.1548	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	122.9424	GEN579459 1-G16-075-GEN10.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	122.6083	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	122.4089	GEN661015 1-COYOTE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	122.3632	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	122.2896	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	122.0528	GEN657748 1-YOUNG 2 GENERATOR
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	121.9895	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	121.263	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	121.0496	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	120.7253	GEN659125 1-COVEY
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	120.7163	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.35907	120.6606	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.35907	120.6203	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	120.6164	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	120.6164	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.35907	120.5971	2810X2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.35907	120.4606	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.35907	120.4606	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.35907	120.4534	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.35907	120.4463	2801X
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.35907	120.3653	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.32132	120.1641	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	120.0137	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	119.9125	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4663	118.3867	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.31698	116.1005	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	115.0391	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	115.0391	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.4197	112.0844	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34193	110.705	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34063	108.5353	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34377	107.0858	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34587	107.016	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34608	106.4882	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34403	105.9226	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34518	105.7483	HANLON - STORLA 230KV CKT 1
FDNSLock	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34302	105.4068	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34597	105.3415	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34597	105.3415	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33008	105.0616	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	105.0034	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34063	104.8918	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34302	104.8827	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34302	104.8826	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34302	104.8826	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34206	104.7658	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34206	104.7658	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34685	104.7468	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34685	104.7468	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	104.7148	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34253	104.6746	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34253	104.6746	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	104.6274	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34293	104.5176	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34573	104.4655	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34573	104.4655	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34571	104.4594	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34571	104.4594	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34378	104.4533	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34638	104.4235	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3444	104.396	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34571	104.2506	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34519	104.2037	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	104.1301	GEN563222 1-G15088_3 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34443	104.057	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	104.0402	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34433	104.0192	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	104.0006	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.9935	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34212	103.9874	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34212	103.9874	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34212	103.9486	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34212	103.9143	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34367	103.8903	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34433	103.8822	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34401	103.8766	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34271	103.8302	2809X2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34271	103.8301	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34271	103.8298	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34271	103.8298	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34271	103.8239	2809X1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34271	103.8213	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34378	103.8185	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.8179	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34271	103.8173	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34505	103.7866	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.7861	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.7246	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.6971	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.6742	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34402	103.6469	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNSLock	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34449	103.6276	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3459	103.596	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3459	103.596	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34399	103.5741	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34435	103.5588	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34415	103.5181	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.5033	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.4905	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34271	103.4878	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34421	103.452	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.4368	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34305	103.4075	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34444	103.3769	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34402	103.3697	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34608	103.3563	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34608	103.3563	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34485	103.3485	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34459	103.3446	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34459	103.3358	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34399	103.329	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34421	103.3059	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34525	103.2997	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34447	103.2905	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34447	103.2905	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34459	103.2899	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34447	103.2726	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.249	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.2456	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34525	103.2101	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34525	103.2101	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34293	103.1773	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34525	103.1676	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34525	103.1676	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.1651	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.1616	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.1422	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.1406	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3431	103.1372	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3431	103.1344	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34375	103.1342	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.1159	GEN338143 1-INDEPENDENCE UNIT #1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34414	103.0961	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34449	103.0892	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3431	103.0632	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34402	103.0603	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.0435	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34462	103.039	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34455	103.0369	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34671	103.0264	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	103.0173	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34363	102.999	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.9869	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.9861	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34552	102.9805	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34552	102.9805	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.9622	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.9607	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.9605	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34447	102.9564	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34447	102.9536	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34482	102.9484	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34415	102.9415	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.9385	GEN642067 1-PLATTE
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.9357	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34405	102.9345	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34285	102.9332	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34285	102.9332	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.933	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34462	102.9233	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNSLock	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	102.9216	P13:230-345:NPPD:STEGALL3:KV3A
FDNSLock	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34376	102.9187	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34409	102.9177	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.9061	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34256	102.9033	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.9024	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.9022	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34402	102.8959	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34502	102.893	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34502	102.893	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34768	102.8916	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34768	102.8916	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34768	102.8916	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34768	102.8916	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34479	102.8869	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.8698	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34599	102.8674	AINSWORTH - STUART 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34456	102.8533	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.8405	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34405	102.8378	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34599	102.8368	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.8298	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34373	102.8296	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.8206	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.8193	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34479	102.8112	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34464	102.7997	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34599	102.7965	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34433	102.7883	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34447	102.7873	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34479	102.7858	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.7745	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34599	102.774	EMMET - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.7535	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.35013	102.7527	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.7522	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.7505	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.7459	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.7245	GEN563212 1-G15087_3 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3446	102.7234	BISMARK - WEBER 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.7195	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3448	102.7182	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34481	102.7152	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34509	102.7104	BROKEN BOW - LOUP CITY 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34459	102.6939	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34671	102.6839	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3446	102.6836	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.6829	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.6699	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34409	102.6685	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34455	102.6665	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34457	102.6664	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34507	102.6622	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3444	102.6594	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.3444	102.6594	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.651	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.6495	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34467	102.6485	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34467	102.6485	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34474	102.6426	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34474	102.6426	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34489	102.3128	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	102.1767	BASE CASE
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34313	102.0736	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34425	101.8614	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34425	101.8614	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34425	101.859	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34442	101.8059	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34442	101.8059	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34442	101.8038	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34442	101.8038	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33678	101.777	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34399	101.7522	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34399	101.7522	MOORE - NW68TH & HOLDREGE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34446	101.7134	CRETE - FRIEND 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.7112	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34458	101.6979	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34393	101.6978	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.6913	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.6834	J262_J263 115.00 - JAMESTOWN 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.6776	GEN652414 4-FT PECK
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.6776	GEN652415 5-FT PECK
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.6666	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.6656	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.6645	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.6645	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.6601	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.6601	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.6601	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.636	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.635	GEN657600 1-L1GEN3 9 0.5750
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34369	101.6149	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.6143	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34448	101.6075	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.6038	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.6038	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.6034	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.5965	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.5953	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.5953	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.589	GEN600050 1-FEP
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.5825	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.5825	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34476	101.5698	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34476	101.5698	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.5534	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.5196	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.5196	GEN600066 8-HIGH BRIDGE

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.5099	GEN659192 6-LYNN
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.5091	GEN659162 4-RED WLCK
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.5091	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34459	101.5071	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.5069	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34702	101.5009	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34432	101.4972	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34693	101.4886	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.4732	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.4697	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.4627	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.4605	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.4585	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34294	101.4575	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34294	101.4575	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.4573	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.4573	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.4569	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.4473	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34702	101.4393	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.438	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34405	101.4338	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34405	101.4338	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34702	101.4306	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34702	101.4302	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.43	GEN681522 3-GENOA 3
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.4228	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.4221	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34471	101.4171	COPSTJCPFRSJ
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34471	101.4171	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34471	101.4171	STMDSJFAFACO
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.4138	GEN600017 C-LS POWER CT
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34702	101.4081	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34702	101.4081	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34448	101.3862	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.3844	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34702	101.3814	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.3687	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.3659	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.348	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34274	101.3291	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34274	101.3291	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.3272	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.3272	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34474	101.3021	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.2924	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34405	101.2614	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.2549	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34476	101.2204	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34476	101.2154	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.1951	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34299	101.1931	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34299	101.1931	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.1482	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.1463	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34476	101.1331	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34323	101.1315	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.1231	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.1172	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.1172	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.1172	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.0547	GEN652461 5-GARRISON
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.0546	GEN652460 4-GARRISON
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.0475	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.0213	GEN652457 1-GARRISON
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.0212	GEN652458 2-GARRISON
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	101.0212	GEN652459 3-GARRISON
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.9856	GEN659010 4-G07_027IS_2 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.9748	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.9539	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.9527	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.947	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.9402	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.9132	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.8616	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.8271	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.8015	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.7736	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.7237	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.7011	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.6907	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.6677	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.6307	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34298	100.6205	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.33678	100.611	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34298	100.6098	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34298	100.6095	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNSLock	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.5996	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.5837	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.5586	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.5466	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.5285	GEN652559 1-OAHE
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.3589	GEN652556 2-OAHE
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.3589	GEN652558 6-OAHE
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.3398	GEN652557 5-OAHE
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.294	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.2685	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.2423	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.168	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.1499	GEN659141 1-K10215A
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100.0729	GEN615010 1-STANTON4
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	100	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	99.9	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	99.9	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	99.9	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	99.9	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	99.9	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	99.9	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	99.8	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_075	2	16WP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	720	720	0.34483	99.7	GEN600006 1-AS KING
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46158	152.2619	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.41553	138.0855	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33768	135.1162	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34261	133.985	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34287	133.0292	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33952	132.8223	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33952	132.6502	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33952	132.5771	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33952	132.5771	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34106	132.5426	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34115	132.5221	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34198	132.0011	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3427	131.6395	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3427	131.6395	FT THOMPSON - LETCHER 230KV CKT 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34115	131.2397	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34127	131.0051	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33949	130.7427	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33949	130.7427	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34401	130.5456	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34401	130.5456	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34235	130.4347	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34235	130.4347	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33768	130.418	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34234	130.2185	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34234	130.2185	FT THOMPSON - LAKE PLATT 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34351	130.1216	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34234	129.9252	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34081	129.7682	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	129.6658	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34113	129.4224	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33947	129.3847	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34204	129.3753	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.32759	129.3479	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33905	129.3398	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33905	129.3398	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34156	129.1962	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	129.1221	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33945	129.0234	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33945	129.0234	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33945	128.847	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34002	128.8429	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	128.8099	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33945	128.8018	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34023	128.726	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	128.7177	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34141	128.6331	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34144	128.5899	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34026	128.5651	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34093	128.4964	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34023	128.4841	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34023	128.4841	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34023	128.484	2809X2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34023	128.4828	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34023	128.4742	2809X1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34023	128.4669	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34086	128.342	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	128.3371	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34026	128.3201	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34199	128.2676	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	128.2448	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	128.2366	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34154	128.0604	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34154	128.0604	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34185	128.0133	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34155	128.005	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.9348	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34146	127.8393	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.8383	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3416	127.8221	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34302	127.7849	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34302	127.7849	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34114	127.7748	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34093	127.7365	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.7108	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34167	127.6681	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.6626	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34287	127.6498	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34287	127.6498	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.6479	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34229	127.5468	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34138	127.5418	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.5286	GEN645011 1-NEBRASKA CITY 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3416	127.5262	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34153	127.5191	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34229	127.4887	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34229	127.4887	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.4874	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34167	127.486	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34112	127.4812	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.4362	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.4358	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34229	127.4284	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34229	127.4284	CARPENTER - WATERTOWN 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.4159	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.4156	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34114	127.3932	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34016	127.3843	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34016	127.3843	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3472	127.355	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34114	127.3506	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34136	127.3381	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34166	127.2913	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34088	127.2557	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34166	127.2409	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.1818	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.1816	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.1804	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.13	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34136	127.1257	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34144	127.1212	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34378	127.1184	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34217	127.1178	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34144	127.1136	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34173	127.1119	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34173	127.1119	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34118	127.0656	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.0285	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.0263	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	127.0261	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34187	127.0254	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	126.9841	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34166	126.9725	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	126.9574	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	126.9572	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	126.952	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34126	126.9481	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34179	126.9436	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	126.9099	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34167	126.8707	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34115	126.8645	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34182	126.8637	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34192	126.8496	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34192	126.8496	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	126.8137	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	126.8137	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34182	126.7526	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34309	126.7222	AINSWORTH - STUART 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34262	126.7063	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34262	126.7063	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34212	126.7003	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34212	126.7003	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34192	126.6907	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34191	126.6904	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	126.688	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34309	126.5445	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34083	126.5027	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	126.4645	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34378	126.4594	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34221	126.4454	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34221	126.368	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34438	126.3658	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34217	126.3554	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34309	126.308	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34212	126.3015	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34212	126.3015	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34206	126.1036	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34206	126.0875	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34206	126.0875	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34243	125.7364	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34243	125.7364	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34243	125.7364	FT THOMPSON - OAHE 230KV CKT 2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34243	125.7364	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34245	125.7048	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34245	125.7048	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34245	125.7048	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34245	125.7048	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34272	125.6933	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	125.675	BASE CASE
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	125.6221	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.35636	125.6136	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3564	125.6128	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	125.6049	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34134	125.5958	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34134	125.5958	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34134	125.594	KELLY - SHELL CREEK 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33387	125.4803	COLUMWEST - KELLY 230KV CKT 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	125.3972	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	125.397	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	125.3716	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	125.3699	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34241	125.3431	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	125.3229	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	125.3092	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3414	125.3042	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3403	125.2735	GRAND ISLAND - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34272	125.2548	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34272	125.2548	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34272	125.2532	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34272	125.2523	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34272	125.2508	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34272	125.2508	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34272	125.2508	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33981	125.2473	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33981	125.2473	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34126	125.1937	LOUP CITY - ST LIBORY 115KV CKT 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	125.1039	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34152	125.0987	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34152	125.0987	GRAND ISLAND (GRAND.ISD T5) 230/115/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34152	125.0954	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34152	125.0954	GRAND ISLAND (GRAND.ISD T2) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	125.0945	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34007	124.9717	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34007	124.9717	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34186	124.9521	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34186	124.9521	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34066	124.9507	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34066	124.9507	GRAND ISLAND (GI KU1B) 345/230/13.8KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34066	124.9492	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34066	124.9492	GRAND ISLAND (GI KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34032	124.9458	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34078	124.9171	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34272	124.8605	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34181	124.8452	COPSTJCPFRSJ
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34181	124.8452	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34181	124.8452	STMDSJFAFACO
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.6728	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.6716	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34184	124.6637	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.6545	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.6496	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33387	124.6283	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34005	124.611	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34005	124.611	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34186	124.5372	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34186	124.5341	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.4567	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34186	124.4489	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34399	124.3689	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.3251	GEN587593 1-J460-GEN1 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3439	124.2967	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.2901	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34399	124.2531	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34399	124.2317	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34399	124.2316	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34399	124.2157	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34399	124.2157	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.2052	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.189	GEN652545 7-BIG BEND
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.1774	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34399	124.1744	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.1709	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.1646	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.1604	GEN652460 4-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.1604	GEN652461 5-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.1141	GEN652458 2-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.1141	GEN652459 3-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.114	GEN652457 1-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.1031	GEN652543 3-BIG BEND
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.1028	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.1027	GEN652559 1-OAHE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.1011	GEN652544 5-BIG BEND
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.0545	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	124.0456	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.7681	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.763	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.6744	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.6686	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.6078	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.5199	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34008	123.5128	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.5004	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.5003	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.4476	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34008	123.4419	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34008	123.4362	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.4148	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.4113	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.3705	GEN652556 2-OAHE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.3705	GEN652557 4-OAHE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.3705	GEN652558 6-OAHE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.35	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.2897	GEN615010 1-STANTON4
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.2742	GEN659141 1-K10215A
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.2567	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.1701	GEN600006 1-AS KING
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.1157	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	123.0684	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	122.9726	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	122.9463	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	122.8983	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	122.8674	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	122.866	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	122.743	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	122.2237	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	122.02	GEN579459 1-G16-075-GEN10.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	121.6774	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	121.468	GEN661015 1-COYOTE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	121.4325	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	121.3611	GEN620315 1-BIG STONE GEN
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	121.1477	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	121.1101	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	120.3279	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	120.0965	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	119.7828	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	119.7696	GEN659125 1-COVEY
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.35907	119.7515	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.35907	119.7026	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.35907	119.6796	2810X2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	119.6595	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	119.6595	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.35907	119.5204	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.35907	119.5204	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.35907	119.5129	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.35907	119.5055	2801X
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.35907	119.4175	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.32132	119.1764	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	119.0792	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	118.9777	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4663	117.5435	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.31698	115.125	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	114.2879	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	114.2879	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.4197	111.2908	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34193	109.9049	GEN652353 2-GR PRAIRIEG 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34063	107.7719	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34377	106.3009	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34587	106.2668	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34608	105.745	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34403	105.1699	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34518	105.0092	HANLON - STORLA 230KV CKT 1
FDNSLock	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34302	104.6758	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34597	104.6058	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34597	104.6058	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	104.2594	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33008	104.2445	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34063	104.1702	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34302	104.1543	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34302	104.1538	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34302	104.1538	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34206	104.03	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34206	104.03	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34685	103.9693	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34685	103.9693	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	103.9547	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34253	103.9521	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34253	103.9521	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	103.8894	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34293	103.797	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34573	103.7459	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34573	103.7459	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34571	103.7403	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34571	103.7403	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34378	103.7292	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34638	103.6664	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3444	103.6623	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34571	103.5327	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34519	103.4794	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	103.4092	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34443	103.338	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	103.3052	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34433	103.3012	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	103.2808	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	103.2785	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34212	103.2678	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34212	103.2678	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34212	103.2295	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34212	103.1953	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34367	103.1732	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34401	103.1596	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34433	103.1574	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34271	103.118	2809X2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34271	103.1179	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34271	103.1176	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34271	103.1176	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34271	103.1118	2809X1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34271	103.1092	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	103.1078	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34271	103.1058	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34378	103.1013	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34505	103.0698	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	103.0491	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	103.0123	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.963	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.9622	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34402	102.9302	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNSLock	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34449	102.9148	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34399	102.8596	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3459	102.8524	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3459	102.8524	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34435	102.8451	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34415	102.8012	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.7927	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.7802	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34271	102.7772	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34421	102.7364	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34305	102.7109	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.7097	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34444	102.663	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34402	102.6563	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34608	102.6454	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34608	102.6454	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34459	102.6321	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34485	102.6299	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34459	102.6234	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34399	102.5932	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34421	102.5921	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34525	102.5883	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34447	102.5791	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34447	102.5791	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34459	102.5781	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34447	102.5614	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.5405	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.5232	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34525	102.5	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34525	102.5	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34293	102.4676	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.4584	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34525	102.4577	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34525	102.4577	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3431	102.4455	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.4441	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3431	102.443	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.4347	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.4326	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34375	102.424	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.4082	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34414	102.3869	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34449	102.3793	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3431	102.3728	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34402	102.3509	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34455	102.3292	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34462	102.3277	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.3263	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34671	102.3177	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.3025	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34363	102.3004	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.2802	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.2697	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34552	102.256	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34552	102.256	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.2542	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.2527	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.2525	GEN344896 3-1LAB G3 20.000

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34447	102.2477	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34447	102.2449	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34482	102.2404	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34415	102.2339	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.2326	GEN642067 1-PLATTE
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.228	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34405	102.2263	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNSLock	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	102.226	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34285	102.2245	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34285	102.2245	RAUN - SIOUX CITY 345KV CKT 1
FDNSLock	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34376	102.2232	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.2181	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34462	102.2133	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34409	102.2098	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.2009	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34256	102.1959	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.1952	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.195	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34402	102.1881	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34768	102.1852	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34768	102.1852	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34768	102.1852	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34768	102.1852	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34479	102.1816	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34502	102.1751	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34502	102.1751	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34599	102.1594	AINSWORTH - STUART 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.1587	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34456	102.1467	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.1359	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34405	102.1306	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34599	102.1288	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.1228	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34373	102.1216	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.1145	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.1115	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34479	102.1066	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34464	102.092	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34599	102.0891	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34433	102.0838	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34479	102.0815	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34447	102.0804	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.0702	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34599	102.0669	EMMET - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.048	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.0478	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.35013	102.0445	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.0406	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.0391	P13:115-345:NPPD:NUCOR-2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.0193	GEN563212 1-G15087_3 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3446	102.0191	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.0155	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3448	102.0116	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	102.0096	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34481	102.0082	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34509	102.0033	BROKEN BOW - LOUP CITY 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34459	101.9898	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3446	101.9796	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	101.9795	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34671	101.9779	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	101.9664	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34409	101.9641	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34471	101.9634	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34457	101.962	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3444	101.9576	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.3444	101.9576	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34507	101.9561	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	101.9518	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	101.9503	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34467	101.9423	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34467	101.9423	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	101.4774	BASE CASE
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34568	101.1089	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34446	101.0125	CRETE - FRIEND 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34393	101.0037	HIGHLND 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34458	101.003	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9962	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9826	GEN652414 4-FT PECK
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9826	GEN652415 5-FT PECK
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9724	GEN615032 2-PLEASANT VALLEY
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9715	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9703	GEN672347 1-CORY COGEN GENERATOR 1 GT1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9703	GEN672348 2-CORY COGEN GENERATOR 2 GT2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9659	GEN672350 1-NIPAWIN GENERATOR 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9659	GEN672351 2-NIPAWIN GENERATOR 2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9659	GEN672352 3-NIPAWIN GENERATOR 3
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9422	GEN620324 3-HOOT LAKE 3 GEN
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9409	GEN657600 1-L1GEN3 9 0.5750
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9203	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34369	100.9186	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34448	100.9155	FALLOW 3 345.00 - POTTCO 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9102	GEN672367 1-MERIDIAN GENERATOR 1 GT1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9102	GEN672368 2-MERIDIAN GENERATOR 2 GT2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9098	GEN672349 3-CORY COGEN GENERATOR 3 ST
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9027	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9018	GEN672339 16-QE 16G 13.800
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.9018	GEN672342 3-QUEEN ELIZABETH GENERATOR 3
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.8957	GEN600050 1-FEP
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.8881	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.8881	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34476	100.8799	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34476	100.8799	COOPER - FAIRPORT 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.8608	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.827	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.827	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34459	100.8164	MADISON COUNTY - RLHILLS3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.8163	GEN659192 6-LYNN
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.8154	GEN659162 4-RED WLCK
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.8154	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.8142	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34702	100.809	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34693	100.7969	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.7808	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.7781	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.7707	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.7685	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.7666	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.7654	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.7653	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.7648	GEN657985 1-ASH1GEN9 0.5750
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34294	100.761	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34294	100.761	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.7554	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34432	100.749	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34702	100.7481	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.7449	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34405	100.7443	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34405	100.7443	ATCHSNT3 345.00 - COOPER 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34702	100.7395	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34702	100.7392	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.7379	GEN681522 3-GENOA 3
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.7305	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.7298	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34471	100.7294	COPSTJCPFRSJ
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34471	100.7294	P12:345:NPPD:3517:COOPER 3:ST JOE 3:BTB
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34471	100.7294	STMDSJFAFACO

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.7223	GEN600017 C-LS POWER CT
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34702	100.7173	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34702	100.7173	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34448	100.6971	FALLOW 3 345.00 - GRIMES 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.6931	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34702	100.6908	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.6761	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.6748	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.657	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34274	100.6381	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34274	100.6381	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.6361	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.6361	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34474	100.6177	COOPER - ST JOE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.6017	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34405	100.5727	ATCHSNT3 345.00 - BOONEVILLE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.5634	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34476	100.5365	G14-021T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34476	100.5305	G15-005T 345.00 - MULLNCR7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.5058	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34299	100.4914	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34299	100.4914	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.4596	CENTER 230/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.4594	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34476	100.4499	G15-005T 345.00 - SIBLEY 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.4339	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34323	100.4285	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.4284	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.4284	GEN672304 4-BOUNDARY DAM GENERATOR 4
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.4284	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.3645	GEN652460 4-GARRISON
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.3645	GEN652461 5-GARRISON
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.3623	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.3314	GEN652457 1-GARRISON
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.3313	GEN652458 2-GARRISON
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.3313	GEN652459 3-GARRISON
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.2961	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.2854	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.2666	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.2647	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.2599	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.2541	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.2297	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.1734	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.1407	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.1325	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100.116	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	100	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	99.9	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	99.9	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34298	99.9	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34298	99.9	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34298	99.9	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.33678	99.9	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	99.8	GEN652559 1-OAHE
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	99.7	GEN652556 2-OAHE
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	99.7	GEN652557 5-OAHE
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	99.7	GEN652558 6-OAHE
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	99.6	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	99.6	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	99.6	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	99.5	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	2	16WP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.34483	99.5	GEN659141 1-K10215A
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50466	121.0109	KELLY - MEADOWGROVE4230.00 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51049	120.7624	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51082	119.6337	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5064	119.1075	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5064	118.8974	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5064	118.8067	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5064	118.8067	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50854	118.648	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5096	118.1438	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50351	117.8831	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51056	117.781	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51056	117.781	FT THOMPSON - LETCHER 230KV CKT 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50854	117.0656	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	116.9794	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	116.7686	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51012	116.507	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51012	116.507	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50648	116.4155	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50648	116.4155	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51011	116.2445	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51011	116.2445	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50303	116.1763	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	116.1168	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	116.1168	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50303	116.0503	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50303	115.9281	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51011	115.8572	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50466	115.6335	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50811	115.2108	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	114.9614	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50969	114.8889	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50852	114.7856	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50638	114.7689	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50599	114.4758	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50599	114.4758	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50642	114.2714	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50642	114.2714	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	114.2686	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	114.2027	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50803	114.1437	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	114.1278	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50642	114.0576	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50803	114.0408	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50642	114.0008	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50885	113.9919	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50738	113.9383	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50803	113.8711	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50816	113.8296	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	113.8187	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50589	113.7495	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50889	113.708	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	113.6754	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50738	113.6339	LELAND03-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50738	113.6339	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50738	113.6337	2809X2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50738	113.6334	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50738	113.6324	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50738	113.6214	2809X1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50738	113.6121	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	113.5843	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50803	113.5837	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50815	113.4931	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50961	113.4547	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	113.3221	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50795	113.1351	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50795	113.1351	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50885	113.1207	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	113.1137	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50795	113.1041	FT RANDAL - SPENCER 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50904	113.0968	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50904	113.0968	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50905	113.03	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50795	112.9893	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50944	112.9438	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	112.9181	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	112.9176	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50458	112.9078	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50816	112.8494	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50803	112.8386	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50912	112.8276	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	112.819	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	112.8102	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50853	112.7789	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51082	112.7525	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51082	112.7525	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50917	112.7359	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	112.7295	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51002	112.5736	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50881	112.5282	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50917	112.5038	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50844	112.5025	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51002	112.4996	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51002	112.4996	HURON - WATERTOWN 230KV CKT 2
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50912	112.4585	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50901	112.4559	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50664	112.4325	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51002	112.423	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51002	112.423	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50664	112.4176	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50664	112.4049	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	112.3532	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	112.3527	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50853	112.3145	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50851	112.2693	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50732	112.2657	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50732	112.2657	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.508	112.2553	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.508	112.2539	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.508	112.2101	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	112.2012	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	112.1897	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50883	112.1811	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50817	112.1554	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	112.1315	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	112.1034	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50796	112.0778	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50796	112.0229	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50796	112.0226	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50796	112.0216	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50796	112.0215	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	112.0124	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	112.0093	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	112.0092	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50796	112.0089	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50796	112.0089	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50927	111.9962	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50927	111.9962	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5089	111.9719	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5089	111.9628	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.9519	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50796	111.9494	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.9411	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.941	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50778	111.9342	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50778	111.9342	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50883	111.9229	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50854	111.9203	GRIMES - LEHIGH 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50851	111.8879	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.8837	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50946	111.8829	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.868	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.8167	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50863	111.8105	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.7474	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50917	111.7148	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50939	111.7128	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.6917	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.6354	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.5888	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50954	111.5734	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50954	111.5734	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50939	111.5699	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.5696	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.5671	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.5635	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.5564	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.5375	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50922	111.5267	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50892	111.5219	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50864	111.4988	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50939	111.4976	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50928	111.4827	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50849	111.4793	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.4126	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50918	111.3866	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50934	111.3772	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50934	111.3772	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50916	111.3682	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50952	111.3533	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50805	111.3455	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50917	111.3378	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50923	111.3364	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.3252	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50918	111.3073	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.3064	GEN303007 1-1BC2 U2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.3019	GEN303006 1-1BC2 U1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50934	111.2518	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50934	111.2518	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50925	111.2431	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.2424	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.2327	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.2323	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50928	111.2255	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5094	111.2246	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5094	111.2246	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.2225	GEN303008 1-1BC2 U3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5133	111.2206	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5133	111.2206	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5133	111.2206	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5133	111.2206	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.2192	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50925	111.2149	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5085	111.2108	EAGLE - PHILIP 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50962	111.2098	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50962	111.2098	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50962	111.2098	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50925	111.2061	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50962	111.2022	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50962	111.2022	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50934	111.1986	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50942	111.1747	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50954	111.1675	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50936	111.1631	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50915	111.1611	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50915	111.1575	CHADRON - WAYSIDE 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50915	111.1575	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50934	111.1371	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.132	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50914	111.1255	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5085	111.1163	EAGLE - MARTIN 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50824	111.1067	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50927	111.1055	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50917	111.0915	PALXFRASBTHI
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50936	111.0835	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50914	111.0725	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50934	111.0564	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.0438	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50917	111.0412	7PALM TAP 345.00 - SUB T 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.0375	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.0141	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.0133	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	111.013	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5097	111.0115	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50889	110.97	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	110.9668	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50924	110.9599	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50943	110.951	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	110.9437	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50707	110.9409	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50998	110.914	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50914	110.891	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	110.8852	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	110.8852	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50942	110.8829	FRANKS - HUBEN 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	110.8758	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	110.8579	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	110.8507	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	110.8387	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	110.8387	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5085	110.8238	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5085	110.8238	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51012	110.8115	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51012	110.8115	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	110.761	GEN640009 1-COOPER NUCLEAR STATION
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	110.1953	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	110.1844	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	110.1813	BASE CASE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53057	110.1196	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53062	110.1186	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51056	110.0585	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51056	110.0585	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51056	110.0585	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51056	110.0585	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50956	110.0323	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51085	110.0234	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50958	110.0194	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5106	110.0106	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5106	110.0106	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5106	110.0106	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5106	110.0106	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50948	109.9722	P12:115:TSGT:GRANTNB7-OGALALA7_2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50196	109.913	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50952	109.9004	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50952	109.9004	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50947	109.9	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50933	109.8964	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5096	109.877	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.509	109.8407	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.7964	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.7949	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50939	109.7827	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50939	109.7827	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.772	P12:115:TSGT:BLKWDCK7-ELSIETP7

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50933	109.7612	BONESTEEL - GREGORY 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.7595	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.7563	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50732	109.7146	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50732	109.7146	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50819	109.7139	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50855	109.7017	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50819	109.6918	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51081	109.6851	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50687	109.67	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50819	109.6663	AINSWORTH - STUART 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50505	109.6659	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50949	109.6618	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50933	109.6525	WINNER - WITTEN 115KV CKT 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.651	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50933	109.6494	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.647	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.6394	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50933	109.6334	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50853	109.6174	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50853	109.6174	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50933	109.6159	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.5352	GEN652548 5-FT RANDAL
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.5352	GEN652549 7-FT RANDAL
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50917	109.5206	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50917	109.5206	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.5159	GEN652547 3-FT RANDAL
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50939	109.5066	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50939	109.5066	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50814	109.4846	COOPER - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50841	109.4645	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.4538	GEN600020 2-ANGUS ANSON1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51085	109.4533	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51085	109.4533	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51085	109.4513	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51085	109.4507	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51085	109.4488	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51085	109.4488	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51085	109.4488	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.4357	GEN600021 3-ANGUS ANSON2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50765	109.4285	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50765	109.4285	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.4163	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.4075	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.3951	GEN659290 1-EDGECOL
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5086	109.3844	LOUP CITY - NORTH LOUP 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50944	109.377	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.3765	GEN652410 3-FT PECK
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.3724	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.3695	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50933	109.367	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.3553	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.3259	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50916	109.3256	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.3236	GEN660003 3-HURON WEST PARK
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.2798	GEN652414 4-FT PECK
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.2798	GEN652415 5-FT PECK
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.2735	EMERY 161/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.2568	GEN600046 1-MECST
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.2545	GEN300003 1-THOMAS HILL UNIT 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.2542	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.2495	GEN600050 1-FEP
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.2317	GEN600047 1-MECCT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.2268	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.1943	GEN600045 4-ANSON
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50196	109.1934	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.1858	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.1793	GEN300006 1-NEW MADRID UNIT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.1585	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.1585	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.1583	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.1564	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.1564	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.1266	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.1138	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.1138	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.1115	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.1065	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.1014	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.1013	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.0904	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.0904	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.0856	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.0541	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.0472	GEN600017 C-LS POWER CT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.0299	GEN659192 6-LYNN
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.0292	GEN659162 4-RED WLCK
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	109.0292	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.9884	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.9827	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50917	108.982	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50917	108.982	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51085	108.9609	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.9479	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.9476	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.9083	GEN681522 3-GENOA 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.8893	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50856	108.87	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50856	108.87	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.856	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.856	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.7974	GEN659274 1-GROTON
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.7874	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.7732	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.767	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.765	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.509	108.7575	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.509	108.7575	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.7494	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.7463	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.7426	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.7335	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.7334	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50899	108.7294	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50556	108.7272	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.6989	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.6763	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.6347	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.6342	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.6292	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.5769	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.5707	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.5584	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51217	108.5496	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.5392	GEN659270 1-WEST SW
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.5379	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.5081	GEN659353 1-DEERCREK CTG18.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.502	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51206	108.4583	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51217	108.4034	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51217	108.3829	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51217	108.3827	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51217	108.3594	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51217	108.3594	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.51217	108.3081	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.3077	GEN587593 1-J460-GEN1 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.1426	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.0868	GEN652545 7-BIG BEND
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.0731	GEN652559 1-OAHE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.0137	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	108.0012	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.9946	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.9849	GEN652460 4-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.9848	GEN652461 5-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.9704	GEN652543 3-BIG BEND
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.9699	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.9677	GEN652544 5-BIG BEND
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.921	GEN652458 2-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.921	GEN652459 3-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.9209	GEN652457 1-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.8803	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50801	107.7602	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50801	107.7602	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.48349	107.7279	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.6472	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50743	107.5127	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50743	107.5074	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50743	107.4967	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.4945	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.4784	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.2624	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.2368	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.2368	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.2279	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.2254	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.2183	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.1789	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.1617	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50687	107.1249	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.0671	GEN615010 1-STANTON4
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50798	107.0385	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.0119	GEN652556 2-OAHE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.0119	GEN652557 4-OAHE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	107.0119	GEN652558 6-OAHE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	106.905	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	106.9022	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	106.8969	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	106.8344	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	106.7419	GEN659141 1-K10215A
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	106.6063	GEN600006 1-AS KING
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	106.5087	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.5065	106.3867	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	106.2715	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	106.1678	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	106.0232	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50682	105.6873	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50682	105.6873	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	105.2763	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	105.0209	GEN579459 1-G16-075-GEN10.6900
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.49359	104.9534	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	104.6574	GEN661015 1-COYOTE
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	104.5002	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	104.293	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	104.1796	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	104.131	GEN600002 3-SHERBURNE CNTY G3
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.46158	103.4917	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	102.3741	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.49073	102.1136	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	102.0642	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53407	101.9488	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	101.9405	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53407	101.8662	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53407	101.8389	2810X2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	101.641	GEN659125 1-COVEY

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53407	101.5901	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53407	101.5901	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53407	101.5805	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53407	101.5708	2801X
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	101.4847	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.53407	101.4642	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	101.436	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	101.436	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_075	2	17SP	G16_075	FROM->TO	GRPRAR1-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	720	720	0.50953	101.3497	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50466	121.1991	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51049	120.9279	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51082	119.7983	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5064	119.2354	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5064	119.0322	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5064	118.9425	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5064	118.9425	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50854	118.741	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5096	118.3243	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50351	118.0057	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51056	117.9656	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51056	117.9656	FT THOMPSON - LETCHER 230KV CKT 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50854	117.1799	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	117.1279	GEN640010 1-GERALD GENTLEMAN STATION UNIT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	116.9261	GEN640011 2-GERALD GENTLEMAN STATION UNIT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51012	116.6737	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51012	116.6737	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50648	116.5472	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50648	116.5472	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51011	116.4099	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51011	116.4099	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50303	116.3656	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50303	116.2324	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	116.2266	GEN562714 1-G15_023_4 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	116.2266	GEN562715 1-G15_023_5 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50303	116.0917	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51011	116.0273	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50466	115.8141	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50811	115.3493	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	115.1406	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50969	115.079	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50852	114.9297	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50638	114.8993	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50599	114.6777	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50599	114.6777	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50642	114.4517	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50642	114.4517	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	114.4473	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	114.3838	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	114.3088	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50803	114.2953	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50642	114.238	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50803	114.1937	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50642	114.1819	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50885	114.1633	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50738	114.0665	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50803	114.0243	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50816	114.0081	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	113.9962	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50589	113.9222	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50889	113.9016	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	113.8543	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50738	113.7665	2809X2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50738	113.7665	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50738	113.7665	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50738	113.7655	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	113.764	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50738	113.7634	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50738	113.7542	2809X1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50738	113.7451	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50803	113.7373	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50815	113.6515	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50961	113.6362	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	113.5003	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50795	113.3151	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50795	113.3151	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50885	113.3008	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50795	113.2841	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50904	113.2538	ELLENDALE - OAKES 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50904	113.2538	ELLENDALE - OAKES 230KV CKT 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	113.2424	GEN659118 1-LARAMIE RIVER UNIT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50905	113.1871	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50795	113.1688	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50944	113.1349	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	113.0979	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	113.0975	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50458	113.0678	GERALD GENTLEMAN STATION - KEYSTONE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50816	113.0289	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50803	112.9998	AINSWORTH - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	112.999	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	112.99	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50912	112.9879	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50853	112.9718	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51082	112.9376	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51082	112.9376	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50917	112.9199	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	112.9111	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51002	112.7484	CARPENTER - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50881	112.7172	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50917	112.6884	H081-TAP 345.00 - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50844	112.6815	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51002	112.6727	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51002	112.6727	HURON - WATERTOWN 230KV CKT 2
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50912	112.6214	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50901	112.6201	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51002	112.5973	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51002	112.5973	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50664	112.5962	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50664	112.5803	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50664	112.5677	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	112.5338	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	112.5331	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50853	112.5043	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50732	112.4482	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50732	112.4482	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50851	112.4341	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.508	112.4196	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.508	112.4183	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	112.3817	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.508	112.375	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50883	112.3717	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	112.3702	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50817	112.3239	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	112.3123	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	112.284	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50796	112.2685	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50796	112.2058	SIDNEY - SIDNEY2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50796	112.2055	SIDNEY-GEN2015095TAP-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50796	112.2045	G16231629-TAP-SIDNEYT-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50796	112.2044	LELANDO3-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	112.1927	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50796	112.1926	G16-034-TAP 345.00 - G1623&1629-T345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50796	112.1925	LARAMIE3-G16-034-TAP-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	112.1895	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	112.1894	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50927	112.1722	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50927	112.1722	BLAIR - GRANITE FALLS 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5089	112.1562	KOSSUTH 3 345.00 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5089	112.1474	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	112.1325	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50778	112.1296	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50778	112.1296	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50796	112.1277	G1623&1629-T345.00 - LARAMIE RIVER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	112.1215	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	112.1213	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50883	112.1141	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50854	112.1091	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	112.0672	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50946	112.0599	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50851	112.0564	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	112.0515	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.9966	GEN531447 1-HOLCOMB GENERATOR
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50863	111.9888	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.9271	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50917	111.8951	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50939	111.8849	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.8742	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.8152	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.769	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50954	111.7534	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50954	111.7534	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.7502	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.75	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.7436	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50939	111.7427	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.7368	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.7178	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50922	111.6982	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50892	111.6886	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50864	111.6778	BYRON - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50939	111.6714	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50928	111.6556	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50849	111.6515	LAKEFIELD 3 - LKFLDXL3 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.5933	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50918	111.5654	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50934	111.5566	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50934	111.5566	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50916	111.5489	ARPIN B3 345.00 - ROCKY RN B8 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50952	111.5346	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50805	111.5242	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50923	111.5194	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50917	111.5089	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.5057	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.4871	GEN303007 1-1BC2 U2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.4826	GEN303006 1-1BC2 U1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50918	111.4787	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50934	111.4326	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50934	111.4326	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.4178	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50925	111.4153	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.4134	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.413	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5094	111.4063	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5094	111.4063	ARKANSAS NUCLEAR ONE - FT SMITH 500KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.4032	GEN303008 1-1BC2 U3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.3999	GEN336170 1-GULF OXY U4
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50928	111.3995	AUDUBON - SHEYNNE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5133	111.3975	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5133	111.3975	FT THOMPSON - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5133	111.3975	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5133	111.3975	FT THOMPSON - HURON 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50962	111.389	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50962	111.389	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50962	111.389	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50925	111.3875	BISMARK - WEBER 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5085	111.383	EAGLE - PHILIP 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50962	111.3815	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50962	111.3815	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50925	111.3783	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50934	111.3745	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50942	111.3615	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50954	111.3497	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50936	111.342	DKSN_CO5 161.00 - TRIBOJI NO1 + NO2 161KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50915	111.3354	WAYSIDE (WAYSIDE T1) 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50915	111.3318	CHADRON - WAYSIDE 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50915	111.3318	P13:115-230:NPPD:WAYSIDE4:T1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50934	111.3134	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.313	GEN501811 1-RODEMACHER UNIT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50914	111.3029	P12:115:NPPD:WAPA1:CHADRON7:BOXBUTE7:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50927	111.2934	DENISON - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50824	111.2927	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5085	111.2896	EAGLE - MARTIN 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50917	111.2743	PALXFRASBTHI
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50936	111.2588	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50914	111.2475	CHADRON - DUNLAP 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50934	111.2333	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.225	GEN334071 1-LEWIS CREEK 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50917	111.2238	7PALM TAP 345.00 - SUB T 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.2187	GEN334070 1-LEWIS CREEK 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50707	111.1966	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.1952	GEN337766 1-TRACTEBEL UNIT S1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.1896	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.1892	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5097	111.1876	P13:230:UMZW:# 253 #: FR IN SD. LOSS OF TRANSFORMER (E
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50889	111.1556	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.1479	GEN501910 1-ACADIA UNIT ST1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50924	111.1408	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50943	111.1275	MARTIN - SHANNON 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.1255	GRAND GULF 500/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50998	111.0906	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50914	111.0673	BOXBUTE7 115.00 - DUNLAP 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.0668	GEN337764 1-TRACTEBEL UNIT C1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.0668	GEN337765 1-TRACTEBEL UNIT C2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50942	111.0651	FRANKS - HUBEN 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.0579	P12:345:GRDA:CHOUTEAU-SPORTSMANACRES
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.0429	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.0362	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.0191	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	111.0191	FINNEY SWITCHING STATION - PSCO LAMAR DC TIE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5085	110.9953	MAURINE - NUNDRWD-LNX3230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5085	110.9953	NUNDERWOOD-MAURIN-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	110.9581	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	110.3633	BASE CASE
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	110.3547	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	110.3428	GR ISLD-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50956	110.2514	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53057	110.2489	FT THOMPSON (FT2 KU1A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53062	110.2477	FT THOMPSON (FT2 KU1B) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50958	110.2408	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51056	110.2061	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51056	110.2061	FT THOMPSON - OAHE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51056	110.2061	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51056	110.2061	FT THOMPSON - OAHE 230KV CKT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50948	110.1697	P12:115:TSGT:GRANTNB7-OGALALA7_2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5106	110.1597	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5106	110.1597	FT THOMPSON - OAHE 230KV CKT 3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5106	110.1597	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5106	110.1597	FT THOMPSON - OAHE 230KV CKT 4
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51085	110.1414	ANTELOP-LNX3345.00 - BRDLAND-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50196	110.1093	COLUMWEST - KELLY 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5096	110.1064	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50952	110.0987	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50952	110.0987	P12:115:UMZB:# 119 #: IN NE.

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50947	110.094	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50933	110.0798	P12:115:UMZW:# 150 #: GY-BO-FR IN SD. GY-BO-FR BONESTEEL HAS FAULT INTERUPTING DEVIECES (
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	110.036	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	110.0344	FTTHOM1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	110.0053	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	110.0019	FTTHOM2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50939	109.9718	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50939	109.9718	BUCKNER7 345.00 - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.9646	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50933	109.9447	BONESTEEL - GREGORY 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50732	109.9026	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50732	109.9026	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50819	109.9024	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50855	109.8988	AXTELL - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51081	109.8842	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50819	109.8797	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50687	109.8646	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50819	109.8565	AINSWORTH - STUART 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50505	109.8458	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50949	109.8451	HOYT - JEFFREY ENERGY CENTER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50933	109.8391	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50933	109.8357	MISSION - WITTEN 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.826	GEN562003 1-G11_027_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50933	109.8202	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50933	109.8033	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50853	109.8024	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50853	109.8024	GRAND ISLAND (GI KU3A) 345/230/13.8KV TRANSFORMER CKT 3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.7124	GEN652548 5-FT RANDAL
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.7124	GEN652549 7-FT RANDAL
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50917	109.7073	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50917	109.7073	FINNEY SWITCHING STATION - HOLCOMB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50939	109.7008	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50939	109.7008	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.6935	GEN652547 3-FT RANDAL
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50814	109.6803	COOPER - MOORE 345KV CKT 1
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.651	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNSLock	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.647	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50841	109.6469	CENTRAL CITY - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.6435	GRPRAR2-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.6393	GRPRAR1-LNX3345.00 345KV SWITCHED SHUNT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.6327	GEN600020 2-ANGUS ANSON1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50765	109.6206	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50765	109.6206	103RD & ROKEBY - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.6146	GEN600021 3-ANGUS ANSON2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.5991	GEN600012 2-BLACK DOG GEN 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51085	109.5972	ANTELOPEVALLEY-BOARDLAND-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51085	109.5972	P12:345:UMZB:# 102 #: AVS BD IN ND. AVS BRD LR
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51085	109.5959	BRDLAND-LNX3345.00 - HURON 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51085	109.5952	P12:345:UMZB:# 103 #: BD IN SD. LOSS OF LINE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51085	109.594	BROADLAND - HURON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51085	109.594	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51085	109.594	HURON (BD KU2A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.5917	GEN590010 1-ERCOT EQUIVALENCE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.581	GEN659290 1-EDGECOL
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5086	109.5686	LOUP CITY - NORTH LOUP 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.5641	GEN652410 3-FT PECK
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50944	109.5616	MATHWSN7 345.00 - TATONGA7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50933	109.5571	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.5566	GEN590011 2-ERCOT EQUIVALENCE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.5558	GEN672393 2-NBECST2G 13.800
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.5369	GEN629072 4-LANSING GENERATOR FOR UNITS NO4 EIA CODE 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.5093	EASTDC - ERCOT EQUIVALENCE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50916	109.5059	POST ROCK (POSTROCK T1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.5013	GEN660003 3-HURON WEST PARK
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.468	GEN652414 4-FT PECK
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.468	GEN652415 5-FT PECK
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.4555	EMERY 161/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.4411	GEN300003 1-THOMAS HILL UNIT 3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.4385	GEN652345 W-G07_023IS_2 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.4371	GEN600046 1-MECST
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.4317	GEN600050 1-FEP
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.4119	GEN600047 1-MECCT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.4087	GEN587583 1-J432-GEN1 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50196	109.3833	COLUMWEST - GRAND ISLAND 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.371	GEN300007 1-NEW MADRID UNIT 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.3677	GEN600045 4-ANSON
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.3645	GEN300006 1-NEW MADRID UNIT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.3424	GEN660001 2-ABERDEEN SIEBRECHT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.3414	GEN600043 7-BLUE LAKE5
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.3414	GEN600044 8-BLUE LAKE6
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.3392	GEN600063 1-COLVILLE GEN 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.3392	GEN600064 2-COLVILLE GEN 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.3172	LADISH 115/13.2KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.2972	GEN600065 7-HIGH BRIDGE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.2972	GEN600066 8-HIGH BRIDGE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.2945	GEN600014 4-BLACK DOG GEN 4
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.2896	GEN600011 5-BLACK DOG GEN 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.2848	GEN600070 9-RIVER SIDE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.2848	GEN600071 10-RIVER SIDE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.2798	GEN659273 2-GROTON SYNC COND
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.2798	GEN659294 1-WILTONCOL9
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.2691	GEN600007 7-RIVERSIDE GEN 7
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.2311	GEN652906 1-G09_006IS_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.2305	GEN600017 C-LS POWER CT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.2203	GEN659192 6-LYNN
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.2195	GEN659162 4-RED WLCK
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.2195	GEN659163 5-BLACK WDCK
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50917	109.1727	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50917	109.1727	FINNEY SWITCHING STATION - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.1726	GEN615021 1-GRE-ER 14G 16.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.1664	LANSING WEST 161/22.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.1323	GEN615052 1-CAMBRIDGE GENERATING STATION
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.124	GEN652907 1-G09_007IS_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51085	109.1211	ANTELOP-LNX3345.00 - ANTELOPE VALLEY 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.0902	GEN681522 3-GENOA 3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.0766	GEN659272 2-GROTON 2G13.800
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50856	109.0665	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50856	109.0665	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.0473	GEN 11104 1-J262_GEN 0.6000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	109.0473	GEN 11108 1-J263_GEN 0.6000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.9851	GEN659274 1-GROTON
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.9781	GEN615015 1-GRE-SPRITWDG13.200
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.9576	GEN562872 1-G15046_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.9532	GEN660016 1-B_H WIND 0.7000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.509	108.9498	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.509	108.9498	Hitchland Interchange - WALKTAP7 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.9489	GEN659291 1-FT MP COLLECTOR
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.9445	G830_SUB 115.00 115/34.5KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.9413	G830_SUB 115.00 - GRE-MCHENRY7115.00 115KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.9223	GEN672303 3-BOUNDARY DAM GENERATOR 3
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.9223	GEN672305 5-BOUNDARY DAM GENERATOR 5
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.9221	GEN662101 1-WESSINGTON190.5750
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50899	108.922	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50556	108.9196	CHERRYC3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.888	GEN672392 1-NBECGT1G 18.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.8596	GEN600067 9-HIGH BRIDGE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.837	SQUARE BUTTE - YNG2 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.8364	YNG2 4 230.00 230/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.8308	COYOTE 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.7693	GEN910006 1-G12_012IS_3 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.7668	BISONMP4 230.00 - SQUARE BUTTE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.7527	GEN 10648 1-G830_GEN 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.7322	GEN659270 1-WEST SW
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51217	108.7297	OAHE - SULLEY BUTTE 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.7247	GEN587623 1-J493-GEN1 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.69	GEN659353 1-DEERCREK CTG18.000

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.684	GEN659354 1-DEERCREK STG18.000
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51206	108.6385	GLENHAM - L3 HAWDON 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51217	108.5833	SULLEY BUTTE - SULLYBT-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51217	108.5627	SULLYBUTTE-WHITLOCK-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51217	108.5625	SULLYBT-LNX3230.00 - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51217	108.5392	P12:230:UMZB:# 114 #: SB IN SD. SB-WK-GH
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51217	108.5392	P12:230:UMZB:# 117 #: WK IN SD. SB-WK-GH
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.4893	GEN587593 1-J460-GEN1 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.51217	108.4881	GLENHAM - WHITLOK 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.3256	GEN681542 6-JP MADGETT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.2643	GEN652559 1-OAHE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.2579	GEN652545 7-BIG BEND
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.21	GEN659010 4-G07_027IS_2 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.1979	GEN659194 1-NDPRAIRWND1W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.191	GEN659366 3-WILTON 3 W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.1819	GEN652460 4-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.1818	GEN652461 5-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.1518	GEN652543 3-BIG BEND
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.1514	GEN652542 1-BIG BEND
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.1486	GEN652544 5-BIG BEND
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.1186	GEN652457 1-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.1186	GEN652458 2-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.1186	GEN652459 3-GARRISON
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	108.0776	GEN659403 1-NDSUNFLWR W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.48349	108.0028	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50801	107.9745	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50801	107.9745	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.8527	STANTON 230/18.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50743	107.7045	AXTELL - G16-050-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50743	107.6994	POSTROCK7-AXTELL3-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50743	107.6946	G16-050-TAP 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.6912	GEN659411 1-CAMPBLCNTY W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.67	CLAY BOSWELL 230/20.9KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.4583	GEN672321 1-SHAND GENERATOR 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.4329	GEN672310 1-POPLAR RIVER GENERATOR 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.4329	GEN672311 2-POPLAR RIVER GENERATOR 2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.4202	P12:230:UMZB:# 112 #: NU IN SD. NU-RCDC & DRY CREEK XFMR
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.4105	RCDC EAST 4230.00 - RED CEDAR DC 230KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.4092	GEN659296 2-SDPRAIRWND1W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.3659	ALMA 161 161/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.3583	GEN672306 6-BOUNDARY DAM GENERATOR 6
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50687	107.3344	G15088_T 345.00 - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50798	107.2982	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.2734	GEN615010 1-STANTON4
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.208	GEN652556 2-OAHE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.208	GEN652557 4-OAHE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.208	GEN652558 6-OAHE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.1099	GEN659453 1-GI1414GEN W0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.0872	GEN600004 2-PRAIRIE ISLAND G2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.082	GEN600003 1-PRAIRIE ISLAND G1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	107.0417	GEN657749 1-YOUNG 1 GENERATOR
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	106.9489	GEN659141 1-K10215A
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	106.794	GEN600006 1-AS KING
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	106.702	GEN652173 1-G09_001IS_2 0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.5065	106.636	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	106.484	GEN659407 1-ANTELPHILLSW0.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	106.3792	GEN659110 1-LELAND OLDS UNIT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	106.2129	GEN600005 1-MONTICELLO
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50682	105.9526	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50682	105.9526	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	105.4678	GEN600000 1-SHERBURNECNTY G1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.49359	105.2179	MCCOOL - MOORE 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	105.1959	GEN579459 1-G16-075-GEN10.6900
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	104.8814	GEN661015 1-COYOTE
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	104.6924	GEN600001 2-SHERBURNE CNTY G2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	104.486	GEN620315 1-BIG STONE GEN
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	104.4072	GEN657748 1-YOUNG 2 GENERATOR
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	104.3232	GEN600002 3-SHERBURNE CNTY G3

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.46158	103.7681	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	102.5749	SHERBURNE CO 345/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.49073	102.3721	GRAND ISLAND - MCCOOL 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	102.308	GEN659111 2-LELAND OLDS UNIT2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	102.1445	BIG STONE 230/24.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53407	102.1022	FTTHOM1-LNX3345.00 - G16-017-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53407	102.0386	G16-017-TAP 345.00 - LELAND2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53407	102.0119	2810X2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	101.8871	GEN659125 1-COVEY
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53407	101.8103	LELAND03-FTTHOMP3-T-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53407	101.8103	P12:345:UMZB:# 108 #: LOS FT IN ND. LOS FT
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53407	101.8013	FT THOMPSON - FTTHOM1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53407	101.7923	2801X
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.53407	101.7029	LELAND OLDS - LELAND2-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	101.6974	GEN615001 1-COAL CREEK
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	101.685	GEN659103 1-ANTELOPE VALLEY UNIT1
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	101.685	GEN659107 2-ANTELOPE VALLEY UNIT2
FDNS	00NR_G16_075	2	17SP	G16_075	TO->FROM	GRPRAR1-LNX3345.00 - YANKTON 345KV CKT Z	720	720	0.50953	101.5634	GEN615002 2-COAL CREEK
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.46277	118.5074	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.46281	118.372	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.46158	111.6648	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.33961	108.2747	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.41717	107.7974	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.41716	107.2432	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34594	107.1139	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34594	107.1139	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34462	106.6246	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.33958	106.4996	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34308	106.3856	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34484	105.6026	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34126	105.1898	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34126	105.1898	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34325	105.1278	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.344	105.0323	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34458	104.5143	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34473	104.4584	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34473	104.4584	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34338	104.3108	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34303	104.2759	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34179	103.8998	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34308	103.8475	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.33961	103.8044	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3448	103.747	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34129	103.5518	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34129	103.5518	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3427	103.4848	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34434	103.4831	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34434	103.4831	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34314	103.4477	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34272	103.3744	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34105	103.3703	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34105	103.3703	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34129	103.3694	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34129	103.2984	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34308	103.2834	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34433	103.2709	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34433	103.2709	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34396	103.2222	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34351	103.1663	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	103.1287	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34215	103.0292	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34433	103.0206	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34321	102.9862	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34215	102.8866	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	102.8692	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34229	102.8212	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34229	102.8212	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34229	102.8212	WATERTOWN-WHITE-TLINE-REACTOR-CKT1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.343	102.8108	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3459	102.7878	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3459	102.7878	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34469	102.751	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34469	102.751	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.32958	102.7505	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.33958	102.6666	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34335	102.6416	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	102.6378	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34402	102.6364	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34229	102.6352	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3454	102.5393	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34492	102.5045	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34492	102.5045	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34215	102.4964	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	102.4158	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34283	102.3554	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	102.2728	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	102.2652	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.41553	102.2631	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3433	102.2561	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34127	102.237	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34127	102.237	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34431	102.1522	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34431	102.1522	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34175	102.1145	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34127	102.0801	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	102.0705	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34307	102.0393	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34127	102.0131	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34429	102.0016	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34429	102.0016	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34335	101.9785	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.9478	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34337	101.9412	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.9168	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34179	101.8923	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34103	101.8821	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34103	101.8821	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34304	101.8739	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34348	101.8494	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.8473	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.8369	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34304	101.8245	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34429	101.7928	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34299	101.7702	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34311	101.7661	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34347	101.6861	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	101.6732	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34305	101.6617	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34345	101.6383	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.6193	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34382	101.5799	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34384	101.5765	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34394	101.5443	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.4977	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34264	101.4908	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34268	101.4589	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.4582	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.4524	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34364	101.4455	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34364	101.4455	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.4424	GEN338146 1-INDEPENDENCE UNIT #2
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34896	101.4424	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34307	101.4409	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	101.4365	GEN336821 1-GRAND GULF UNIT
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34225	101.4315	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34225	101.4315	WATERTN-LNX3345.00 - WHITE 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34225	101.4315	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34222	101.4208	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34222	101.4094	LELANDO3-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34222	101.4094	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34222	101.3966	2809X2
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34222	101.3966	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34222	101.3952	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.3924	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34194	101.3923	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34194	101.3923	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.3881	GEN337653 1-WHITE BLUFF UNIT #2
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34293	101.3854	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34299	101.3485	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.3419	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34305	101.3357	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34225	101.3222	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.3212	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34398	101.3125	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34199	101.3011	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34344	101.2786	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.2777	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34311	101.2729	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34484	101.2677	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34484	101.2677	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34222	101.265	2809X1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34222	101.265	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34413	101.2409	CALLAWAY - MAXWELL 115KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34338	101.2009	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34287	101.1878	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.1657	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34318	101.133	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34569	101.105	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34501	101.1044	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.0925	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34319	101.0664	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34348	101.0619	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.0568	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34212	101.0516	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34354	101.0401	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34354	101.0267	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.0168	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.0101	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.0084	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34327	101.0081	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.0073	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.007	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	101.005	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34358	100.9986	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34239	100.9491	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34239	100.9491	HOSKINS - RAUN 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.9423	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100.9345	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34318	100.9345	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.9164	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34451	100.9053	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34451	100.9053	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100.904	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34364	100.8882	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34364	100.8882	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34345	100.8741	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.8737	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.869	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.8679	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.8678	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.8678	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100.8662	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34338	100.8632	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34338	100.8537	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34338	100.8537	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34362	100.8494	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34362	100.8494	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.847	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34364	100.8425	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34372	100.8423	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34212	100.838	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34378	100.8287	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34378	100.8287	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34326	100.8272	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3435	100.8255	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.8196	GEN345671 2-1RUSH G2 18.000
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34366	100.8182	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.8158	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34279	100.8136	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34366	100.8117	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34418	100.809	CARPENTER - HURON 230KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34292	100.7997	HIGHLND 3 345.00 - RAUN 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34374	100.7935	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34374	100.7935	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34366	100.7823	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34374	100.7804	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34364	100.7803	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34364	100.7803	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34334	100.7792	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.7713	GEN338388 1-1PLUM PT U1 23.000
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34418	100.769	HURON - WATERTOWN 230KV CKT 2
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34418	100.769	HURON - WATERTOWN 230KV CKT 2
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.7689	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.7603	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.7545	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34351	100.7529	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34369	100.7504	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34194	100.7495	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34366	100.7481	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34501	100.7433	BASSETT 7115.00 - STUART 115KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34501	100.7359	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34418	100.7357	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34418	100.7357	CARPENTER - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.7354	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34372	100.7234	MENNO JCT - UTICA 115KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34378	100.7212	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34301	100.7172	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.33768	100.7143	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34378	100.7113	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34354	100.7068	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34309	100.7055	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34349	100.7036	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34332	100.6965	GARRISON - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.6915	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34296	100.6866	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.6799	GEN635214 4-NEAL UNIT 4
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34369	100.6768	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34352	100.6732	FARGO - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100.6673	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34372	100.6616	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.6608	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.6603	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34501	100.6594	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34353	100.6507	FARGO - JAMES TOWN 230KV CKT 2
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34417	100.6505	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34417	100.6505	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.6505	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.6485	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.6479	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.6388	GEN336464 1-MICHOUD UNIT #3
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34328	100.6367	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34361	100.6354	AUDUBON - SHEYNNE 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.343	100.6336	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34269	100.6218	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34365	100.6089	P12:230:UMZW:# 1786 #: GF IN MN. GF-MNVLTAP LINE FAULT
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34351	100.6031	CENTER - COYOTE 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34369	100.6002	HENNING - INMANN 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34366	100.5869	MN VALLEY TAP - PANTHER 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34191	100.5856	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34191	100.5856	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.584	GEN542955 1-LACYGNE UNIT #1
FDNSLock	00NR_G16_075	3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34082	100.582	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3439	100.5748	WINNER - WITTEN 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3437	100.5723	BALTA - RAMSEY 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34357	100.5682	BISMARK - JAMES TOWN 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.5576	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100.5559	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.5454	HARMONY - VALENTINE 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34357	100.544	JAMES TOWN - WEBER 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.5374	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34342	100.535	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34357	100.5253	BISMARK - WEBER 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34501	100.5099	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34355	100.5031	HAMPTON CORNER - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34364	100.5003	LOWERBRULE 4230.00 - RELIANCE 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34413	100.4937	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.4911	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.4805	MAPLE RIVER - PILSBRY4 230.00 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34596	100.479	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3439	100.4777	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.4738	GEN542956 2-LACYGNE UNIT #2
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34489	100.4734	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34489	100.4734	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34364	100.4507	RELIANCE 4 230.00 - WITTEN 4 230.00 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3439	100.4399	P12:115:UMZW:# 172 #: WI IN SD.
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3439	100.4311	GREGORY - WINNER 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34175	100.4161	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.4157	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.4156	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34569	100.4136	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34285	100.4014	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3457	100.401	P12:230:UMZW:# 733 #: FT IN SD. FT-BG2 LINE FAULT
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34375	100.3937	P12:115:UMZW:# 173 #: WI-WE-MS IN SD. WITTEN IS A TAP
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.3927	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34364	100.3919	WITTEN 4 230.00 () 230/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.3899	P13:230:UMZW:# 2218 #: FP IN MT. LOSS OF TRANSFORMER (AT2).
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.386	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.344	100.3792	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.344	100.3792	NAPA JCT7 115.00 - UTICA 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.344	100.3792	P12:115:UMZW:# 1910 #: YJ IN SD. YJ-UJ LINE FAULT
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100.3787	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.344	100.3742	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.344	100.3742	NAPA JCT7 115.00 - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34399	100.3724	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34399	100.3724	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34309	100.3708	BELDEN - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34212	100.3577	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100.3356	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34296	100.326	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34371	100.2982	MT VERN - STORLA 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100.2922	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.2757	GEN562547 1-G14_039_3 0.6900
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100.2747	GEN532751 1-WOLF CREEK GENERATING STATION UNIT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.257	P13:115-230:NPPD:NUCOR-3
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.2387	P13:230-345:NPPD:NUCOR-1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100.2372	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34391	100.2179	OAHE - PHILIP TAP 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.343	100.2162	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3429	100.2105	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100.1955	GEN337653 1-WHITE BLUFF UNIT #2

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34361	100.1911	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	3	20OSP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34361	100.1911	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34285	100.1774	STEGALL-LNX3230.00 - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100.1769	GEN337652 1-WHITE BLUFF UNIT #1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34399	100.1723	P12:230:UMZW:# 166 #: PL IN SD. TAP
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34399	100.1723	P12:230:UMZW:# 167 #: PL IN SD. NU-PLT-OA & PLT-PL (PLT IS A TAP)
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34342	100.1712	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100.1635	GEN338146 1-INDEPENDENCE UNIT #2
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100.1627	GEN338143 1-INDEPENDENCE UNIT #1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34281	100.1534	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34281	100.1534	103RD & ROKEBY - SUB 3458 NEB CTY 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100.1455	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34315	100.1435	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34218	100.1142	GROTON - GROTON-LNX3 345.00 345KV CKT Z
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34218	100.1119	2809X2
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34218	100.1119	G16-044-TAP 345.00 - GROTON-LNX3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34218	100.1064	LELAND03-GROTON-LINE-REACTOR-345kV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34218	100.1064	P12:345:UMZB:# 109 #: LOS GRT IN ND. LOS GRT
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34328	100.1059	P13:230-345:NPPD:STEGALL3:KV3A
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34328	100.1059	STEGALL - STEGALL TRANSFORMER 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34218	100.1024	LELAND OLDS - LELAND1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34285	100.1007	STEGALL-WAYSIDE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100.1	GEN336252 1-NINEMILE POINT UNIT#5
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.0967	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 2
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34285	100.0962	STEGALL - STEGALL-LNX3230.00 230KV CKT Z
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34345	100.096	NOBLES - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	100.0952	PRAIRIE ISLAND 345/20.0KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34328	100.0932	STEGALL (SGQ KV3A) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34308	100.092	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34325	100.0717	G15088_T 345.00 - PAULINE 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100.0662	GEN501801 1-DOLET HILLS UNIT1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34893	100	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34498	100	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3448	100	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3448	100	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3441	100	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100	GEN336251 1-NINEMILE POINT UNIT#4
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100	GEN336831 1-BAXTER WILSON SES
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100	GEN337041 1-GERALD ANDRUS
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100	GEN501813 1-RODEMACHER UNIT 3
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	100	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34315	100	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34313	100	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34301	100	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34284	100	ALEXMRES3 345.00 - WAITE PARK 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34218	100	2809X1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34218	100	G16-044-TAP 345.00 - LELAND1-LNX3345.00 345KV CKT 1
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34345	100	CENTER - CNTSHNT3 345.00 345KV CKT Z1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34565	99.9	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.9	GEN335206 1-NELSON UNIT 6
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.9	GEN344894 1-1LAB G1 20.000
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.9	GEN344895 2-1LAB G2 20.000
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.9	GEN344896 3-1LAB G3 20.000
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.9	GEN344897 4-1LAB G4 20.000
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.9	GEN345670 1-1RUSH G1 18.000
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.9	GEN345671 2-1RUSH G2 18.000
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.9	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.9	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.9	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.9	GEN542962 2-IATAN UNIT #2
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34355	99.9	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3435	99.9	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3435	99.9	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34348	99.9	NMA B3 345 345.00 - NORTH LA CROSSE 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34261	99.9	SIDNEY - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34392	99.9	P12:345:SPS:J07.1.FINN.HITCH
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.33566	99.9	COLUMWEST - KELLY 230KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34319	99.9	KELLY - SHELL CREEK 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34319	99.9	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34319	99.9	SHELL CREEK (SHELLCREEKT1) 345/230/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.8	GEN334440 1-SABINE UNIT 4
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.8	GEN501812 1-RODEMACHER UNIT 2
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.8	GEN635214 4-NEAL UNIT 4
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34334	99.8	P12:115:NPPD:WAPA6:FTRANDL7:ONEILL 7:BTB
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34334	99.8	P12:115:UMZB:# 115 #: SE IN NE. FR-SE-ON
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34322	99.8	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34301	99.8	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34379	99.8	BASE CASE
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.8	P12:115:NPPD:1091:VALENTN7:MISSION7:BTB
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34498	99.7	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34396	99.7	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34396	99.7	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.7	GEN334441 1-SABINE UNIT 5
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.7	GEN335204 1-NELSON UNIT 4
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.7	GEN335614 1-WILLOW GLENN UNIT#4
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.7	GEN336191 1-LITTLE GYPSY UNIT#3
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.7	GEN336464 1-MICHOUD UNIT #3
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.7	GEN336801 1-BAXTER WILSON UNIT #1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.7	GEN338388 1-1PLUM PT U1 23.000
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.7	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34363	99.7	FERGSFL4 230.00 - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34361	99.7	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3435	99.7	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34347	99.7	NORTH ROCHESTER - PRAIRIE ISLAND 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34346	99.7	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34334	99.7	FT RANDAL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34334	99.7	ONEILL - SPENCER 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34297	99.7	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34282	99.7	LAKEFIELD 3 - OBRIEN 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34325	99.7	G15088_T 345.00 - MOORE 345KV CKT 1
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34361	99.7	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34361	99.7	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	3	17SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34261	99.6	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34498	99.6	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34447	99.6	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34447	99.6	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.6	GEN334433 1-SABINE UNIT 3
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.6	GEN635213 3-NEAL UNIT 3
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.6	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.6	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34375	99.6	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34374	99.6	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34374	99.6	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34371	99.6	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34371	99.6	ELLENDLMVP4 230.00 - OAKES 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34371	99.6	FORMAN - OAKES 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34369	99.6	MENNO JCT - TRIPP JCT 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34363	99.6	FORMAN - HANKINSON 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34363	99.6	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34363	99.6	GRE-CEDARMT3345.00 - LYON COUNTY 345KV CKT 2
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34359	99.6	GRE-CEDARMT3345.00 - HELENA 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34359	99.6	GRE-CEDARMT3345.00 - HELENA 345KV CKT 2
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34306	99.6	GAVINS POINT - HARTINGTON 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3442	99.6	MAXWELL - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34334	99.6	G13-010T 345.00 - POST ROCK 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34334	99.6	G16-049-TAP-POSTROCK7-345kV CKT 1
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34414	99.6	CARPENTER - HURON 230KV CKT 1
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34414	99.6	HURON - WATERTOWN 230KV CKT 2
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34414	99.6	HURON - WATERTOWN 230KV CKT 2
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34361	99.6	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34361	99.6	APPLEDORN 4 230.00 - GRANITE FALLS 230KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34334	99.6	G13-010T 345.00 - G16-049-TAP 345.00 345KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34334	99.6	SPERVIL7-G16-049-TAP-345kV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34334	99.6	SPERVIL7-POSTROCK7-345kV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34498	99.5	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34414	99.5	GAVINS POINT - YANKON JCT 115KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34414	99.5	GAVINS POINT - YANKON JCT 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.3438	99.5	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.5	GEN336151 1-WATERFORD UNIT#1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.5	GEN336152 1-WATERFORD UNIT#2
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.5	GEN336222 1-LITTLE GYPSY UNIT#2
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.5	GEN542951 5-HAWTHORN UNIT #5
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.5	GEN542955 1-LACYGNE UNIT #1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.5	GEN636641 1-LOUISA UNIT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.5	GEN642067 1-PLATTE
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34369	99.5	MENNO JCT - UTICA 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34369	99.5	P12:115:UMZZ:# 237 #: MEN IN SD. MENNO JUNCTION IS A TAP (UJ-MEN-TP).
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34365	99.5	FERGSFL4 230.00 - GRE-SILVRLK4230.00 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34365	99.5	GRE-SILVRLK4230.00 - HENNING 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34326	99.5	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34323	99.5	BYRON - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34266	99.5	COLUMEAST - SHELL CREEK 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34344	99.5	AURORA - GRAND ISLAND 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34317	99.5	LOUP CITY - ST LIBORY 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34166	99.5	SUB 3454 - WAGENER 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34166	99.5	SUB 3454 - WAGENER 345KV CKT 1
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34414	99.5	CARPENTER - WATERTOWN 230KV CKT 1
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34414	99.5	CARPENTER - WATERTOWN 230KV CKT 1
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34376	99.5	HARMONY - VALENTINE 115KV CKT 1
FDNSLock	00NR_G16_075	3	20SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34375	99.5	P12:115:UMZW:# 162 #: NEL IN ND. FAULT ON ML-NEL-MX-GA 115 KV
FDNSLock	00NR_G16_075	3	25SP	G16_075	FROM->TO	GR ISLD-LNX3345.00 - GRAND ISLAND 345KV CKT Z	956	956	0.34334	99.5	G16-049-TAP 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.46277	117.5732	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.46281	117.4556	HOLT.CO3 345.00 - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.46158	110.7628	CHERRYC3 345.00 - HOLT.CO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.33961	107.427	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.41717	106.948	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.41716	106.3814	GERALD GENTLEMAN STATION - THEDFRD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34594	106.1521	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34594	106.1521	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34462	105.7882	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.33958	105.6664	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34308	105.4771	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34484	104.7673	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34126	104.3953	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34126	104.3953	SPLIT ROCK - WHITE 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34325	104.2413	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.344	104.1908	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34458	103.6921	P12:230:UMZB:# 116 #: ST IN SD. WSG-ST-VH
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34473	103.6163	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34473	103.6163	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34338	103.4799	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34303	103.3769	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34308	103.0202	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.33961	102.9624	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.3448	102.9245	STORLA - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34129	102.7122	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34129	102.7122	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.3427	102.6777	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34434	102.6452	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34434	102.6452	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34314	102.6056	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34272	102.5461	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34129	102.5296	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34105	102.5193	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34105	102.5193	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34129	102.4588	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34308	102.4554	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34433	102.4341	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34433	102.4341	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34396	102.3932	HANLON - STORLA 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34351	102.2871	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	102.279	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34215	102.2164	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34433	102.1817	FT RANDAL - LAKE PLATT 230KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34321	102.1078	GERALD GENTLEMAN STATION - SWEETWATER 345KV CKT 2
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34215	102.0812	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	102.0335	GEN336821 1-GRAND GULF UNIT
FDNSLock	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.343	101.997	BISON 3 345.00 - BUFFALO 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34229	101.9864	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34229	101.9864	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34229	101.9864	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34469	101.9165	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34469	101.9165	FT THOMPSON - LETCHER 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.3459	101.8619	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.3459	101.8619	MINGO - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.32958	101.857	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.33958	101.8361	FT RANDAL - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34335	101.8187	H081-TAP 345.00 - LYON COUNTY 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34229	101.8046	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34402	101.7902	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	101.7891	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34215	101.688	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.3454	101.6411	GERALD GENTLEMAN STATION - RED WILLOW 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34492	101.5993	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34492	101.5993	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	101.5739	GEN344225 1-1CAL G1 25.000
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34283	101.5212	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.41553	101.4242	CHERRYC3 345.00 - GERALD GENTLEMAN STATION 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34127	101.4092	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34127	101.4092	SIOUXCY-LNX3345.00 - SPLIT ROCK 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.3433	101.4076	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34431	101.3256	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34431	101.3256	FT RANDAL - FT THOMPSON 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34175	101.3078	G09_001IST 345.00 - WATERTOWN 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34127	101.2511	P12:345:UMZW:# 907 #: SC2-SR IN IA. SC2-SR 345 KV LINE
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34376	101.2306	GEN635024 4-WALTER SCOTT UNIT 4
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34307	101.1985	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34127	101.1836	SIOUX CITY - SIOUXCY-LNX3345.00 345KV CKT Z
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34429	101.1754	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34429	101.1754	FT THOMPSON - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34335	101.1543	BROOKING COUNTY - J460-TAP 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34337	101.1027	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	101.0795	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34304	101.0561	CHISAGO COUNTY - FORBES 500KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34103	101.0398	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34103	101.0398	RAUN - SUB 3451 FT CAL 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34304	101.0067	CHISAGO COUNTY - CHISAGO COUNTY 500KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	100.9743	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34429	100.9647	FT RANDAL - LAKE PLATT 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34311	100.9336	LAKEFIELD 3 - NOBLES 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34299	100.9204	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34376	100.8348	GEN635023 3-WALTER SCOTT UNIT 3
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34305	100.8278	GLENBORO SOUTH - J290_SUB 230.00 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34347	100.8151	CROOKED CREEK - NORTH PLATTE 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34345	100.7981	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34382	100.7317	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34394	100.6995	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.32953	100.685	GRAND ISLAND - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34384	100.6768	AXTELL - SWEETWATER 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34268	100.6397	CENTER - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34376	100.615	GEN336821 1-GRAND GULF UNIT
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34364	100.607	BLAIR - GRANITE FALLS 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34364	100.607	BLAIR - GRANITE FALLS 230KV CKT 1
FDNSLock	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34225	100.6062	P12:345:UMZW:# 1747 #: WT2 IN SD. WT2-WHT LINE FAULT
FDNSLock	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34225	100.6062	WATERTN-LNX3345.00 - WHITE 345KV CKT 1
FDNSLock	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34225	100.6062	WATERTOWN-WHITE-TLINE-REACTOR-CKT1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	100.6005	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34307	100.5999	ADAMS - MITCHLCO3 345.00 345KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34896	100.5702	THEDFRD3 345.00 (THEDFORDT2) 345/115/13.8KV TRANSFORMER CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34194	100.5475	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34194	100.5475	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	100.5423	GEN563222 1-G15088_3 0.6900

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34293	100.5399	GRIMES - LEHIGH 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34299	100.5022	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34305	100.4989	J290_SUB 230.00 - RUGBY 230KV CKT 1
FDNSLock	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34225	100.4963	WATERTN-LNX3345.00 - WATERTOWN 345KV CKT Z
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34199	100.4886	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	100.4857	GEN645011 1-NEBRASKA CITY 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34398	100.4766	LETCHER - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.3433	100.4639	G16-034-TAP 345.00 - SIDNEY2-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	100.459	GEN641089 2-ENERGY CENTER 2
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34344	100.4376	ARPIN B4 345.00 - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34311	100.4299	KOSSUTH 3 345.00 - WEBSTER 345KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34484	100.4224	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34484	100.4224	FT THOMPSON - WESSINGTON 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34413	100.3764	CALLAWAY - MAXWELL 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34318	100.286	RASMUSN - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34212	100.257	KEYSTONE - SIDNEY1-LNX3345.00 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34569	100.248	STAPLETON - THEDFORD 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34501	100.2474	P12:115:NPPD:1167A:AINSWRT7:ONEILL 7:BTB
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34319	100.2265	ADAMS - PLEASANT VALLEY 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34348	100.2197	NOBLES - SPLIT ROCK 345KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34354	100.1941	P12:115:NPPD:1164:ONEILL 7:JEFFREY9:BTB
FDNSLock	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34354	100.1803	CLEARWATER - ONEILL 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34327	100.1786	FT RANDAL - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	100.1616	GEN532651 1-JEFFREY ENERGY CENTER UNIT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	100.1586	GEN532652 1-JEFFREY ENERGY CENTER UNIT 2
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	100.1584	GEN532653 1-JEFFREY ENERGY CENTER UNIT 3
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34358	100.1521	NORTH LA CROSSE - NORTH ROCHESTER 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34376	100.1102	GEN336153 1-WATERFORD UNIT#3
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	100.0988	GEN629075 1-OTTUMWA GENERATOR FOR OTTUMWA UNIT NO 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34318	100.0886	RASMUSN - SIOUX CITY 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34376	100.08	GEN337911 1-ARKANSAS NUCLEAR ONE UNIT #2
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	100.0647	GEN542962 2-IATAN UNIT #2
FDNSLock	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34345	100.051	CNTSHNT3 345.00 - PRAIRIE3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34376	100	GEN640009 1-COOPER NUCLEAR STATION
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34334	100	ARROWHEAD - ARROWHEAD 230 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34279	100	ALEXMRES3 345.00 - BISON 3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34212	100	SIDNEY-KEYSTONE-TLINE-REACTORS-CKT1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34194	100	NUNDRWD - WAYSIDE 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34451	100	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34451	100	HOLCOMB - SETAB 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	100	MISSION - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34378	100	P12:115:NPPD:WAPA4:SIDNEY 7:B.SPRGS7:BTB
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34378	100	P12:115:UMZB:# 119 #: IN NE.
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34364	100	P12:115:NPPD:WAPA2:HEMINGF7:SNAKECK7:BTB
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34326	100	HUNTLEY3 345.00 - LEDYARD3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.33768	99.9	KELLY - MEADOWGROVE4230.00 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34376	99.9	GEN335831 1-RIVERBEND UNIT#1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34296	99.9	PAHOJA - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34501	99.9	BASSETT 7115.00 - STUART 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	99.9	GEN542957 1-IATAN UNIT #1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	99.9	HARMONY - ST FRANCIS 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34378	99.9	JEFFREY - NORTH PLATTE 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34364	99.9	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34364	99.9	APPLEDORN 4 230.00 - WATERTOWN 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34354	99.9	CLEARWATER - NELIGH 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34349	99.9	HUNTLEY3 345.00 - LAKEFIELD 3 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34301	99.9	CROOKED CREEK - RIVERDALE 230KV CKT 1
FDNSLock	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34501	99.9	ATKINSON - STUART 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34376	99.8	GEN337910 1-ARKANSAS NUCLEAR ONE UNIT #1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.343	99.8	HAZLETON - MITCHLCO3 345.00 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34191	99.8	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34191	99.8	RAUN - SIOUX CITY 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34501	99.8	AINSWORTH - BASSETT 7115.00 115KV CKT 1
FDNSLock	00NR_G16_075	3	17SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34082	99.8	BUFFALO - JAMESTOWN 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34342	99.7	AS KING - EAU CLAIRE 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34501	99.7	ATKINSON - EMMET 115KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34489	99.6	MINGO - SETAB 345KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34489	99.6	MINGO - SETAB 345KV CKT 1

SOLUTION	GROUP	SCENARIO	SEASON	SOURCE	DIRECTION	MONITORED ELEMENT	RATEA (MVA)	RATEB(MVA)	TDF	TC%LOADING (% MVA)	CONTINGENCY
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.3439	99.6	HANLON - SIOUX FALLS 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	99.6	FT RANDAL - UTICA JCT 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34376	99.6	HANKINSON - WAHPETON 230KV CKT 1
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34212	99.6	SIDNEY - SIDNEY1-LNX3345.00 345KV CKT 2
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34175	99.6	G09_001IST 345.00 - GROTON 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34596	99.6	AINSWORTH - AINSWORTH 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34569	99.6	MAXWELL - STAPLETON 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34413	99.6	BROKEN BOW - CALLAWAY 115KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34379	99.6	P12:115:TSGT:BLKWDCK7-ELSIETP7
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34376	99.5	GEN563222 1-G15088_3 0.6900
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34376	99.5	GEN645012 2-NEBRASKA CITY 2
FDNS	00NR_G16_075	3	20SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34296	99.5	EAGLE 4 230.00 - PAHOJA 230KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34418	99.5	LARAMIE RIVER - STEGALL 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34399	99.5	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1
FDNS	00NR_G16_075	3	25SP	G16_075	TO->FROM	GR ISLD-LNX3345.00 - HOLT.CO3 345.00 345KV CKT 1	956	956	0.34399	99.5	BUCKNER7 345.00 - SPEARVILLE 345KV CKT 1

11.10 G-V: VOLTAGE POWER FLOW ANALYSIS (CONSTRAINTS REQUIRING TRANSMISSION REINFORCEMENT)

Available upon request

11.11 G1-V: STAND-ALONE VOLTAGE POWER FLOW ANALYSIS (CONSTRAINTS REQUIRING TRANSMISSION REINFORCEMENT)

Available upon request

11.12 H-T: THERMAL POWER FLOW ANALYSIS (OTHER CONSTRAINTS NOT REQUIRING TRANSMISSION REINFORCEMENT)

Available upon request

11.13 H1-T: STAND-ALONE THERMAL POWER FLOW ANALYSIS (OTHER CONSTRAINTS NOT REQUIRING TRANSMISSION REINFORCEMENT)

Available upon request

11.14 H-T-AS: AFFECTED SYSTEM THERMAL POWER FLOW ANALYSIS (CONSTRAINTS FOR POTENTIAL UPGRADES)

Available upon request

11.15 H-V-AS: AFFECTED SYSTEM VOLTAGE POWER FLOW ANALYSIS (CONSTRAINTS FOR POTENTIAL UPGRADES)

Available upon request

11.16 I: POWER FLOW ANALYSIS (CONSTRAINTS FROM MULTI-CONTINGENCIES)

Available upon request

11.17 J: DYNAMIC STABILITY ANALYSIS REPORTS

11.17.1 J1: GROUP 1 DYNAMIC STABILITY ANALYSIS REPORT

S&C ELECTRIC COMPANY
Excellence Through Innovation

DISIS-2016-001 (GROUP 01)

LITTLE ROCK, AR

SOUTHWEST POWER POOL

DEFINITIVE INTERCONNECTION SYSTEM IMPACT STUDY

S&C PROJECT NUMBER: 10994

DOCUMENT NUMBER: E-857

REVISION: 0

FINAL REPORT

CONFIDENTIAL

JANUARY 27, 2017

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REPORT REVISION HISTORY:

REV	DATE	PREPARED BY	REVIEWED BY	APPROVED BY	DESCRIPTION
A	01/23/2017	MA	SK	SK	Preliminary report issued.
0	01/27/2017	MA	SK	SK	Final report issued

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1. EXECUTIVE SUMMARY

S&C Electric Company (S&C) has performed several analyses as part of a Definitive Interconnection System Impact Study, DISIS-2016-001 (Group 1), in response to a request through Southwest Power Pool (SPP) to administer a subsection of Attachment V to the SPP Open Access Transmission Tariff (Tariff). Group 1 consists of seven (7) new generator interconnection requests (GEN-2015-038, GEN-2015-095, GEN-2016-003, GEN-2016-020, GEN-2016-045, GEN-2016-047, and GEN-2016-057).

S&C has performed dynamic stability analysis for Group 1 under Cluster and Stand-Alone (SA) scenarios. The cluster studies were performed using three (3) cluster base cases (2016 Winter Peak (WP), 2017 Summer Peak (SP), and 2025 SP) provided by SPP. In the cluster studies, all seven new interconnection requests and prior-queued projects were studied at 100% of nameplate MW capacity. The standalone studies were performed using three (3) standalone base cases (2016 WP, 2017 SP, and 2025 SP) provided by SPP and by placing an interconnection request into service, one at a time. The in-service interconnection project was dispatched at 100% power and the six (6) out of service interconnection projects were set to zero generation or to its pre-project value if the project is an increase to an existing project or facility. The dynamics stability analysis for the cluster and stand-alone studies indicated that modifications to Generation Interconnection Requests GEN-2016-045 and GEN-2016-057 are needed to avoid low voltage tripping due to certain contingencies during stability simulation. These projects are unique in that they exhibit long generator leads (290-296 miles) and are both comprised of GE 2.3 MW wind turbines. To mitigate the issues observed, multiple solutions were considered (listed below):

1. Adjustment to the LVPL setpoint of the GE 2.3 MW wind turbine model
2. Addition of a second 345 kV transmission line to each project
3. Additional reactive support at the MV (34.5 kV) and HV level (345 kV)

The solutions mentioned above were simulated independent from one another. The results of each simulation are detailed in Section 6.3.

S&C has performed power factor analysis on Group 1 Cluster scenarios. Power factor analysis reported the power factors at the study projects point of interconnection (POI) for all N-1 three-phase contingences and marked the contingency at which the required power factor at the POI of study projects to maintain the voltages at the desired level is beyond the normal required capability (from 0.95 lagging to 0.95 leading) of the studied projects. The power factor requirement for GEN-2015-038, GEN-2015-095, GEN-2016-003, GEN-2016-020, GEN-2016-045, GEN-2016-047, and GEN-2016-057 interconnection requests is from 0.95 lagging to 0.95 leading power factor at the POIs.

S&C has performed an analysis of low wind/low solar irradiance solar conditions for interconnection requests that are renewable energy projects. The low wind/low solar irradiance analysis was performed only under the cluster cases by taking the interconnection generation out of service and determining the Mvar size of a shunt reactor to offset the reactive power generated from the capacitance of the project's transmission lines and collector cables. The shunt reactor Mvars are given in Section 8.

S&C has performed a short-circuit analysis for the 2017 Summer Peak and 2025 Summer Peak under Group 1 Cluster and reported short circuit results at all buses up to five (5) levels away from the POI of the study projects.

2. INTRODUCTION

S&C has performed several analyses as part of a Definitive Interconnection System Impact Study, DISIS-2016-001 (Group 1), in response to a request through the SPP to administer a subsection of Attachment V to the SPP Tariff. Group 1 consist of seven (7) new generator interconnection requests listed in

Table 1 and thirty-one (31) previously queued projects listed in Table 2.

Table 1: Group 1 Generation Interconnection Requests

Project	Size (MW)	Generator Model	Generator Bus(es)	Point of Interconnection (POI)	POI Bus
GEN-2015-038	303.6	Siemens 2.3MW	584793 & 584796	Cimarron 345 kV	514901
GEN-2015-095	176	Vestas V110	585303	Tap on Mooreland to Noel Switch 138kV (G15-095T)	560066
GEN-2016-003	248.4	Vestas GS V126 3.45MW	587023	Tap on Hitchland to Woodward 345kV (G16-003-TAP)	560071
GEN-2016-020	150	Vestas V110 VCSS 2.0MW	587143	Mooreland 138 kV (520999)	520999
GEN-2016-045	500	GE 2.3MW	587303 & 587307	Mathewson 345 kV (515497)	515497
GEN-2016-047	Uprate of 8MW SP/ 24MW WP (Total 118MW SP/ 134MW WP)	Combustion Turbine (GENROU)	587322, 587323, 587324, 587325, 587326, 587327 & 587328	Mustang 69 kV (514860)	514860
GEN-2016-057	500	GE 2.3MW	587383 & 587387	Mathewson 345 kV (515497)	515497

Table 2: Prior Queued Projects

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2001-014	94.5	Suzlon 2.1MW	Fort Supply 138 kV (520920)
GEN-2001-037	102	GE 1.5MW	Moorland–Woodward 138 kV (515785)
GEN-2005-008	120	GE 1.5MW	Woodward 138 kV (514785)
GEN-2006-024S	18.9	Suzlon 2.1MW	Buffalo Bear 69 kV (521120)
GEN-2006-046	132	Mitsubishi 2.4MW	Dewey 138 kV (514787)
GEN-2007-021	200	GE 1.6MW	Tatonga 345 kV (515407)
GEN-2007-043	200	GE 1.6	Minco 345 kV (514801)
GEN-2007-044	299.2	GE 1.6MW	Tatonga 345 kV (515407)
GEN-2007-050	170.2	Siemens 2.3MW	Woodward 138 kV (515376)

GEN-2007-062	425	GE 1.5MW	Woodward 345 kV (515375)
GEN-2008-003	101.2	Siemens 2.3MW	Woodward 138 kV (515376)
GEN-2008-044	197.8	Siemens SWT 2.3MW	Tatonga 345 kV (515407)
GEN-2010-011	29.7	Siemens SWT 2.3MW	Tatonga 345 kV (515407) (Addition to Gen-2008-044 34.5 kV bus (515450)
GEN-2010-040	298.5	RePower 2.05MW	Cimarron 345 kV (514901)
GEN-2011-010	100.8	GE 1.6MW	Minco 345 kV (514801)
GEN-2011-019	175	Siemens 2.3MW	Woodward 345 kV (515375)
GEN-2011-020	165	Siemens 2.3MW	Woodward 345 kV (515375)
GEN-2011-054	298	Vestas V100 2.0MW	Cimarron 345 kV (514901)
GEN-2014-002	10.53 increase (Pmax=209.4)	GE 97.4m 1.79MW (579256)	Tatonga 345 kV (515407)
GEN-2014-003	15.84 increase (Pmax=315)	GE 97.4m 1.79MW (579271,579275)	Tatonga 345 kV (515407)
GEN-2014-005	5.67 increase (Pmax=106.5)	GE 97.4m 1.79MW (514113)	Minco 345 kV (514801)
GEN-2014-020	100.0	Vestas V110 2.0MW	Tuttle 138 kV (511501)
GEN-2014-056	250.0	GE 2.0MW	Minco 345 kV (514801)
GEN-2015-029	161.0	GE 2.3MW	Tatonga 345 kV (515407)

3. TRANSMISSION SYSTEM AND STUDY AREA

The interconnection requests in Group 1 will interconnect into Oklahoma Gas & Electric (OKGE, Area #524) and Western Farmers Electric Cooperative (WFEC, Area #525).

In addition to Areas #524 and #525, the following areas were monitored also:

- American Electric Power West (AEPW, Area #520)
- Southwestern Public Service (SPS, Area #526)
- Midwest Energy (MIDW, Area #531)
- Sunflower Electric Power Corporation (SUNC, Area #534)
- Westar Energy, Inc. (WERE, Area #536)

4. POWER FLOW BASE CASES

DISIS-2016-001 (Group 1) and prior-queued projects were modeled as aggregated generating units in the base cases from SPP.

Cluster Scenario Base Cases

- **MDWG15-16WP_DIS1601_G01.sav** – 2016 Winter Peak Cluster Base Case for Group 1. New interconnection requests and prior queued projects at 100% output power.
- **MDWG15-17SP_DIS1601_G01.sav** – 2017 Summer Peak Cluster Base Case for Group 1. New interconnection requests and prior queued projects at 100% output power.
- **MDWG15-25SP_DIS1601_G01.sav** – 2025 Summer Peak Cluster Base Case for Group 1. New interconnection requests and prior queued projects at 100% output power.

Stand-Alone Scenario Base Cases

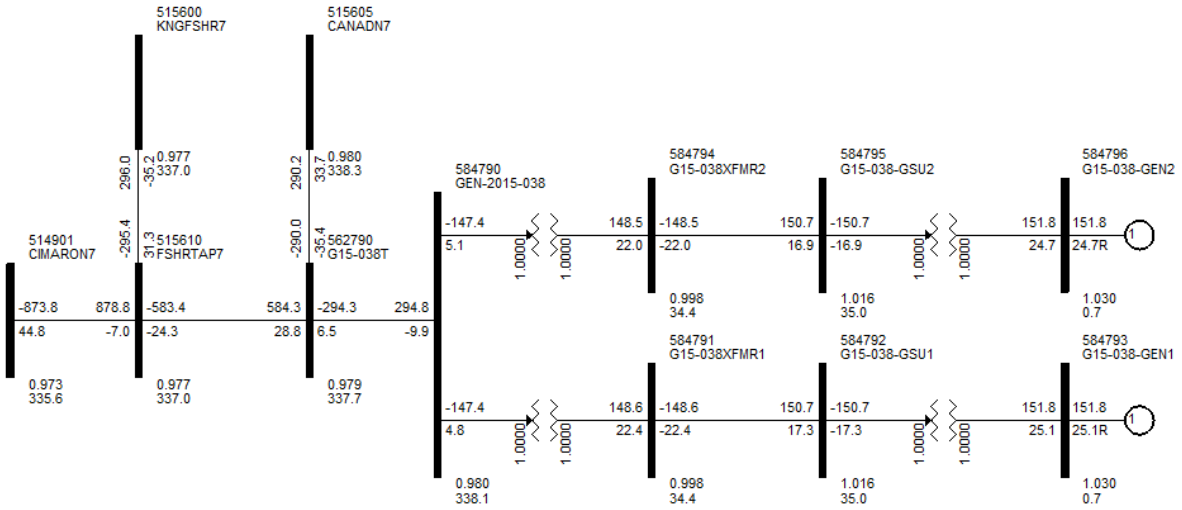
- **MDWG15-16WP_DIS1601_G01_SA.sav** – 2016 Winter Peak SA Base Case for Group 1. New interconnection requests currently out of service.
- **MDWG15-17SP_DIS1601_G01_SA.sav** – 2017 Summer Peak SA Base Case for Group 1. New interconnection requests currently out of service.
- **MDWG15-25SP_DIS1601_G01_SA.sav** – 2025 Summer Peak SA Base Case for Group 1. New interconnection requests currently out of service.

On December 6, 2016, S&C received an IDV file titled "Place_out_of_service_GEN-2011-051-100%_V32.IDV" to remove Prior Queued Project GEN-2011-051 from service.

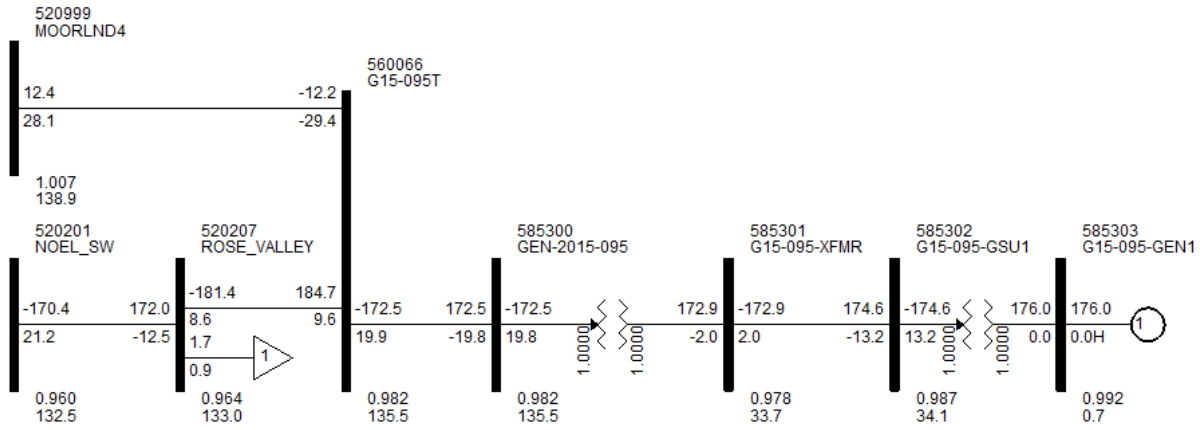
On January 4, 2017, S&C received corrected versions of the IDV files intended to place GEN-2016-047 into service. The revised IDV files were titled "GEN-2016-047-SP_V32_r1.idv" and "GEN-2016-047-WP_V32_r1.idv".

5. POWER FLOW MODEL

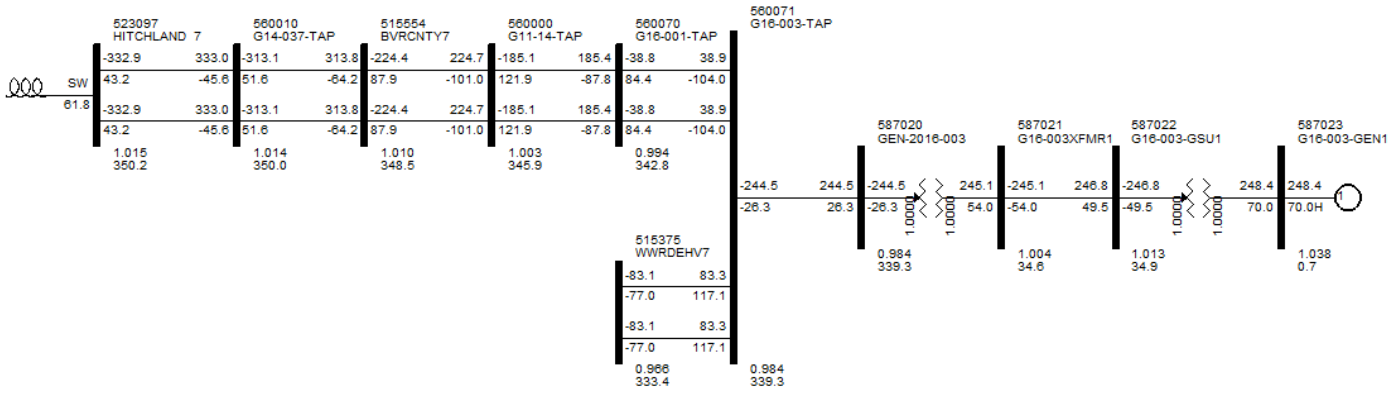
SPP's base case power flow models were built in PSS/E 32.2.1. In PSS/E of the same version, S&C created one-line diagrams depicted in Figure 1 for each interconnection request.



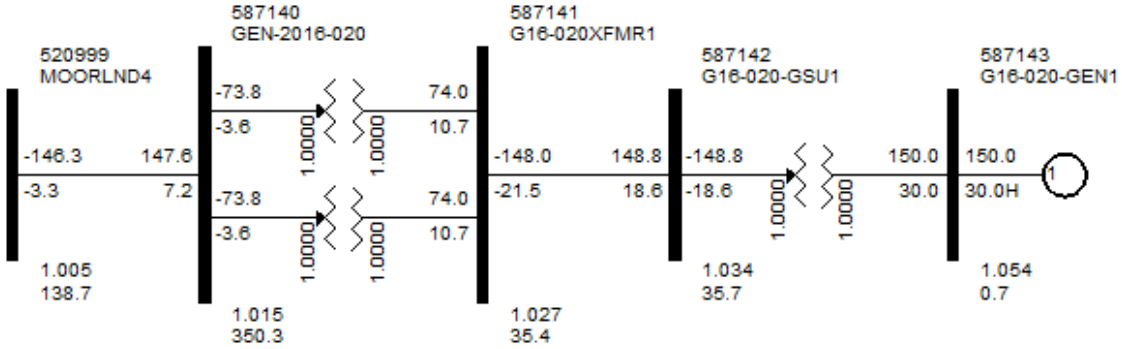
(a) Interconnection request GEN-2015-038



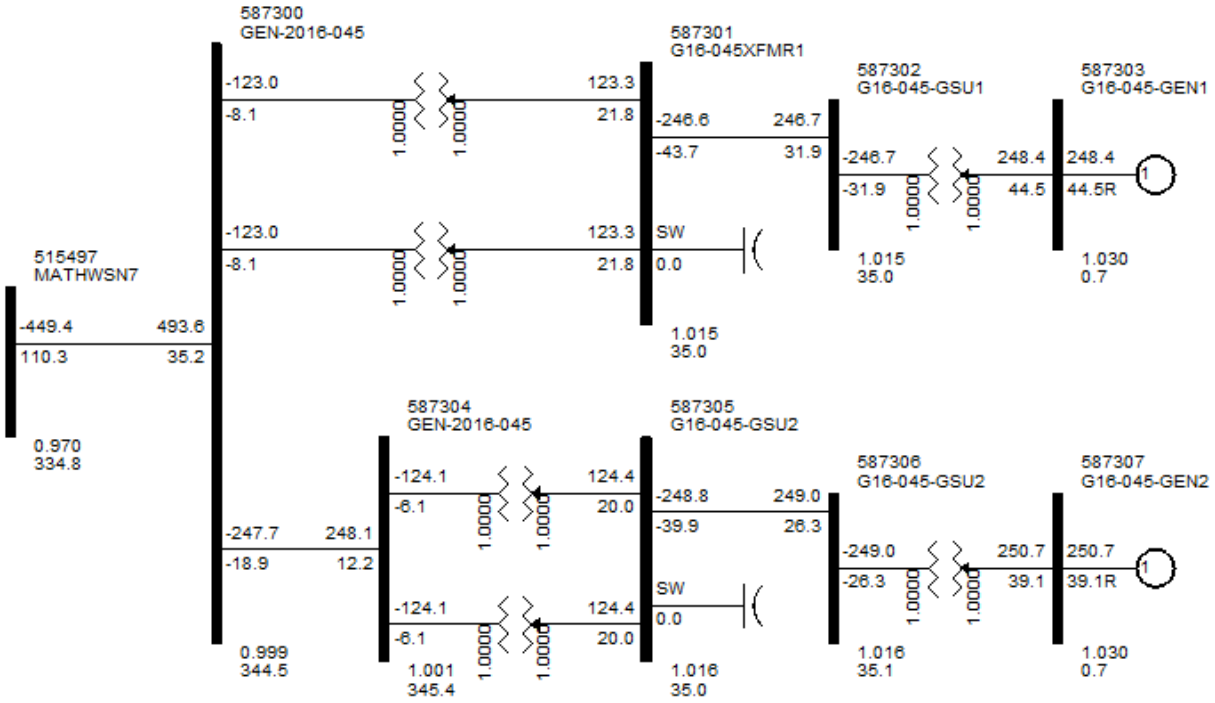
(b) Interconnection request GEN-2015-095



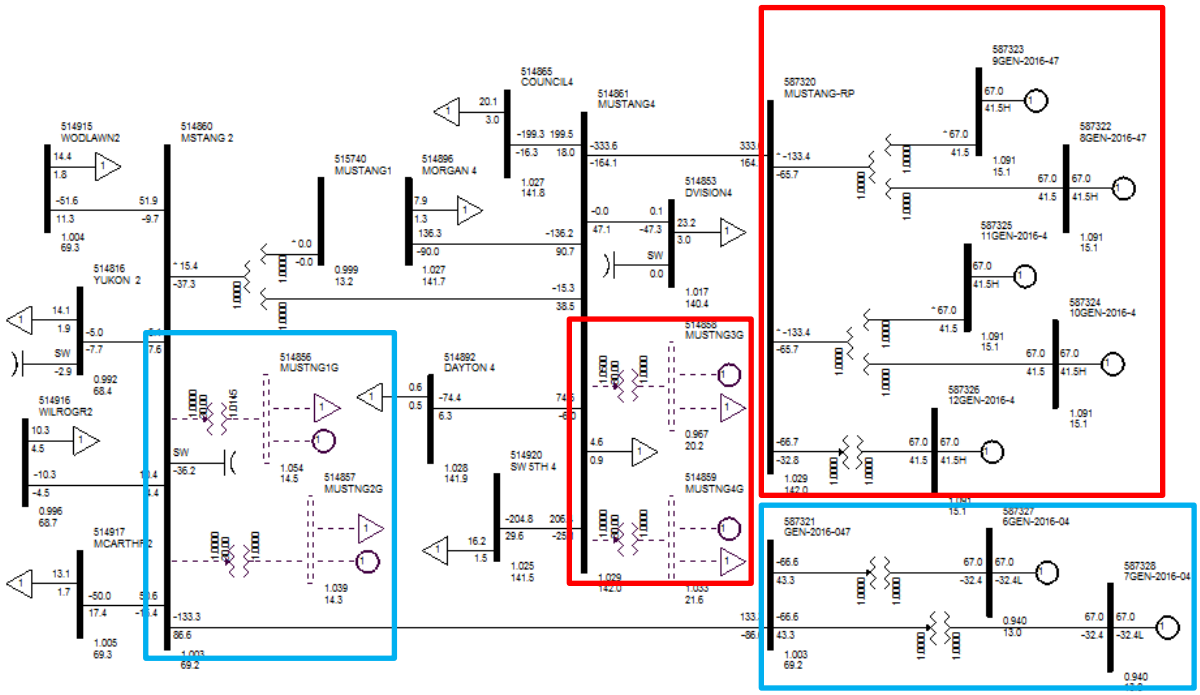
(c) Interconnection request GEN-2016-003



(d) Interconnection request GEN-2016-020

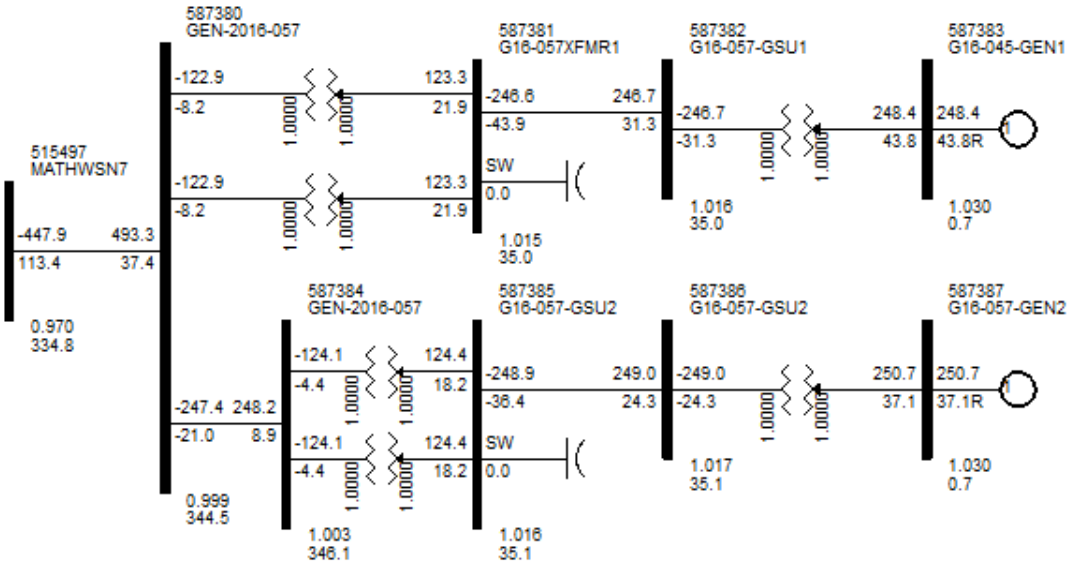


(e) Interconnection request GEN-2016-045



(f) Interconnection request GEN-2016-047

138 kV System in Red: Existing Generation (≈390MW) is dashed & New Generation (335/295MW WP/SP) is solid
Net Result: No 138kV Generation Added
69 kV System in Blue: Existing Generation (≈110MW) is dashed & New Generation (134/118MW WP/SP) is solid
Net Result: Uprate of 24/8MW WP/SP



(g) Interconnection request GEN-2016-057

Note: GEN-2016-057 is the correct naming convention (not GEN-2016-045 as shown above)

Figure 1: One-line Diagrams of the Interconnection Request Projects

6. DYNAMIC STABILITY ANALYSIS

6.1. ASSUMPTIONS

Dynamic stability analysis was performed for all the SPP contingencies listed in Appendix A. Three phase faults were simulated as bolted faults, while single line-to-ground faults were simulated under the assumption that a single line-to-ground fault will cause a 40% drop in the positive-sequence voltage at the fault location.

6.2. STABILITY CRITERIA

Dynamic stability studies were performed to ensure system stability following critical faults on the system. The system is considered stable if the following conditions are met:

(1) Disturbances including three-phase and single-phase to ground faults, should not cause synchronous and asynchronous plants to disconnect from the transmission grid.

(2) The angular positions of synchronous machine rotor become constant following an aperiodic system disturbance.

(3) Voltage magnitudes and frequencies at terminals of asynchronous generators should not exceed magnitudes and durations that will cause protection elements to operate. Furthermore, the response after the disturbance needs to be studied at the terminals of the machine to ensure that there are no sustained oscillations in power output, speed, frequency, etc.

(4) Voltage magnitudes and angles after the disturbance should settle to a constant and acceptable operating level. Frequencies should settle to the acceptable range within nominal 60 Hz power frequency.

In addition, performance of the transmission system is measured against the SPP Disturbance Criteria Requirements on Angular oscillations and Transient Voltage Recovery, detailed in Appendix B.

6.3. DYNAMIC STABILITY RESULTS

Multiple concerns surfaced during preliminary dynamic stability simulations. A detailed list of such concerns and how they were addressed is shown below.

- During the prior outage in FLT64-PO, the system was unable to converge (16WP)
    - To resolve the issue, the control mode of the switched shunt device at bus 599000 was changed from "1 – Discrete, cntr voltage" to "0 – Locked" per SPP direction.
- During the prior outage in FLT76-PO, the system was unable to converge (16WP, 17SP)
    - To resolve the issue in the 16WP case, the reactors located on circuits connected to Woodward 345kV were switched OFF per SPP direction. To resolve the issue in the 17SP case, a larger set of reactor adjustments were made (per SPP direction).
    - The same large set of reactor adjustments was also utilized to resolve the convergence issue encountered during the prior outage in FLT22-PO (17SP)
- Gamesa WTGs at bus 599049 & 599050 tripped on under-voltage during FLT06
    - This issue was also encountered in the previous DISIS-2015-002 GR1 study. In this previous study, SPP provided an IDV file titled "GEN-2006-035_UV_Protection_Modification" to correct an improper implementation of the under-voltage protection scheme for the Gamesa WTGs. The same IDV file was also applied during this study.
- Generation Interconnection Request GEN-2016-041 in Group 2 (involving AE solar inverters) was tripping offline due to overfrequency during FLTs 40-42.
    - This issue was also encountered in the previous DISIS-2015-002 GR7 study. In this previous study, SPP provided an IDV file titled "GEN-2015-055_AEINX_OverFreq_extended.idv" to change the over-frequency parameters. The same IDV file was also applied during this study.
- Generation Interconnection Request GEN-2016-002 in Group 6 (involving Gamesa wind turbines) was tripping due to overvoltage conditions in FLT40.
    - Since this Generation Interconnection Request is far from the area of interest, the GNET command was used at bus 587013 to mitigate the issue.

- When using the revised IDV file titled "GEN-2016-047-SP_V32_r1.idv" to place Generation Interconnection Request GEN-2016-047 into service, the power flow solution failed to converge in the 2025SP case.
    - To resolve the issue, the option "Flat start" was selected within the PSS/E Power Flow solution to encourage convergence. After convergence was achieved, the "Flat start" option was removed.

Dynamic stability simulations were performed once again after implementing the solutions described above. Detailed plots of cluster dynamic stability results for each contingency and each peak season are given in Appendices C-1 to C-3. Plots of stand-alone dynamic stability result for each contingency and each season are given Appendices D-1 to D-21. These results, however, demonstrated that Generation Interconnection Requests GEN-2016-045 and GEN-2016-057 (involving GE 2.3 MW wind turbines) were tripping offline due to low voltage protection. This issue surfaced during multiple contingencies (e.g. FLTs06-20, 72-74, and 82-86). The dynamic stability plots that illustrate these issues are provided in the following Appendices:

- Appendix C-1, C-2 & C-3 (Cluster)
- Appendix D-13, D-14 & D-15 (GEN-2016-045 Stand-Alone)
- Appendix D-19, D-20 & D-21 (GEN-2106-057 Stand-Alone)

Thereafter, SPP suggested changing the J+2 CON parameter of each machine (e.g. 587303, 587307, 587383, and 587387) in GEN-2016-045 and GEN-2016-057 from 0.5 to 0.9 to resolve these issues. This encouraged the Low Voltage Power Logic (LVPL) of the GE turbines to enable during problematic faults. Table 3 below summarizes the new dynamic stability results after this modification. In addition, the revised dynamic stability plots are provided in the following Appendices:

- Appendix C-1-1, C-2-1 & C-3-1 (Cluster)
- Appendix D-13-1, D-14-1 & D-15-1 (GEN-2016-045 Stand-Alone)
- Appendix D-19-1, D-20-1 & D-21-1 (GEN-2106-057 Stand-Alone)

Table 3: Group 1 Dynamic Stability Results
(YES = STABLE, NO = UNSTABLE)

Cont. No.	Cont. Name	16WP: Cluster	16WP: GEN-15-38	16WP: GEN-15-95	16WP: GEN-16-03	16WP: GEN-16-20	16WP: GEN-16-45	16WP: GEN-16-47	16WP: GEN-16-57	17SP: Cluster	17SP: GEN-15-38	17SP: GEN-15-95	17SP: GEN-16-03	17SP: GEN-16-20	17SP: GEN-16-45	17SP: GEN-16-47	17SP: GEN-16-57	25SP: Cluster	25SP: GEN-15-38	25SP: GEN-15-95	25SP: GEN-16-03	25SP: GEN-16-20	25SP: GEN-16-45	25SP: GEN-16-47	25SP: GEN-16-57
1	FLT01-3PH	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
2	FLT02-3PH	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
3	FLT03-3PH	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
4	FLT04-3PH	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
5	FLT05-3PH	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
6	FLT06-3PH	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-
7	FLT07-3PH	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-
8	FLT08-3PH	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-
9	FLT09-3PH	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-
10	FLT10-3PH	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-
11	FLT11-3PH	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-
12	FLT12-3PH	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-
13	FLT13-3PH	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-
14	FLT14-3PH	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-	YES	YES	-	-	-	-	-	-
15	FLT15-SB	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
16	FLT16-SB	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
17	FLT17-SB	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
18	FLT18-SB	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
19	FLT19-SB	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
20	FLT20-SB	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
21	FLT21-PO	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
22	FLT22-PO	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
23	FLT23-3PH	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-
24	FLT24-3PH	YES [1]	-	YES	-	YES	-	-	-	YES [1]	-	YES	-	YES	-	-	-	YES [1]	-	YES	-	YES	-	-	-
25	FLT25-3PH	YES	-	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-
26	FLT26-3PH	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-
27	FLT27-3PH	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-
28	FLT28-3PH	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-
29	FLT29-3PH	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-
30	FLT30-3PH	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-
31	FLT31-3PH	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-
32	FLT32-3PH	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-
33	FLT33-3PH	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-
34	FLT34-SB	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-
35	FLT35-SB	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-
36	FLT36-PO	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-
37	FLT37-PO	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-
38	FLT38-3PH	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-
39	FLT39-3PH	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-
40	FLT40-3PH	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-

[1] Adjusting the reactive power capability of the Vestas V110 turbines in Generation Interconnection Request GEN-2015-095 and Prior Queued Projects GEN-2015-048 & GEN-2015-081 is expected to resolve the sustained oscillations observed (see later discussion for further details)

Cont. No.	Cont. Name	16WP: Cluster	16WP: GEN-15-38	16WP: GEN-15-95	16WP: GEN-16-03	16WP: GEN-16-20	16WP: GEN-16-45	16WP: GEN-16-47	16WP: GEN-16-57	17SP: Cluster	17SP: GEN-15-38	17SP: GEN-15-95	17SP: GEN-16-03	17SP: GEN-16-20	17SP: GEN-16-45	17SP: GEN-16-47	17SP: GEN-16-57	25SP: Cluster	25SP: GEN-15-38	25SP: GEN-15-95	25SP: GEN-16-03	25SP: GEN-16-20	25SP: GEN-16-45	25SP: GEN-16-47	25SP: GEN-16-57
41	FLT41-3PH (16WP ONLY)	YES	-	-	YES	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	FLT42-3PH	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-
43	FLT43-3PH	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-
44	FLT44-3PH	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-
45	FLT45-3PH	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-
46	FLT46-3PH	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-
47	FLT47-SB	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-
48	FLT48-SB	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-
49	FLT49-PO	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-
50	FLT50-PO	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-	YES	-	-	YES	-	-	-	-
51	FLT51-3PH	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-
52	FLT52-3PH	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-
53	FLT53-3PH	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-
54	FLT54-3PH	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-
55	FLT55-3PH	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-
56	FLT56-3PH	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-
57	FLT57-3PH	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-
58	FLT58-3PH	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-
59	FLT59-3PH	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-
60	FLT60-3PH	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-	YES	-	-	-
61	FLT61-SB	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-
62	FLT62-SB	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-
63	FLT63-PO	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-
64	FLT64-PO	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-	YES	-	YES	-	YES	-	-	-
65	FLT65-3PH	YES [1]	YES	-	-	-	YES	-	YES[2]	YES[2]	YES	-	-	-	YES[2]	-	YES	YES	YES	-	-	-	YES	-	YES
66	FLT66-3PH	YES	YES	-	-	-	YES[2]	-	YES[2]	YES	YES	-	-	-	YES[2]	-	YES	YES	YES	-	-	-	YES	-	YES
67	FLT67-3PH	YES[2]	YES	-	-	-	YES[2]	-	YES[2]	YES	YES	-	-	-	YES[2]	-	YES	YES[2]	YES	-	-	-	YES	-	YES[2]
68	FLT68-3PH	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
69	FLT69-3PH	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
70	FLT70-3PH	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
71	FLT71-3PH	YES	-	-	-	-	YES	-	YES	YES	-	-	-	-	YES	-	YES	YES	-	-	-	-	YES	-	YES
72	FLT72-3PH	YES	-	-	-	-	YES	-	YES	YES	-	-	-	-	YES	-	YES	YES	-	-	-	-	YES	-	YES
73	FLT73-SB	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
74	FLT74-SB	YES [1]	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
75	FLT75-PO	YES	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES[2]	-	YES	YES	YES	-	-	-	YES	-	YES
76	FLT76-PO	YES	YES	-	-	-	YES[2]	-	YES	YES[2]	YES	-	-	-	YES	-	YES	YES	YES	-	-	-	YES	-	YES
77	FLT77-3PH	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-
78	FLT78-3PH	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-
79	FLT79-3PH	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-
80	FLT80-3PH	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-
81	FLT81-3PH	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-
82	FLT82-3PH	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-
83	FLT83-3PH	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-

[2] The J+2 CON parameter of Generation Interconnection Requests GEN-2016-045 & GEN-2016-057 was reverted back to 0.5 to avoid tripping (see later discussion for further details)

Cont. No.	Cont. Name	16WP: Cluster	16WP: GEN-15-38	16WP: GEN-15-95	16WP: GEN-16-03	16WP: GEN-16-20	16WP: GEN-16-45	16WP: GEN-16-47	16WP: GEN-16-57	17SP: Cluster	17SP: GEN-15-38	17SP: GEN-15-95	17SP: GEN-16-03	17SP: GEN-16-20	17SP: GEN-16-45	17SP: GEN-16-47	17SP: GEN-16-57	25SP: Cluster	25SP: GEN-15-38	25SP: GEN-15-95	25SP: GEN-16-03	25SP: GEN-16-20	25SP: GEN-16-45	25SP: GEN-16-47	25SP: GEN-16-57
84	FLT84-3PH	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-
85	FLT85-3PH	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-
86	FLT86-3PH (16WP & 17SP ONLY)	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-	-	-	-	-	-	-	-	-
87	FLT87-3PH	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-
88	FLT88-SB	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-
89	FLT89-SB	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-
90	FLT90-PO	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-
91	FLT91-PO	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-	YES	-	-	-	-	-	YES	-

As described by a footnote beneath Table 3, there were some contingencies that resulted in tripping of Generation Interconnection Requests GEN-2016-045 and GEN-2016-057 after the J+2 CON parameter of each machine was changed from 0.5 to 0.9. To resolve this issue, the J+2 CON parameter was reverted back to 0.5. The figure below demonstrates a before/after example of this situation.

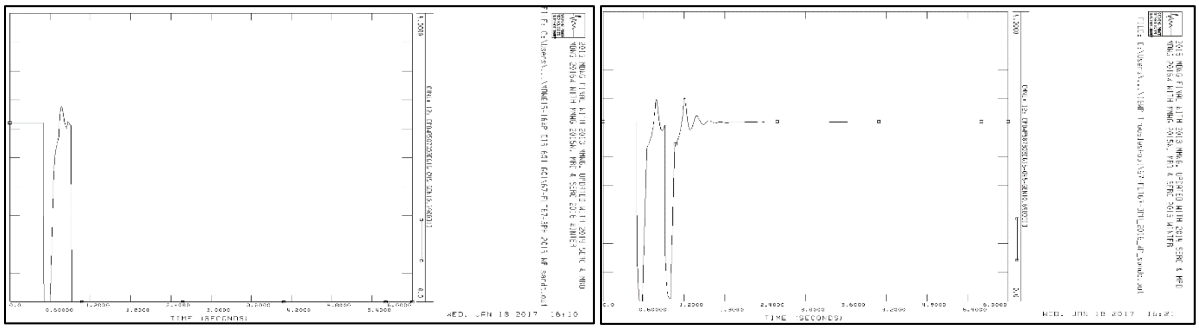


Figure 2: Example of Improved Result with J+2 CON Parameter at 0.5 (GEN-2016-045 Bus #587303 Power)
Left = FLT67 from 2016WP Cluster Case (J+2 CON = 0.9)
Right = FLT67 from 2016WP Cluster Case (J+2 CON = 0.5)

In addition to the item mentioned above, it should be noted that Prior Queued Project GEN-2001-014 occasionally exhibited post-transient voltages greater than 1.1 p.u. during contingencies FLT31, FLT57 & FLT62. However, some form of switching action reduces the voltage when the simulation is extended beyond 20 seconds. The figure below demonstrates an example of when this situation is carried out.

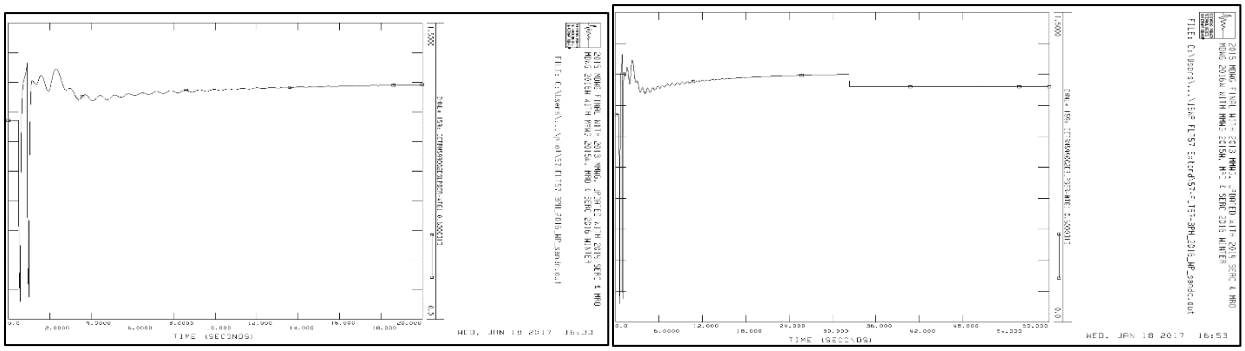


Figure 3: Post-Transient Voltage at Bus #599002 (GEN-2001-014)
Left = 20s simulation (FLT57 in 2016WP Cluster Case)
Right = 60s simulation (FLT57 in 2016WP Cluster Case)

Given the adjustments mentioned, dynamic stability analysis thus concluded that Group 1 experiences improved stability performance when the J+2 CON parameter of each machine (e.g. 587303, 587307, 587383, and 587387) in GEN-2016-045 and GEN-2016-057 is changed from 0.5 to 0.9. However, this is not a viable solution since it is not known what contingency to expect in order to set the J+2 CON to the appropriate value. The wind turbine vendor should be consulted to determine if there are any generator control parameters that can be adjusted to mitigate this issue.

6.3.1. Dynamic Stability Results (Double-Circuit Transmission Lines)

To further support the issues encountered with Generation Interconnection Requests GEN-2016-045 and GEN-2016-057, S&C produced an additional set of dynamic stability plots as listed below:

- Appendices C-1-2, C-2-2 & C-3-2 (Cluster)

The stability plots listed above illustrate the results during the following circumstances:

- Second transmission line added between bus #515497 and bus #587300
- Second transmission line added between bus #515497 and bus #587380
- J+2 CON parameter of GEN-2016-045 and GEN-2016-057 kept at 0.5

These results demonstrate that installing double-circuit transmission lines from each of the generation facilities to the POI serves as an alternative solution for the issues encountered with GEN-2016-045 and GEN-2016-057. These results suggest that the low voltage protection tripping is resolved in each contingency.

It should be noted that initial oscillation issues were observed with Generation Interconnection Request GEN-2015-095 during contingency 24 and Prior Queued Project GEN-2015-081 during contingencies 65 and 74. However, these issues were resolved by adjusting the reactive power capability of the Vestas V110 turbines in Generation Interconnection Request GEN-2015-095 and Prior Queued Projects GEN-2015-048 & GEN-2015-081 (see Figures 4 and 5 below). More specifically, the reactive power capability of each Vestas model was set to a value in a range of 35 to 41 Mvar, such that it yields a power factor of 0.98 ($Q_{GEN} = Q_{MAX} = Q_{MIN}$).

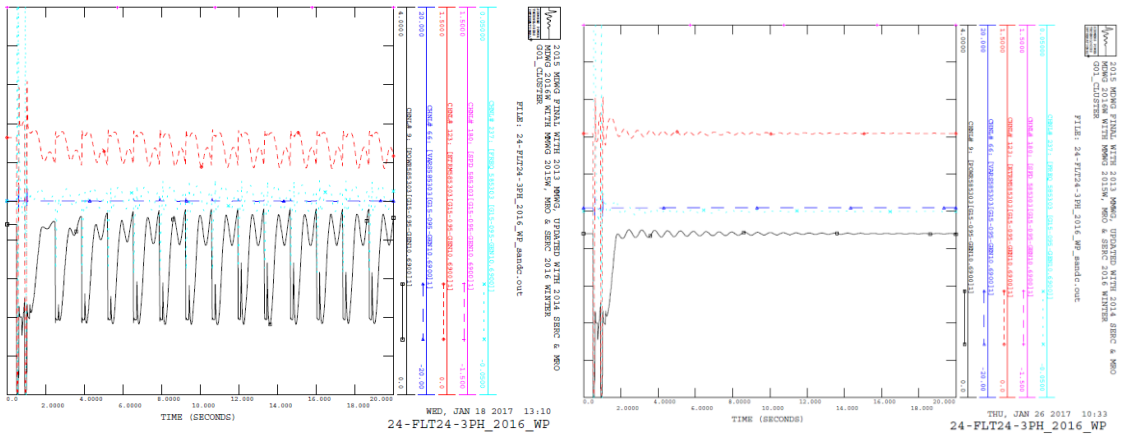


Figure 4: Example of Improved Result with Vestas V110 Adjustment (GEN-2015-095)
Left = FLT24 from 2016WP Cluster Case (Before V110 Adjustment)
Right = FLT24 from 2016WP Cluster Case (After V110 Adjustment)

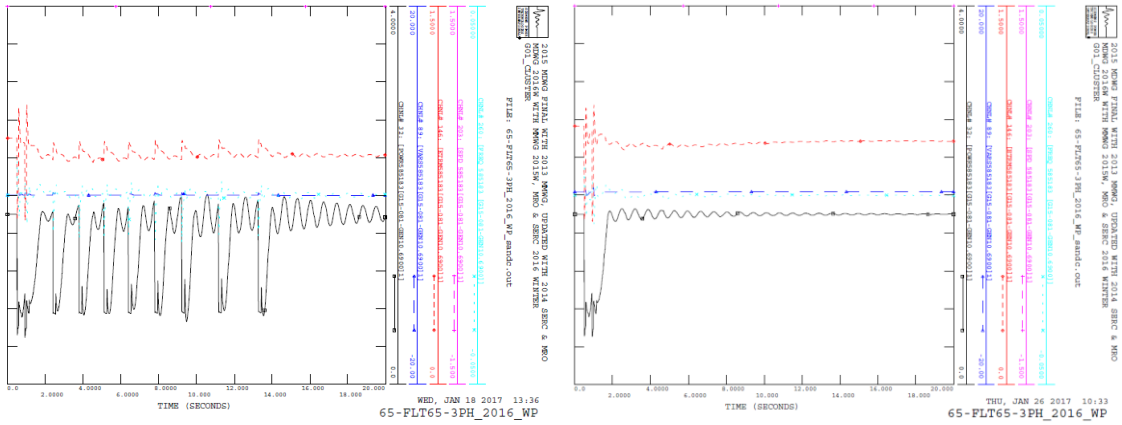


Figure 5: Example of Improved Result with Vestas V110 Adjustment (GEN-2015-081)
Left = FLT65 from 2016WP Cluster Case (Before V110 Adjustment)
Right = FLT65 from 2016WP Cluster Case (After V110 Adjustment)

To confirm that the Vestas V110 adjustment did not introduce new concerns in other contingencies, the dynamic stability plots were revised for the Original cluster cases (Appendices C-1, C-2, and C-3) and the Double-Circuit T-Line cluster cases (Appendices C-1-2, C-2-2, and C-3-2).

6.3.2. Dynamic Stability Results (Additional Reactive Support: MV & HV)

To continue support of the issues encountered with Generation Interconnection Requests GEN-2016-045 and GEN-2016-057, S&C also produced another set of dynamic stability plots as below:

- Appendices C-1-3, C-2-3 & C-3-3 (Cluster)

The stability plots listed above illustrate the results when additional reactive support was provided at the medium-voltage level (34.5 kV). The reactive support took the form of switched shunt devices under various control modes (0 – Locked and 2 – Continuous, cntrl voltage). Various sizes of locked shunt device were tested up to 108 Mvar for GEN-2016-045 and 132 Mvar for GEN-2016-057, as well as ±180 Mvar SVCs. It should be noted that various other changes were also made near GEN-2016-045 and GEN-2016-057 during these simulations (transformer taps, generator bus voltage setpoints, etc.). The results demonstrate that tripping of GEN-2016-045 and GEN-2016-057 was eliminated in some contingencies (e.g. FLTs 06-20 and FLTs 72-74) but not all. In some cases, tripping of GEN-2016-045 and GEN-2016-057 occurred in contingencies that were previously intact (e.g. FLTs 1-5 and FLTs 43-46). For some of these new problematic contingencies, additional generation facilities also tripped offline (e.g. Cuningham machine at bus #527883).

As an alternative to medium-voltage support, additional simulations were also performed with reactive support provided at the high-voltage level (345 kV). More specifically, switched shunt devices were placed at high voltage buses 587300 and 587380. However, the results from these simulations did not show a significant improvement with regards to GEN-2016-045 and GEN-2016-057. For this reason, no additional sets of Appendix C were provided in this situation.

7. Power Factor Analysis

The power factor analysis was performed under the cluster bases and for all N-1 three-phase contingencies shown in the Fault Definition table in Appendix A. Single-phase contingencies, N-1-1 contingencies and N-2 contingencies were excluded from the study. Prior to the run, the cluster base cases were slightly altered, by turning off the renewable energy projects and replacing them by a generator at the high voltage bus with the MW rating of the renewable project at that POI and no var capability. A new var generator was placed at each renewable energy project high voltage bus for supporting the reactive power. The var generators were set to hold the voltage schedule at the interconnection project consistent with the voltage schedules in the provided base case or 1.0 p.u. voltage (whichever is higher).

Table 4 gives the voltage schedule at each interconnection request location in the original cluster base cases.

Table 4: Base Case Voltages at the Interconnection Request POI Bus

Request	POI	2016 Winter Peak (p.u.)	2017 Summer Peak (p.u.)	2025 Summer Peak (p.u.)
GEN-2015-038	514901	0.974	0.984	0.987
GEN-2015-095	560066	0.982	0.978	0.979
GEN-2016-003	560071	0.984	0.986	0.994
GEN-2016-020	520999	1.007	1.005	1.006
GEN-2016-045	515497	0.972	0.982	0.987
GEN-2016-047	514860	1.004	1.001	1.000
GEN-2016-057	515497	0.972	0.982	0.987

The power factor analysis results for Group 1 interconnection requests for each N-1 three phase contingency were presented in Appendix E. We marked in pink color the contingencies at which the required power factor at the POI of the study project is beyond the normal required capability (from 0.95 lagging to 0.95 leading) of the studied renewable energy project. We also provided a summary Table 5 of the maximum leading/lagging reactive power demand and power factor found by the power factor analysis at the POIs.

The power factor requirement for GEN-2015-038, GEN-2015-095, GEN-2016-003, GEN-2016-020, GEN-2016-045, GEN-2016-047, and GEN-2016-057 interconnection requests is from 0.95 lagging to 0.95 leading power factor at the POIs.

Table 5: Summary of Power Factor Analysis at the POI

Request	Capacity	POI	Reactive Power/Power Factor at the POI	
			Leading (absorbing vars)	Lagging (providing vars)
GEN-2015-038	303.6 MW	514901	N/A**	455.1 Mvar / 0.892**
GEN-2015-095	176 MW	560066	-26.9 Mvar / 0.989	40.0 Mvar / 0.975
GEN-2016-003	248.4 MW	560071	-8.4 Mvar / 0.999	585.5 Mvar / 0.391
GEN-2016-020	150 MW	520999	-61.3 Mvar / 0.924	74.6 Mvar / 0.893
GEN-2016-045	500 MW	515497	-57.6 Mvar / 0.992	98.6 Mvar / 0.978
GEN-2016-047	118/134MW SP/WP	514860	-*	-*
GEN-2016-057	500 MW	515497	-63.8 Mvar / 0.990	103.0 Mvar / 0.976

** GEN-2016-047 is not a renewable energy project (combustion turbine) and is therefore not included*

*** Note that GEN-2015-038 has the same POI bus (514901) as prior-queued projects Gen-2010-040 and Gen-2011-054. The aggregated MW of these three (3) generators is 902.1 MW at the high-side bus downstream of the POI.*

NOTE: Per the SPP Tariff as reactive power is required for all projects, the final requirement in the GIA will be the pro-forma 95% lagging to 95% leading at the point of interconnection.

8. Low Wind/Low Solar irradiance Conditions Analysis

S&C has performed an analysis of low wind/low solar irradiance conditions for the interconnection requests that is a renewable energy project. The low wind/low solar irradiance analysis was performed under the Cluster scenarios by taking the interconnection renewable energy project out of service and placing a shunt reactor at the project substation high side to offset the reactive power generated from the capacitance of the project's transmission lines and collector cables. The size of the shunt reactor was adjusted such that the net Mvar flow into the POI from the studied renewable energy project was approximately zero. Table 6 gives the shunt reactor Mvars for the studied projects.

Table 6: Shunt Reactor Mvar Determined by Low Wind/Low Irradiance Study

Request	POI	2016 Winter Peak	2017 Summer Peak	2025 Summer Peak
GEN-2015-038**	514901	25.3	25.3	25.3
GEN-2015-095	560066	14.6	14.6	14.6
GEN-2016-003	560071	6.7	6.7	6.7
GEN-2016-020	520999	3.9	3.9	3.9
GEN-2016-045	515497	317.5	317.5	317.5
GEN-2016-047	514860	-*	-*	-*
GEN-2016-057	515497	333.0	333.0	333.0

** GEN-2016-047 is not a renewable energy project (combustion turbine) and is therefore not included*

*** The POI for GEN-2015-038 is the Cimarron 345 kV (514901). However, GEN-2015-038 will share the transmission line of prior queued projects GEN-2010-040 and GEN-2011-054. This table shows the reactor requirement attributed to GEN-2015-038 up to the point where it connects to the shared transmission line.*

9. SHORT-CIRCUIT STUDY

A short-circuit study has been performed on the power flow models for the 2017 SP and 2025 SP Seasons for each generator using the Cluster Scenario model. Short-circuit analysis includes applying a 3-phase fault on buses up to 5 levels away from the POI of each interconnection request project. PSS/E "Automatic Sequence Fault Calculation (ASCC)" fault analysis module was used for the purpose of short-circuit analysis. The results of the short-circuit analysis have been recorded for all the buses up to five levels away from the point of interconnection of each interconnection request project. Detailed results of the short-circuit study are provided in Appendix F.

10. CONCLUSIONS AND RECOMMENDATIONS

Analysis of Group 1 dynamic simulation results revealed that Generation Interconnection Requests GEN-2016-045 and GEN-2016-057 tripped offline for multiple contingencies in the Cluster cases (16WP, 17SP, and 25SP) and Stand-Alone cases (16WP, 17SP, and 25SP). To address these issues, multiple solutions were considered (listed below):

1. Adjustment to the LVPL setpoint of the GE 2.3 MW wind turbine model
2. Addition of a second 345 kV transmission line to each project
3. Additional reactive support at the MV (34.5 kV) and HV level (345 kV)

While option #2 (double transmission line) resolved the issue in all contingencies, it could also prove to be the most expensive option. For this reason, additional consideration should be given to options #1 and #3 (although these options did not resolve the issue in every contingency). To help support the process of evaluating each option, S&C has provided multiple sets of dynamic stability plots within Appendix C. It is recommended that further detailed studies be performed to determine the size and type of the reactive compensation system as a possible solution. Detailed model of the wind farms and comprehensive dynamic model of the RCS shall be utilized for such studies, which is beyond the scope of this project.

The results of power factor analysis indicate that all the interconnection requests are required to maintain a power factor of 0.95 lagging to 0.95 leading at the POI to meet SPP's requirements.

The project's low wind/low solar irradiance study suggested that to offset the reactive power from the capacitance of the project's transmission lines and collector cables during the low wind/low irradiance conditions, a 25.3 Mvar shunt reactor size is required for GEN-2015-038, 14.6 Mvar for GEN-2015-095, 6.7 Mvar for GEN-2016-003, 3.9 Mvar for GEN-2016-020, 317.5 Mvar for GEN-2016-045, and a 333.0 Mvar for GEN-2016-057.

A short-circuit study has been performed on the power flow models for the 2017 Summer Peak Season and 2025 Summer Peak Season for each generator using the Cluster Scenario model. A 3-phase fault is applied on buses up to 5 levels away from the POI of each interconnection request project and the results of the study have been presented.

APPENDIX A

SPP GROUP 1 FAULT DEFINITIONS

Fault Definitions

Cont. No.	Cont. Name	Description
1	FLT01-3PH	3 phase fault on CIMARON7 345 kV (514901) to MATHWSN7 345 kV (515497) CKT 1, near CIMARON7. a. Apply fault at the CIMARON7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
2	FLT02-3PH	3 phase fault on CIMARON7 345 kV (514901) to NORTWST7 345 kV (514880), near CIMARON7. a. Apply fault at the CIMARON7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
3	FLT03-3PH	3 phase fault on CIMARON7 345 kV (514901) to MINCO 7 345 kV (514801), near CIMARON7. a. Apply fault at the CIMARON7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
4	FLT04-3PH	3 phase fault on CIMARON7 345 kV (514901) to DRAPER 7 345 kV (514934), near CIMARON7. a. Apply fault at the CIMARON7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
5	FLT05-3PH	3 phase fault on the CIMARON7 345 kV (514901) to CIMARON4 138 kV (514898) to CIMARO11 13.8 kV (515714) XFMR, near CIMARON7 345 kV. a. Apply fault at the CIMARON7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
6	FLT06-3PH	3 phase fault on MINCO 7 345 kV (514801) to GRACMNT7 345 kV (515800), near MINCO 7. a. Apply fault at the MINCO 7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Fault Definitions

Cont. No.	Cont. Name	Description
7	FLT07-3PH	3 phase fault on DRAPER 7 345 kV (514934) to SEMINOL7 345 kV (515045) CKT1, near DRAPER 7. a. Apply fault at the DRAPER 7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
8	FLT08-3PH	3 phase fault on the DRAPER 7 345 kV (514934) to DRAPER 4 138 kV (514933) to DRAPER31 13.8 kV (515720) XFMR, near DRAPER 7 345 kV. a. Apply fault at the DRAPER 7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
9	FLT09-3PH	3 phase fault on CIMARON4 138 kV (514898) to EL-RENO4 138 kV (514819), near CIMARON4. a. Apply fault at the CIMARON4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
10	FLT10-3PH	3 phase fault on CIMARON4 138 kV (514898) to TUTCONT4 138 kV (511425), near CIMARON4. a. Apply fault at the CIMARON4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
11	FLT11-3PH	3 phase fault on CIMARON4 138 kV (514898) to JENSENT4 138 kV (514820), near CIMARON4. a. Apply fault at the CIMARON4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
12	FLT12-3PH	3 phase fault on CIMARON4 138 kV (514898) to SARA 4 138 kV (514895), near CIMARON4. a. Apply fault at the CIMARON4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Fault Definitions

Cont. No.	Cont. Name	Description
13	FLT13-3PH	3 phase fault on CIMARON4 138 kV (514898) to CZECHAL4 138 kV (514894), near CIMARON4. a. Apply fault at the CIMARON4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
14	FLT14-3PH	3 phase fault on CIMARON4 138 kV (514898) to HAYMAKR4 138 kV (514863), near CIMARON4. a. Apply fault at the CIMARON4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
15	FLT15-SB	**Stuck Breaker at CIMARON7 (514901)** a. Apply single phase fault at CIMARON7 bus. b. Clear fault after 16 cycles and trip the following elements c. CIMARON7 (514901) - NORTWST7 (514880) d. CIMARON7 (514901) - DRAPER 7 (514934)
16	FLT16-SB	**Stuck Breaker at CIMARON7 (514901)** a. Apply single phase fault at CIMARON7 bus. b. Clear fault after 16 cycles and trip the following elements c. CIMARON7 (514901) - MINCO 7 (514801) d. CIMARON7 345kV (514901) / CIMARON4 138 kV (514898) / CIMARO11 13.8 kV (515714) transformer
17	FLT17-SB	**Stuck Breaker at CIMARON7 (514901)** a. Apply single phase fault at CIMARON7 bus. b. Clear fault after 16 cycles and trip the following elements c. CIMARON7 (514901) - MATHWSN7 (515497), CKT 1 d. CIMARON7 (514901) - NORTWST7 (514880)
18	FLT18-SB	**Stuck Breaker at CIMARON7 (514901)** a. Apply single phase fault at CIMARON7 bus. b. Clear fault after 16 cycles and trip the following elements c. CIMARON7 (514901) - MATHWSN7 (515497), CKT 1 d. CIMARON7 (514901) - MINCO 7 (514801)
19	FLT19-SB	**Stuck Breaker at CIMARON7 (514901)** a. Apply single phase fault at CIMARON7 bus. b. Clear fault after 16 cycles and trip the following elements c. CIMARON7 (514901) - MATHWSN7 (515497), CKT 1 d. CIMARON7 (514901) - DRAPER 7 (514934)

Fault Definitions

Cont. No.	Cont. Name	Description
20	FLT20-SB	**Stuck Breaker at CIMARON7 (514901)** a. Apply single phase fault at CIMARON7 bus. b. Clear fault after 16 cycles and trip the following elements c. CIMARON7 (514901) - MATHWSN7 (515497), CKT 1 d. CIMARON7 345kV (514901) / CIMARON4 138 kV (514898) / CIMARO11 13.8 kV (515714) transformer
21	FLT21-PO	**Prior Outage of CIMARON7 (514901) to NORTWST7 (514880) line;** 3 phase fault on CIMARON7 (514901) – DRAPER 7 (514934) near CIMARON7 a. Apply fault at the CIMARON7 bus. b. Clear fault after 5 cycles and trip the faulted line.
22	FLT22-PO	**Prior Outage of CIMARON7 (514901) - MINCO 7 (514801) line;** 3 phase fault on the CIMARON7 345kV (514901) / CIMARON4 138 kV (514898) / CIMARO11 13.8 kV (515714) transformer near CIMARON7 a. Apply fault at the CIMARON7 bus. b. Clear fault after 5 cycles and trip the faulted transformer.
23	FLT23-3PH	3 phase fault on G15-095T 138 kV (560066) to ROSE_VALLEY 138 kV (520207), near G15-095T. a. Apply fault at the G15-095T 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
24	FLT24-3PH	3 phase fault on G15-095T 138 kV (560066) to MOORLND4 138 kV (520999), near G15-095T. a. Apply fault at the G15-095T 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
25	FLT25-3PH	3 phase fault on ROSE_VALLEY 138 kV (520207) to NOEL_SW 138 kV (520201), near ROSE_VALLEY. a. Apply fault at the ROSE_VALLEY 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Fault Definitions

Cont. No.	Cont. Name	Description
26	FLT26-3PH	3 phase fault on MOORLND4 138 kV (520999) to KNOBHIL4 138 kV (514795), near MOORLND4. a. Apply fault at the MOORLND4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
27	FLT27-3PH	3 phase fault on MOORLND4 138 kV (520999) to MOORLND2 69 kV (520995) to MLNDTERT 13.8 kV (521180) XFMR, near MOORLND4 138 kV. a. Apply fault at the MOORLND4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
28	FLT28-3PH	3 phase fault on MOORLND4 138 kV (520999) to WINDFRM4 138 kV (515785), near MOORLND4. a. Apply fault at the MOORLND4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
29	FLT29-3PH	3 phase fault on MOORLND4 138 kV (520999) to BEARCAT 138 kV (520500), near MOORLND4. a. Apply fault at the MOORLND4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
30	FLT30-3PH	3 phase fault on MOORLND4 138 kV (520999) to PIC4 138 kV (520425), near MOORLND4. a. Apply fault at the MOORLND4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
31	FLT31-3PH	3 phase fault on MOORLND4 138 kV (520999) to IODINE 4 138 kV (520957), near MOORLND4. a. Apply fault at the MOORLND4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Fault Definitions

Cont. No.	Cont. Name	Description
32	FLT32-3PH	3 phase fault on MOORLND4 138 kV (520999) to GLASMTN4 138 kV (514788), near MOORLND4. a. Apply fault at the MOORLND4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
33	FLT33-3PH	3 phase fault on MOORLND4 138 kV (520999) to TALOGA 4 138 kV (521065), near MOORLND4. a. Apply fault at the MOORLND4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
34	FLT34-SB	**Stuck Breaker at NOEL_SW (520201)** a. Apply single phase fault at NOEL_SW bus. b. Clear fault after 16 cycles and trip the following elements c. NOEL_SW (520201) - SALT_PLAINS (520208) d. NOEL_SW (520201) - KNOBHIL4 (514795)
35	FLT35-SB	**Stuck Breaker at MOORLND4 (520999)** a. Apply single phase fault at MOORLND4. b. Clear fault after 16 cycles and trip the following elements c. MOORLND4 (520999) - BEARCAT (520500) d. MOORLND4 (520999) - PIC4 (520425)
36	FLT36-PO	**Prior Outage of NOEL_SW (520201) to SALT_PLAINS (520208) line;** 3 phase fault on NOEL_SW (520201) – KNOBHIL4 (514795) near NOEL_SW a. Apply fault at the NOEL_SW bus. b. Clear fault after 5 cycles and trip the faulted line.
37	FLT37-PO	**Prior Outage of MOORLND4 (520999) to BEARCAT (520500) line;** 3 phase fault on MOORLND4 (520999) - PIC4 (520425) near MOORLND4 a. Apply fault at the MOORLND4 bus. b. Clear fault after 5 cycles and trip the faulted line.
38	FLT38-3PH	3 phase fault on G16-003-TAP 345 kV (560071) to G16-001-TAP 345 kV (560070) CKT 1, near G16-003-TAP. a. Apply fault at the G16-003-TAP 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Fault Definitions

Cont. No.	Cont. Name	Description
39	FLT39-3PH	3 phase fault on G16-003-TAP 345 kV (560071) to WWRDEHV7 345 kV (515375) CKT 1, near G16-003-TAP. a. Apply fault at the G16-003-TAP 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
40	FLT40-3PH	3 phase fault on HITCHLAND 7 345 kV (523097) to HITCHLAND 6 230 kV (523095) to HITCHLD_TR01 13.2 kV (523091) XFMR, near HITCHLAND 7 345 kV. a. Apply fault at the HITCHLAND 7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
41	FLT41-3PH (16WP ONLY)	3 phase fault on HITCHLAND 7 345 kV (523097) to FINNEY 7 345 kV (523853), near HITCHLAND 7. a. Apply fault at the HITCHLAND 7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
42	FLT42-3PH	3 phase fault on HITCHLAND 7 345 kV (523097) to POTTER_CO 7 345 kV (523961), near HITCHLAND 7. a. Apply fault at the HITCHLAND 7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
43	FLT43-3PH	3 phase fault on WWRDEHV7 345 kV (515375) to THISTLE7 345 kV (539801) CKT1, near WWRDEHV7. a. Apply fault at the WWRDEHV7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
44	FLT44-3PH	3 phase fault on WWRDEHV7 345 kV (515375) to BORDER 7 345 kV (515458), near WWRDEHV7. a. Apply fault at the WWRDEHV7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Fault Definitions

Cont. No.	Cont. Name	Description
45	FLT45-3PH	3 phase fault on WWRDEHV7 345 kV (515375) to WWRDEHV4 138 kV (515376) to WWDEHV31 13.8 kV (515795) XFMR, near WWRDEHV7 345 kV. a. Apply fault at the WWRDEHV7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
46	FLT46-3PH	3 phase fault on WWRDEHV7 345 kV (515375) to G11-051-TAP 345 kV (562075), near WWRDEHV7. a. Apply fault at the WWRDEHV7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
47	FLT47-SB	**Stuck Breaker at G16-003-TAP (560071)** a. Apply single phase fault at G16-003-TAP bus. b. Clear fault after 16 cycles and trip the following elements c. G16-003-TAP (560071) - G16-001-TAP (560070), CKT 1 d. G16-003-TAP (560071) - WWRDEHV7 (515375), CKT 1
48	FLT48-SB	**Stuck Breaker at WWRDEHV7 (515375)** a. Apply single phase fault at WWRDEHV7 bus. b. Clear fault after 16 cycles and trip the following elements c. WWRDEHV7 (515375) - THISTLE7 (539801), CKT 1 d. WWRDEHV7 345kV (515375) / WWRDEHV4 138 kV (515376) / WWDEHV31 13.8 kV (515795) transformer
49	FLT49-PO	**Prior Outage of G16-003-TAP (560071) to G16-001-TAP (560070), CKT 1;** 3 phase fault on G16-003-TAP (560071) - WWRDEHV7 (515375), CKT 1 near G16-003-TAP a. Apply fault at the G16-003-TAP bus. b. Clear fault after 5 cycles and trip the faulted line.
50	FLT50-PO	**Prior Outage of WWRDEHV7 (515375)-THISTLE7 (539801), CKT1;** 3 phase fault on the WWRDEHV7 345kV (515375) / WWRDEHV4 138 kV (515376) / WWDEHV31 13.8 kV (515795) transformer near WWRDEHV7 a. Apply fault at the WWRDEHV7 bus. b. Clear fault after 5 cycles and trip the faulted line.
51	FLT51-3PH	3 phase fault on KNOBHIL4 138 kV (514795) to NOEL_SW 138 kV (520201), near KNOBHIL4. a. Apply fault at the KNOBHIL4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Fault Definitions

Cont. No.	Cont. Name	Description
52	FLT52-3PH	3 phase fault on KNOBHIL4 138 kV (514795) to KNOBHIL2 69 kV (514794) to KNOBHIL1 13.2 kV (515732) XFMR, near KNOBHIL4 138 kV. a. Apply fault at the KNOBHIL4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
53	FLT53-3PH	3 phase fault on MOORLND2 69 kV (520995) to CRTSJCT2 69 kV (521197), near MOORLND2. a. Apply fault at the MOORLND2 69 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
54	FLT54-3PH	3 phase fault on WINDFRM4 138 kV (515785) to WOODWRD4 138 kV (514785), near WINDFRM4. a. Apply fault at the WINDFRM4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
55	FLT55-3PH	3 phase fault on BEARCAT 138 kV (520500) to NINMILE 4 138 kV (521128), near BEARCAT. a. Apply fault at the BEARCAT 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
56	FLT56-3PH	3 phase fault on PIC4 138 kV (520425) to CEDRDAL4 138 kV (520848), near PIC4. a. Apply fault at the PIC4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
57	FLT57-3PH	3 phase fault on IODINE 4 138 kV (520957) to FTSUPLY4 138 kV (520920), near IODINE 4. a. Apply fault at the IODINE 4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Fault Definitions

Cont. No.	Cont. Name	Description
58	FLT58-3PH	3 phase fault on GLASMTN4 138 kV (514788) to CLEOCOR4 138 kV (514778), near GLASMTN4. a. Apply fault at the GLASMTN4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
59	FLT59-3PH	3 phase fault on TALOGA 4 138 kV (521065) to DEWEY 4 138 kV (514787), near TALOGA 4. a. Apply fault at the TALOGA 4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
60	FLT60-3PH	3 phase fault on TALOGA 4 138 kV (521065) to TALOGA 2 69 kV (521064) to TLGTERT 13.8 kV (521178) XFMR, near TALOGA 4 138 kV. a. Apply fault at the TALOGA 4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
61	FLT61-SB	**Stuck Breaker at MOORLND4 (520999)** a. Apply single phase fault at MOORLND4. b. Clear fault after 16 cycles and trip the following elements c. MOORLND4 (520999) - KNOBHIL4 (514795) d. MOORLND4 138kV (520999) / MOORLND2 69 kV (520995) / MLNDTERT 13.8 kV (521180) transformer
62	FLT62-SB	**Stuck Breaker at MOORLND4 (520999)** a. Apply single phase fault at MOORLND4. b. Clear fault after 16 cycles and trip the following elements c. MOORLND4 (520999) - IODINE 4 (520957) d. MOORLND4 (520999) - GLASMTN4 (514788)
63	FLT63-PO	**Prior Outage of MOORLND4 (520999) to KNOBHIL4 (514795) line;** 3 phase fault on MOORLND4 138kV (520999) / MOORLND2 69 kV (520995) / MLNDTERT 13.8 kV (521180) transformer near MOORLND4 a. Apply fault at the MOORLND4 bus. b. Clear fault after 5 cycles and trip the faulted transformer.
64	FLT64-PO	**Prior Outage of MOORLND4 (520999) to IODINE 4 (520957) line;** 3 phase fault on MOORLND4 (520999) - GLASMTN4 (514788) near MOORLND4 a. Apply fault at the MOORLND4 bus. b. Clear fault after 5 cycles and trip the faulted line.

Fault Definitions

Cont. No.	Cont. Name	Description
65	FLT65-3PH	3 phase fault on MATHWSN7 345 kV (515497) to TATONGA7 345 kV (515407) CKT1, near MATHWSN7. a. Apply fault at the MATHWSN7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
66	FLT66-3PH	3 phase fault on MATHWSN7 345 kV (515497) to G15-063T 345 kV (560055), near MATHWSN7. a. Apply fault at the MATHWSN7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
67	FLT67-3PH	3 phase fault on MATHWSN7 345 kV (515497) to NORTWST7 345 kV (514880), near MATHWSN7. a. Apply fault at the MATHWSN7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
68	FLT68-3PH	3 phase fault on NORTWST7 345 kV (514880) to NORTWST4 138 kV (514879) to NORTWS41 13.8 kV (514885) XFMR, near NORTWST7 345 kV. a. Apply fault at the NORTWST7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
69	FLT69-3PH	3 phase fault on NORTWST7 345 kV (514880) to ARCADIA7 345 kV (514908), near NORTWST7. a. Apply fault at the NORTWST7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
70	FLT70-3PH	3 phase fault on NORTWST7 345 kV (514880) to SPRNGCK7 345 kV (514881), near NORTWST7. a. Apply fault at the NORTWST7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Fault Definitions

Cont. No.	Cont. Name	Description
71	FLT71-3PH	3 phase fault on TATONGA7 345 kV (515407) to G11-051-TAP 345 kV (562075), near TATONGA7. a. Apply fault at the TATONGA7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
72	FLT72-3PH	3 phase fault on G15-063T 345 kV (560055) to WOODRNG7 345 kV (514715), near G15-063T. a. Apply fault at the G15-063T 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
73	FLT73-SB	**Stuck Breaker at MATHWSN7 (515497)** a. Apply single phase fault at MATHWSN7. b. Clear fault after 16 cycles and trip the following elements c. MATHWSN7 (515497) - NORTWST7 (514880) d. MATHWSN7 (515497) - CIMARON7 (514901), CKT 1
74	FLT74-SB	**Stuck Breaker at MATHWSN7 (515497)** a. Apply single phase fault at MATHWSN7. b. Clear fault after 16 cycles and trip the following elements c. MATHWSN7 (515497) - TATONGA7 (515407), CKT 1 d. MATHWSN7 (515497) - G15-063T (560055)
75	FLT75-PO	**Prior Outage of MATHWSN7 (515497) to NORTWST7 (514880) line;** 3 phase fault on MATHWSN7 (515497) - CIMARON7 (514901), CKT 1 near MATHWSN7 a. Apply fault at the MATHWSN7 bus. b. Clear fault after 5 cycles and trip the faulted line.
76	FLT76-PO	**Prior Outage of MATHWSN7 (515497) to TATONGA7 (515407) CKT 1;** 3 phase fault on MATHWSN7 (515497) - G15-063T (560055) near MATHWSN7 a. Apply fault at the MATHWSN7 bus. b. Clear fault after 5 cycles and trip the faulted line.
77	FLT77-3PH	3 phase fault on MSTANG 2 69 kV (514860) to YUKON 2 69 kV (514816), near MSTANG 2. a. Apply fault at the MSTANG 2 69 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Fault Definitions

Cont. No.	Cont. Name	Description
78	FLT78-3PH	3 phase fault on MSTANG 2 69 kV (514860) to MCARTHR2 69 kV (514917), near MSTANG 2. a. Apply fault at the MSTANG 2 69 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
79	FLT79-3PH	3 phase fault on MSTANG 2 69 kV (514860) to MUSTANG4 138 kV (514861) to MUSTANG1 13.2 kV (515740) XFMR, near MSTANG 2 69 kV. a. Apply fault at the MSTANG 2 69 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
80	FLT80-3PH	3 phase fault on MSTANG 2 69 kV (514860) to WODLAWN2 69 kV (514915), near MSTANG 2. a. Apply fault at the MSTANG 2 69 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
81	FLT81-3PH	3 phase fault on YUKON 2 69 kV (514816) to SVCELRN2 69 kV (514817), near YUKON 2. a. Apply fault at the YUKON 2 69 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
82	FLT82-3PH	3 phase fault on MUSTANG4 138 kV (514861) to DVISION4 138 kV (514853), near MUSTANG4. a. Apply fault at the MUSTANG4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
83	FLT83-3PH	3 phase fault on MUSTANG4 138 kV (514861) to MORGAN 4 138 kV (514896), near MUSTANG4. a. Apply fault at the MUSTANG4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Fault Definitions

Cont. No.	Cont. Name	Description
84	FLT84-3PH	3 phase fault on MUSTANG4 138 kV (514861) to COUNCIL4 138 kV (514865), near MUSTANG4. a. Apply fault at the MUSTANG4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
85	FLT85-3PH	3 phase fault on MUSTANG4 138 kV (514861) to DAYTON 4 138 kV (514892), near MUSTANG4. a. Apply fault at the MUSTANG4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
86	FLT86-3PH (16WP & 17SP ONLY)	3 phase fault on MUSTANG4 138 kV (514861) to SW 5TH 4 138 kV (514920), near MUSTANG4. a. Apply fault at the MUSTANG4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
87	FLT87-3PH	3 phase fault on WODLAWN2 69 kV (514915) to BETHANY2 69 kV (514914), near WODLAWN2. a. Apply fault at the WODLAWN2 69 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
88	FLT88-SB	**Stuck Breaker at MSTANG 2 (514860)** a. Apply single phase fault at MSTANG 2. b. Clear fault after 16 cycles and trip the following elements c. MSTANG 2 (514860) - YUKON 2 (514816) d. MSTANG 2 69 kV (514860) / MUSTANG4 138 kV (514861) / MUSTANG1 13.2 kV (515740) transformer
89	FLT89-SB	**Stuck Breaker at MSTANG 2 (514860)** a. Apply single phase fault at MSTANG 2. b. Clear fault after 16 cycles and trip the following elements c. MSTANG 2 (514860) - MCARTHR2 (514917) d. MSTANG 2 (514860) - WODLAWN2 (514915)

Fault Definitions

Cont. No.	Cont. Name	Description
90	FLT90-PO	**Prior Outage of MSTANG 2 (514860) to YUKON 2 (514816) line;** 3 phase fault on MSTANG 2 69 kV (514860) / MUSTANG4 138 kV (514861) / MUSTANG1 13.2 kV (515740) transformer near MSTANG 2 a. Apply fault at the MSTANG 2 bus. b. Clear fault after 5 cycles and trip the faulted transformer.
91	FLT91-PO	**Prior Outage of MSTANG 2 (514860) to MCARTHR2 (514917) line;** 3 phase fault on MSTANG 2 (514860) - WODLAWN2 (514915) near MSTANG 2 a. Apply fault at the MSTANG 2 bus. b. Clear fault after 5 cycles and trip the faulted line.

APPENDIX B

SOUTHWEST POWER POOL DISTURBANCE PERFORMANCE REQUIREMENTS (SUBMITTED IN A SEPARATE FILE)

APPENDIX C

DYNAMIC STABILITY PLOTS FOR CLUSTER SCENARIO (SUBMITTED IN SEPARATE FILES FROM APPENDIX C-1 TO C-3)

C-1 Group 1 Cluster Dynamic Stability Plots For 2016 Winter Peak Case

C-1-1 Group 1 Cluster Dynamic Stability Plots For 2016 Winter Peak Case (J+2 CON)

C-1-2 Group 1 Cluster Dynamic Stability Plots For 2016 Winter Peak Case (Double T-Line)

C-1-3 Group 1 Cluster Dynamic Stability Plots For 2016 Winter Peak Case (Reactive Support)

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C-2-3 Group 1 Cluster Dynamic Stability Plots For 2017 Summer Peak Case (Reactive Support)

C-3 Group 1 Cluster Dynamic Stability Plots For 2025 Summer Peak Case

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C-3-2 Group 1 Cluster Dynamic Stability Plots For 2025 Summer Peak Case (Double T-Line)

C-3-3 Group 1 Cluster Dynamic Stability Plots For 2025 Summer Peak Case (Reactive Support)

Each contingency consists of (66) subplots:

- Subplot #1 is the system phase angle channels in the snapshot file provided by SPP.
- Subplot #2 to Subplot #58 are results for (57) generators in the scope of study.
- Subplots #59 to Subplot #62 are voltages at the POI buses in the scope of study.
- Subplots #63 to Subplot #66 are frequencies at the POI buses in the scope of study.

APPENDIX D

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D-21-1 Group1 StandAlone "GEN-2016-057" Stability Plots For 2025 Summer Peak Case (J+2 CON)

Each contingency consists of (66) subplots:

- Subplot #1 is the system phase angle channels in the snapshot file provided by SPP.
- Subplot #2 to Subplot #58 are results for (57) generators in the scope of study.
- Subplots #59 to Subplot #62 are voltages at the POI buses in the scope of study.
- Subplots #63 to Subplot #66 are frequencies at the POI buses in the scope of study.

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E-4 Group 1 Power Factor Results for Interconnection Request GEN-2016-020 (#520999)

E-5 Group 1 Power Factor Results for Interconnection Request GEN-2016-045 (#515497)

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DISIS-2016-001 (Group 02)
Definitive Interconnection System
Impact Study

Final Report

Prepared by **PSC North America**

For **Southwest Power Pool, LLC**

Reference **DISIS-2016-001 (Group 02)**

Date **February 24, 2017**

Proprietary & Confidential

Revision Table

Revision	Issue Date	Description
0	February 21, 2017	First issue for SPP comments.
1	February 24, 2017	Updated sections of the report based on comments received from SPP.

Study Engineers

Name	Interest	Date
Algon Meikle	Author	February 23, 2017
Roul Martin	Peer reviewer	February 23, 2017

Approval

Name	Position	Date
Roul Martin	Senior Planning Engineer	February 24, 2017

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1 Executive Summary

As the Regional Transmission Operator, Southwest Power Pool (SPP) is responsible for conducting a Definitive Impact Study for its interconnection customers. The customers in DISIS-2016-001 (Group 02) have requested a generation interconnection study through SPP for their respective interconnection requests. SPP contracted Power Systems Consultants (PSC) to carry out this definitive interconnection system impact study (DISIS), which includes the projects listed in Table 1.

Table 1: Generation Interconnection Requests Group 02

Request	Size (MW)	Wind Turbine Model	Point of Interconnection
GEN-2015-082	200.0	GE 2.0MW	Tap on Woodward (515375) to Beaver (515554) 345kV (G11-14-TAP, 560000)
GEN-2016-001	300.3	Vestas GS V126 3.3MW	Tap on Badger (G11-14-TAP, 560000) to Woodward (515375) 345kV (560070)
GEN-2016-038	299	GE 2.3MW	Harrington 230kV (523978)
GEN-2016-041	100	Advanced Energy 500NX 0.5MW PV inverters	Hitchland 345kV (523097)
GEN-2016-059	299	GE 2.3MW	Harrington 230kV (523978)
GEN-2016-070	5.3MW Uprate (Total 84.8MW)	GE 1.6MW	Martin Switching Station 115kV (523928)

The definitive impact studies include short circuit analysis, stability analysis, reactive analysis and power factor analysis.

The following base cases were provided by SPP to perform the impact studies:

MDWG15-16WP_DIS1601_G02– 2016 winter peak base case

MDWG15-17SP_DIS1601_G02– 2017 summer peak base case

MDWG15-25SP_DIS1601_G02– 2025 summer peak base case

However, the following network upgrades were added to the original base cases on SPP's recommendation to mitigate voltage collapse issues for certain N-1 contingencies observed in the cluster base cases:

- Potter County to Grapevine to Chisholm 345kV circuit 1
- Grapevine to Beaver County 345kV circuit 1
- Beaver County to Clark County 345kV circuit 1

- Accelerate Woodward to Mathewson 345kV circuit 2 (added to 2016 WP and 2017 SP only)

These upgrades were added to the cluster and standalone base cases prior to performing the studies.

1.1 Cluster power factor analysis

A power factor analysis for each generation project was performed on the 2016 winter peak, 2017 summer peak, and 2025 summer peak cases with identified system upgrades. As reactive power is required for all projects, the final requirement per the SPP Open Access Transmission Tariff (OATT) will be the pro-forma 95% lagging to 95% leading at the point of interconnection.

A low wind/no wind (low irradiance/no irradiance) analysis was performed on both wind powered and solar powered generation projects. This analysis determines the amount reactors needed to offset the capacitive injection as a result of the charging in the transmission lead from the project to the Point of Interconnection (POI) and the charging in the collector system while the project is on line but producing little or no power.

1.2 Cluster Short-circuit analysis

Short-circuit current levels were calculated for all transmission buses (rated at 115 kV and above) within five buses away from the POI of all the cluster generators. The total short circuit currents at the mentioned buses are within the typical range of the breaker duty requirements and the short circuit current contribution from requested project is not anticipated to impact breaker duty requirements.

1.3 Cluster dynamic scenario

One hundred and ninety-one contingencies were simulated for the 2016 winter peak and 2017 summer peak base cases, and one hundred and ninety-two contingencies were simulated for the 2025 summer peak base case. The contingencies simulated include single phase, three phase and single phase stuck breaker faults and three phase faults with a prior outage branch.

A number of contingencies resulted in system instability, which led to the loss of prior queue and requested generation. Mitigation measures were required to enable system stability following these contingencies. The prior queue and requested projects that were impacted by post contingency system instability are as follows:

Project GEN-2016-041: Over-frequency tripping

Project GEN-2016-038: Under-voltage tripping (In 2017SP scenario only)

Project GEN-2016-059: Under-voltage tripping (In 2017SP scenario only)

Prior project GEN-2006-044: Over-voltage tripping

Prior project ASGI-2011-002: Over-voltage tripping

Mitigation measures that were tested include the following:

- Correct the over-voltage protection thresholds and time delay settings for GEN-2006-044 and ASGI-2011-002
- Modify the over-frequency protection threshold and time delay settings for GEN-2016-041
- Add dynamic reactive power support on the 34.5 kV collector buses of GEN-2016-038 and GEN-2016-059

With the mitigation measures applied:

- Group 02 generators (as listed in Table 2) are able to ride through all the simulated contingencies and the transient recovery voltage at the Points of Interconnection (POIs) remains within 0.7 to 1.2 per unit (pu) following fault clearance (as per SPP Disturbance Performance Requirements);
- No tripping of prior queue projects occurs;
- No large rotor angle deviation and oscillations (as per SPP Disturbance Performance Requirements) occur for the synchronous generators in the monitored areas;
- The projects were found to comply with the low voltage ride through requirements in FERC Order 661A.

1.4 Standalone dynamic scenario, GEN-2015-082

Seventy-three contingencies were simulated for each of the three base cases: 2016 winter peak, 2017 summer peak, and 2025 summer peak.

A number of contingencies resulted in system instability, which led to the loss of prior queue generation. Mitigation measures were required to enable system stability following these contingencies. The prior queue projects that were impacted by post contingency system instability are as follows:

- Prior project GEN-2006-044: Over-voltage tripping
- Prior project ASGI-2011-002: Over-voltage tripping

Mitigation measures that were tested include the following:

- Correct the over-voltage protection settings for GEN-2006-044
- Correct the over-voltage protection for ASGI-2011-002

With the mitigation measures applied:

- The transient recovery voltage at the Point of Interconnection (POI) remains within 0.7 to 1.2 per unit (pu) following fault clearance (as per SPP Disturbance Performance Requirements);
- No tripping of prior queue projects occurs;
- No large rotor angle deviation and oscillations (as per SPP Disturbance Performance Requirements) occur for the synchronous generators in the monitored areas;

1.5 Standalone dynamic scenario, GEN-2016-001

Seventy-four contingencies were simulated for each of the three base cases: 2016 winter peak, 2017 summer peak, and 2025 summer peak.

A number of contingencies resulted in system instability, which led to the loss of prior queue generation. Mitigation measures were required to enable system stability following these contingencies. The prior queue projects that were impacted by post contingency system instability are as follows:

- Prior project GEN-2006-044: Over-voltage tripping
- Prior project ASGI-2011-002: Over-voltage tripping

Mitigation measures that were tested included one or more of the following:

- Correct the over-voltage protection settings for GEN-2006-044
- Correct the over-voltage protection for ASGI-2011-002

With the mitigation measures applied:

- The transient recovery voltage at the Point of Interconnection (POI) remains within 0.7 to 1.2 per unit (pu) following fault clearance (as per SPP Disturbance Performance Requirements);
- No tripping of prior queue projects occurs;
- No large rotor angle deviation and oscillations (as per SPP Disturbance Performance Requirements) occur for the synchronous generators in the monitored areas;

1.6 Standalone dynamic scenario, GEN-2016-038

Twenty-one contingencies were simulated for each of the three base cases: 2016 winter peak, 2017 summer peak, and 2025 summer peak.

A number of contingencies resulted in system instability, which led to the loss of GEN-2016-038 and prior queue generation. Mitigation measures were required to enable system stability

following these contingencies. The requested and prior queue projects that were impacted by post contingency system instability are as follows:

- Prior project GEN-2006-044: Over-voltage tripping
- Prior project ASGI-2011-002: Over-voltage tripping
- Project GEN-2016-038: Under-voltage tripping

Mitigation measures that were tested include the following:

- Modify over-voltage protection settings for GEN-2006-044 and ASGI-2011-002
- Add dynamic reactive power support on the 34.5 kV collector buses of GEN-2016-038

With the mitigation measures applied:

- GEN-2016-038 is able to ride through all the simulated contingencies and the transient recovery voltage at the POI remains within a 0.7 to 1.2 pu range following fault clearance;
- No tripping of prior queue projects occurs;
- No large rotor angle deviation and oscillations (as per SPP Disturbance Performance Requirements) occur for the synchronous generators in the monitored areas;

1.7 Standalone dynamic scenario, GEN-2016-041

Forty-five contingencies were simulated for each of the three base cases: 2016 winter peak, 2017 summer peak, and 2025 summer peak.

A number of contingencies resulted in system instability, which led to the loss of GEN-2016-041 and prior queue generation. Mitigation measures were required to enable system stability following these contingencies. The requested and prior queue projects that were impacted by post contingency system instability are as follows:

- Prior project GEN-2006-044: Over-voltage tripping
- Prior project ASGI-2011-002: Over-voltage tripping
- Project GEN-2016-041: Over-frequency tripping

Mitigation measures that were tested include the following:

- Correct the over-voltage protection settings for GEN-2006-044 and ASGI-2011-002

- Modify the over-frequency protection threshold and time delay settings for GEN-2016-041

With the mitigation measures applied:

- GEN-2016-041 is able to ride through all the simulated contingencies and the transient recovery voltage at the POI remains within a 0.7 to 1.2 pu range following fault clearance;
- No tripping of prior queue projects occurs;
- No large rotor angle deviation and oscillations (as per SPP Disturbance Performance Requirements) occur for the synchronous generators in the monitored areas;

1.8 Standalone dynamic scenario, GEN-2016-059

Twenty-one contingencies were simulated for each of the three base cases: 2016 winter peak, 2017 summer peak, and 2025 summer peak.

A number of contingencies resulted in system instability, which led to the loss of GEN-2016-059 and prior queue generation. Mitigation measures were required to enable system stability following these contingencies. The requested and prior queue projects that were impacted by post contingency system instability are as follows:

- Prior project GEN-2006-044: Over-voltage tripping
- Prior project ASGI-2011-002: Over-voltage tripping
- Project GEN-2016-059: Under-voltage tripping

Mitigation measures that were tested include the following:

- Correct the over-voltage protection settings for GEN-2006-044 and ASGI-2011-002
- Add dynamic reactive power support at the 34.5 kV collector buses of GEN-2016-059

With the mitigation measures applied:

- GEN-2016-059 is able to ride through all the simulated contingencies and the transient recovery voltage at the POI remains within a 0.7 to 1.2 pu range following fault clearance;
- No tripping of prior queue projects occurs;
- No large rotor angle deviation and oscillations (as per SPP Disturbance Performance Requirements) occur for the synchronous generators in the monitored areas;

1.9 Standalone dynamic scenario, GEN-2016-070

Seventeen contingencies were simulated for each of the three base cases: 2016 winter peak, 2017 summer peak, and 2025 summer peak.

A number of contingencies resulted in system instability, which led to the loss of prior queue generation. Mitigation measures were required to enable system stability following these contingencies. The prior queue projects that were impacted by post contingency system instability are as follows:

- Prior project GEN-2006-044: Over-voltage tripping
- Prior project ASGI-2011-002: Over-voltage tripping

Mitigation measures that were tested include the following:

- Correct the over-voltage protection settings for GEN-2006-044
- Correct over-voltage protection settings for ASGI-2011-002

With the mitigation measures applied:

- The transient recovery voltage at the POI remains within a 0.7 to 1.2 pu range following fault clearance;
- No tripping of prior queue projects occurs;
- No large rotor angle deviation and oscillations (as per SPP Disturbance Performance Requirements) occur for the synchronous generators in the monitored areas;

2 Introduction

As the Regional Transmission Operator, SPP is responsible to conduct a definitive impact study for its interconnection customers. The customers in DISIS-2016-001 (Group 02) have requested a generation interconnection study through SPP for their respective interconnection requests.

SPP contracted Power Systems Consultants (PSC) to carry out this definitive impact study (DIS), which includes the Group 02 projects listed in Table 2.

The Group 02 projects were analyzed as standalone (other Group 02 projects off line); and together as a cluster (all online).

For the study, both the Group 02 projects and the prior queued projects listed in

Table 3 were monitored, in addition to selected synchronous generators and transmission bus voltages in the following areas:

Area 520 – AEPW: American Electric Power West

Area 524 – OKGE: Oklahoma Gas and Electric

Area 525 – WFEC: Western Farmers Electric Cooperative

Area 526 – SPS: Southwestern Public Service Company

Area 531 – MIDW: Midwest Energy, Inc.

Area 534 – SUNC: Sunflower Electric Power Corporation

Area 536 – WERE: Westar Energy

Table 2: Generation Interconnection Requests

Request	Size (MW)	Wind Turbine Model	Point of Interconnection
GEN-2015-082	200.0	GE 2.0MW	Tap on Woodward (515375) to Beaver (515554) 345kV (G11-14-TAP, 560000)
GEN-2016-001	300.3	Vestas GS V126 3.3MW	Tap on Badger (G11-14-TAP, 560000) to Woodward (515375) 345kV (560070)
GEN-2016-038	299	GE 2.3MW	Harrington 230kV (523978)
GEN-2016-041	100	Advanced Energy 500NX 0.5MW PV inverters	Hitchland 345kV (523097)
GEN-2016-059	299	GE 2.3MW	Harrington 230kV (523978)
GEN-2016-070	5.3MW Uprate (Total 84.8MW)	GE 1.6MW	Martin Switching Station 115kV (523928)

Table 3: Prior Queued Projects

Request	Size (MW)	Wind Turbine Model	Point of Interconnection
Llano Estacado (White Deer)	80.0	CIMTR1	Tap on Kingsmill (523712) to MIDSTRM Tap (523817) (523815)
GEN-2002-008	240	GE 1.5MW	Hitchland 345kV (523097)
GEN-2002-009	79.8	Suzlon 2.1MW	Hansford 115kV (523195)
GEN-2002-022	240	Siemens 2.3MW	Bushland 230kV (524267)
GEN-2003-020	159.1	GE 1.5/1.6 MW	Martin Switching Station 115kV (523928)
GEN-2006-020S	20	D8.2 2.0MW	Frisco Wind 115kV (523160)
GEN-2006-044	370	DeWind D9.2 2.0MW	Hitchland 345kV (523097)
GEN-2007-046	200.0	Vestas V100/V110 2.0MW	Hitchland 115kV (523093)
GEN-2008-047	300	GE 1.7MW	Beaver County 345kV (515554)
GEN-2008-051	322	Siemens 2.3MW	Potter 345kV (523961)
GEN-2010-001	300	GE 1.85MW	Beaver County 345kV (515554)
GEN-2010-014	358.8	Siemens SWT 2.3MW	Hitchland 345kV (523097)
ASGI-2011-002	20	DeWind D8.2 2.0MW	Herring 115kV (523359)
GEN-2011-014	201	Siemens 3.0MW	Beaver County 345kV (515554)
GEN-2011-022	299	Siemens 2.3MW	Hitchland 345kV (523097)
ASGI-2013-001	11.5	Siemens 2.3	PanTex South 115kV(523945)
GEN-2013-030	300	Vestas 2.0 MW VCSS (583763, 583766)	Beaver County 345kV (515554)
GEN-2014-037	200.0	Vestas V110 2.0MW	Tap on Hitchland to Beaver County 345kV (Optima 345kV – 560010)

3 Base case model and generator data

3.1 Simulation Tools

The modelling and studies in this report were performed using the PSS/E Version 32.2.4 software package.

3.2 Power flow data

The power flow data for the Group 02 requested generators GEN-2015-082, GEN-2016-001, GEN-2016-038, GEN-2016-041, GEN-2016-059 and GEN-2016-070 are provided in Table 4 and Table 5. The power flow data were extracted from the base cases and model idevs provide by SPP.

Table 4: GEN-2015-082, GEN-2016-001 and GEN-2016-070 power flow data

	GEN-2016-070	GEN-2015-082	GEN-2016-001-1	GEN-2016-001-2
Generator type	Wind	Wind	Wind	Wind
Pgen [MW]	84.8	200	151.8	148.5
Pmax [MW]	84.8	200	151.8	148.5
Pmin [MW]	3.71	7.47	0	0
Qmax [MVAr]	41.0705	96.8644	70	70
Qmin [MVAr]	-41.0705	-96.8644	70	70
Mbase [MVA]	88.35	210.5	151.8	148.5
Zsorce [pu on MVA base]	R= 0 X= 0.8	R= 0 X= 0.8	R= 0.0047 X= 0.8219	R= 0.0047 X= 0.8219
Transformer 1	GSU	GSU	GSU	GSU
Ratio [kV/kV]	34.5 / 0.7	34.5 / 0.7	34.5 / 0.7	34.5 / 0.7
Rating [MVA]	92.8	225	172.5	168.8
Mbase [MVA]	92.75	225	172.5	168.75
Impedance [pu on Mbase]	R= 0.0083 X= 0.06243	R= 0.00767 X= 0.058	R= 0.006956 X= 0.089731	R= 0.006956 X= 0.089731
Number of taps	33	5	5	5
Tap step size	1%	5%	5%	5%
Transformer 2	Collector	Collector	Collector	Collector
Voltage Ratio [kV/kV]	115 / 34.5	345 / 34.5	345 / 34.5	345 / 34.5
Rating [MVA]	90	184	167	167
Mbase [MVA]	100	138	100	100
Impedance (pu on Mbase)	R= 0.00594 X= 0.170505	R= 0.00213 X= 0.085	R= 0.004996 X= 0.119896	R= 0.004996 X= 0.119896
Number of taps	33	33	33	33
Tap step size	1%	1%	1%	1%
Transmission line 34.5 kV [pu, 100 MVA base]	R = 0.009942 X = 0.009815 B = 0.03472	R = 0.002858 X = 0.002575 B = 0.02945	R = 0.006853 X = 0.0084 B = 0.049786	R = 0.006579 X = 0.00816 B = 0.046044
Transmission line 115 kV [pu, 100 MVA base]	R = 0.00198 X = 0.011 B = 0.00006 L= 0.02 miles	Not applicable	Not applicable	Not applicable
Transmission line 345 kV [pu, 100 MVA base]	Not applicable	R = 0.001225 X = 0.01248 B = 0.21 L= 25 miles	R = 0.000266 X = 0.002428 B = 0.041015 L= 4.8 miles	R = 0.000266 X = 0.002428 B = 0.041015 L= 4.8 miles

Table 5: GEN-2016-001, GEN-2016-038, GEN-2016-041 and GEN-2016-059 power flow data

	GEN-2016-038-1	GEN-2016-038-2	GEN-2016-041	GEN-2016-059-1	GEN-2016-059-2
Generator	Wind	Wind	Solar	Wind	Wind
Pgen [MW]	149.5	149.5	100	149.5	149.5
Pmax [MW]	149.5	149.5	100	149.5	149.5
Pmin [MW]	0	0	0	0	0
Qmax [MVAr]	72.4062	72.4062	32.8684	72.4062	72.4062
Qmin [MVAr]	-72.4062	-72.4062	-32.8684	-72.4062	-72.4062
Mbase [MVA]	157.37	157.37	110	157.37	157.37
Zsorce [pu on MVA base	R= 0 X= 0.8	R= 0 X= 0.8	R= 0 X= 9999	R= 0 X= 0.8	R= 0 X= 0.8
Transformer 1	GSU	GSU	GSU	GSU	GSU
Ratio [kV/kV]	34.5 / 0.7	34.5 / 0.7	34.5 / 0.5	34.5 / 0.7	34.5 / 0.7
Rating [MVA]	162.5	162.5	100	162.5	162.5
Mbase [MVA]	162.5	162.5	100	162.5	162.5
Impedance [pu on Mbase]	R= 0.007599 X= 0.056996	R= 0.007599 X= 0.056996	R= 0.004991 X= 0.059792	R= 0.007599 X= 0.056996	R= 0.007599 X= 0.056996
Number of taps	5	5	5	5	5
Tap step size	5%	5%	5%	5%	5%
Transformer 2	Collector	Collector	Collector	Collector	Collector
Voltage Ratio [kV/kV]	230 / 34.5	230 / 34.5	345 / 34.5	230 / 34.5	230 / 34.5
Rating [MVA]	166	166	125	166	166
Mbase [MVA]	99	99	75	99	99
Impedance (pu on Mbase)	R= 0.002249 X= 0.089972	R= 0.002249 X= 0.089972	R= 0.002249 X= 0.089972	R= 0.002249 X= 0.089972	R= 0.002249 X= 0.089972
Number of taps	33	33	33	33	33
Tap step size	1%	1%	1%	1%	1%
Transmission line	R = 0.004649	R = 0.005375	R = 0.001497	R = 0.006086	R = 0.005484
34.5 kV	X = 0.004981	X = 0.006261	X = 0.001712	X = 0.007363	X = 0.006669
[pu, 100 MVA base]	B = 0.069961	B = 0.082677	B = 0.01475	B = 0.094061	B = 0.082982
Transmission line	R = 0.024907	R = 0.002126	Not applicable	R = 0.02497	R = 0.000673
230 kV	X = 0.172406	X = 0.014735		X = 0.172844	X = 0.004668
[pu, 100 MVA base]	B = 0.35259 L= 118.2 miles	B = 0.029834 L= 10 miles		B = 0.35348 L= 118.5 miles	B = 0.00946 L= 3.2 miles
Transmission line	Not applicable	Not applicable	R = 0	Not applicable	Not applicable
345 kV			X = 0.0001		

	GEN-2016-038-1	GEN-2016-038-2	GEN-2016-041	GEN-2016-059-1	GEN-2016-059-2
[pu, 100 MVA base]			B = 0 L= 0 miles		

3.3 Power flow base cases

The following base cases were provided by SPP to perform the impact studies:

MDWG15-16WP_DIS1601_G02– 2016 winter peak base case

MDWG15-17SP_DIS1601_G02– 2017 summer peak base case

MDWG15-25SP_DIS1601_G02– 2025 summer peak base case

However, during the course of conducting N-1 power flow studies, a number of contingencies resulted in "blown-up" condition or voltage collapse in the 2016WP and 2017SP cluster scenarios. These contingencies are shown in Table 6.

Table 6: Contingencies Resulting in Voltage Collapse in Cluster Cases

Contingency code	Contingency Description
2016WP_FLT12_3PH_C	Woodward 345kV (515375) to G11-051 Tap 345kV (562075) CKT 1
2016WP_FLT20_3PH_C	Tuco 345kV (525832) to G14-074-Tap 345kV (560027) CKT 1
2016WP_FLT21_3PH_C	G14-074-Tap 345kV (560027) to Oklaunion 345kV (511456) CKT 1
2016WP_FLT48_3PH_C	G11-051 TAP 345kV (562075) to Tatonga 345kV (515407) CKT 1
2016WP_FLT50_3PH_C	Mathewson/Spring Creek 345kV (515497) to Tatonga 345kV (515407) CKT 1
2016WP_FLT57_3PH_C	Hitchland 345kV (523097) to Finney 345kV (523853) CKT 1
2016WP_FLT64_3PH_C	Finney 345kV (523853) to Holcomb 345kV (531449) CKT 1
2017SP_FLT56_3PH_C	Hitchland 345kV (523097) to Walk Tap 345kV (531512) CKT 1

The following network upgrades were added to the original 2016 winter peak, 2017 summer peak and 2025 summer peak base cases on SPP's recommendation to mitigate voltage collapse issues observed due the contingencies listed in Table 6:

- Potter County to Grapevine to Chisholm 345kV circuit 1
- Grapevine to Beaver County 345kV circuit 1
- Beaver County to Clark County 345kV circuit 1
- Accelerate Woodward to Mathewson 345kV circuit 2 (added to 2016 WP and 2017 SP only)

These upgrades were added to the cluster and standalone base cases prior to performing the studies.

The base cases contain the GEN-2015-082, GEN-2016-001, GEN-2016-038, GEN-2016-041, GEN-2016-059 and GEN-2016-070 projects dispatched at 100% output power as well as the prior queued projects listed in Table 3, also dispatched at 100% output power.

Power flow and voltages under system normal conditions for all six projects in the Cluster scenarios are shown in single-line diagrams in Figure 1 to Figure 5.

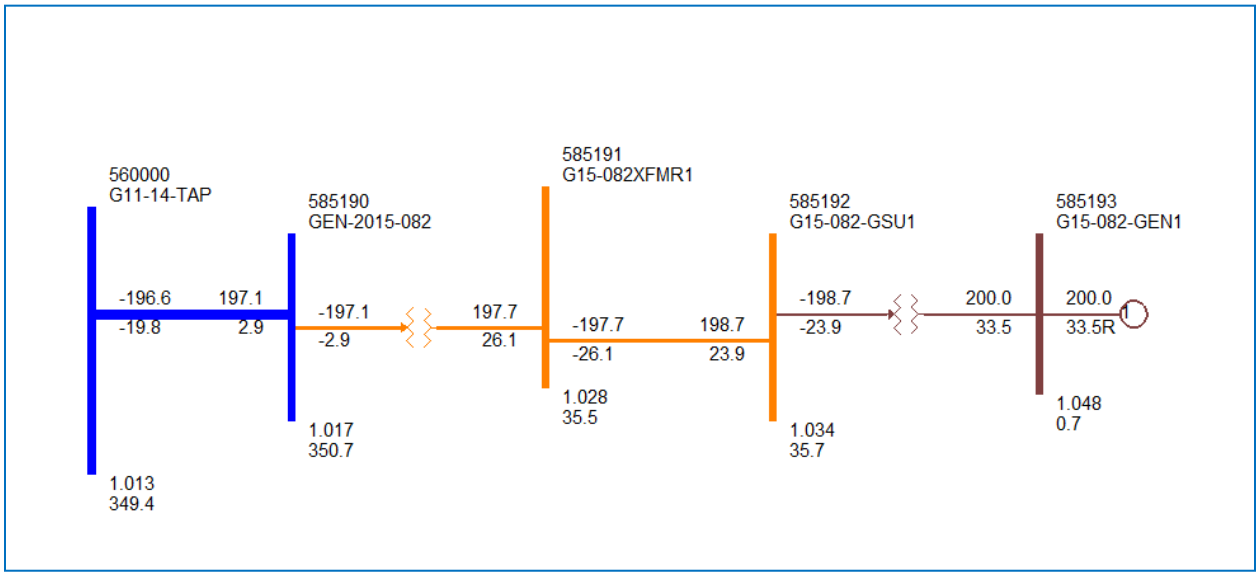


Figure 1: Cluster scenario case- Power flow 2016 Winter Peak GEN-2015-082

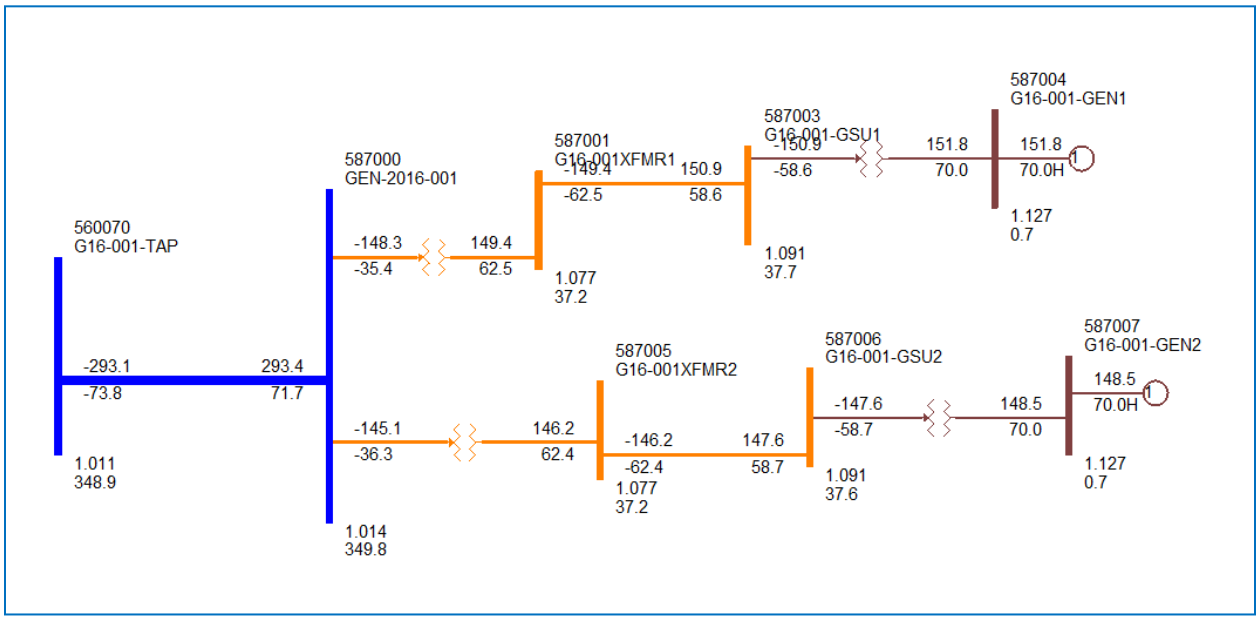


Figure 2: Cluster scenario case- Power flow 2016 Winter Peak GEN-2016-001

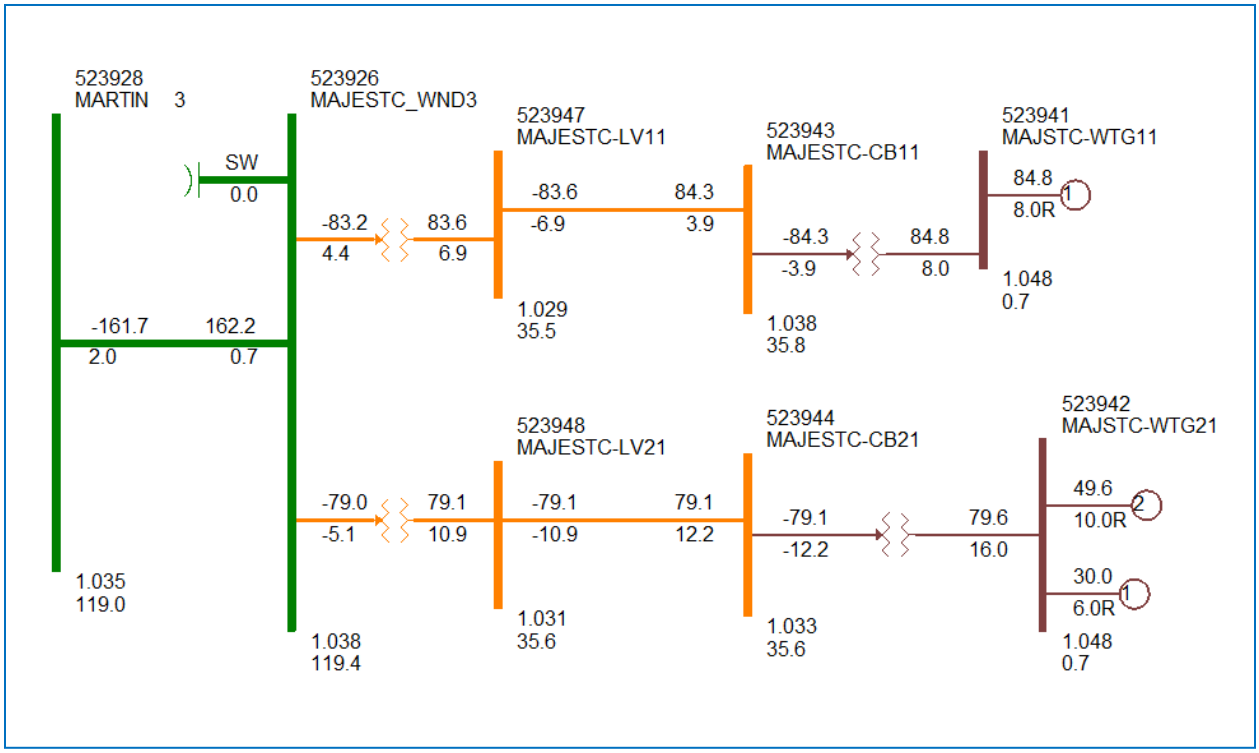


Figure 3:Cluster scenario case- Power flow 2016 Winter Peak GEN-2016-070

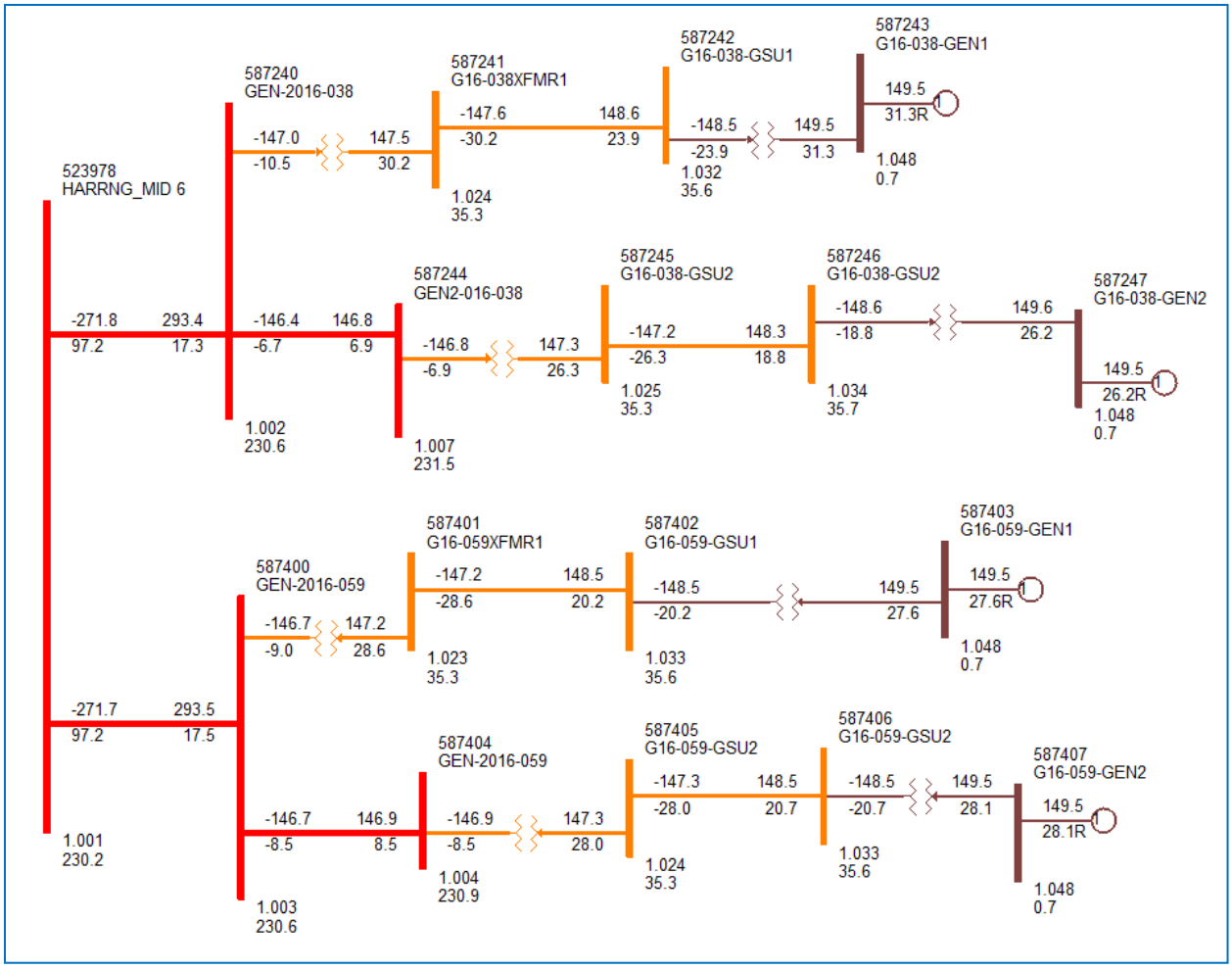


Figure 4: Cluster scenario case- Power flow 2016 Winter Peak GEN-2016-038 & GEN-2016-059

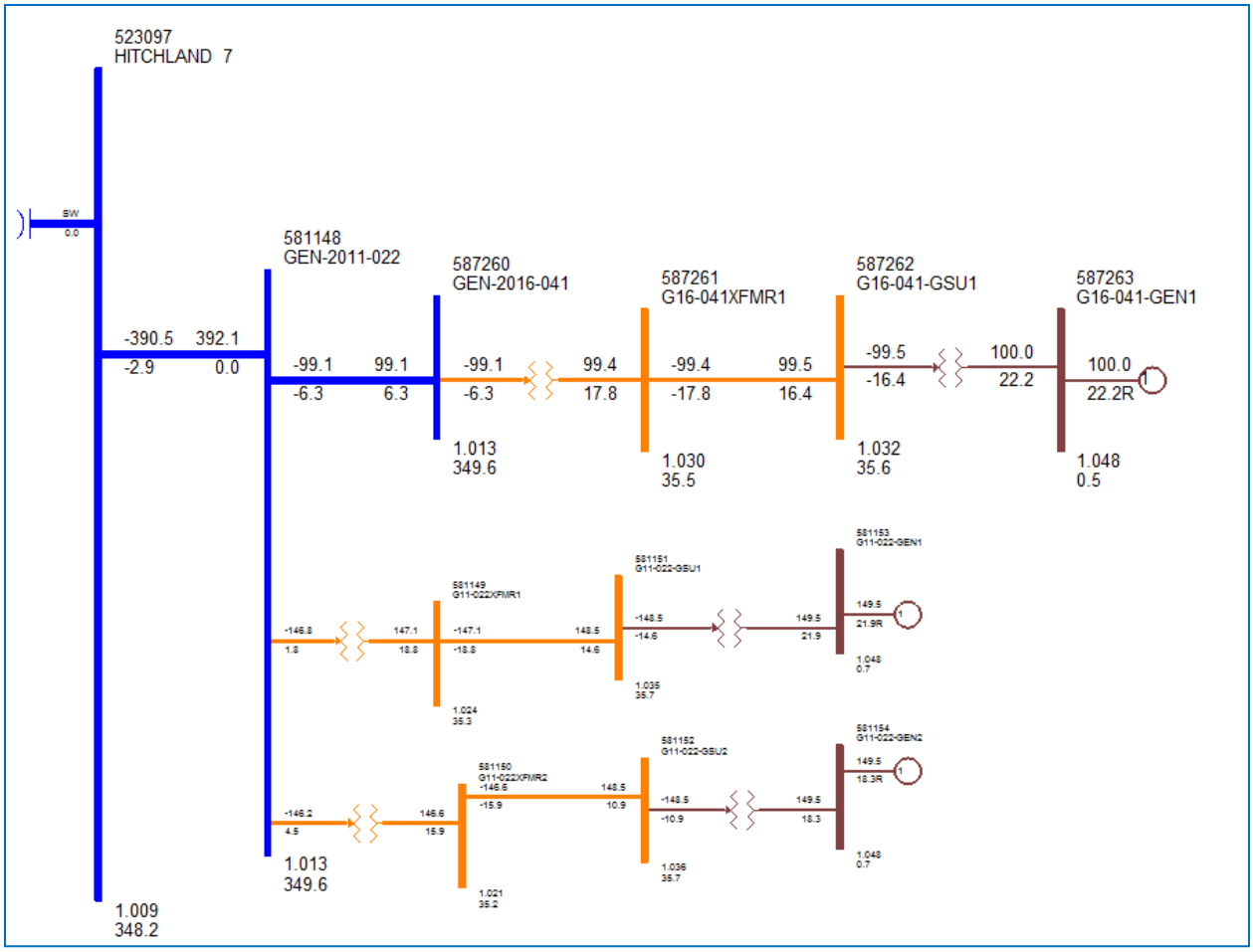


Figure 5:Cluster scenario case- Power flow 2016 Winter Peak GEN-2016-041

3.4 Contingency definitions

The contingencies that were simulated in the stability and power factor analysis are provided in Appendix K.

4 Short circuit analysis

Short circuit analysis was performed using the 2016 winter peak, 2017 summer peak and the 2025 summer peak base cases (cluster scenarios).

Table 7, Table 8 and Table 9 below shows the ten highest short circuit levels based on the post-project short circuit analysis results at buses rated at 115 kV and above. These buses are within five buses away from the POIs listed in Table 2.

The single phase fault short circuit currents were not calculated as no zero sequence line data are included in the base case provided. Appendix J details the short circuit results for all the buses in the Group 02 cluster scenarios that are within five buses away from the POIs and rated at 115 kV and above.

Table 7: Summary of highest Short circuit results per voltage level for 2016 WP Group 02

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
345 kV								
515497	MATHWSN7	345	30.0		562075	G11-051-TAP	345	17.2
532796	WICHITA7	345	22.2		583110	GEN-2011-051	345	17.2
515375	WWRDEHV7	345	20.9		523097	HITCHLAND 7	345	17.1
560033	G1524&G1525T	345	19.1		560010	G14-037-TAP	345	17.1
515554	BVRCNTY7	345	18.1		523101	NOBLE_WND 7	345	17.1
230 kV								
523977	HARRNG_WST 6	230	28.8		525524	TOLK_EAST 6	230	25.8
523978	HARRNG_MID 6	230	28.8		525531	TOLK_WEST 6	230	25.8
523979	HARRNG_EST 6	230	28.8		525543	TOLK_TAP 6	230	25.8
524044	NICHOLS 6	230	27.8		525481	PLANT_X 6	230	22.2
138kV								
587260	GEN-2016-041	138	38.7		514785	WOODWRD4	138	12.1
515376	WWRDEHV4	138	24.1		515398	OUSPRT 4	138	9.1
515997	WWPAR4	138	17.3		515394	KEENAN 4	138	8.3
539804	THISTLE4	138	16.6		514796	IODINE-4	138	7.4
539638	FLATRDG4	138	14.9		514787	DEWEY 4	138	7.3
115 kV								
524043	NICHOLS 3	115	31.0		525480	PLANT_X 3	115	21.0
524018	ASARCO_TP 3	115	29.0		523111	NOVUS1 3	115	20.2
524016	ASARCO 3	115	26.7		524185	PIERCE_TP 3	115	19.4
524162	EAST_PLANT 3	115	23.5		524007	ROLLHILLS 3	115	19.4
524058	WHITAKER 3	115	22.3		525828	TUCO_INT 3	115	19.0
524364	RANDALL 3	115	21.4		524224	MANHATTAN 3	115	18.8

Table 8: Summary of highest Short circuit results per voltage level for 2017 SP Group 02

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
345kV								
515497	MATHWSN7	345	31.9		562075	G11-051-TAP	345	17.6
532796	WICHITA7	345	25.2		583110	GEN-2011-051	345	17.6
515375	WWRDEHV7	345	21.4		523097	HITCHLAND 7	345	17.5
560033	G1524&G1525T	345	20.8		560010	G14-037-TAP	345	17.5
515554	BVRCNTY7	345	18.5		523101	NOBLE_WND 7	345	17.5
230 kV								
523977	HARRNG_WST 6	230	29.0		525524	TOLK_EAST 6	230	26.2
523978	HARRNG_MID 6	230	29.0		525531	TOLK_WEST 6	230	26.2
523979	HARRNG_EST 6	230	29.0		525543	TOLK_TAP 6	230	26.2
524044	NICHOLS 6	230	27.9		525481	PLANT_X 6	230	22.4
138kV								
587260	GEN-2016-041	138	39.6		514785	WOODWRD4	138	12.2
515376	WWRDEHV4	138	24.4		515398	OUSPRT 4	138	9.2
515997	WWPAR4	138	17.5		515394	KEENAN 4	138	8.3
539804	THISTLE4	138	17.1		514796	IODINE-4	138	7.4
539638	FLATRDG4	138	15.3		514787	DEWEY 4	138	7.4
115kV								
524043	NICHOLS 3	115	31.5		525480	PLANT_X 3	115	20.9
524018	ASARCO_TP 3	115	29.4		523111	NOVUS1 3	115	20.4
524016	ASARCO 3	115	27.1		525828	TUCO_INT 3	115	19.6
524162	EAST_PLANT 3	115	23.5		524185	PIERCE_TP 3	115	19.5
531448	HOLCOMB3	115	22.6		524007	ROLLHILLS 3	115	19.5
524058	WHITAKER 3	115	22.5		524224	MANHATTAN 3	115	18.8
524364	RANDALL 3	115	21.5					

Table 9: Summary of highest Short circuit results per voltage level for 2025 SP Group 02

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
345kV								
515497	MATHWSN7	345	32.2		562075	G11-051-TAP	345	17.5
532796	WICHITA7	345	26.1		583110	GEN-2011-051	345	17.5
560033	G1524&G1525T	345	21.2		523097	HITCHLAND 7	345	17.0
515375	WWRDEHV7	345	21.1		560010	G14-037-TAP	345	17.0
515554	BVRCNTY7	345	17.9		523101	NOBLE_WND 7	345	16.9
230 kV								
523977	HARRNG_WST 6	230	28.8		525524	TOLK_EAST 6	230	26.9
523978	HARRNG_MID 6	230	28.8		525531	TOLK_WEST 6	230	26.9
523979	HARRNG_EST 6	230	28.8		525543	TOLK_TAP 6	230	26.9
524044	NICHOLS 6	230	27.7		525481	PLANT_X 6	230	23.6
587260	GEN-2016-041	138	38.4		514785	WOODWRD4	138	12.1
515376	WWRDEHV4	138	24.2		515398	OUSPRT 4	138	9.1
515997	WWPAR4	138	17.3		515394	KEENAN 4	138	8.2
539804	THISTLE4	138	17.2		514796	IODINE-4	138	7.4
539638	FLATRDG4	138	15.4		514787	DEWEY 4	138	7.3
524043	NICHOLS 3	115	31.9		524058	WHITAKER 3	115	22.5
524018	ASARCO_TP 3	115	29.8		524364	RANDALL 3	115	20.8
524016	ASARCO 3	115	27.4		525828	TUCO_INT 3	115	20.2
525480	PLANT_X 3	115	26.8		523111	NOVUS1 3	115	19.8
524162	EAST_PLANT 3	115	23.4		524007	ROLLHILLS 3	115	19.4
531448	HOLCOMB3	115	22.5		524185	PIERCE_TP 3	115	19.3

5 Stability analysis

Stability analysis was conducted for Group 02 Requested Generation for 2016 winter, 2017 summer and 2025 summer peak dynamic cases. Stability analysis was conducted with prior queue projects in service.

The following scenarios were studied:

1. Cluster scenario: all interconnection requests in Group 02 were studied at 100% nameplate output.
2. Standalone scenario: GEN-2015-082 at 100% nameplate output with the other interconnection requests in Group 02 switched off.
3. Standalone scenario: GEN-2016-001at 100% nameplate output with the other interconnection requests in Group 02 switched off
4. Standalone scenario: GEN-2016-038 at 100% nameplate output with the other interconnection requests in Group 02 switched off
5. Standalone scenario: GEN-2016-041 at 100% nameplate output with the other interconnection requests in Group 02 switched off
6. Standalone scenario: GEN-2016-059 at 100% nameplate output with the other interconnection requests in Group 02 switched off
7. Standalone scenario: GEN-2016-070 at 100% nameplate output with the other interconnection requests in Group 02 switched off

Simulations were conducted using contingencies as listed in the Fault Definition Contingency List, see Appendix K for details. Single-phase faults were simulated by applying fault impedance to the positive sequence network at the fault location. As per the SPP current practice to compute the fault levels, the fault impedance was computed to give a positive sequence voltage at the specified fault location of approximately 60% pre-fault voltage.

Each contingency simulation was performed with an initial 1.0 second steady-state run, and a total simulation time of 20 seconds to confirm adequate machine damping.

5.1 Evaluation criteria

The SPP Disturbance Performance Requirements was used to evaluate the stability of interconnection GEN-2015-082, GEN-2016-001, GEN-2016-038, GEN-2016-041, GEN-2016-059 and GEN-2016-070.

In this assessment, a system is considered as stable if the following are observed:

Group 02 requested generators (as listed in Table 2

- Table 2) are able to ride through the contingency fault and recover to pre-fault output and terminal voltage;
- No tripping of prior queue projects occurs;
- No large rotor angle deviation and oscillations occur in synchronous machines and oscillatory damping meets the requirements described in Appendix A;

- The transient recovery voltage at the POIs following fault clearance remains within 0.7 to 1.2 pu, as per the requirements described in Appendix A.

5.2 SVC Modelling and Sizing for Instability Mitigation

In order to determine the appropriate SVC that was required to mitigate the under-voltage tripping of generators in the study, a continuous shunt device was modelled at the respective 34.5 kV buses in power flow and set to regulate the voltage at the corresponding 34.5 kV buses; and the standard PSS/e SVC model, CSSCST, was added to the snapshot file corresponding to each continuous shunt device in the power flow with appropriately tuned parameters. The maximum and minimum MVAr of the SVCs were iteratively adjusted until the generators that tripped pre-SVC addition, remain stable and no longer trip after all simulated faults are applied and removed in the dynamic run. The per unit admittance (B) of the SVC was monitored during the dynamic runs to observe the maximum and minimum admittances, which correspond to the maximum and minimum MVAr limits, respectively, of the SVC in per unit on the system MVA base.

5.3 Cluster Dynamic Analysis

The results of the cluster scenario dynamic analysis are summarized in Table 10. For the specified contingency name and corresponding scenario "NO" indicates that the system is unstable and does not meet the evaluation criteria; "NMR" indicates that the system is unstable but no mitigation is required as the contingency is a double-circuit outage; "OK" indicates the system is stable and meets the evaluation criteria and "N/A" indicates that the specified contingency is not applicable.

The following color coding should be used to interpret the post-contingency impacts of single phase (1PH) faults with similarly defined sequence for all three phase (3PH) faults listed in Appendix K.

Instability in 3PH contingency only; mitigation required.	NO
Instability in 1PH contingency only; mitigation required.	NO**
Instability in both 1PH & 3PH contingencies; mitigation required.	NO*
Double-circuit contingency; generator curtailment may be required in real-time.	NMR

5.3.1 Dynamic Analysis Summary

As shown in Table 10, most of the post contingency system instabilities were observed in the 2016WP and 2017SP scenarios.

The main cause of post contingency system instability in the cluster scenarios is due to the over-voltage tripping of the prior queued projects GEN-2006-044 and ASGI-2011-002, and the over-frequency tripping of the GEN-2016-041 project. Only five of the contingencies from the 2017SP cluster scenario resulted in under-voltage tripping of the requested projects; GEN-2016-059 and GEN-2026-038.

Table 10: Summary of cluster scenario stability analysis results

Contingency Name		Cluster Group 02	
3 Phase and 1 Phase Fault unless stated otherwise	**2016WP**	**2017SP**	**2025SP**
FLT01	NMR	OK	OK

FLT02	OK	OK	OK
FLT03	OK	OK	OK
FLT04	OK	OK	OK
FLT05	NO	OK	OK
FLT06	OK	OK	OK
FLT07	OK	OK	OK
FLT08	OK	OK	OK
FLT09	OK	OK	OK
FLT10	NMR	OK	OK
FLT11	NO	OK	OK
FLT12	NO	OK	OK
FLT13	NMR	NMR	OK
FLT14	NO	NO	NO
FLT15	NMR	NMR	NO
FLT16	NO	NO	NO
FLT17	NMR	NMR	NO
FLT18	NO	NO	OK
FLT19	OK	OK	OK
FLT20	OK	OK	OK
FLT21	OK	OK	OK
FLT22	NO	NO	OK
FLT23	NMR	NMR	OK
FLT24	NO	NO	OK
FLT25	NMR	NMR	OK
FLT26	NO	NO	OK
FLT27	NMR	NO	OK
FLT28	NO	NO	OK
FLT29	OK	OK	OK
FLT30	OK	OK	OK
FLT31	OK	OK	OK
FLT32	OK	OK	OK
FLT33	OK	OK	OK
FLT34	OK	OK	OK
FLT35	OK	OK	OK
FLT36	OK	OK	OK
FLT37	OK	OK	OK
FLT38	OK	OK	OK
FLT39	OK	OK	OK
FLT40	OK	OK	OK
FLT41	OK	OK	OK
FLT42	OK	OK	OK

FLT43	OK	OK	OK
FLT44	OK	OK	OK
FLT45	OK	OK	OK
FLT46	OK	OK	OK
FLT47	OK	OK	OK
FLT48	OK	OK	OK
FLT49	OK	OK	OK
FLT50	NO	NO	OK
FLT51(25SP Only)	N/A	N/A	OK
FLT52	NO	NO	OK
FLT53	OK	NO	OK
FLT54	NO	NO	OK
FLT55	OK	OK	OK
FLT56 (17SP and 25SP Only)	N/A	NO	NO
FLT57 (16WP only)	NO	N/A	N/A
FLT58	NO	NO	NO
FLT59	NO	NO	NO
FLT60	OK	OK	OK
FLT61	NO	OK	OK
FLT62	NO	OK	OK
FLT63	OK	OK	OK
FLT64	OK	OK	OK
FLT65	OK	OK	OK
FLT66	OK	OK	OK
FLT67	OK	OK	OK
FLT68	NO	NO	OK
FLT69	NO	NO	OK
FLT70	NO	NO	OK
FLT71	NO	NO	OK
FLT72	OK	OK	OK
FLT73	OK	OK	OK
FLT74	OK	OK	OK
FLT75	OK	OK	OK
FLT76	OK	OK	OK
FLT77	OK	OK	OK
FLT78	OK	OK	OK
FLT79	OK	OK	OK
FLT80	NO	NO	OK
FLT81	NO	NO	OK
FLT82	NO	NO*	OK
FLT83	NO	NO*	OK

FLT84	NO	NO	OK
FLT85	NO	NO	OK
FLT86	NO	NO	OK
FLT87	OK	OK	OK
FLT88-PO	OK	OK	OK
(17SP and 25SP Only)	N/A	OK	OK
FLT89-PO	OK	NO	NO
(17SP and 25SP Only)	N/A	OK	OK
FLT90-PO (16WP Only)	NO	N/A	N/A
FLT91-PO (16WP Only)	NO	N/A	N/A
FLT92-PO	NO	NO	NO
FLT93-PO	OK	NO	NO
(17SP and 25SP Only)	N/A	OK	OK
FLT94-SB	OK	OK	OK
FLT95-SB	OK	OK	OK
FLT96-SB	OK	OK	OK
FLT97-SB	NO**	OK	OK
FLT98-SB (16WP Only)	OK	N/A	N/A
FLT99-SB	OK	OK	OK
FLT100-SB	OK	OK	OK
FLT101-PO	OK	OK	OK
FLT102-PO	OK	OK	OK
FLT103-SB	OK	OK	OK
FLT104-PO	OK	OK	OK
FLT105-PO	OK	OK	OK
FLT106-PO	OK	OK	OK
FLT107-PO	OK	OK	OK
FLT108-SB	NO**	NO**	OK
FLT109-SB	NO**	NO**	OK
FLT110-SB	NO**	NO**	OK
FLT111-SB	NO**	NO**	OK

5.3.2 Mitigation Measures

Static Var Compensators (SVCs) were used to mitigate the post contingency under-voltage tripping that impacted G16-038-GEN1, G16-038-GEN2, G16-059-GEN1 and G16-059-GEN2. Table 11 shows the SVC requirements that when modeled at the 34.5 kV collector bus of GEN-2016-038 and GEN-2016-059 projects allow both projects to ride through all simulated contingencies listed in Table 10 for all the cluster scenarios.

Table 11: Reactive Power Mitigation measure for Cluster scenario

CLUSTER GROUP 02			
Contingency Name	Base case	Mitigations required	
		Units Requiring SVC	Mitigation Requirements
FLT69	2017 SP	G16-038-GEN1	40/10 MVAR (Capacitive/Inductive)
		G16-038-GEN2	40/10 MVAR (Capacitive/Inductive)
		G16-059-GEN1	60/15 MVAR (Capacitive/Inductive)
		G16-059-GEN2	60/15 MVAR (Capacitive/Inductive)
FLT70		G16-038-GEN1	40/10 MVAR (Capacitive/Inductive)
		G16-038-GEN2	40/10 MVAR (Capacitive/Inductive)
		G16-059-GEN1	60/15 MVAR (Capacitive/Inductive)
		G16-059-GEN2	60/15 MVAR (Capacitive/Inductive)
FLT71		G16-038-GEN1	40/10 MVAR (Capacitive/Inductive)
		G16-038-GEN2	40/10 MVAR (Capacitive/Inductive)
		G16-059-GEN1	60/15 MVAR (Capacitive/Inductive)
		G16-059-GEN2	60/15 MVAR (Capacitive/Inductive)
FLT83		G16-038-GEN1	40/10 MVAR (Capacitive/Inductive)
		G16-038-GEN2	40/10 MVAR (Capacitive/Inductive)
FLT86		G16-059-GEN1	60/15 MVAR (Capacitive/Inductive)
		G16-059-GEN2	60/15 MVAR (Capacitive/Inductive)

The over-voltage protection settings for GEN-2006-044 and ASGI-2011-002 were found to be set incorrectly and were modified to allow both prior queued projects to ride through all simulated contingencies listed in Table 10. The corrected settings are shown in Appendix B.

Extended frequency protection was used to mitigate post contingency over-frequency violations that impacted GEN-2016-041 for several contingencies. The over-frequency threshold and time delay trip settings of GEN-2016-041 were extended to 62.5 hertz and 2.0 seconds, respectively. This change in over-frequency settings allowed GEN-2016-041 to ride through all simulated contingencies listed in Table 10 for all the cluster scenarios. The PV inverter vendor should be consulted to determine valid frequency protection settings for GEN-2016-041.

Additionally, the projects were found to comply with the low voltage ride through requirements in FERC Order 661A.

Selected pre and post mitigation dynamic simulation plots are included in Appendix C for the cluster scenario.

5.4 Standalone Dynamic Analysis

For the specified contingency name and corresponding scenario "NO" indicates that the system is unstable and does not meet the evaluation criteria; "NMR" indicates that the system is unstable but no mitigation is required as the contingency is a double branch outage; "OK" indicates the system is stable and meets the evaluation criteria and "N/A" indicates that the specified contingency is not applicable.

The following color coding should be used to interpret the post-contingency impacts of single phase (1PH) faults with similarly defined sequence for all three phase (3PH) faults listed in Appendix K.

Instability in 3PH contingency only; mitigation required.	NO
Instability in 1PH contingency only; mitigation required.	NO**
Instability in both 1PH & 3PH contingencies; mitigation required.	NO*
Double-circuit contingency; generator curtailment may be required in real-time.	NMR

5.4.1 Standalone scenario (GEN-2015-082)

The dynamic analysis results of the standalone scenario for GEN-2015-082 are summarized in Table 12. The primary reason for the system instability is due to the post contingency overvoltage that results in the trip of the prior queued generators GEN-2006-044 and ASGI-2011-002.

Table 12: Summary of stability results for standalone scenario (GEN-2015-082)

Contingency Name	GEN-2015-082		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT01	Ok	Ok	Ok
FLT02	Ok	Ok	Ok
FLT03	Ok	Ok	Ok
FLT04	Ok	Ok	Ok
FLT05	Ok	Ok	Ok
FLT06	Ok	Ok	Ok
FLT07	Ok	Ok	Ok
FLT08	Ok	Ok	Ok
FLT09	Ok	Ok	Ok
FLT10	Ok	Ok	Ok
FLT11	Ok	Ok	Ok
FLT12	Ok	Ok	Ok
FLT13	Ok	Ok	Ok
FLT14	NO	Ok	Ok
FLT15	Ok	Ok	Ok
FLT16	Ok	Ok	Ok

Contingency Name	GEN-2015-082		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT17	Ok	Ok	Ok
FLT18	Ok	Ok	Ok
FLT19	Ok	Ok	Ok
FLT20	Ok	Ok	Ok
FLT21	N/A	N/A	N/A
FLT22	Ok	Ok	Ok
FLT23	Ok	Ok	Ok
FLT24	Ok	Ok	Ok
FLT25	Ok	Ok	Ok
FLT26	Ok	Ok	Ok
FLT27	Ok	Ok	Ok
FLT28	Ok	Ok	Ok
FLT29	Ok	Ok	Ok
FLT30	Ok	Ok	Ok
FLT31	Ok	Ok	Ok
FLT32	Ok	Ok	Ok
FLT33	N/A	N/A	N/A
FLT34	Ok	Ok	Ok
FLT35	Ok	Ok	Ok
FLT36	Ok	Ok	Ok
FLT37	Ok	Ok	Ok
FLT38	Ok	Ok	Ok
FLT39	Ok	Ok	Ok
FLT40	Ok	Ok	Ok
FLT41	N/A	N/A	N/A
FLT42	N/A	N/A	N/A
FLT43	N/A	N/A	N/A
FLT44	N/A	N/A	N/A
FLT45	N/A	N/A	N/A
FLT46	N/A	N/A	N/A
FLT47	N/A	N/A	N/A
FLT48	Ok	Ok	Ok
FLT49	Ok	Ok	Ok
FLT50	Ok	Ok	Ok
FLT51 (25SP Only)	N/A	N/A	Ok
FLT52	Ok	Ok	Ok
FLT53	Ok	Ok	Ok

Contingency Name	GEN-2015-082		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT54	Ok	Ok	Ok
FLT55	N/A	N/A	N/A
FLT56 (17SP and 25SP Only)	N/A	Ok	Ok
FLT57 (16WP only)	Ok	N/A	N/A
FLT58	Ok	Ok	Ok
FLT59	NO	Ok	Ok
FLT60	Ok	Ok	Ok
FLT61	NO	Ok	Ok
FLT62	NO	Ok	Ok
FLT63	Ok	Ok	Ok
FLT64	Ok	Ok	Ok
FLT65	Ok	Ok	Ok
FLT66	Ok	Ok	Ok
FLT67	Ok	Ok	Ok
FLT68	NO	NO	NO
FLT69	NO	NO	NO
FLT70	NO	NO	NO**
FLT71	NO*	NO*	Ok
FLT72	N/A	N/A	N/A
FLT73	N/A	N/A	N/A
FLT74	N/A	N/A	N/A
FLT75	N/A	N/A	N/A
FLT76	N/A	N/A	N/A
FLT77	N/A	N/A	N/A
FLT78	N/A	N/A	N/A
FLT79	N/A	N/A	N/A
FLT80	N/A	N/A	N/A
FLT81	N/A	N/A	N/A
FLT82	N/A	N/A	N/A
FLT83	N/A	N/A	N/A
FLT84	N/A	N/A	N/A
FLT85	N/A	N/A	N/A
FLT86	N/A	N/A	N/A
FLT87	N/A	N/A	N/A
FLT88-PO	Ok	Ok	Ok
(17SP and 25SP Only)	N/A	Ok	Ok
FLT89-PO	Ok	Ok	Ok

Contingency Name	GEN-2015-082		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
(17SP and 25SP Only)	N/A	Ok	Ok
FLT90-PO (16WP Only)	Ok	N/A	N/A
FLT91-PO (16WP Only)	Ok	N/A	N/A
FLT92-PO	NO	Ok	Ok
FLT93-PO	Ok	Ok	Ok
(17SP and 25SP Only)	N/A	Ok	Ok
FLT94-SB	Ok	Ok	Ok
FLT95-SB	Ok	Ok	Ok
FLT96-SB	Ok	Ok	Ok
FLT97-SB	NO	Ok	Ok
FLT98-SB (16WP Only)	Ok	N/A	N/A
FLT99-SB	Ok	Ok	Ok
FLT100-SB	Ok	Ok	Ok
FLT101-PO	N/A	N/A	N/A
FLT102-PO	N/A	N/A	N/A
FLT103-SB	N/A	N/A	N/A
FLT104-PO	N/A	N/A	N/A
FLT105-PO	N/A	N/A	N/A
FLT106-PO	N/A	N/A	N/A
FLT107-PO	N/A	N/A	N/A
FLT108-SB	N/A	N/A	N/A
FLT109-SB	N/A	N/A	N/A
FLT110-SB	N/A	N/A	N/A
FLT111-SB	N/A	N/A	N/A

5.4.1.1 Mitigation Measures

The over-voltage protection settings for GEN-2006-044 and ASGI-2011-002 were corrected to allow both prior queued projects to ride through all simulated contingencies listed in Table 12. The modified settings are shown in Appendix B.

Table 13 shows the contingencies that resulted in system instability and impacted the prior queued projects GEN-2006-044 and ASGI-2011-002.

Selected pre and post mitigation dynamic simulation plots are included in Appendix D for standalone scenario (GEN-2015-082).

Table 13: Mitigation measures required for Standalone scenario (GEN-2015-082)

Contingency Name	Base case	Mitigations requirement
		Modify overvoltage protection settings
FLT14	2016WP	DEWIND-WTG 13.800
FLT59	2016WP	DEWIND-WTG 13.800
FLT61	2016WP	DEWIND-WTG 13.800
FLT62	2016WP	DEWIND-WTG 13.800
FLT68	2016WP	DEWIND-WTG 13.800
		A11-002-GEN113.800
	2017SP	DEWIND-WTG 13.800
		A11-002-GEN113.800
	2025SP	DEWIND-WTG 13.800
		A11-002-GEN113.800
FLT69	2016WP	DEWIND-WTG 13.800
		A11-002-GEN113.800
	2017SP	A11-002-GEN113.800
		A11-002-GEN113.800
FLT70	2016WP	DEWIND-WTG 13.800
		A11-002-GEN113.800
	2017SP	DEWIND-WTG 13.800
		A11-002-GEN113.800
	2025SP	A11-002-GEN113.800
FLT71	2016WP	DEWIND-WTG 13.800
		A11-002-GEN113.800
	2017SP	DEWIND-WTG 13.800
		A11-002-GEN113.800
FLT92	2016WP	DEWIND-WTG 13.800
FLT97	2016WP	DEWIND-WTG 13.800

5.4.2 Standalone scenario (GEN-2016-001)

The dynamic analysis results of the standalone scenario for GEN-2016-001 are summarized in Table 14. The primary reason for the system instability is due to the post contingency overvoltage that results in the trip of the prior queued generator GEN-2006-044.

Table 14: Summary of stability results for standalone scenario (GEN-2016-001)

Contingency Name	GEN-2016-001		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT01	Ok	Ok	Ok
FLT02	Ok	Ok	Ok
FLT03	Ok	Ok	Ok
FLT04	Ok	Ok	Ok
FLT05	Ok	Ok	Ok
FLT06	Ok	Ok	Ok
FLT07	Ok	Ok	Ok
FLT08	Ok	Ok	Ok
FLT09	Ok	Ok	Ok
FLT10	Ok	Ok	Ok
FLT11	Ok	Ok	Ok
FLT12	Ok	Ok	Ok
FLT13	Ok	Ok	Ok
FLT14	NO	Ok	Ok
FLT15	Ok	Ok	Ok
FLT16	NO	Ok	Ok
FLT17	Ok	Ok	Ok
FLT18	Ok	Ok	Ok
FLT19	Ok	Ok	Ok
FLT20	Ok	Ok	Ok
FLT21	Ok	Ok	Ok
FLT22	Ok	Ok	Ok
FLT23	Ok	Ok	Ok
FLT24	Ok	Ok	Ok
FLT25	Ok	Ok	Ok
FLT26	Ok	Ok	Ok
FLT27	Ok	Ok	Ok
FLT28	Ok	Ok	Ok
FLT29	Ok	Ok	Ok
FLT30	Ok	Ok	Ok
FLT31	Ok	Ok	Ok
FLT32	Ok	Ok	Ok

Contingency Name	GEN-2016-001		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT33	Ok	Ok	Ok
FLT34	Ok	Ok	Ok
FLT35	Ok	Ok	Ok
FLT36	Ok	Ok	Ok
FLT37	Ok	Ok	Ok
FLT38	Ok	Ok	Ok
FLT39	Ok	Ok	Ok
FLT40	Ok	Ok	Ok
FLT41	Ok	Ok	Ok
FLT42	Ok	Ok	Ok
FLT43	Ok	Ok	Ok
FLT44	Ok	Ok	Ok
FLT45	Ok	Ok	Ok
FLT46	Ok	Ok	Ok
FLT47	Ok	Ok	Ok
FLT48	Ok	Ok	Ok
FLT49	Ok	Ok	Ok
FLT50	Ok	Ok	Ok
FLT51 (25SP Only)	N/A	N/A	Ok
FLT52	Ok	Ok	Ok
FLT53	Ok	Ok	Ok
FLT54	Ok	Ok	Ok
FLT55	Ok	Ok	Ok
FLT56 (17SP and 25SP Only)	N/A	Ok	Ok
FLT57 (16WP only)	Ok	N/A	N/A
FLT58	Ok	Ok	Ok
FLT59	NO	Ok	Ok
FLT60	Ok	Ok	Ok
FLT61	Ok	Ok	Ok
FLT62	Ok	Ok	Ok
FLT63	Ok	Ok	Ok
FLT64	Ok	Ok	Ok
FLT65	Ok	Ok	Ok
FLT66	N/A	N/A	N/A
FLT67	N/A	N/A	N/A
FLT68	N/A	N/A	N/A
FLT69	N/A	N/A	N/A

Contingency Name	GEN-2016-001		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT70	N/A	N/A	N/A
FLT71	N/A	N/A	N/A
FLT72	N/A	N/A	N/A
FLT73	N/A	N/A	N/A
FLT74	N/A	N/A	N/A
FLT75	N/A	N/A	N/A
FLT76	N/A	N/A	N/A
FLT77	N/A	N/A	N/A
FLT78	N/A	N/A	N/A
FLT79	N/A	N/A	N/A
FLT80	N/A	N/A	N/A
FLT81	N/A	N/A	N/A
FLT82	N/A	N/A	N/A
FLT83	N/A	N/A	N/A
FLT84	N/A	N/A	N/A
FLT85	N/A	N/A	N/A
FLT86	N/A	N/A	N/A
FLT87	N/A	N/A	N/A
FLT88-PO	Ok	Ok	Ok
(17SP and 25SP Only)	N/A	N/A	N/A
FLT89-PO	Ok	Ok	Ok
(17SP and 25SP Only)	N/A	N/A	N/A
FLT90-PO (16WP Only)	Ok	N/A	N/A
FLT91-PO (16WP Only)	NO	N/A	N/A
FLT92-PO	NO	Ok	Ok
FLT93-PO	Ok	Ok	Ok
(17SP and 25SP Only)	N/A	N/A	N/A
FLT94-SB	Ok	Ok	Ok
FLT95-SB	Ok	Ok	Ok
FLT96-SB	Ok	Ok	Ok
FLT97-SB	NO**	Ok	Ok
FLT98-SB (16WP Only)	NO	N/A	N/A
FLT99-SB	Ok	Ok	Ok
FLT100-SB	Ok	Ok	Ok
FLT101-PO	N/A	N/A	N/A
FLT102-PO	N/A	N/A	N/A
FLT103-SB	N/A	N/A	N/A

Contingency Name	GEN-2016-001		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT104-PO	N/A	N/A	N/A
FLT105-PO	N/A	N/A	N/A
FLT106-PO	N/A	N/A	N/A
FLT107-PO	N/A	N/A	N/A
FLT108-SB	N/A	N/A	N/A
FLT109-SB	N/A	N/A	N/A
FLT110-SB	N/A	N/A	N/A
FLT111-SB	N/A	N/A	N/A

5.4.2.1 Mitigation Measures

The over-voltage protection settings for GEN-2006-044 were corrected to allow this prior queued project to ride through all simulated contingencies listed in Table 14. The modified settings are shown in Appendix B.

Table 15 shows the contingencies that resulted in system instability and impacted the prior queued project GEN-2006-044.

Selected pre and post mitigation dynamic simulation plots are included in Appendix E for standalone scenario (GEN-2016-001).

Table 15: Mitigation measures required for Standalone scenario (GEN-2016-001)

Contingency Name	Base case	Mitigations required
		Modify overvoltage protection settings
FLT14	2016WP	DEWIND-WTG 13.800
FLT16	2016WP	DEWIND-WTG 13.800
FLT59	2016WP	DEWIND-WTG 13.800
FLT91	2016WP	DEWIND-WTG 13.800
FLT92	2016WP	DEWIND-WTG 13.800
FLT97	2016WP	DEWIND-WTG 13.800
FLT98	2016WP	DEWIND-WTG 13.800

5.4.3 Standalone scenario (GEN-2016-038)

The dynamic analysis results of the standalone scenario for GEN-2015-038 are summarized in Table 16. The primary reason for the system instability is due to the post contingency overvoltage

that results in the trip of the prior queued generators GEN-2006-044 and ASGI-2011-002, and post contingency under-voltage tripping of GEN-2016-038.

Table 16: Summary of stability results for standalone scenario (GEN-2016-038)

Contingency Name	GEN-2016-038		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT01	N/A	N/A	N/A
FLT02	N/A	N/A	N/A
FLT03	N/A	N/A	N/A
FLT04	N/A	N/A	N/A
FLT05	N/A	N/A	N/A
FLT06	N/A	N/A	N/A
FLT07	N/A	N/A	N/A
FLT08	N/A	N/A	N/A
FLT09	N/A	N/A	N/A
FLT10	N/A	N/A	N/A
FLT11	N/A	N/A	N/A
FLT12	N/A	N/A	N/A
FLT13	N/A	N/A	N/A
FLT14	N/A	N/A	N/A
FLT15	N/A	N/A	N/A
FLT16	N/A	N/A	N/A
FLT17	N/A	N/A	N/A
FLT18	N/A	N/A	N/A
FLT19	N/A	N/A	N/A
FLT20	N/A	N/A	N/A
FLT21	N/A	N/A	N/A
FLT22	N/A	N/A	N/A
FLT23	N/A	N/A	N/A
FLT24	N/A	N/A	N/A
FLT25	N/A	N/A	N/A
FLT26	N/A	N/A	N/A
FLT27	N/A	N/A	N/A
FLT28	N/A	N/A	N/A
FLT29	N/A	N/A	N/A
FLT30	N/A	N/A	N/A
FLT31	N/A	N/A	N/A

Contingency Name	GEN-2016-038		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT32	N/A	N/A	N/A
FLT33	N/A	N/A	N/A
FLT34	N/A	N/A	N/A
FLT35	N/A	N/A	N/A
FLT36	N/A	N/A	N/A
FLT37	N/A	N/A	N/A
FLT38	N/A	N/A	N/A
FLT39	N/A	N/A	N/A
FLT40	N/A	N/A	N/A
FLT41	N/A	N/A	N/A
FLT42	N/A	N/A	N/A
FLT43	N/A	N/A	N/A
FLT44	N/A	N/A	N/A
FLT45	N/A	N/A	N/A
FLT46	N/A	N/A	N/A
FLT47	N/A	N/A	N/A
FLT48	N/A	N/A	N/A
FLT49	N/A	N/A	N/A
FLT50	N/A	N/A	N/A
FLT51 (25SP Only)	N/A	N/A	N/A
FLT52	N/A	N/A	N/A
FLT53	N/A	N/A	N/A
FLT54	N/A	N/A	N/A
FLT55	N/A	N/A	N/A
FLT56 (17SP and 25SP Only)	N/A	N/A	N/A
FLT57 (16WP only)	N/A	N/A	N/A
FLT58	N/A	N/A	N/A
FLT59	N/A	N/A	N/A
FLT60	Ok	Ok	Ok
FLT61	N/A	N/A	N/A
FLT62	N/A	N/A	N/A
FLT63	N/A	N/A	N/A
FLT64	N/A	N/A	N/A
FLT65	N/A	N/A	N/A
FLT66	N/A	N/A	N/A
FLT67	N/A	N/A	N/A
FLT68	NO	NO	NO

Contingency Name	GEN-2016-038		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT69	NO	NO	NO
FLT70	NO	NO	NO
FLT71	NO	NO	NO
FLT72	N/A	N/A	N/A
FLT73	N/A	N/A	N/A
FLT74	N/A	N/A	N/A
FLT75	N/A	N/A	N/A
FLT76	N/A	N/A	N/A
FLT77	N/A	N/A	N/A
FLT78	N/A	N/A	N/A
FLT79	N/A	N/A	N/A
FLT80	NO	NO	NO
FLT81	NO	NO	NO
FLT82	NO*	NO	NO
FLT83	NO*	NO	NO
FLT84	NO	NO	NO
FLT85	NO	NO	NO
FLT86	NO	NO	NO
FLT87	Ok	Ok	Ok
FLT88-PO	N/A	N/A	N/A
(17SP and 25SP Only)	N/A	N/A	N/A
FLT89-PO	N/A	N/A	N/A
(17SP and 25SP Only)	N/A	N/A	N/A
FLT90-PO (16WP Only)	N/A	N/A	N/A
FLT91-PO (16WP Only)	N/A	N/A	N/A
FLT92-PO	N/A	N/A	N/A
FLT93-PO	N/A	N/A	N/A
(17SP and 25SP Only)	N/A	N/A	N/A
FLT94-SB	N/A	N/A	N/A
FLT95-SB	N/A	N/A	N/A
FLT96-SB	N/A	N/A	N/A
FLT97-SB	N/A	N/A	N/A
FLT98-SB (16WP Only)	N/A	N/A	N/A
FLT99-SB	N/A	N/A	N/A
FLT100-SB	N/A	N/A	N/A
FLT101-PO	N/A	N/A	N/A
FLT102-PO	N/A	N/A	N/A

Contingency Name	GEN-2016-038		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT103-SB	N/A	N/A	N/A
FLT104-PO	Ok	Ok	Ok
FLT105-PO	Ok	Ok	Ok
FLT106-PO	Ok	Ok	Ok
FLT107-PO	Ok	Ok	Ok
FLT108-SB	NO	NO	NO
FLT109-SB	Ok	NO	NO
FLT110-SB	NO	NO	NO
FLT111-SB	NO	NO	NO

5.4.3.1 Mitigation Measures

The over-voltage protection settings for GEN-2006-044 and ASGI-2011-002 were corrected to allow both prior queued projects to ride through all simulated contingencies listed in Table 16. The modified settings for GEN-2006-044 and ASGI-2011-002 are shown in Appendix B.

Static Var Compensators (SVCs) were used to mitigate the post contingency under-voltage tripping of project GEN-2016-038. Table 17 shows the SVC requirements that when modeled at the 34.5 kV collector buses of GEN-2016-038 allow its generators to ride through all simulated contingencies listed in Table 16.

Table 17 shows the contingencies that resulted in system instability and impacted the prior queued projects GEN-2006-044 and ASGI-2011-002, and project GEN-2016-038.

Selected pre and post mitigation dynamic simulation plots are included in Appendix F for standalone scenario (GEN-2016-038).

Table 17: Mitigation measures required for Standalone scenario (GEN-2016-038)

Contingency Name	Base case	Mitigations required		
		Units requiring SVC	Modify overvoltage protection settings	SVC Requirements
FLT104	2025SP	G16-038-GEN20.6900		90/10 MVAR (Capacitive/Inductive)
FLT105		G16-038-GEN20.6900		
FLT106		G16-038-GEN20.6900		
FLT107		G16-038-GEN20.6900		
FLT109	2017SP		A11-002-GEN113.800	
	2025SP		A11-002-GEN113.800	
FLT68	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	

Contingency Name	Base case	Mitigations required		
		Units requiring SVC	Modify overvoltage protection settings	SVC Requirements
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2025SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
FLT69	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
		G16-038-GEN20.6900		80/10 MVAR (Capacitive/Inductive)
		G16-038-GEN10.6900		
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
		G16-038-GEN20.6900		80/10 MVAR (Capacitive/Inductive)
		G16-038-GEN10.6900		
	2025SP		A11-002-GEN113.800	
		G16-038-GEN20.6900		90/10 MVAR (Capacitive/Inductive)
		G16-038-GEN10.6900		
FLT70	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
		G16-038-GEN20.6900		80/10 MVAR (Capacitive/Inductive)
		G16-038-GEN10.6900		
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
		G16-038-GEN20.6900		80/10 MVAR (Capacitive/Inductive)
		G16-038-GEN10.6900		
	2025SP		A11-002-GEN113.800	
		G16-038-GEN20.6900		90/10 MVAR (Capacitive/Inductive
		G16-038-GEN10.6900		
FLT71	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
		G16-038-GEN20.6900		80/10 MVAR (Capacitive/Inductive)
		G16-038-GEN10.6900		
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
		G16-038-GEN20.6900		80/10 MVAR (Capacitive/Inductive)
		G16-038-GEN10.6900		
	2025SP		A11-002-GEN113.800	
FLT80	2016WP		DEWIND-WTG 13.800	

Contingency Name	Base case	Mitigations required		
		Units requiring SVC	Modify overvoltage protection settings	SVC Requirements
			A11-002-GEN113.800	
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
		G16-038-GEN20.6900		80/10 MVAR (Capacitive/Inductive)
	2025SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
FLT81	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2025SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
FLT82	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2025SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
FLT83	2016WP	G16-038-GEN10.6900		80/10 MVAR (Capacitive/Inductive)
		G16-038-GEN20.6900		
			DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2025SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
FLT84	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2025SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
FLT85	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2017SP		DEWIND-WTG 13.800	

Contingency Name	Base case	Mitigations required		
		Units requiring SVC	Modify overvoltage protection settings	SVC Requirements
			A11-002-GEN113.800	
	2025SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
FLT86	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2025SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	

5.4.4 Standalone scenario (GEN-2016-041)

The dynamic analysis results of the standalone scenario for GEN-2015-041 are summarized in Table 18. The primary reason for the system instability is due to the post contingency overvoltage that results in the trip of the prior queued generators GEN-2006-044 and ASGI-2011-002, and post contingency over-frequency that trips GEN-2016-041.

Table 18: Summary of stability results for standalone scenario (GEN-2016-041)

Contingency Name	GEN-2016-041		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT01	Ok	Ok	Ok
FLT02	Ok	Ok	Ok
FLT03	Ok	Ok	Ok
FLT04	Ok	Ok	Ok
FLT05	Ok	Ok	Ok
FLT06	Ok	Ok	Ok
FLT07	Ok	Ok	Ok
FLT08	Ok	Ok	Ok
FLT09	Ok	Ok	Ok
FLT10	Ok	Ok	Ok
FLT11	Ok	Ok	Ok
FLT12	Ok	Ok	Ok
FLT13	Ok	Ok	Ok
FLT14	NO	NO	NO
FLT15	NMR	NMR	NMR
FLT16	NO	NO	NO
FLT17	NMR	NMR	NMR

Contingency Name	GEN-2016-041		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT18	Ok	Ok	Ok
FLT19	N/A	N/A	N/A
FLT20	N/A	N/A	N/A
FLT21	N/A	N/A	N/A
FLT22	N/A	N/A	N/A
FLT23	N/A	N/A	N/A
FLT24	N/A	N/A	N/A
FLT25	N/A	N/A	N/A
FLT26	N/A	N/A	N/A
FLT27	N/A	N/A	N/A
FLT28	N/A	N/A	N/A
FLT29	N/A	N/A	N/A
FLT30	N/A	N/A	N/A
FLT31	N/A	N/A	N/A
FLT32	N/A	N/A	N/A
FLT33	N/A	N/A	N/A
FLT34	N/A	N/A	N/A
FLT35	N/A	N/A	N/A
FLT36	N/A	N/A	N/A
FLT37	N/A	N/A	N/A
FLT38	N/A	N/A	N/A
FLT39	N/A	N/A	N/A
FLT40	N/A	N/A	N/A
FLT41	N/A	N/A	N/A
FLT42	N/A	N/A	N/A
FLT43	N/A	N/A	N/A
FLT44	N/A	N/A	N/A
FLT45	N/A	N/A	N/A
FLT46	N/A	N/A	N/A
FLT47	N/A	N/A	N/A
FLT48	N/A	N/A	N/A
FLT49	N/A	N/A	N/A
FLT50	N/A	N/A	N/A
FLT51 (25SP Only)	N/A	N/A	N/A
FLT52	N/A	N/A	N/A
FLT53	N/A	N/A	N/A
FLT54	N/A	N/A	N/A

Contingency Name	GEN-2016-041		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT55	N/A	N/A	N/A
FLT56 (17SP and 25SP Only)	N/A	NO	Ok
FLT57 (16WP only)	NO	N/A	N/A
FLT58	NO	NO	NO
FLT59	NO	NO	NO
FLT60	Ok	Ok	Ok
FLT61	NO	Ok	Ok
FLT62	NO	Ok	Ok
FLT63	Ok	Ok	Ok
FLT64	Ok	Ok	Ok
FLT65	Ok	Ok	Ok
FLT66	Ok	Ok	Ok
FLT67	Ok	Ok	Ok
FLT68	NO	Ok	NO
FLT69	NO	Ok	NO
FLT70	NO	Ok	NO
FLT71	NO	Ok	Ok
FLT72	N/A	N/A	N/A
FLT73	N/A	N/A	N/A
FLT74	N/A	N/A	N/A
FLT75	N/A	N/A	N/A
FLT76	N/A	N/A	N/A
FLT77	N/A	N/A	N/A
FLT78	N/A	N/A	N/A
FLT79	N/A	N/A	N/A
FLT80	N/A	N/A	N/A
FLT81	NO	Ok	NO
FLT82	N/A	N/A	N/A
FLT83	NO	Ok	NO
FLT84	N/A	N/A	N/A
FLT85	N/A	N/A	N/A
FLT86	N/A	N/A	N/A
FLT87	N/A	N/A	N/A
FLT88-PO	Ok	Ok	Ok
(17SP and 25SP Only)	N/A	N/A	N/A
FLT89-PO	Ok	Ok	Ok
(17SP and 25SP Only)	N/A	N/A	N/A

Contingency Name	GEN-2016-041		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT90-PO (16WP Only)	NO	N/A	N/A
FLT91-PO (16WP Only)	NO	N/A	N/A
FLT92-PO	Ok	Ok	Ok
FLT93-PO	Ok	Ok	Ok
(17SP and 25SP Only)	N/A	N/A	N/A
FLT94-SB	Ok	Ok	Ok
FLT95-SB	N/A	N/A	N/A
FLT96-SB	Ok	Ok	Ok
FLT97-SB	NO	Ok	Ok
FLT98-SB (16WP Only)	Ok	N/A	N/A
FLT99-SB	Ok	Ok	Ok
FLT100-SB	Ok	Ok	Ok
FLT101-PO	N/A	N/A	N/A
FLT102-PO	N/A	N/A	N/A
FLT103-SB	N/A	N/A	N/A
FLT104-PO	N/A	N/A	N/A
FLT105-PO	N/A	N/A	N/A
FLT106-PO	N/A	N/A	N/A
FLT107-PO	N/A	N/A	N/A
FLT108-SB	N/A	N/A	N/A
FLT109-SB	N/A	N/A	N/A
FLT110-SB	N/A	N/A	N/A
FLT111-SB	N/A	N/A	N/A

5.4.4.1 Mitigation Measures

The over-voltage protection settings for GEN-2006-044 and ASGI-2011-002 were corrected to allow both prior queued projects to ride through all simulated contingencies listed in Table 18. The modified settings for GEN-2006-044 and ASGI-2011-002 are shown in Appendix B.

Extended frequency protection was used to mitigate post contingency over-frequency violations that impacted GEN-2016-041 for several contingencies. The over-frequency threshold and time delay trip settings of GEN-2016-041 were extended to 62.5 hertz and 2.0 seconds, respectively. This change in over-frequency settings allowed GEN-2016-041 to ride through all simulated contingencies listed in Table 18. The PV inverter vendor should be consulted to determine valid frequency protection settings.

Table 19 shows the contingencies that resulted in system instability and impacted the prior queued projects GEN-2006-044 and ASGI-2011-002, and project GEN-2016-041.

Selected pre and post mitigation dynamic simulation plots are included in Appendix G for standalone scenario (GEN-2016-041).

Table 19: Mitigation measures required for Standalone scenario (GEN-2016-041)

Contingency Name	Base case	Mitigations required		
		Voltage/Frequency tripping disabled	Extended Frequency Protection Required	Mitigation Requirements
FLT14	2016WP		G16-041-GEN10.4800	62.5Hz,2.0 sec (Over Frequency settings)
		DEWIND-WTG 13.800		
	2017SP		G16-041-GEN10.4800	62.5Hz,2.0 sec (Over Frequency settings)
	2025SP		G16-041-GEN10.4800	
FLT16	2016WP		G16-041-GEN10.4800	62.5Hz,2.0 sec (Over Frequency settings)
		DEWIND-WTG 13.800		
	2017SP		G16-041-GEN10.4800	62.5Hz,2.0 sec (Over Frequency settings)
	2025SP		G16-041-GEN10.4800	
FLT56	2017SP		G16-041-GEN10.4800	62.5Hz,2.0 sec (Over Frequency settings)
	2025SP		G16-041-GEN10.4800	
FLT57	2016WP		G16-041-GEN10.4800	62.5Hz,2.0 sec (Over Frequency settings)
FLT58	2016WP		G16-041-GEN10.4800	62.5Hz,2.0 sec (Over Frequency settings)
	2017SP		G16-041-GEN10.4800	
	2025SP		G16-041-GEN10.4800	
FLT59	2016WP		G16-041-GEN10.4800	
		DEWIND-WTG 13.800		
	2017SP		G16-041-GEN10.4800	62.5Hz,2.0 sec (Over Frequency settings)
	2025SP		G16-041-GEN10.4800	
FLT61	2016WP	DEWIND-WTG 13.800		
FLT62	2016WP	DEWIND-WTG 13.800		
FLT68	2016WP	DEWIND-WTG 13.800		
		A11-002-GEN113.800		
	2025SP	DEWIND-WTG 13.800		
		A11-002-GEN113.800		
FLT69	2016WP	DEWIND-WTG 13.800		
		A11-002-GEN113.800		
	2025SP	A11-002-GEN113.800		

Contingency Name	Base case	Mitigations required		
		Voltage/Frequency tripping disabled	Extended Frequency Protection Required	Mitigation Requirements
FLT70	2016WP	DEWIND-WTG 13.800		
		A11-002-GEN113.800		
	2025SP	A11-002-GEN113.800		
FLT71	2016WP	DEWIND-WTG 13.800		
		A11-002-GEN113.800		
FLT81	2016WP	DEWIND-WTG 13.800		
		A11-002-GEN113.800		
	2025SP	DEWIND-WTG 13.800		
		A11-002-GEN113.800		
FLT83	2016WP	DEWIND-WTG 13.800		
		A11-002-GEN113.800		
	2025SP	DEWIND-WTG 13.800		
		A11-002-GEN113.800		
FLT90	2016WP		G16-041-GEN10.4800	62.5Hz,2.0 sec (Over Frequency settings)
		DEWIND-WTG 13.800		
FLT91	2016WP		G16-041-GEN10.4800	62.5Hz,2.0 sec (Over Frequency settings)
		DEWIND-WTG 13.800		
FLT97	2016WP	DEWIND-WTG 13.800		

5.4.5 Standalone scenario (GEN-2016-059)

The dynamic analysis results of the standalone scenario for GEN-2015-059 are summarized in Table 20. The primary reason for the system instability is due to the post contingency overvoltage that results in the trip of the prior queued generators GEN-2006-044 and ASGI-2011-002, and post contingency under-voltage tripping of GEN-2016-059.

Table 20: Summary of stability results for standalone scenario (GEN-2016-059)

Contingency Name	GEN-2016-059		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT01	N/A	N/A	N/A
FLT02	N/A	N/A	N/A
FLT03	N/A	N/A	N/A
FLT04	N/A	N/A	N/A
FLT05	N/A	N/A	N/A
FLT06	N/A	N/A	N/A
FLT07	N/A	N/A	N/A
FLT08	N/A	N/A	N/A
FLT09	N/A	N/A	N/A
FLT10	N/A	N/A	N/A
FLT11	N/A	N/A	N/A
FLT12	N/A	N/A	N/A
FLT13	N/A	N/A	N/A
FLT14	N/A	N/A	N/A
FLT15	N/A	N/A	N/A
FLT16	N/A	N/A	N/A
FLT17	N/A	N/A	N/A
FLT18	N/A	N/A	N/A
FLT19	N/A	N/A	N/A
FLT20	N/A	N/A	N/A
FLT21	N/A	N/A	N/A
FLT22	N/A	N/A	N/A
FLT23	N/A	N/A	N/A
FLT24	N/A	N/A	N/A
FLT25	N/A	N/A	N/A
FLT26	N/A	N/A	N/A
FLT27	N/A	N/A	N/A
FLT28	N/A	N/A	N/A
FLT29	N/A	N/A	N/A

Contingency Name	GEN-2016-059		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT30	N/A	N/A	N/A
FLT31	N/A	N/A	N/A
FLT32	N/A	N/A	N/A
FLT33	N/A	N/A	N/A
FLT34	N/A	N/A	N/A
FLT35	N/A	N/A	N/A
FLT36	N/A	N/A	N/A
FLT37	N/A	N/A	N/A
FLT38	N/A	N/A	N/A
FLT39	N/A	N/A	N/A
FLT40	N/A	N/A	N/A
FLT41	N/A	N/A	N/A
FLT42	N/A	N/A	N/A
FLT43	N/A	N/A	N/A
FLT44	N/A	N/A	N/A
FLT45	N/A	N/A	N/A
FLT46	N/A	N/A	N/A
FLT47	N/A	N/A	N/A
FLT48	N/A	N/A	N/A
FLT49	N/A	N/A	N/A
FLT50	N/A	N/A	N/A
FLT51 (25SP Only)	N/A	N/A	N/A
FLT52	N/A	N/A	N/A
FLT53	N/A	N/A	N/A
FLT54	N/A	N/A	N/A
FLT55	N/A	N/A	N/A
FLT56 (17SP and 25SP Only)	N/A	N/A	N/A
FLT57 (16WP only)	N/A	N/A	N/A
FLT58	N/A	N/A	N/A
FLT59	N/A	N/A	N/A
FLT60	Ok	Ok	Ok
FLT61	N/A	N/A	N/A
FLT62	N/A	N/A	N/A
FLT63	N/A	N/A	N/A
FLT64	N/A	N/A	N/A
FLT65	N/A	N/A	N/A
FLT66	N/A	N/A	N/A

Contingency Name	GEN-2016-059		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT67	N/A	N/A	N/A
FLT68	NO	NO	NO
FLT69	NO	NO	NO
FLT70	NO	NO	NO
FLT71	NO	NO	NO
FLT72	N/A	N/A	N/A
FLT73	N/A	N/A	N/A
FLT74	N/A	N/A	N/A
FLT75	N/A	N/A	N/A
FLT76	N/A	N/A	N/A
FLT77	N/A	N/A	N/A
FLT78	N/A	N/A	N/A
FLT79	N/A	N/A	N/A
FLT80	NO	NO	NO
FLT81	NO	NO	NO
FLT82	NO	NO	NO
FLT83	NO	NO	NO
FLT84	NO	NO	NO
FLT85	NO	NO	NO
FLT86	NO	NO	NO
FLT87	Ok	Ok	Ok
FLT88-PO	N/A	N/A	N/A
(17SP and 25SP Only)	N/A	N/A	N/A
FLT89-PO	N/A	N/A	N/A
(17SP and 25SP Only)	N/A	N/A	N/A
FLT90-PO (16WP Only)	N/A	N/A	N/A
FLT91-PO (16WP Only)	N/A	N/A	N/A
FLT92-PO	N/A	N/A	N/A
FLT93-PO	N/A	N/A	N/A
(17SP and 25SP Only)	N/A	N/A	N/A
FLT94-SB	N/A	N/A	N/A
FLT95-SB	N/A	N/A	N/A
FLT96-SB	N/A	N/A	N/A
FLT97-SB	N/A	N/A	N/A
FLT98-SB (16WP Only)	N/A	N/A	N/A
FLT99-SB	N/A	N/A	N/A
FLT100-SB	N/A	N/A	N/A

Contingency Name	GEN-2016-059		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT101-PO	N/A	N/A	N/A
FLT102-PO	N/A	N/A	N/A
FLT103-SB	N/A	N/A	N/A
FLT104-PO	Ok	Ok	Ok
FLT105-PO	Ok	Ok	Ok
FLT106-PO	Ok	Ok	Ok
FLT107-PO	Ok	Ok	Ok
FLT108-SB	NO	NO	NO
FLT109-SB	Ok	NO	NO
FLT110-SB	NO	NO	NO
FLT111-SB	NO	NO	NO

5.4.5.1 Mitigation Measures

The over-voltage protection settings for GEN-2006-044 and ASGI-2011-002 were corrected to allow both prior queued projects to ride through all simulated contingencies listed in Table 16. The modified settings for GEN-2006-044 and ASGI-2011-002 are shown in Appendix B.

Static Var Compensators (SVCs) were used to mitigate the post contingency under-voltage tripping of project GEN-2016-059. Table 21 shows the SVC requirements that when modeled at the 34.5 kV bus of GEN-2016-059 allow its generators to ride through all simulated contingencies listed in Table 20.

Table 21 shows the contingencies that resulted in system instability and impacted the prior queued projects GEN-2006-044 and ASGI-2011-002, and project GEN-2016-059.

Selected pre and post mitigation dynamic simulation plots are included in Appendix H for standalone scenario (GEN-2016-059).

Table 21: Mitigation measures required for Standalone scenario (GEN-2016-059)

Contingency Name	Base case	Mitigations required		
		Units requiring SVC	Modify overvoltage protection settings	Mitigation Requirements
FLT109	2017SP		A11-002-GEN113.800	
	2025SP		A11-002-GEN113.800	
FLT68	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	

Contingency Name	Base case	Mitigations required		
		Units requiring SVC	Modify overvoltage protection settings	Mitigation Requirements
	2025SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
FLT69	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
		G16-059-GEN20.6900		60/40MVAR (Capacitive/Inductive)
		G16-059-GEN10.6900		
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
		G16-059-GEN20.6900		80/10MVAR (Capacitive/Inductive)
		G16-059-GEN10.6900		
	2025SP		A11-002-GEN113.800	
		G16-059-GEN20.6900		105/30MVAR (Capacitive/Inductive)
		G16-059-GEN10.6900		
FLT70	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
		G16-059-GEN20.6900		60/40MVAR (Capacitive/Inductive)
		G16-059-GEN10.6900		
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
		G16-059-GEN20.6900		80/10MVAR (Capacitive/Inductive)
		G16-059-GEN10.6900		80/10MVAR (Capacitive/Inductive)
	2025SP		A11-002-GEN113.800	
		G16-059-GEN20.6900		105/30MVAR (Capacitive/Inductive)
		G16-059-GEN10.6900		
FLT71	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
		G16-059-GEN20.6900		60/40MVAR (Capacitive/Inductive)
		G16-059-GEN10.6900		
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
		G16-059-GEN20.6900		80/10MVAR (Capacitive/Inductive)
		G16-059-GEN10.6900		
	2025SP		A11-002-GEN113.800	
		G16-059-GEN20.6900		

Contingency Name	Base case	Mitigations required		
		Units requiring SVC	Modify overvoltage protection settings	Mitigation Requirements
		G16-059-GEN10.6900		105/30MVAR (Capacitive/Inductive)
FLT80	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2025SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
FLT81	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2025SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
FLT82	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2025SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
FLT83	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2025SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
FLT84	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
		G16-059-GEN20.6900		60/40MVAR (Capacitive/Inductive)
		G16-059-GEN10.6900		
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2025SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
FLT85	2016WP		DEWIND-WTG 13.800	

Contingency Name	Base case	Mitigations required		
		Units requiring SVC	Modify overvoltage protection settings	Mitigation Requirements
			A11-002-GEN113.800	
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2025SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
FLT86	2016WP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
		G16-059-GEN20.6900		60/40MVAR (Capacitive/Inductive)
		G16-059-GEN10.6900		
	2017SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	
	2025SP		DEWIND-WTG 13.800	
			A11-002-GEN113.800	

5.4.6 Standalone scenario (GEN-2016-070)

The dynamic analysis results of the standalone scenario for GEN-2016-070 are summarized in Table 22. The primary reason for the system instability is due to the post contingency overvoltage that results in the trip of the prior queued generators GEN-2006-044 and ASGI-2011-002.

Table 22: Summary of stability results for standalone scenario (GEN-2016-070)

Contingency Name	GEN-2016-070		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT01	N/A	N/A	N/A
FLT02	N/A	N/A	N/A
FLT03	N/A	N/A	N/A
FLT04	N/A	N/A	N/A
FLT05	N/A	N/A	N/A
FLT06	N/A	N/A	N/A
FLT07	N/A	N/A	N/A
FLT08	N/A	N/A	N/A
FLT09	N/A	N/A	N/A
FLT10	N/A	N/A	N/A
FLT11	N/A	N/A	N/A
FLT12	N/A	N/A	N/A
FLT13	N/A	N/A	N/A
FLT14	N/A	N/A	N/A
FLT15	N/A	N/A	N/A
FLT16	N/A	N/A	N/A
FLT17	N/A	N/A	N/A
FLT18	N/A	N/A	N/A
FLT19	N/A	N/A	N/A
FLT20	N/A	N/A	N/A
FLT21	N/A	N/A	N/A
FLT22	N/A	N/A	N/A
FLT23	N/A	N/A	N/A
FLT24	N/A	N/A	N/A
FLT25	N/A	N/A	N/A
FLT26	N/A	N/A	N/A
FLT27	N/A	N/A	N/A
FLT28	N/A	N/A	N/A
FLT29	N/A	N/A	N/A
FLT30	N/A	N/A	N/A

Contingency Name	GEN-2016-070		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT31	N/A	N/A	N/A
FLT32	N/A	N/A	N/A
FLT33	N/A	N/A	N/A
FLT34	N/A	N/A	N/A
FLT35	N/A	N/A	N/A
FLT36	N/A	N/A	N/A
FLT37	N/A	N/A	N/A
FLT38	N/A	N/A	N/A
FLT39	N/A	N/A	N/A
FLT40	N/A	N/A	N/A
FLT41	N/A	N/A	N/A
FLT42	N/A	N/A	N/A
FLT43	N/A	N/A	N/A
FLT44	N/A	N/A	N/A
FLT45	N/A	N/A	N/A
FLT46	N/A	N/A	N/A
FLT47	N/A	N/A	N/A
FLT48	N/A	N/A	N/A
FLT49	N/A	N/A	N/A
FLT50	N/A	N/A	N/A
FLT51 (25SP Only)	N/A	N/A	N/A
FLT52	N/A	N/A	N/A
FLT53	N/A	N/A	N/A
FLT54	N/A	N/A	N/A
FLT55	N/A	N/A	N/A
FLT56 (17SP and 25SP Only)	N/A	N/A	N/A
FLT57 (16WP only)	N/A	N/A	N/A
FLT58	N/A	N/A	N/A
FLT59	N/A	N/A	N/A
FLT60	N/A	N/A	N/A
FLT61	N/A	N/A	N/A
FLT62	N/A	N/A	N/A
FLT63	N/A	N/A	N/A
FLT64	N/A	N/A	N/A
FLT65	N/A	N/A	N/A
FLT66	N/A	N/A	N/A
FLT67	N/A	N/A	N/A

Contingency Name	GEN-2016-070		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT68	N/A	N/A	N/A
FLT69	N/A	N/A	N/A
FLT70	N/A	N/A	N/A
FLT71	N/A	N/A	N/A
FLT72	Ok	Ok	Ok
FLT73	Ok	Ok	Ok
FLT74	Ok	Ok	Ok
FLT75	Ok	Ok	Ok
FLT76	Ok	Ok	Ok
FLT77	Ok	Ok	Ok
FLT78	Ok	Ok	Ok
FLT79	Ok	Ok	Ok
FLT80	NO	NO	NO
FLT81	NO	NO	NO
FLT82	NO	NO	NO
FLT83	N/A	N/A	N/A
FLT84	N/A	N/A	N/A
FLT85	NO	NO	NO
FLT86	NO	NO	NO
FLT87	N/A	N/A	N/A
FLT88-PO	N/A	N/A	N/A
(17SP and 25SP Only)	N/A	N/A	N/A
FLT89-PO	N/A	N/A	N/A
(17SP and 25SP Only)	N/A	N/A	N/A
FLT90-PO (16WP Only)	N/A	N/A	N/A
FLT91-PO (16WP Only)	N/A	N/A	N/A
FLT92-PO	N/A	N/A	N/A
FLT93-PO	N/A	N/A	N/A
(17SP and 25SP Only)	N/A	N/A	N/A
FLT94-SB	N/A	N/A	N/A
FLT95-SB	N/A	N/A	N/A
FLT96-SB	N/A	N/A	N/A
FLT97-SB	N/A	N/A	N/A
FLT98-SB (16WP Only)	N/A	N/A	N/A
FLT99-SB	N/A	N/A	N/A
FLT100-SB	N/A	N/A	N/A
FLT101-PO	Ok	Ok	Ok

Contingency Name	GEN-2016-070		
3 Phase and 1 Phase Fault unless stated otherwise	2016WP	2017SP	2025SP
FLT102-PO	Ok	Ok	Ok
FLT103-SB	Ok	Ok	Ok
FLT104-PO	N/A	N/A	N/A
FLT105-PO	N/A	N/A	N/A
FLT106-PO	N/A	N/A	N/A
FLT107-PO	N/A	N/A	N/A
FLT108-SB	N/A	N/A	N/A
FLT109-SB	NO	NO	NO
FLT110-SB	N/A	N/A	N/A
FLT111-SB	N/A	N/A	N/A

5.4.6.1 Mitigation Measures

The over-voltage protection settings for GEN-2006-044 and ASGI-2011-002 were corrected to allow both prior queued projects to ride through all simulated contingencies listed in Table 22. The modified settings are shown in Appendix B.

Table 23 shows the contingencies that resulted in system instability and impacted the prior queued projects GEN-2006-044 and ASGI-2011-002.

Selected pre and post mitigation dynamic simulation plots are included in Appendix I for standalone scenario (GEN-2016-070).

Table 23: Mitigation measures required for Standalone scenario (GEN-2016-070)

Contingency Name	Base case	Mitigations required
		Modify overvoltage protection settings
FLT109	2016WP	DEWIND-WTG 13.800
		A11-002-GEN113.800
	2017SP	A11-002-GEN113.800
	2025SP	A11-002-GEN113.800
FLT80	2016WP	DEWIND-WTG 13.800
		A11-002-GEN113.800
	2017SP	DEWIND-WTG 13.800
		A11-002-GEN113.800
	2025SP	DEWIND-WTG 13.800
		A11-002-GEN113.800
FLT81	2016WP	DEWIND-WTG 13.800

Contingency Name	Base case	Mitigations required
		Modify overvoltage protection settings
		A11-002-GEN113.800
	2017SP	DEWIND-WTG 13.800
		A11-002-GEN113.800
	2025SP	DEWIND-WTG 13.800
		A11-002-GEN113.800
FLT82	2016WP	DEWIND-WTG 13.800
		A11-002-GEN113.800
	2017SP	DEWIND-WTG 13.800
		A11-002-GEN113.800
	2025SP	DEWIND-WTG 13.800
		A11-002-GEN113.800
FLT85	2016WP	DEWIND-WTG 13.800
		A11-002-GEN113.800
	2017SP	DEWIND-WTG 13.800
		A11-002-GEN113.800
		DEWIND-WTG 13.800
		A11-002-GEN113.800
	2025SP	DEWIND-WTG 13.800
		A11-002-GEN113.800
FLT86	2016WP	DEWIND-WTG 13.800
		A11-002-GEN113.800
	2017SP	DEWIND-WTG 13.800
		A11-002-GEN113.800
	2025SP	DEWIND-WTG 13.800
		A11-002-GEN113.800

6 Power factor analysis

Power factor analysis is to determine the reactive compensation needed to hold the scheduled voltage at the POI. The analysis was performed on the Cluster Scenario only.

The projects were turned off during the power factor analysis and replaced by a generator with no VAr capability on the HV bus of the projects. Each generator was dispatched at 100% output of the project. A VAr generator was modeled at the same HV bus and set to hold a voltage schedule at the POI consistent with the voltage schedule in the provided base case or 1.0 pu voltage (whichever is higher). The reactive power of the VAr generator is determined from the power flow calculations. All three phase N-1 faults listed in Appendix K were applied, and the power factor monitored.

The power factor analysis results for the listed faults are shown in Table 24, Table 25, Table 27, Table 28, Table 30 and Table 31. The results presented show that reactive power is needed to support the voltage at the studied area.

Further analysis was performed on the Cluster Scenario using the low wind/no wind conditions. The analysis consisted of the following:

- The generator and capacitor bank (if installed) were switched out of service with the collector system as modeled remaining in service.

- The resulting reactive power injection into the transmission network comes from the capacitance of the project's transmission lines and collector cables. This reactive power injection is measured at the POI. Shunt reactors were added at the study project substation high side bus to bring the MVAr flow into the POI down to approximately zero.

The results of this analysis are summarized in Table 26, Table 29, and Table 32.

Table 24: Power factor analysis for 2016 WP Base Case (GEN-2015-082, GEN-2016-001, GEN-2016-038)

Contingency	GEN-2015-082			GEN-2016-001			GEN-2016-038		
	Q(MVAR)	PF[1]		Q(MVAR)	PF		Q(MVAR)	PF	
Base Case	108.42	0.84	lag	179.13	0.84	lag	45.98	0.99	lag
FLT1_3PH	111.06	0.84	lag	189.21	0.83	lag	46.96	0.99	lead
FLT2_3PH	111.06	0.84	lag	189.21	0.83	lag	46.96	0.99	lead
FLT5_3PH	118.50	0.83	lag	151.49	0.88	lag	46.62	0.99	lead
FLT7_3PH	103.33	0.85	lag	226.60	0.78	lag	47.11	0.99	lead
FLT9_3PH	102.25	0.86	lag	193.54	0.83	lag	47.28	0.99	lead
FLT11_3PH	108.42	0.84	lag	179.13	0.84	lag	45.98	0.99	lead
FLT12_3PH	108.92	0.84	lag	205.37	0.81	lag	46.34	0.99	lead

[1] Lagging power factor is the generator providing vars. Leading power factor is the generator absorbing vars.

Contingency	GEN-2015-082			GEN-2016-001			GEN-2016-038		
	Q(MVAR)	PF[1]		Q(MVAR)	PF		Q(MVAR)	PF	
FLT14_3PH	130.44	0.80	lag	164.55	0.86	lag	46.87	0.99	lead
FLT16_3PH	109.99	0.84	lag	176.53	0.85	lag	46.11	0.99	lead
FLT19_3PH	114.57	0.83	lag	191.53	0.83	lag	46.21	0.99	lead
FLT20_3PH	130.34	0.80	lag	225.54	0.79	lag	44.87	0.99	lead
FLT21_3PH	136.83	0.79	lag	240.35	0.77	lag	44.76	0.99	lead
FLT22_3PH	109.27	0.84	lag	159.28	0.87	lag	45.97	0.99	lead
FLT24_3PH	109.36	0.84	lag	199.15	0.82	lag	46.39	0.99	lead
FLT26_3PH	109.86	0.84	lag	206.01	0.81	lag	46.24	0.99	lead
FLT29_3PH	110.53	0.84	lag	187.51	0.83	lag	46.07	0.99	lead
FLT31_3PH	115.63	0.83	lag	187.20	0.83	lag	46.03	0.99	lead
FLT32_3PH	106.95	0.85	lag	180.85	0.84	lag	45.98	0.99	lead
FLT33_3PH	111.97	0.84	lag	184.92	0.84	lag	46.01	0.99	lead
FLT34_3PH	107.56	0.85	lag	180.88	0.84	lag	46.09	0.99	lead
FLT36_3PH	106.60	0.85	lag	179.03	0.84	lag	46.14	0.99	lead
FLT37_3PH	107.44	0.85	lag	172.71	0.85	lag	45.90	0.99	lead
FLT38_3PH	112.42	0.84	lag	187.09	0.83	lag	45.89	0.99	lead
FLT39_3PH	108.35	0.85	lag	180.88	0.84	lag	46.02	0.99	lead
FLT43_3PH	109.52	0.84	lag	183.51	0.84	lag	45.99	0.99	lead
FLT44_3PH	108.27	0.85	lag	181.11	0.84	lag	46.04	0.99	lead
FLT45_3PH	108.41	0.84	lag	179.43	0.84	lag	45.99	0.99	lead
FLT46_3PH	109.15	0.84	lag	179.79	0.84	lag	45.93	0.99	lead
FLT47_3PH	107.38	0.85	lag	176.61	0.85	lag	46.00	0.99	lead
FLT48_3PH	108.70	0.84	lag	199.33	0.82	lag	46.34	0.99	lead
FLT50_3PH	108.23	0.85	lag	180.59	0.84	lag	46.80	0.99	lead
FLT52_3PH	108.08	0.85	lag	175.42	0.85	lag	46.06	0.99	lead
FLT54_3PH	107.76	0.85	lag	165.13	0.86	lag	46.05	0.99	lead
FLT55_3PH	108.60	0.84	lag	180.10	0.84	lag	45.94	0.99	lead
FLT57_3PH	239.42	0.62	lag	329.61	0.66	lag	50.20	1.00	lead
FLT59_3PH	107.65	0.85	lag	178.94	0.85	lag	45.23	0.99	lead
FLT61_3PH	109.06	0.84	lag	179.90	0.84	lag	46.01	0.99	lead
FLT62_3PH	108.80	0.84	lag	179.52	0.84	lag	47.46	0.99	lead
FLT64_3PH	254.78	0.60	lag	347.32	0.64	lag	50.88	1.00	lead
FLT65_3PH	108.42	0.84	lag	179.13	0.84	lag	45.98	0.99	lead
FLT66_3PH	132.97	0.80	lag	201.28	0.82	lag	46.56	0.99	lead
FLT67_3PH	133.63	0.80	lag	224.00	0.79	lag	46.80	0.99	lead
FLT68_3PH	107.97	0.85	lag	177.52	0.85	lag	44.38	0.99	lead
FLT69_3PH	107.37	0.85	lag	177.39	0.85	lag	46.37	0.99	lead

Contingency	GEN-2015-082			GEN-2016-001			GEN-2016-038		
	Q(MVAR)	PF[1]		Q(MVAR)	PF		Q(MVAR)	PF	
FLT70_3PH	109.33	0.84	lag	180.85	0.84	lag	43.46	0.99	lead
FLT71_3PH	115.85	0.83	lag	189.14	0.83	lag	52.43	1.00	lead
FLT72_3PH	108.65	0.84	lag	179.31	0.84	lag	44.84	0.99	lead
FLT73_3PH	107.28	0.85	lag	177.22	0.85	lag	46.82	0.99	lead
FLT76_3PH	108.37	0.85	lag	179.06	0.84	lag	46.17	0.99	lead
FLT77_3PH	109.50	0.84	lag	180.42	0.84	lag	46.47	0.99	lead
FLT78_3PH	108.60	0.84	lag	179.31	0.84	lag	45.88	0.99	lead
FLT80_3PH	109.21	0.84	lag	180.18	0.84	lag	47.62	0.99	lead
FLT81_3PH	108.75	0.84	lag	178.15	0.85	lag	42.26	0.99	lead
FLT82_3PH	108.42	0.84	lag	179.13	0.84	lag	45.98	0.99	lead
FLT83_3PH	109.47	0.84	lag	180.47	0.84	lag	48.69	1.00	lead
FLT84_3PH	108.20	0.85	lag	178.84	0.85	lag	49.58	1.00	lead
FLT85_3PH	108.54	0.84	lag	179.24	0.84	lag	47.40	0.99	lead
FLT86_3PH	109.47	0.84	lag	180.53	0.84	lag	39.84	0.99	lead

Table 25: Power factor analysis for 2016 WP Base Case (GEN-201-041, GEN-2016-059, GEN-2016-070)

Contingency	GEN-2016-041			GEN-2016-059			GEN-2016-070		
	Q(MVAR)	PF		Q(MVAR)	PF		Q(MVAR)	PF	
Base Case	56.10	0.98	lag	45.98	0.99	lag	52.92	0.96	lead
FLT1_3PH	77.31	0.97	lag	46.96	0.99	lead	52.56	0.96	lead
FLT2_3PH	77.31	0.97	lag	46.96	0.99	lead	52.56	0.96	lead
FLT5_3PH	97.08	0.96	lag	46.62	0.99	lead	52.71	0.96	lead
FLT7_3PH	80.28	0.97	lag	47.11	0.99	lead	52.52	0.96	lead
FLT9_3PH	84.34	0.97	lag	47.28	0.99	lead	52.46	0.96	lead
FLT11_3PH	56.10	0.98	lag	45.98	0.99	lead	52.92	0.96	lead
FLT12_3PH	63.25	0.98	lag	46.34	0.99	lead	52.79	0.96	lead
FLT14_3PH	82.90	0.97	lag	46.87	0.99	lead	52.66	0.96	lead
FLT16_3PH	63.04	0.98	lag	46.11	0.99	lead	52.88	0.96	lead
FLT19_3PH	64.31	0.98	lag	46.21	0.99	lead	52.70	0.96	lead
FLT20_3PH	92.34	0.96	lag	44.87	0.99	lead	52.30	0.96	lead
FLT21_3PH	103.36	0.96	lag	44.76	0.99	lead	52.09	0.96	lead
FLT22_3PH	82.64	0.97	lag	45.97	0.99	lead	52.90	0.96	lead
FLT24_3PH	61.37	0.98	lag	46.39	0.99	lead	52.77	0.96	lead
FLT26_3PH	45.96	0.99	lag	46.24	0.99	lead	52.83	0.96	lead

Contingency	GEN-2016-041			GEN-2016-059			GEN-2016-070		
	Q(MVAR)	PF		Q(MVAR)	PF		Q(MVAR)	PF	
FLT29_3PH	54.82	0.98	lag	46.07	0.99	lead	52.89	0.96	lead
FLT31_3PH	62.26	0.98	lag	46.03	0.99	lead	52.90	0.96	lead
FLT32_3PH	64.29	0.98	lag	45.98	0.99	lead	52.91	0.96	lead
FLT33_3PH	63.17	0.98	lag	46.01	0.99	lead	52.90	0.96	lead
FLT34_3PH	56.20	0.98	lag	46.09	0.99	lead	52.87	0.96	lead
FLT36_3PH	52.33	0.98	lag	46.14	0.99	lead	52.86	0.96	lead
FLT37_3PH	67.07	0.98	lag	45.90	0.99	lead	52.93	0.96	lead
FLT38_3PH	66.60	0.98	lag	45.89	0.99	lead	52.95	0.96	lead
FLT39_3PH	60.18	0.98	lag	46.02	0.99	lead	52.90	0.96	lead
FLT43_3PH	56.91	0.98	lag	45.99	0.99	lead	52.91	0.96	lead
FLT44_3PH	55.02	0.98	lag	46.04	0.99	lead	52.89	0.96	lead
FLT45_3PH	58.92	0.98	lag	45.99	0.99	lead	52.91	0.96	lead
FLT46_3PH	59.02	0.98	lag	45.93	0.99	lead	52.93	0.96	lead
FLT47_3PH	59.53	0.98	lag	46.00	0.99	lead	52.90	0.96	lead
FLT48_3PH	63.31	0.98	lag	46.34	0.99	lead	52.79	0.96	lead
FLT50_3PH	72.40	0.98	lag	46.80	0.99	lead	52.61	0.96	lead
FLT52_3PH	56.08	0.98	lag	46.06	0.99	lead	52.89	0.96	lead
FLT54_3PH	58.73	0.98	lag	46.05	0.99	lead	52.88	0.96	lead
FLT55_3PH	56.77	0.98	lag	45.94	0.99	lead	52.92	0.96	lead
FLT57_3PH	125.66	0.94	lag	50.20	1.00	lead	51.79	0.96	lead
FLT59_3PH	74.81	0.97	lag	45.23	0.99	lead	52.95	0.96	lead
FLT61_3PH	54.13	0.98	lag	46.01	0.99	lead	52.79	0.96	lead
FLT62_3PH	60.39	0.98	lag	47.46	0.99	lead	52.46	0.96	lead
FLT64_3PH	27.71	0.99	lag	50.88	1.00	lead	51.52	0.96	lead
FLT65_3PH	56.10	0.98	lag	45.98	0.99	lead	52.91	0.96	lead
FLT66_3PH	50.05	0.99	lag	46.56	0.99	lead	52.73	0.96	lead
FLT67_3PH	78.06	0.97	lag	46.80	0.99	lead	52.62	0.96	lead
FLT68_3PH	62.39	0.98	lag	44.38	0.99	lead	52.44	0.96	lead
FLT69_3PH	58.18	0.98	lag	46.37	0.99	lead	52.73	0.96	lead
FLT70_3PH	55.29	0.98	lag	43.46	0.99	lead	53.06	0.96	lead
FLT71_3PH	69.29	0.98	lag	52.43	1.00	lead	52.50	0.96	lead
FLT72_3PH	58.74	0.98	lag	44.84	0.99	lead	26.53	0.99	lead
FLT73_3PH	51.45	0.99	lag	46.82	0.99	lead	31.65	0.98	lead
FLT76_3PH	56.54	0.98	lag	46.17	0.99	lead	53.30	0.96	lead
FLT77_3PH	58.94	0.98	lag	46.47	0.99	lead	53.63	0.95	lead
FLT78_3PH	57.77	0.98	lag	45.88	0.99	lead	53.32	0.96	lead
FLT80_3PH	57.76	0.98	lag	47.62	1.00	lead	53.17	0.96	lead

Contingency	GEN-2016-041			GEN-2016-059			GEN-2016-070		
	Q(MVAR)	PF		Q(MVAR)	PF		Q(MVAR)	PF	
FLT81_3PH	65.23	0.98	lag	42.26	0.99	lead	51.75	0.96	lead
FLT82_3PH	56.10	0.98	lag	45.98	0.99	lead	52.92	0.96	lead
FLT83_3PH	58.16	0.98	lag	48.69	1.00	lead	53.49	0.96	lead
FLT84_3PH	54.52	0.98	lag	49.58	1.00	lead	53.10	0.96	lead
FLT85_3PH	56.21	0.98	lag	47.40	0.99	lead	52.85	0.96	lead
FLT86_3PH	59.91	0.98	lag	39.84	0.99	lead	46.68	0.97	lead

Table 26: Reactive power from the project's transmission lines for 2016 WP Base Case

Request	Reactive Power Injection at POI (MVAr)	Shunt Reactors required at High Voltage Buses (MVAr)
GEN-2015-082	23.5	23.5
GEN-2016-001	13.5	13.5
GEN-2016-038	56.1	56.1
GEN-2016-059	56.7	56.7
GEN-2016-041	19.0	19.0
GEN-2016-070	3.5	3.5

Table 27: Power factor analysis for 2017 SP Base Case (GEN-2015-082, GEN-2016-001, GEN-2016-038)

Contingency	GEN-2015-082			GEN-2016-001			GEN-2016-038		
	Q(MVAR)	PF		Q(MVAR)	PF		Q(MVAR)	PF	
Base Case	94.17	0.93	lead	23.13	0.99	lag	86.10	1.00	lag
FLT1_3PH	44.46	0.99	lead	29.95	0.99	lag	87.53	1.00	lag
FLT11_3PH	94.17	0.93	lead	23.13	0.99	lag	86.10	1.00	lag
FLT12_3PH	94.00	0.93	lead	43.05	0.98	lag	86.64	1.00	lag
FLT14_3PH	88.06	0.94	lead	10.18	1.00	lag	87.15	1.00	lag
FLT16_3PH	97.48	0.93	lead	20.84	0.99	lag	86.26	1.00	lag
FLT19_3PH	98.77	0.93	lead	21.10	0.99	lag	91.28	1.00	lag
FLT2_3PH	44.46	0.99	lead	29.95	0.99	lag	87.53	1.00	lag
FLT20_3PH	91.21	0.94	lead	29.91	0.99	lag	84.52	1.00	lag
FLT21_3PH	86.92	0.95	lead	40.18	0.99	lag	82.63	1.00	lag
FLT22_3PH	91.33	0.94	lead	40.05	0.99	lag	86.17	1.00	lag

Contingency	GEN-2015-082			GEN-2016-001			GEN-2016-038		
	Q(MVAR)	PF		Q(MVAR)	PF		Q(MVAR)	PF	
FLT24_3PH	95.65	0.93	lead	31.96	0.99	lag	86.72	1.00	lag
FLT26_3PH	91.08	0.94	lead	52.84	0.98	lag	86.62	1.00	lag
FLT29_3PH	92.05	0.94	lead	30.23	0.99	lag	86.27	1.00	lag
FLT31_3PH	88.48	0.94	lead	28.89	0.99	lag	86.16	1.00	lag
FLT32_3PH	94.86	0.93	lead	24.29	0.99	lag	86.09	1.00	lag
FLT33_3PH	92.22	0.94	lead	26.33	0.99	lag	86.12	1.00	lag
FLT34_3PH	95.51	0.93	lead	21.78	0.99	lag	86.29	1.00	lag
FLT36_3PH	96.02	0.93	lead	21.76	0.99	lag	86.45	1.00	lag
FLT37_3PH	97.97	0.93	lead	5.10	1.00	lag	85.76	1.00	lag
FLT38_3PH	92.47	0.94	lead	25.17	0.99	lag	85.84	1.00	lag
FLT39_3PH	95.18	0.93	lead	21.17	0.99	lag	86.12	1.00	lag
FLT43_3PH	93.47	0.94	lead	25.59	0.99	lag	86.09	1.00	lag
FLT44_3PH	94.41	0.93	lead	24.11	0.99	lag	86.22	1.00	lag
FLT45_3PH	94.96	0.93	lead	20.78	0.99	lag	86.07	1.00	lag
FLT46_3PH	93.90	0.93	lead	22.95	0.99	lag	86.02	1.00	lag
FLT47_3PH	95.81	0.93	lead	18.46	1.00	lag	86.11	1.00	lag
FLT48_3PH	94.20	0.93	lead	36.72	0.99	lag	86.65	1.00	lag
FLT5_3PH	64.11	0.97	lead	0.85	1.00	lag	86.84	1.00	lag
FLT50_3PH	95.14	0.93	lead	19.75	0.99	lag	87.34	1.00	lag
FLT52_3PH	94.42	0.93	lead	19.74	0.99	lag	86.26	1.00	lag
FLT54_3PH	94.78	0.93	lead	10.36	1.00	lag	86.24	1.00	lag
FLT55_3PH	96.02	0.93	lead	21.02	0.99	lag	85.76	1.00	lag
FLT56_3PH	0.59	1.00	lag	139.68	0.89	lag	90.84	1.00	lag
FLT59_3PH	91.26	0.94	lead	27.81	0.99	lag	84.65	1.00	lag
FLT61_3PH	92.88	0.94	lead	24.90	0.99	lag	86.52	1.00	lag
FLT62_3PH	91.42	0.94	lead	26.51	0.99	lag	88.10	1.00	lag
FLT64_3PH	23.35	1.00	lead	114.61	0.92	lag	90.24	1.00	lag
FLT65_3PH	94.17	0.93	lead	23.13	0.99	lag	86.10	1.00	lag
FLT66_3PH	64.77	0.97	lead	50.76	0.98	lag	87.33	1.00	lag
FLT67_3PH	79.11	0.96	lead	52.33	0.98	lag	87.03	1.00	lag
FLT68_3PH	93.30	0.94	lead	21.53	0.99	lag	83.04	1.00	lag
FLT69_3PH	93.81	0.93	lead	21.51	0.99	lag	85.16	1.00	lag
FLT7_3PH	98.45	0.93	lead	85.16	0.95	lag	87.60	1.00	lag
FLT70_3PH	90.33	0.94	lead	30.90	0.99	lag	86.32	1.00	lag
FLT71_3PH	83.02	0.95	lead	41.43	0.98	lag	100.44	0.99	lag
FLT72_3PH	93.80	0.93	lead	23.59	0.99	lag	87.60	1.00	lag
FLT73_3PH	95.46	0.93	lead	20.96	0.99	lag	85.74	1.00	lag

Contingency	GEN-2015-082			GEN-2016-001			GEN-2016-038		
	Q(MVAR)	PF		Q(MVAR)	PF		Q(MVAR)	PF	
FLT76_3PH	94.22	0.93	lead	23.07	0.99	lag	86.31	1.00	lag
FLT77_3PH	93.02	0.94	lead	24.69	0.99	lag	86.38	1.00	lag
FLT78_3PH	93.99	0.93	lead	23.36	0.99	lag	86.05	1.00	lag
FLT80_3PH	92.76	0.94	lead	25.09	0.99	lag	97.07	0.99	lag
FLT81_3PH	92.95	0.94	lead	22.18	0.99	lag	80.24	1.00	lag
FLT82_3PH	94.17	0.93	lead	23.13	0.99	lag	86.10	1.00	lag
FLT83_3PH	92.38	0.94	lead	25.51	0.99	lag	89.89	1.00	lag
FLT84_3PH	94.51	0.93	lead	22.66	0.99	lag	87.63	1.00	lag
FLT85_3PH	94.08	0.93	lead	23.23	0.99	lag	90.75	1.00	lag
FLT86_3PH	92.94	0.94	lead	24.91	0.99	lag	67.82	1.00	lead
FLT9_3PH	98.15	0.93	lead	88.79	0.95	lag	88.38	1.00	lag

Table 28: Power factor analysis for 2017 SP Base Case (GEN-201-041, GEN-2016-059, GEN-2016-070)

Contingency	**GEN-2016-041**			**GEN-2016-059**			**GEN-2016-070**		
	Q(MVAR)	**PF**		**Q(MVAR)**	**PF**		**Q(MVAR)**	**PF**	
Base Case	61.58	0.99	lead	86.10	1.00	lag	51.35	0.95	lead
FLT1_3PH	44.44	1.00	lead	87.53	1.00	lag	51.30	0.95	lead
FLT11_3PH	61.58	0.99	lead	86.10	1.00	lag	51.35	0.95	lead
FLT12_3PH	56.36	1.00	lead	86.64	1.00	lag	51.33	0.95	lead
FLT14_3PH	22.92	1.00	lead	87.15	1.00	lag	51.34	0.95	lead
FLT16_3PH	49.71	1.00	lead	86.26	1.00	lag	51.35	0.95	lead
FLT19_3PH	65.04	0.99	lead	91.28	1.00	lag	51.51	0.95	lead
FLT2_3PH	44.44	1.00	lead	87.53	1.00	lag	51.30	0.95	lead
FLT20_3PH	58.18	0.99	lead	84.52	1.00	lag	51.28	0.95	lead
FLT21_3PH	52.96	1.00	lead	82.63	1.00	lag	51.19	0.95	lead
FLT22_3PH	39.27	1.00	lead	86.17	1.00	lag	51.35	0.95	lead
FLT24_3PH	60.16	0.99	lead	86.72	1.00	lag	51.33	0.95	lead
FLT26_3PH	67.13	0.99	lead	86.62	1.00	lag	51.33	0.95	lead
FLT29_3PH	62.19	0.99	lead	86.27	1.00	lag	51.34	0.95	lead
FLT31_3PH	56.92	1.00	lead	86.16	1.00	lag	51.35	0.95	lead
FLT32_3PH	57.36	0.99	lead	86.09	1.00	lag	51.35	0.95	lead
FLT33_3PH	57.62	0.99	lead	86.12	1.00	lag	51.35	0.95	lead
FLT34_3PH	62.21	0.99	lead	86.29	1.00	lag	51.34	0.95	lead
FLT36_3PH	64.63	0.99	lead	86.45	1.00	lag	51.34	0.95	lead

Contingency	GEN-2016-041			GEN-2016-059			GEN-2016-070		
	Q(MVAR)	PF		Q(MVAR)	PF		Q(MVAR)	PF	
FLT37_3PH	55.05	1.00	lead	85.76	1.00	lag	51.36	0.95	lead
FLT38_3PH	56.42	1.00	lead	85.84	1.00	lag	51.36	0.95	lead
FLT39_3PH	59.70	0.99	lead	86.12	1.00	lag	51.35	0.95	lead
FLT43_3PH	61.43	0.99	lead	86.09	1.00	lag	51.35	0.95	lead
FLT44_3PH	62.40	0.99	lead	86.22	1.00	lag	51.34	0.95	lead
FLT45_3PH	60.40	0.99	lead	86.07	1.00	lag	51.35	0.95	lead
FLT46_3PH	60.22	0.99	lead	86.02	1.00	lag	51.35	0.95	lead
FLT47_3PH	60.03	0.99	lead	86.11	1.00	lag	51.35	0.95	lead
FLT48_3PH	56.36	1.00	lead	86.65	1.00	lag	51.33	0.95	lead
FLT5_3PH	43.79	1.00	lead	86.84	1.00	lag	51.33	0.95	lead
FLT50_3PH	50.16	1.00	lead	87.34	1.00	lag	51.31	0.95	lead
FLT52_3PH	61.40	0.99	lead	86.26	1.00	lag	51.34	0.95	lead
FLT54_3PH	59.95	0.99	lead	86.24	1.00	lag	51.35	0.95	lead
FLT55_3PH	71.51	0.99	lead	85.76	1.00	lag	51.40	0.95	lead
FLT56_3PH	8.16	1.00	lag	90.84	1.00	lag	51.36	0.95	lead
FLT59_3PH	37.75	1.00	lead	84.65	1.00	lag	51.44	0.95	lead
FLT61_3PH	65.28	0.99	lead	86.52	1.00	lag	51.65	0.95	lead
FLT62_3PH	63.89	0.99	lead	88.10	1.00	lag	51.78	0.95	lead
FLT64_3PH	91.72	0.98	lead	90.24	1.00	lag	51.23	0.95	lead
FLT65_3PH	61.58	0.99	lead	86.10	1.00	lag	51.35	0.95	lead
FLT66_3PH	49.12	1.00	lead	87.33	1.00	lag	51.29	0.95	lead
FLT67_3PH	61.04	0.99	lead	87.03	1.00	lag	51.31	0.95	lead
FLT68_3PH	45.57	1.00	lead	83.04	1.00	lag	51.05	0.95	lead
FLT69_3PH	50.05	1.00	lead	85.16	1.00	lag	50.84	0.96	lead
FLT7_3PH	43.64	1.00	lead	87.60	1.00	lag	51.30	0.95	lead
FLT70_3PH	63.54	0.99	lead	86.32	1.00	lag	51.68	0.95	lead
FLT71_3PH	49.97	1.00	lead	100.44	0.99	lag	51.36	0.95	lead
FLT72_3PH	59.75	0.99	lead	87.60	1.00	lag	25.18	0.99	lead
FLT73_3PH	65.80	0.99	lead	85.74	1.00	lag	35.08	0.98	lead
FLT76_3PH	60.90	0.99	lead	86.31	1.00	lag	52.04	0.95	lead
FLT77_3PH	59.36	0.99	lead	86.38	1.00	lag	52.84	0.95	lead
FLT78_3PH	60.62	0.99	lead	86.05	1.00	lag	51.12	0.95	lead
FLT80_3PH	58.43	0.99	lead	97.07	0.99	lag	51.58	0.95	lead
FLT81_3PH	46.92	1.00	lead	80.24	1.00	lag	51.32	0.95	lead
FLT82_3PH	61.58	0.99	lead	86.10	1.00	lag	51.35	0.95	lead
FLT83_3PH	57.63	0.99	lead	89.89	1.00	lag	51.74	0.95	lead
FLT84_3PH	58.11	0.99	lead	87.63	1.00	lag	51.59	0.95	lead

Contingency	GEN-2016-041			GEN-2016-059			GEN-2016-070		
	Q(MVAR)	PF		Q(MVAR)	PF		Q(MVAR)	PF	
FLT85_3PH	61.51	0.99	lead	90.75	1.00	lag	51.33	0.95	lead
FLT86_3PH	58.12	0.99	lead	67.82	1.00	lead	48.86	0.96	lead
FLT9_3PH	35.28	1.00	lead	88.38	1.00	lag	51.27	0.95	lead

Table 29: Reactive power from the project's transmission lines for 2017 SP Base Case

Request	Reactive Power Injection at POI (MVAr)	Shunt Reactors required at High Voltage Buses (MVAr)
GEN-2015-082	24.9	24.9
GEN-2016-001	14.1	14.1
GEN-2016-038	56.1	56.1
GEN-2016-059	56.7	56.7
GEN-2016-041	19.6	19.6
GEN-2016-070	3.4	3.4

Table 30: Power factor analysis for 2025 SP Base Case (GEN-2015-082, GEN-2016-001, GEN-2016-038)

Contingency	GEN-2015-082			GEN-2016-001			GEN-2016-038		
	Q(MVAR)	PF		Q(MVAR)	PF		Q(MVAR)	PF	
Base Case	155.12	0.82	lead	108.02	0.95	lead	95.19	0.99	lag
FLT1_3PH	114.04	0.90	lead	101.45	0.96	lead	96.65	0.99	lag
FLT2_3PH	114.04	0.90	lead	101.45	0.96	lead	96.65	0.99	lag
FLT5_3PH	115.84	0.90	lead	125.94	0.93	lead	95.82	0.99	lag
FLT7_3PH	158.04	0.81	lead	33.33	1.00	lead	96.65	0.99	lag
FLT9_3PH	157.48	0.81	lead	31.09	1.00	lead	97.34	0.99	lag
FLT11_3PH	155.12	0.82	lead	108.02	0.95	lead	95.19	0.99	lag
FLT12_3PH	154.81	0.82	lead	91.83	0.97	lead	95.72	0.99	lag
FLT14_3PH	157.89	0.81	lead	117.24	0.94	lead	96.03	0.99	lag
FLT16_3PH	160.79	0.81	lead	109.55	0.95	lead	95.29	0.99	lag
FLT19_3PH	165.34	0.80	lead	120.70	0.94	lead	109.57	0.99	lag
FLT20_3PH	160.70	0.81	lead	122.25	0.94	lead	101.95	0.99	lag
FLT21_3PH	158.14	0.81	lead	115.49	0.94	lead	98.78	0.99	lag
FLT22_3PH	152.75	0.82	lead	85.21	0.97	lead	95.30	0.99	lag

Contingency	GEN-2015-082			GEN-2016-001			GEN-2016-038		
	Q(MVAR)	PF		Q(MVAR)	PF		Q(MVAR)	PF	
FLT24_3PH	156.34	0.82	lead	102.27	0.96	lead	95.85	0.99	lag
FLT26_3PH	152.57	0.82	lead	80.77	0.97	lead	95.76	0.99	lag
FLT29_3PH	153.22	0.82	lead	101.89	0.96	lead	95.36	0.99	lag
FLT31_3PH	153.06	0.82	lead	105.92	0.95	lead	95.21	0.99	lag
FLT32_3PH	156.31	0.82	lead	108.01	0.95	lead	95.18	0.99	lag
FLT33_3PH	154.23	0.82	lead	106.23	0.95	lead	95.20	0.99	lag
FLT34_3PH	156.39	0.82	lead	110.31	0.95	lead	95.38	0.99	lag
FLT36_3PH	157.00	0.82	lead	111.86	0.95	lead	95.51	0.99	lag
FLT37_3PH	157.14	0.82	lead	117.15	0.94	lead	94.98	0.99	lag
FLT38_3PH	154.37	0.82	lead	105.17	0.95	lead	95.19	0.99	lag
FLT39_3PH	155.69	0.82	lead	108.80	0.95	lead	95.24	0.99	lag
FLT43_3PH	154.45	0.82	lead	105.73	0.95	lead	95.16	0.99	lag
FLT44_3PH	155.25	0.82	lead	107.42	0.95	lead	95.28	0.99	lag
FLT45_3PH	155.59	0.82	lead	109.45	0.95	lead	95.18	0.99	lag
FLT46_3PH	154.64	0.82	lead	108.42	0.95	lead	94.98	0.99	lag
FLT47_3PH	156.29	0.82	lead	111.40	0.95	lead	95.23	0.99	lag
FLT48_3PH	155.00	0.82	lead	98.47	0.96	lead	95.74	0.99	lag
FLT50_3PH	155.32	0.82	lead	110.95	0.95	lead	96.50	0.99	lag
FLT52_3PH	155.26	0.82	lead	110.93	0.95	lead	95.36	0.99	lag
FLT54_3PH	155.65	0.82	lead	120.20	0.94	lead	95.30	0.99	lag
FLT55_3PH	155.16	0.82	lead	108.55	0.95	lead	95.14	0.99	lag
FLT56_3PH	89.27	0.94	lead	28.28	1.00	lead	99.23	0.99	lag
FLT59_3PH	148.05	0.83	lead	98.99	0.96	lead	93.51	1.00	lag
FLT61_3PH	152.82	0.82	lead	104.81	0.95	lead	96.47	0.99	lag
FLT62_3PH	150.21	0.83	lead	101.96	0.96	lead	96.85	0.99	lag
FLT64_3PH	98.78	0.93	lead	39.35	1.00	lead	98.54	0.99	lag
FLT65_3PH	155.12	0.82	lead	108.02	0.95	lead	95.19	0.99	lag
FLT66_3PH	133.73	0.86	lead	87.42	0.97	lead	96.31	0.99	lag
FLT67_3PH	141.95	0.85	lead	82.83	0.97	lead	96.24	0.99	lag
FLT68_3PH	153.69	0.82	lead	108.77	0.95	lead	90.24	1.00	lag
FLT69_3PH	154.37	0.82	lead	108.99	0.95	lead	93.56	1.00	lag
FLT70_3PH	151.19	0.83	lead	99.28	0.96	lead	93.79	1.00	lag
FLT71_3PH	145.22	0.84	lead	89.16	0.97	lead	105.45	0.99	lag
FLT72_3PH	154.71	0.82	lead	107.53	0.95	lead	95.32	0.99	lag
FLT73_3PH	155.99	0.82	lead	109.41	0.95	lead	94.87	0.99	lag
FLT76_3PH	155.16	0.82	lead	108.07	0.95	lead	95.43	0.99	lag
FLT77_3PH	153.86	0.82	lead	106.00	0.95	lead	95.41	0.99	lag

Contingency	GEN-2015-082			GEN-2016-001			GEN-2016-038		
	Q(MVAR)	PF		Q(MVAR)	PF		Q(MVAR)	PF	
FLT78_3PH	154.87	0.82	lead	107.68	0.95	lead	95.27	0.99	lag
FLT80_3PH	153.48	0.82	lead	105.54	0.95	lead	113.29	0.99	lag
FLT81_3PH	153.39	0.82	lead	108.31	0.95	lead	86.55	1.00	lag
FLT82_3PH	155.12	0.82	lead	108.02	0.95	lead	95.19	0.99	lag
FLT83_3PH	152.99	0.82	lead	104.93	0.95	lead	94.89	0.99	lag
FLT84_3PH	155.46	0.82	lead	108.44	0.95	lead	97.36	0.99	lag
FLT85_3PH	155.05	0.82	lead	107.93	0.95	lead	99.30	0.99	lag
FLT86_3PH	154.22	0.82	lead	106.66	0.95	lead	77.51	1.00	lag

Table 31: Power factor analysis for 2025 SP Base Case (GEN-201-041, GEN-2016-059, GEN-2016-070)

Contingency	GEN-2016-041			GEN-2016-059			GEN-2016-070		
	Q(MVAR)	PF	Lag/Lead	Q(MVAR)	PF	Lag/Lead	Q(MVAR)	PF	Lag/Lead
Base Case	156.96	0.94	lead	95.19	0.99	lag	53.45	0.97	lead
FLT1_3PH	140.69	0.95	lead	96.65	0.99	lag	53.35	0.97	lead
FLT2_3PH	140.69	0.95	lead	96.65	0.99	lag	53.35	0.97	lead
FLT5_3PH	153.32	0.95	lead	95.82	0.99	lag	53.41	0.97	lead
FLT7_3PH	140.63	0.95	lead	96.65	0.99	lag	53.35	0.97	lead
FLT9_3PH	132.69	0.96	lead	97.34	0.99	lag	53.30	0.97	lead
FLT11_3PH	156.96	0.94	lead	95.19	0.99	lag	53.45	0.97	lead
FLT12_3PH	152.40	0.95	lead	95.72	0.99	lag	53.42	0.97	lead
FLT14_3PH	114.35	0.97	lead	96.03	0.99	lag	53.37	0.97	lead
FLT16_3PH	143.14	0.95	lead	95.29	0.99	lag	53.44	0.97	lead
FLT19_3PH	157.53	0.94	lead	109.57	0.99	lag	53.50	0.97	lead
FLT20_3PH	158.89	0.94	lead	101.95	0.99	lag	53.47	0.97	lead
FLT21_3PH	158.05	0.94	lead	98.78	0.99	lag	53.46	0.97	lead
FLT22_3PH	139.59	0.96	lead	95.30	0.99	lag	53.44	0.97	lead
FLT24_3PH	155.26	0.94	lead	95.85	0.99	lag	53.41	0.97	lead
FLT26_3PH	160.89	0.94	lead	95.76	0.99	lag	53.41	0.97	lead
FLT29_3PH	157.05	0.94	lead	95.36	0.99	lag	53.44	0.97	lead
FLT31_3PH	154.73	0.94	lead	95.21	0.99	lag	53.45	0.97	lead
FLT32_3PH	154.23	0.95	lead	95.18	0.99	lag	53.45	0.97	lead
FLT33_3PH	153.68	0.95	lead	95.20	0.99	lag	53.45	0.97	lead
FLT34_3PH	157.43	0.94	lead	95.38	0.99	lag	53.44	0.97	lead
FLT36_3PH	159.51	0.94	lead	95.51	0.99	lag	53.43	0.97	lead
FLT37_3PH	151.30	0.95	lead	94.98	0.99	lag	53.46	0.97	lead

Contingency	GEN-2016-041			GEN-2016-059			GEN-2016-070		
	Q(MVAR)	PF	Lag/Lead	Q(MVAR)	PF	Lag/Lead	Q(MVAR)	PF	Lag/Lead
FLT38_3PH	155.84	0.94	lead	95.19	0.99	lag	53.45	0.97	lead
FLT39_3PH	155.20	0.94	lead	95.24	0.99	lag	53.45	0.97	lead
FLT43_3PH	156.85	0.94	lead	95.16	0.99	lag	53.45	0.97	lead
FLT44_3PH	157.34	0.94	lead	95.28	0.99	lag	53.44	0.97	lead
FLT45_3PH	155.66	0.94	lead	95.18	0.99	lag	53.45	0.97	lead
FLT46_3PH	154.72	0.94	lead	94.98	0.99	lag	53.46	0.97	lead
FLT47_3PH	155.50	0.94	lead	95.23	0.99	lag	53.45	0.97	lead
FLT48_3PH	152.41	0.95	lead	95.74	0.99	lag	53.42	0.97	lead
FLT50_3PH	146.43	0.95	lead	96.50	0.99	lag	53.38	0.97	lead
FLT52_3PH	156.58	0.94	lead	95.36	0.99	lag	53.44	0.97	lead
FLT54_3PH	155.81	0.94	lead	95.30	0.99	lag	53.44	0.97	lead
FLT55_3PH	156.97	0.94	lead	95.14	0.99	lag	53.45	0.97	lead
FLT56_3PH	40.85	1.00	lead	99.23	0.99	lag	53.07	0.97	lead
FLT59_3PH	134.27	0.96	lead	93.51	1.00	lag	53.38	0.97	lead
FLT61_3PH	147.19	0.95	lead	96.47	0.99	lag	52.48	0.97	lead
FLT62_3PH	152.94	0.95	lead	96.85	0.99	lag	52.80	0.97	lead
FLT64_3PH	148.53	0.95	lead	98.54	0.99	lag	53.20	0.97	lead
FLT65_3PH	156.96	0.94	lead	95.19	0.99	lag	53.45	0.97	lead
FLT66_3PH	154.96	0.94	lead	96.31	0.99	lag	53.37	0.97	lead
FLT67_3PH	152.06	0.95	lead	96.24	0.99	lag	53.38	0.97	lead
FLT68_3PH	142.27	0.95	lead	90.24	1.00	lag	53.21	0.97	lead
FLT69_3PH	146.75	0.95	lead	93.56	1.00	lag	53.21	0.97	lead
FLT70_3PH	159.66	0.94	lead	93.79	1.00	lag	53.63	0.97	lead
FLT71_3PH	152.45	0.95	lead	105.45	0.99	lag	53.47	0.97	lead
FLT72_3PH	155.01	0.94	lead	95.32	0.99	lag	37.63	0.99	lead
FLT73_3PH	159.80	0.94	lead	94.87	0.99	lag	25.03	1.00	lead
FLT76_3PH	156.08	0.94	lead	95.43	0.99	lag	54.11	0.97	lead
FLT77_3PH	155.74	0.94	lead	95.41	0.99	lag	55.61	0.97	lead
FLT78_3PH	155.60	0.94	lead	95.27	0.99	lag	51.51	0.97	lead
FLT80_3PH	153.51	0.95	lead	113.29	0.99	lag	53.52	0.97	lead
FLT81_3PH	141.84	0.95	lead	86.55	1.00	lag	53.31	0.97	lead
FLT82_3PH	156.96	0.94	lead	95.19	0.99	lag	53.45	0.97	lead
FLT83_3PH	152.40	0.95	lead	94.89	0.99	lag	53.47	0.97	lead
FLT84_3PH	154.46	0.95	lead	97.36	0.99	lag	53.02	0.97	lead
FLT85_3PH	156.91	0.94	lead	99.30	0.99	lag	53.44	0.97	lead
FLT86_3PH	154.63	0.94	lead	77.51	1.00	lag	51.78	0.97	lead

Table 32: Reactive power from the project's transmission lines for 2025 SP Base Case

Request	Reactive Power Injection at POI (MVAr)	Shunt Reactors required at High Voltage Buses (MVAr)
GEN-2015-082	25.7	25.7
GEN-2016-001	14.7	14.7
GEN-2016-038	56.1	56.1
GEN-2016-059	56.7	56.7
GEN-2016-041	20.1	20.1
GEN-2016-070	3.4	3.4

7 Conclusions

The definitive impact studies include short circuit analysis, stability analysis, reactive analysis and power factor analysis.

The following base cases were provided by SPP to perform the impact studies:

MDWG15-16WP_DIS1601_G02– 2016 winter peak base case

MDWG15-17SP_DIS1601_G02– 2017 summer peak base case

MDWG15-25SP_DIS1601_G02– 2025 summer peak base case

However, the following network upgrades were added to the original base cases on SPP's recommendation to mitigate voltage collapse issues for certain N-1 contingencies observed in the cluster base cases:

- Potter County to Grapevine to Chisholm 345kV circuit 1
- Grapevine to Beaver County 345kV circuit 1
- Beaver County to Clark County 345kV circuit 1
- Accelerate Woodward to Mathewson 345kV circuit 2 (added to 2016 WP and 2017 SP only)

These upgrades were added to the cluster and standalone base cases prior to performing the studies.

7.1 Cluster power factor analysis

A power factor analysis for each generation project was performed on the 2016 winter peak, 2017 summer peak, and 2025 summer peak cases with identified system upgrades. As reactive power is required for all projects, the final requirement per the SPP Open Access Transmission Tariff (OATT) will be the pro-forma 95% lagging to 95% leading at the point of interconnection.

A low wind/no wind (low irradiance/no irradiance) analysis was performed on both wind powered and solar powered generation projects. This analysis determines the amount reactors needed to offset the capacitive injection as a result of the charging in the transmission lead from the project to the Point of Interconnection (POI) and the charging in the collector system while the project is on line but producing little or no power.

7.2 Cluster Short-circuit analysis

Short-circuit current levels were calculated for all transmission buses (rated at 115 kV and above) within five buses away from the POI of all the cluster generators. The total short circuit currents at the mentioned buses are within the typical range of the breaker duty requirements and the short circuit current contribution from requested project is not anticipated to impact breaker duty requirements.

7.3 Cluster dynamic scenario

One hundred and ninety-one contingencies were simulated for the 2016 winter peak and 2017 summer peak base cases, and one hundred and ninety-two contingencies were simulated for the 2025 summer peak base case. The contingencies simulated include single phase, three phase and single phase stuck breaker faults and three phase faults with a prior outage branch.

A number of contingencies resulted in system instability, which led to the loss of prior queue and requested generation. Mitigation measures were required to enable system stability following these contingencies. The prior queue and requested projects that were impacted by post contingency system instability are as follows:

Project GEN-2016-041: Over-frequency tripping

Project GEN-2016-038: Under-voltage tripping (In 2017SP scenario only)

Project GEN-2016-059: Under-voltage tripping (In 2017SP scenario only)

Prior project GEN-2006-044: Over-voltage tripping

Prior project ASGI-2011-002: Over-voltage tripping

Mitigation measures that were tested include the following:

- Correct the over-voltage protection thresholds and time delay settings for GEN-2006-044 and ASGI-2011-002
- Modify the over-frequency protection threshold and time delay settings for GEN-2016-041
- Add dynamic reactive power support on the 34.5 kV collector buses of GEN-2016-038 and GEN-2016-059

With the mitigation measures applied:

- Group 02 generators (as listed in Table 2) are able to ride through all the simulated contingencies and the transient recovery voltage at the Points of Interconnection (POIs) remains within 0.7 to 1.2 per unit (pu) following fault clearance (as per SPP Disturbance Performance Requirements);
- No tripping of prior queue projects occurs;
- No large rotor angle deviation and oscillations (as per SPP Disturbance Performance Requirements) occur for the synchronous generators in the monitored areas;
- The projects were found to comply with the low voltage ride through requirements in FERC Order 661A.

7.4 Standalone dynamic scenario, GEN-2015-082

Seventy-three contingencies were simulated for each of the three base cases: 2016 winter peak, 2017 summer peak, and 2025 summer peak.

A number of contingencies resulted in system instability, which led to the loss of prior queue generation. Mitigation measures were required to enable system stability following these contingencies. The prior queue projects that were impacted by post contingency system instability are as follows:

- Prior project GEN-2006-044: Over-voltage tripping
- Prior project ASGI-2011-002: Over-voltage tripping

Mitigation measures that were tested include the following:

- Correct the over-voltage protection settings for GEN-2006-044
- Correct the over-voltage protection for ASGI-2011-002

With the mitigation measures applied:

- The transient recovery voltage at the Point of Interconnection (POI) remains within 0.7 to 1.2 per unit (pu) following fault clearance (as per SPP Disturbance Performance Requirements);
- No tripping of prior queue projects occurs;
- No large rotor angle deviation and oscillations (as per SPP Disturbance Performance Requirements) occur for the synchronous generators in the monitored areas;

7.5 Standalone dynamic scenario, GEN-2016-001

Seventy-four contingencies were simulated for each of the three base cases: 2016 winter peak, 2017 summer peak, and 2025 summer peak.

A number of contingencies resulted in system instability, which led to the loss of prior queue generation. Mitigation measures were required to enable system stability following these contingencies. The prior queue projects that were impacted by post contingency system instability are as follows:

- Prior project GEN-2006-044: Over-voltage tripping
- Prior project ASGI-2011-002: Over-voltage tripping

Mitigation measures that were tested included one or more of the following:

- Correct the over-voltage protection settings for GEN-2006-044

- Correct the over-voltage protection for ASGI-2011-002

With the mitigation measures applied:

- The transient recovery voltage at the Point of Interconnection (POI) remains within 0.7 to 1.2 per unit (pu) following fault clearance (as per SPP Disturbance Performance Requirements);
- No tripping of prior queue projects occurs;
- No large rotor angle deviation and oscillations (as per SPP Disturbance Performance Requirements) occur for the synchronous generators in the monitored areas;

7.6 Standalone dynamic scenario, GEN-2016-038

Twenty-one contingencies were simulated for each of the three base cases: 2016 winter peak, 2017 summer peak, and 2025 summer peak.

A number of contingencies resulted in system instability, which led to the loss of GEN-2016-038 and prior queue generation. Mitigation measures were required to enable system stability following these contingencies. The requested and prior queue projects that were impacted by post contingency system instability are as follows:

- Prior project GEN-2006-044: Over-voltage tripping
- Prior project ASGI-2011-002: Over-voltage tripping
- Project GEN-2016-038: Under-voltage tripping

Mitigation measures that were tested include the following:

- Modify over-voltage protection settings for GEN-2006-044 and ASGI-2011-002
- Add dynamic reactive power support on the 34.5 kV collector buses of GEN-2016-038

With the mitigation measures applied:

- GEN-2016-038 is able to ride through all the simulated contingencies and the transient recovery voltage at the POI remains within a 0.7 to 1.2 pu range following fault clearance;
- No tripping of prior queue projects occurs;
- No large rotor angle deviation and oscillations (as per SPP Disturbance Performance Requirements) occur for the synchronous generators in the monitored areas;

7.7 Standalone dynamic scenario, GEN-2016-041

Forty-five contingencies were simulated for each of the three base cases: 2016 winter peak, 2017 summer peak, and 2025 summer peak.

A number of contingencies resulted in system instability, which led to the loss of GEN-2016-041 and prior queue generation. Mitigation measures were required to enable system stability following these contingencies. The requested and prior queue projects that were impacted by post contingency system instability are as follows:

- Prior project GEN-2006-044: Over-voltage tripping
- Prior project ASGI-2011-002: Over-voltage tripping
- Project GEN-2016-041: Over-frequency tripping

Mitigation measures that were tested include the following:

- Correct the over-voltage protection settings for GEN-2006-044 and ASGI-2011-002
- Modify the over-frequency protection threshold and time delay settings for GEN-2016-041

With the mitigation measures applied:

- GEN-2016-041 is able to ride through all the simulated contingencies and the transient recovery voltage at the POI remains within a 0.7 to 1.2 pu range following fault clearance;
- No tripping of prior queue projects occurs;
- No large rotor angle deviation and oscillations (as per SPP Disturbance Performance Requirements) occur for the synchronous generators in the monitored areas;

7.8 Standalone dynamic scenario, GEN-2016-059

Twenty-one contingencies were simulated for each of the three base cases: 2016 winter peak, 2017 summer peak, and 2025 summer peak.

A number of contingencies resulted in system instability, which led to the loss of GEN-2016-059 and prior queue generation. Mitigation measures were required to enable system stability following these contingencies. The requested and prior queue projects that were impacted by post contingency system instability are as follows:

- Prior project GEN-2006-044: Over-voltage tripping
- Prior project ASGI-2011-002: Over-voltage tripping
- Project GEN-2016-059: Under-voltage tripping

Mitigation measures that were tested include the following:

- Correct the over-voltage protection settings for GEN-2006-044 and ASGI-2011-002
- Add dynamic reactive power support at the 34.5 kV collector buses of GEN-2016-059

With the mitigation measures applied:

- GEN-2016-059 is able to ride through all the simulated contingencies and the transient recovery voltage at the POI remains within a 0.7 to 1.2 pu range following fault clearance;
- No tripping of prior queue projects occurs;
- No large rotor angle deviation and oscillations (as per SPP Disturbance Performance Requirements) occur for the synchronous generators in the monitored areas;

7.9 Standalone dynamic scenario, GEN-2016-070

Seventeen contingencies were simulated for each of the three base cases: 2016 winter peak, 2017 summer peak, and 2025 summer peak.

A number of contingencies resulted in system instability, which led to the loss of prior queue generation. Mitigation measures were required to enable system stability following these contingencies. The prior queue projects that were impacted by post contingency system instability are as follows:

- Prior project GEN-2006-044: Over-voltage tripping
- Prior project ASGI-2011-002: Over-voltage tripping

Mitigation measures that were tested include the following:

- Correct the over-voltage protection settings for GEN-2006-044
- Correct over-voltage protection settings for ASGI-2011-002

With the mitigation measures applied:

- The transient recovery voltage at the POI remains within a 0.7 to 1.2 pu range following fault clearance;
- No tripping of prior queue projects occurs;
- No large rotor angle deviation and oscillations (as per SPP Disturbance Performance Requirements) occur for the synchronous generators in the monitored areas;

Appendix A Southwest Power Pool Disturbance Performance Requirements

Southwest Power Pool
Disturbance Performance Requirements

OVERVIEW

These Disturbance Performance Requirements ("Requirements") shall be applicable to the Bulk Electric System within the Southwest Power Pool Planning Area. Utilization of these Requirements applies to all registered entities within the Southwest Power Pool Planning Area. These Requirements shall not be applicable to facilities that are not part of Bulk Electric System. More stringent Requirements are at the sole discretion of each Transmission Owner.

Transient and dynamic stability assessments are generally performed to assure adequate avoidance of loss of generator synchronism and prevention of system voltage collapse within the first 20 seconds after a system disturbance. These Requirements provide a basis for evaluating the system response during the initial transient period following a disturbance on the Bulk Electric System by establishing minimum requirements for machine rotor angle damping and transient voltage recovery.

ROTOR ANGLE DAMPING REQUIREMENT

Machine Rotor Angles shall exhibit well damped angular oscillations [as defined below] and acceptable power swings following a disturbance on the Bulk Electric System for all NERC Category A, B and C events.

Well damped angular oscillations shall meet one of the following two requirements when calculated directly from the rotor angle:

1. Successive Positive Peak Ratio (SPPR) must be less than or equal to 0.95 where SPPR is calculated as follows:

$$SPPR = \frac{\text{Peak Rotor Angle of } 2^{nd} \text{ Positive Swing Peak}}{\text{Peak Rotor Angle of } 1^{st} \text{ Positive Swing Peak}} \leq 0.95$$

-or- Damping Factor % = (1 – SPPR) OK 100% $\geq$ 5%

The machine rotor angle damping ratio may be determined by appropriate modal analysis (i.e. Prony Analysis) where the following equivalent requirement must be met:

Damping Ratio ≥ 0.0081633

2. Successive Positive Peak Ratio Five (SPPR5) must be less than or equal to 0.774 where SPPR5 is calculated as follows:

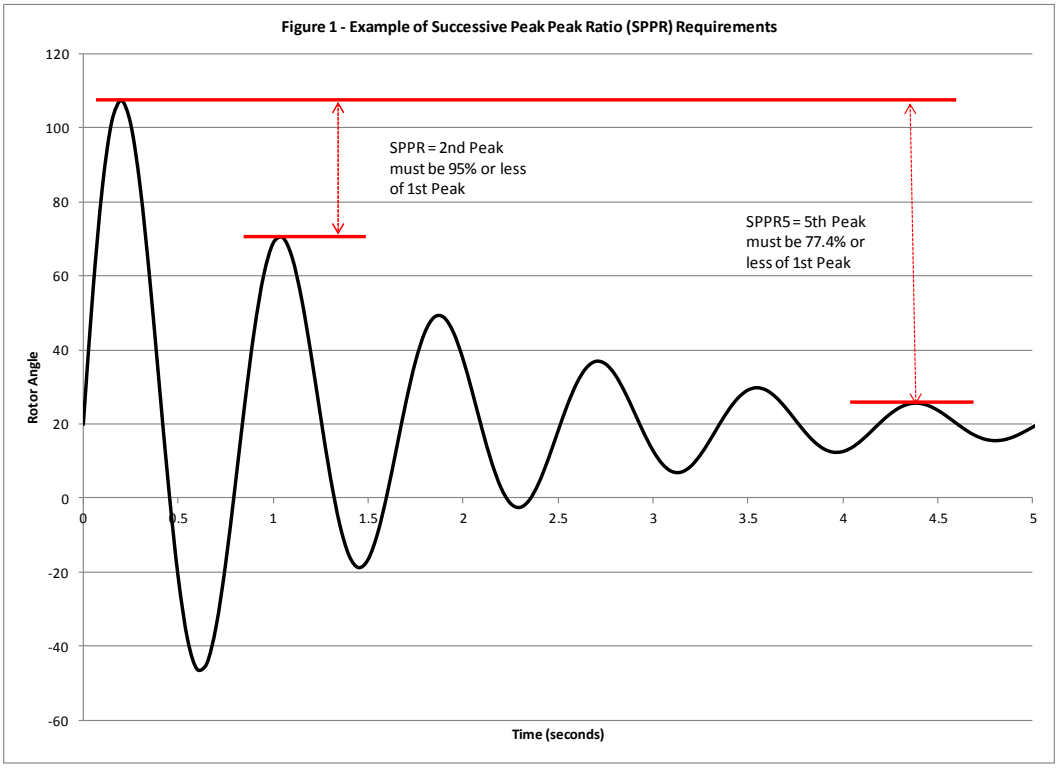
$$SPPR5 = \frac{\text{Peak Rotor Angle of 5}^{th}\text{ Positive Swing Peak}}{\text{Peak Rotor Angle of 1}^{st}\text{ Positive Swing Peak}} \leq 0.774$$

-or- Damping Factor % = (1 – SPPR) OK 100% ≥ 22.6%

The machine rotor angle damping ratio may be determined by appropriate modal analysis (i.e. Prony Analysis) where the following equivalent requirement must be met:

Damping Ratio ≥ 0.0081633

Qualitatively, these Requirements are shown in the figure below.



TRANSIENT VOLTAGE RECOVERY REQUIREMENT

Any time after a disturbance is cleared; bus voltages on the Bulk Electric System shall not swing outside of the bandwidth of 0.70 per unit to 1.20 per unit.

Qualitatively, this Requirement is shown in the figure below.

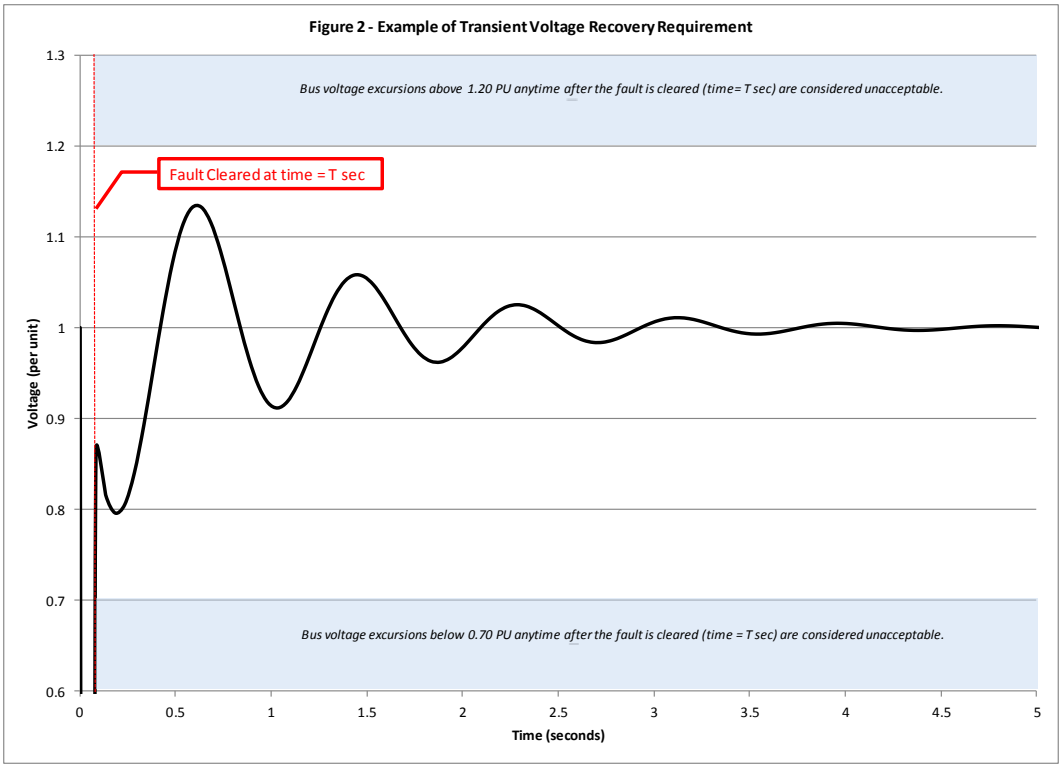


Figure 2 - Example of Transient Voltage Recovery Requirement
Bus voltage excursions above 1.20 PU anytime after the fault is cleared (time= T sec) are considered unacceptable.
Fault Cleared at time = T sec
Bus voltage excursions below 0.70 PU anytime after the fault is cleared (time = T sec) are considered unacceptable.
Voltage (per unit)
Time (seconds)
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5

Appendix B Project dynamic model data

Supplied on Request

Appendix C Stability Analysis Plots for Cluster scenario

The following files contain the cluster scenario stability plots with and without mitigation measures applied for contingencies resulting in system instability for each of the three base cases:

“16WP-sa-GEN-082.pdf”

“17SP-sa- GEN-082.pdf”

“25SP-sa- GEN-082.pdf”

These plots are available on request.

Appendix D Stability Analysis Plots for Standalone Scenario (GEN-2015-082)

The following files contain the standalone scenario (GEN-2015-082) stability plots with and without mitigation measures applied for contingencies resulting in system instability for each of the three base cases:

“16WP-sa-GEN-082.pdf”

“17SP-sa- GEN-082.pdf”

“25SP-sa- GEN-082.pdf”

These plots are available on request.

Appendix E Stability Analysis Plots for Standalone Scenario (GEN-2016-001)

The following files contain the standalone scenario (GEN-2016-001) stability plots with and without mitigation measures applied for contingencies resulting in system instability for each of the three base cases:

“16WP-sa-GEN-001.pdf”

“17SP-sa- GEN-001.pdf”

“25SP-sa- GEN-001.pdf”

These plots are available on request.

Appendix F Stability Analysis Plots for Standalone Scenario (GEN-2016-038)

The following files contain the standalone scenario (GEN-2016-038) stability plots with and without mitigation measures applied for contingencies resulting in system instability for each of the three base cases:

“16WP-sa-GEN-038.pdf”

“17SP-sa- GEN-038.pdf”

“25SP-sa- GEN-038.pdf”

These plots are available on request.

Appendix G Stability Analysis Plots for Standalone Scenario (GEN-2016-041)

The following files contain the standalone scenario (GEN-2016-041) stability plots with and without mitigation measures applied for contingencies resulting in system instability for each of the three base cases:

“16WP-sa-GEN-041.pdf”

“17SP-sa- GEN-041.pdf”

“25SP-sa- GEN-041.pdf”

These plots are available on request.

Appendix H Stability Analysis Plots for Standalone Scenario (GEN-2016-059)

The following files contain the standalone scenario (GEN-2016-059) stability plots with and without mitigation measures applied for contingencies resulting in system instability for each of the three base cases:

“16WP-sa-GEN-059.pdf”

“17SP-sa- GEN-059.pdf”

“25SP-sa- GEN-059.pdf”

These plots are available on request.

Appendix I Stability Analysis Plots for Standalone Scenario (GEN-2016-070)

The following files contain the standalone scenario (GEN-2016-070) stability plots with and without mitigation measures applied for contingencies resulting in system instability for each of the three base cases:

“16WP-sa-GEN-070.pdf”

“17SP-sa- GEN-070.pdf”

“25SP-sa- GEN-070.pdf”

These plots are available on request.

Appendix J Short Circuit Results for Group 02 Cluster Cases

Table 33: Short circuit analysis results Cluster 2016 Winter Peak Group 2 (345kV Bus)

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
515497	MATHWSN7	345	30.0		587040	GEN-2016-005	345	11.7
532796	WICHITA7	345	22.2		515448	CRSRDSW7	345	11.3
515375	WWRDEHV7	345	20.9		585440	PRSIMN_CRK2	345	11.0
560033	G1524&G1525T	345	19.1		560087	G16-073-TAP	345	10.9
515554	BVRCNTY7	345	18.1		587500	GEN-2016-073	345	10.9
562075	G11-051-TAP	345	17.2		585080	GEN-2015-071	345	10.9
583110	GEN-2011-051	345	17.2		525832	TUCO_INT 7	345	10.8
523097	HITCHLAND 7	345	17.1		582708	G-2011-008-1	345	10.3
560010	G14-037-TAP	345	17.1		585410	GREAT_WESTRN	345	10.3
523101	NOBLE_WND 7	345	17.1		531449	HOLCOMB7	345	10.2
523112	NOVUS1 7	345	16.8		531501	BUCKNER7	345	10.1
539800	CLARKCOUNTY7	345	16.4		523853	FINNEY 7	345	10.1
515407	TATONGA7	345	16.3		523961	POTTER_CO 7	345	9.8
539801	THISTLE7	345	16.0		584700	GEN-2015-029	345	9.8
560071	G16-003-TAP	345	16.0		560081	G16-049-TAP	345	9.5
587020	GEN-2016-003	345	16.0		582908	G-2011-008-2	345	9.5
560000	G11-14-TAP	345	15.8		515582	SLNGWND7	345	9.2
515800	GRACMNT7	345	15.7		579272	G0744&1403HV	345	9.2
531469	SPERVIL7	345	15.7		562334	G13-010-TAP	345	9.1
581148	GEN-2011-022	345	15.5		583600	GEN-2013-010	345	9.1
560002	IRONWOOD7	345	15.2		560035	GRAPEVINE	345	9.0
539803	IRONWOOD7	345	15.2		560078	G16-037-TAP	345	8.9
560070	G16-001-TAP	345	14.9		587340	GEN-2016-049	345	8.7
515590	PALDR2W7	345	14.8		515458	BORDER 7	345	8.2
579480	GEN-2008-124	345	14.6		531504	CIMWD2 7	345	8.1
560072	G16-005-TAP	345	14.5		582016	GEN-2011-016	345	8.0
585180	GEN-2015-081	345	14.2		585420	COWBOY_RIDGE	345	7.9
578542	GEN-2010-001	345	14.2		531502	CIMRRN 7	345	7.9
640183	GENTLMN3	345	14.1		587230	GEN-2016-037	345	7.6
583760	GEN-2013-030	345	14.0		585190	GEN-2015-082	345	7.6

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
581112	GEN-2011-014	345	13.9		531465	SETAB 7	345	7.2
560080	G16-046-TAP	345	13.8		580049	GEN-2010-045	345	7.1
515599	G07621119-20	345	13.7		583090	G1149&G1504	345	7.1
583370	GEN-2012-024	345	13.6		525549	TOLK 7	345	7.0
515585	MAMTHPW7	345	13.6		531451	MINGO 7	345	6.8
511553	CHISHOLM7	345	13.2		585030	GEN-2015-065	345	6.3
582008	GEN-2011-008	345	12.7		587450	GEN-2016-067	345	6.3
587000	GEN-2016-001	345	12.4		523118	BUFF_DUNES 7	345	6.2
515634	PALDR1W7	345	12.3		640325	REDWILO3	345	6.2
576395	GEN-2010-014	345	12.2		584990	GEN-2015-061	345	5.6
585430	PRSIMN_CRK1	345	12.0		527656	CROSSROADS 7	345	5.4
587310	GEN-2016-046	345	12.0		524296	SPNSPUR_WND7	345	5.1
584210	GEN-2014-037	345	11.9		599950	LAMAR7	345	2.4

Table 34: Short circuit analysis results Cluster 2016 Winter Peak Group 2 (230kV Bus)

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
523977	HARRNG_WST 6	230	28.8		583340	GEN-2012-020	230	8.7
523978	HARRNG_MID 6	230	28.8		526460	AMOCO_SS 6	230	8.6
523979	HARRNG_EST 6	230	28.8		526161	CARLISLE 6	230	8.3
524044	NICHOLS 6	230	27.8		539679	GRTBEND6	230	8.3
525524	TOLK_EAST 6	230	25.8		530680	HEIZER 6	230	8.3
525531	TOLK_WEST 6	230	25.8		587370	GEN-2016-056	230	8.1
525543	TOLK_TAP 6	230	25.8		522823	LP-MILWAKEE6	230	8.0
525481	PLANT_X 6	230	22.2		511490	ELKCITY6	230	7.8
523959	POTTER_CO 6	230	22.1		511541	SWEETWT6	230	7.7
524010	ROLLHILLS 6	230	20.7		524623	DEAFSMITH 6	230	7.6
525830	TUCO_INT 6	230	19.0		523551	HUTCHISON 6	230	7.4
525840	ANTELOPE_1 6	230	18.9		560051	G15-039-TAP	230	7.3
523095	HITCHLAND 6	230	15.6		523779	STLN-DEMARC6	230	6.9
526337	JONES 6	230	15.1		523309	MOORE_CNTY 6	230	6.8
524365	RANDALL 6	230	14.8		524290	WILDOR2_JUS6	230	6.5
524163	EAST_PLANT 6	230	14.6		584800	GEN-2015-039	230	6.2
524415	AMA_SOUTH 6	230	13.8		523777	WHEELER 6	230	5.8

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
539695	SPEARVL6	230	13.4		511542	BUFFCK6	230	5.7
511557	CHISHOLM6	230	11.8		523771	GRAPEVINE 6	230	5.6
525461	NEWHART 6	230	10.8		525637	LAMB_CNTY 6	230	5.4
525213	SWISHER 6	230	10.3		511544	DEMPSEY6	230	4.9
526525	WOLFFORTH 6	230	9.8		524276	WILDOR_WND 6	230	4.8
526435	SUNDOWN 6	230	9.8		511547	ROARK6	230	4.4
524267	BUSHLAND 6	230	9.6		523267	PRINGLE 6	230	4.3
562480	G13-027-TAP	230	9.0		523155	OCHILTREE 6	230	4.3
560050	G15-031-TAP	230	8.8		587400	GEN-2016-059	230	4.0
584750	GEN-2015-031	230	8.8		587240	GEN-2016-038	230	4.0
524909	ROSEVELT_N 6	230	8.7		587404	GEN-2016-059	230	3.9
524911	ROSEVELT_S 6	230	8.7		523869	CHAN/TASCOS6	230	3.9
524915	SW_4K33 6	230	8.7		587244	GEN2-016-038	230	3.7
599955	PNM-DC6	230	8.7		523221	XIT_INTG 6	230	2.6

Table 35: Short circuit analysis results Cluster 2016 Winter Peak Group 2 (138kV Bus)

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
587260	GEN-2016-041	138	38.7		514785	WOODWRD4	138	12.1
515376	WWRDEHV4	138	24.1		515398	OUSPRT 4	138	9.1
515997	WWPAR4	138	17.3		515394	KEENAN 4	138	8.3
539804	THISTLE4	138	16.6		514796	IODINE-4	138	7.4
539638	FLATRDG4	138	14.9		514787	DEWEY 4	138	7.3
					584980	GEN-2015-060	138	5.8

Table 36: Short circuit analysis results Cluster 2016 Winter Peak Group 2 (115kV Bus)

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
524043	NICHOLS 3	115	31.0		525124	HART_INDUST3	115	7.6
524018	ASARCO_TP 3	115	29.0		523404	CRMWA_#1TP 3	115	7.6
524016	ASARCO 3	115	26.7		523405	CRMWA_#2 3	115	7.5

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
524162	EAST_PLANT 3	115	23.5		525440	LC-S_OLTON 3	115	7.5
524058	WHITAKER 3	115	22.3		523352	HERRING_TP 3	115	7.4
524364	RANDALL 3	115	21.4		523770	GRAPEVINE 3	115	7.2
525480	PLANT_X 3	115	21.0		524331	PULLMAN 3	115	7.2
523111	NOVUS1 3	115	20.2		524124	BUSH 3	115	7.1
524185	PIERCE_TP 3	115	19.4		523160	FRISCO_WND 3	115	7.1
524007	ROLLHILLS 3	115	19.4		599041	DEWIND-HV	115	7.1
525828	TUCO_INT 3	115	19.0		523492	FRITCH 3	115	7.0
524224	MANHATTAN 3	115	18.8		524530	PALO_DURO 3	115	6.9
531448	HOLCOMB3	115	18.6		587570	ASGI1604	115	6.9
524009	CHERRY 3	115	18.5		523924	CARSON_SUB 3	115	6.9
523093	HITCHLAND 3	115	17.2		523926	MAJESTC_WND3	115	6.8
524414	AMA_SOUTH 3	115	16.9		525179	TULIA_TP 3	115	6.8
524322	GEORGIA 3	115	16.6		523174	GOODWELLWND3	115	6.8
523544	HUTCH_N 3	115	15.4		523366	RB-SNEED 3	115	6.8
523546	HUTCH_S 3	115	15.4		523817	MIDSTRM_TP 3	115	6.7
524388	CROUSE_HIND3	115	15.3		531393	PLYMELL3	115	6.7
524377	FARMERS 3	115	15.3		523407	CRMWA_#3 3	115	6.5
524306	COULTER 3	115	15.3		531430	MORRIS-3	115	6.5
524282	34TH_ST 3	115	15.1		523748	BOWERS 3	115	6.5
524404	OWENSCORN 3	115	15.0		524544	SPRING_DRW 3	115	6.4
525460	NEWHART 3	115	14.8		523113	TC-MCMURRY 3	115	6.4
524345	OSAGE 3	115	14.0		523403	CRMWA_#1 3	115	6.4
524136	HASTINGS 3	115	13.9		531493	GANO 3	115	6.3
523485	CAMX/AGR TP3	115	13.9		531476	SWNDTAP3	115	6.3
524397	ARROWHEAD 3	115	13.8		525225	KRESS_RURAL3	115	6.3
576396	G10-014-XFMR	115	13.7		531432	PILE 3	115	6.3
523377	RIVERVIEW 3	115	13.4		523203	SPEARMNSUB 3	115	6.2
524425	ESTACADO_TP3	115	13.3		531420	FLETCHR3	115	6.1
524192	PIERCE 3	115	13.2		525154	HAPPY_INT 3	115	6.1
576407	G10-014-XF-2	115	12.9		587010	GEN-2016-002	115	6.1
523486	CAMEX/AGRM 3	115	12.8		531485	CNTRLPL3	115	6.1
539678	GRTBEND3	115	12.7		524065	HIGHLAND 3	115	6.1
526160	CARLISLE 3	115	12.7		523776	WHEELER 3	115	6.0
539771	NFTDODG3	115	12.6		523154	OCHILTREE 3	115	5.9
539671	FTDODGE3	115	12.6		531477	S. WIND3	115	5.9

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
530601	HEIZER 3	115	12.6		530555	COLBY 3	115	5.8
524300	HILLSIDE 3	115	12.5		523175	LASLEY 3	115	5.8
523516	W_BORGER_TP3	115	12.3		523177	RB-SPURLOCK3	115	5.7
524252	SONCY_TP 3	115	12.2		531478	IRSKDOL3	115	5.7
539759	SPRVL 3	115	12.1		523176	RB-ELKS 3	115	5.7
523344	BLKHAWK_W 3	115	12.0		523318	DUMAS_19ST 3	115	5.7
523346	BLKHAWK_E 3	115	12.0		523158	PERRYTON 3	115	5.6
523470	CPCOKER 3	115	11.9		523712	KINGSMILL 3	115	5.6
524432	ESTACADO 3	115	11.7		523142	TC-AGGIE 3	115	5.5
524746	CASTRO_CNTY3	115	11.7		523339	FAIN 3	115	5.3
524249	SUNSET 3	115	11.6		523256	ETTER 3	115	5.3
523931	HIGHLAND_TP3	115	11.5		523130	NBLWND-HV2 3	115	5.2
523478	Q_RYTON_TP 3	115	11.5		525019	EMU&VLY_TP 3	115	5.2
524106	NORTHWEST 3	115	11.4		523359	HERRING 3	115	5.2
525192	KRESS_INT 3	115	11.3		524088	KIRBY 3	115	5.2
524622	DEAFSMITH 3	115	11.2		531362	MANNGT 3	115	5.2
524338	SOUTHEAST 3	115	11.2		523140	TXFARMS 3	115	5.2
523304	MOORE_W 3	115	10.9		524590	DAWN 3	115	5.1
523308	MOORE_E 3	115	10.9		524522	CANYON E_TP3	115	5.1
523103	NOBLE_WND 3	115	10.9		524694	DS-#22 3	115	5.0
524734	DS-#21 3	115	10.9		523804	MCCLELLAN 3	115	5.0
523266	PRINGLE 3	115	10.8		524079	CONWAY 3	115	4.9
539694	SPEARVL3	115	10.8		531392	PIONTAP3	115	4.9
640326	REDWILO7	115	10.7		523332	EXELL_TP 3	115	4.9
531464	SETAB 3	115	10.7		523797	HOWARD 3	115	4.8
526434	SUNDOWN 3	115	10.6		524516	CANYON_WEST3	115	4.8
579377	G06-044-MV2B	115	10.6		523197	EXCELN4-HV23	115	4.8
584220	GEN-2014-040	115	10.4		524523	CANYON_EAST3	115	4.8
525212	SWISHER 3	115	10.3		523228	DALLAM 3	115	4.7
584640	GEN-2015-022	115	10.3		530559	PH RUN 3	115	4.6
587250	GEN-2016-039	115	10.3		523237	HILMARCHZ 3	115	4.6
523195	HANSFORD 3	115	10.3		523246	DALHART 3	115	4.5
525454	HALE_CNTY 3	115	10.2		531398	SUBLETE3	115	4.5
524606	HEREFORD 3	115	10.2		523168	SHERMAN 3	115	4.3
531429	MINGO 3	115	10.1		531391	PIONEER3	115	4.3
531416	CTYSERT3	115	10.0		523198	EXCELN4-HV13	115	4.2

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
531445	GRDNCTY3	115	10.0		523325	EXELL 3	115	4.2
523277	VALERO 3	115	9.9		523120	COLE 3	115	4.1
523410	CRMWA_#4 3	115	9.8		523240	RB-EXUM 3	115	4.1
531480	KSAVWTP3	115	9.8		539652	CMRIVTP3	115	4.1
531418	CTYSERV3	115	9.8		531400	PK_GOAB3	115	4.1
523518	W_BORGER 3	115	9.8		531375	PUCKET 3	115	4.1
531419	DOBSON 3	115	9.6		531203	CMX-TAP3	115	4.1
531379	JONES3	115	9.6		523106	TXPHSF 3	115	4.0
576397	G10-014-XF-1	115	9.5		523636	GRAY_CNTY 3	115	3.9
523815	LLANO_WND 3	115	9.4		523220	XIT_INTG 3	115	3.9
524567	NE_HEREFORD3	115	9.1		531442	SAT-TAP3	115	3.9
531426	JAMESON3	115	9.1		512086	JERICHO3	115	3.9
524266	BUSHLAND 3	115	9.0		539691	SATMKEC3	115	3.9
531433	SCOTCTY3	115	9.0		523216	RB-HOGUE 3	115	3.7
523186	SPEARMAN 3	115	9.0		539672	E-LIBER3	115	3.7
531425	LOWETAP3	115	8.9		539775	NATBFTAP-A3	115	3.7
525056	BC-EARTH 3	115	8.8		539751	NATBEEF3	115	3.6
525636	LAMB_CNTY 3	115	8.5		523147	WADE 3	115	3.6
523315	RB-S&S 3	115	8.5		523149	NP-CHAPARAL3	115	3.6
579370	G06-044-MV1A	115	8.5		531408	PIERCVL3	115	3.6
525050	BC-KELLEY 3	115	8.4		531440	WILLIAM3	115	3.5
585020	GEN-2015-064	115	8.3		531437	SYRACUS3	115	3.4
523090	TEXAS_CNTY 3	115	8.2		539690	E-PINE 3	115	3.2
523945	PANTEX_S 3	115	8.2		523772	COBRN_CREEK3	115	3.2
523131	NBLWND-HV3 3	115	8.2		531351	BREWSTR3	115	3.0
524597	PANDAHFD 3	115	8.0		523135	LISPCOMB 3	115	2.7
579490	ASGI-GEN0757	115	7.9		531407	INGALLS3	115	2.5
525414	LAMTON 3	115	7.9		523811	MCLEAN 3	115	2.3
523494	MEREDITH 3	115	7.8		523099	TC-WHITING 3	115	2.2
523938	PANTEX_N 3	115	7.7		523012	TC-ANTHY_TP3	115	2.0
523928	MARTIN 3	115	7.7		523024	TC-BEAVER 3	115	1.6

Table 37: Short circuit analysis results Cluster 2017 Summer Peak Group2 (345kV Bus)

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
515497	MATHWSN7	345	31.9		515448	CRSRDSW7	345	11.5
532796	WICHITA7	345	25.2		560087	G16-073-TAP	345	11.3
515375	WWRDEHV7	345	21.4		587500	GEN-2016-073	345	11.3
560033	G1524&G1525T	345	20.8		585440	PRSIMN_CRK2	345	11.1
515554	BVRCNTY7	345	18.5		531449	HOLCOMB7	345	11.0
562075	G11-051-TAP	345	17.6		585080	GEN-2015-071	345	11.0
583110	GEN-2011-051	345	17.6		523853	FINNEY 7	345	10.9
523097	HITCHLAND 7	345	17.5		525832	TUCO_INT 7	345	10.9
560010	G14-037-TAP	345	17.5		531501	BUCKNER7	345	10.5
523101	NOBLE_WND 7	345	17.5		582708	G-2011-008-1	345	10.5
523112	NOVUS1 7	345	17.2		585410	GREAT_WESTRN	345	10.4
539800	CLARKCOUNTY7	345	16.7		584700	GEN-2015-029	345	10.0
515407	TATONGA7	345	16.7		523961	POTTER_CO 7	345	9.9
539801	THISTLE7	345	16.6		560081	G16-049-TAP	345	9.7
560071	G16-003-TAP	345	16.3		582908	G-2011-008-2	345	9.6
587020	GEN-2016-003	345	16.3		562334	G13-010-TAP	345	9.4
515800	GRACMNT7	345	16.2		583600	GEN-2013-010	345	9.4
560000	G11-14-TAP	345	16.1		515582	SLNGWND7	345	9.3
531469	SPERVIL7	345	16.1		579272	G0744&1403HV	345	9.3
581148	GEN-2011-022	345	15.8		560078	G16-037-TAP	345	9.1
560002	IRONWOOD7	345	15.5		560035	GRAPEVINE	345	9.1
539803	IRONWOOD7	345	15.5		587340	GEN-2016-049	345	8.9
560070	G16-001-TAP	345	15.1		515458	BORDER 7	345	8.4
515590	PALDR2W7	345	15.1		531504	CIMWD2 7	345	8.3
579480	GEN-2008-124	345	14.9		582016	GEN-2011-016	345	8.2
560072	G16-005-TAP	345	14.7		531502	CIMRRN 7	345	8.1
585180	GEN-2015-081	345	14.5		531512	WALKTAP7	345	8.0
578542	GEN-2010-001	345	14.4		585420	COWBOY_RIDGE	345	8.0
583760	GEN-2013-030	345	14.3		587230	GEN-2016-037	345	7.8
581112	GEN-2011-014	345	14.2		585190	GEN-2015-082	345	7.7
560080	G16-046-TAP	345	14.1		531465	SETAB 7	345	7.6
515599	G07621119-20	345	13.9		580049	GEN-2010-045	345	7.3
515585	MAMTHPW7	345	13.8		583090	G1149&G1504	345	7.1

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
583370	GEN-2012-024	345	13.8		525549	TOLK 7	345	7.0
511553	CHISHOLM7	345	13.4		531451	MINGO 7	345	7.0
582008	GEN-2011-008	345	12.9		523118	BUFF_DUNES 7	345	6.5
587000	GEN-2016-001	345	12.6		585030	GEN-2015-065	345	6.4
515634	PALDR1W7	345	12.5		587450	GEN-2016-067	345	6.4
576395	GEN-2010-014	345	12.5		640325	REDWILO3	345	6.3
585430	PRSIMN_CRK1	345	12.2		584990	GEN-2015-061	345	5.7
587310	GEN-2016-046	345	12.2		527656	CROSSROADS 7	345	5.4
584210	GEN-2014-037	345	12.1		524296	SPNSPUR_WND7	345	5.2
587040	GEN-2016-005	345	11.9		599950	LAMAR7	345	2.5

Table 38:Short circuit analysis results Cluster 2017 Summer Peak Group2 (230kV Bus)

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
523977	HARRNG_WST 6	230	29.0		584750	GEN-2015-031	230	8.8
523978	HARRNG_MID 6	230	29.0		524909	ROSEVELT_N 6	230	8.7
523979	HARRNG_EST 6	230	29.0		524911	ROSEVELT_S 6	230	8.7
524044	NICHOLS 6	230	27.9		524915	SW_4K33 6	230	8.7
525524	TOLK_EAST 6	230	26.2		599955	PNM-DC6	230	8.7
525531	TOLK_WEST 6	230	26.2		539679	GRTBEND6	230	8.4
525543	TOLK_TAP 6	230	26.2		530680	HEIZER 6	230	8.4
525481	PLANT_X 6	230	22.4		511490	ELKCITY6	230	8.0
523959	POTTER_CO 6	230	22.2		511541	SWEETWT6	230	7.9
524010	ROLLHILLS 6	230	20.8		524623	DEAFSMITH 6	230	7.6
525830	TUCO_INT 6	230	20.5		523551	HUTCHISON 6	230	7.4
525840	ANTELOPE_1 6	230	20.4		560051	G15-039-TAP	230	7.3
526337	JONES 6	230	20.1		523779	STLN-DEMARC6	230	7.1
523095	HITCHLAND 6	230	15.8		523309	MOORE_CNTY 6	230	6.8
524365	RANDALL 6	230	14.8		524290	WILDOR2_JUS6	230	6.4
524163	EAST_PLANT 6	230	14.6		584800	GEN-2015-039	230	6.1
524415	AMA_SOUTH 6	230	13.8		523777	WHEELER 6	230	5.9
526525	WOLFFORTH 6	230	13.6		511542	BUFFCK6	230	5.8

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
539695	SPEARVL6	230	13.6		523771	GRAPEVINE 6	230	5.7
526161	CARLISLE 6	230	12.2		525637	LAMB_CNTY 6	230	5.4
511557	CHISHOLM6	230	12.0		511544	DEMPSEY6	230	5.0
587370	GEN-2016-056	230	11.7		524276	WILDOR_WND 6	230	4.8
522823	LP-MILWAKEE6	230	11.4		511547	ROARK6	230	4.5
525461	NEWHART 6	230	10.7		523267	PRINGLE 6	230	4.4
526435	SUNDOWN 6	230	10.5		523155	OCHILTREE 6	230	4.3
525213	SWISHER 6	230	10.3		587400	GEN-2016-059	230	4.0
524267	BUSHLAND 6	230	9.5		587240	GEN-2016-038	230	4.0
526460	AMOCO_SS 6	230	9.1		587404	GEN-2016-059	230	3.9
562480	G13-027-TAP	230	9.0		523869	CHAN/TASCOS6	230	3.9
583340	GEN-2012-020	230	8.9		587244	GEN2-016-038	230	3.7
560050	G15-031-TAP	230	8.8		523221	XIT_INTG 6	230	2.6

Table 39:Short circuit analysis results Cluster 2017 Summer Peak Group2 (138kV Bus)

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
587260	GEN-2016-041	138	39.6		514785	WOODWRD4	138	12.2
515376	WWRDEHV4	138	24.4		515398	OUSPRT 4	138	9.2
515997	WWPAR4	138	17.5		515394	KEENAN 4	138	8.3
539804	THISTLE4	138	17.1		514796	IODINE-4	138	7.4
539638	FLATRDG4	138	15.3		514787	DEWEY 4	138	7.4
					584980	GEN-2015-060	138	5.8

Table 40:Short circuit analysis results Cluster 2017 Summer Peak Group2 (115kV Bus)

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
524043	NICHOLS 3	115	31.5		524597	PANDAHFD 3	115	7.9
524018	ASARCO_TP 3	115	29.4		523494	MEREDITH 3	115	7.8

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
524016	ASARCO 3	115	27.1		531393	PLYMELL3	115	7.8
524162	EAST_PLANT 3	115	23.5		579490	ASGI-GEN0757	115	7.8
531448	HOLCOMB3	115	22.6		525414	LAMTON 3	115	7.8
524058	WHITAKER 3	115	22.5		531476	SWNDTAP3	115	7.8
524364	RANDALL 3	115	21.5		523938	PANTEX_N 3	115	7.7
525480	PLANT_X 3	115	20.9		523928	MARTIN 3	115	7.7
523111	NOVUS1 3	115	20.4		523770	GRAPEVINE 3	115	7.7
525828	TUCO_INT 3	115	19.6		523404	CRMWA_#1TP 3	115	7.6
524185	PIERCE_TP 3	115	19.5		523405	CRMWA_#2 3	115	7.5
524007	ROLLHILLS 3	115	19.5		525124	HART_INDUST3	115	7.5
524224	MANHATTAN 3	115	18.8		523352	HERRING_TP 3	115	7.4
524009	CHERRY 3	115	18.6		539654	CIM-PLT3	115	7.3
523093	HITCHLAND 3	115	17.8		524331	PULLMAN 3	115	7.2
524414	AMA_SOUTH 3	115	16.8		539749	N-CIMRN3	115	7.1
524322	GEORGIA 3	115	16.6		523160	FRISCO_WND 3	115	7.1
523544	HUTCH_N 3	115	15.6		599041	DEWIND-HV	115	7.1
523546	HUTCH_S 3	115	15.6		524124	BUSH 3	115	7.1
524388	CROUSE_HIND3	115	15.3		523492	FRITCH 3	115	7.0
524377	FARMERS 3	115	15.3		531420	FLETCHR3	115	6.9
524306	COULTER 3	115	15.3		531392	PIONTAP3	115	6.9
524282	34TH_ST 3	115	15.0		523924	CARSON_SUB 3	115	6.9
524404	OWENSCORN 3	115	15.0		523926	MAJESTC_WND3	115	6.8
531445	GRDNCTY3	115	14.6		524530	PALO_DURO 3	115	6.8
525460	NEWHART 3	115	14.5		587570	ASGI1604	115	6.8
531480	KSAVWTP3	115	14.0		523174	GOODWELLWND3	115	6.8
524345	OSAGE 3	115	14.0		523748	BOWERS 3	115	6.8
524136	HASTINGS 3	115	14.0		523366	RB-SNEED 3	115	6.8
523485	CAMX/AGR TP3	115	13.9		525179	TULIA_TP 3	115	6.7
576396	G10-014-XFMR	115	13.8		523817	MIDSTRM_TP 3	115	6.6
524397	ARROWHEAD 3	115	13.8		523407	CRMWA_#3 3	115	6.5
523377	RIVERVIEW 3	115	13.4		523113	TC-MCMURRY 3	115	6.5
526160	CARLISLE 3	115	13.3		523403	CRMWA_#1 3	115	6.4
524425	ESTACADO_TP3	115	13.3		524544	SPRING_DRW 3	115	6.4
524192	PIERCE 3	115	13.2		523776	WHEELER 3	115	6.3
576407	G10-014-XF-2	115	13.0		523203	SPEARMNSUB 3	115	6.3
523486	CAMEX/AGRM 3	115	12.9		525225	KRESS_RURAL3	115	6.2

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
539771	NFTDODG3	115	12.9		539652	CMRIVTP3	115	6.2
539671	FTDODGE3	115	12.8		524065	HIGHLAND 3	115	6.1
539678	GRTBEND3	115	12.6		525154	HAPPY_INT 3	115	6.0
524300	HILLSIDE 3	115	12.5		587010	GEN-2016-002	115	6.0
531419	DOBSON 3	115	12.4		531481	HUGOTON3	115	6.0
530601	HEIZER 3	115	12.4		523154	OCHILTREE 3	115	6.0
523516	W_BORGER_TP3	115	12.4		539640	HAYNE3	115	5.9
524252	SONCY_TP 3	115	12.2		523175	LASLEY 3	115	5.7
539759	SPRVL 3	115	12.2		523177	RB-SPURLOCK3	115	5.7
523344	BLKHAWK_W 3	115	12.1		523158	PERRYTON 3	115	5.7
523346	BLKHAWK_E 3	115	12.1		523318	DUMAS_19ST 3	115	5.7
523470	CPCOKER 3	115	12.0		523176	RB-ELKS 3	115	5.7
524432	ESTACADO 3	115	11.7		523142	TC-AGGIE 3	115	5.6
524746	CASTRO_CNTY3	115	11.6		523712	KINGSMILL 3	115	5.6
523931	HIGHLAND_TP3	115	11.6		523339	FAIN 3	115	5.3
524249	SUNSET 3	115	11.6		524088	KIRBY 3	115	5.3
523478	Q_RYTON_TP 3	115	11.5		523256	ETTER 3	115	5.3
524106	NORTHWEST 3	115	11.3		523130	NBLWND-HV2 3	115	5.3
531379	JONES3	115	11.2		523359	HERRING 3	115	5.2
525192	KRESS_INT 3	115	11.1		525019	EMU&VLY_TP 3	115	5.2
524338	SOUTHEAST 3	115	11.1		523140	TXFARMS 3	115	5.2
531464	SETAB 3	115	11.1		531467	SEWARD-3	115	5.1
524622	DEAFSMITH 3	115	11.0		523804	MCCLELLAN 3	115	5.1
523103	NOBLE_WND 3	115	11.0		524522	CANYON E_TP3	115	5.1
523266	PRINGLE 3	115	10.8		539672	E-LIBER3	115	5.0
539694	SPEARVL3	115	10.8		524590	DAWN 3	115	5.0
523304	MOORE_W 3	115	10.8		539775	NATBFTAP-A3	115	5.0
523308	MOORE_E 3	115	10.8		531483	GRANTTP3	115	5.0
524734	DS-#21 3	115	10.8		531400	PK_GOAB3	115	5.0
526434	SUNDOWN 3	115	10.7		531375	PUCKET 3	115	5.0
531426	JAMESON3	115	10.7		539751	NATBEEF3	115	5.0
579377	G06-044-MV2B	115	10.6		524694	DS-#22 3	115	5.0
525446	SPGLAKE_TP3	115	10.6		524079	CONWAY 3	115	5.0
531510	WALKTAP3	115	10.5		523797	HOWARD 3	115	5.0
523195	HANSFORD 3	115	10.4		523332	EXELL_TP 3	115	4.9
531416	CTYSERT3	115	10.4		524516	CANYON_WEST3	115	4.8

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
584220	GEN-2014-040	115	10.4		523197	EXCELN4-HV23	115	4.8
531429	MINGO 3	115	10.3		523228	DALLAM 3	115	4.7
525454	HALE_CNTY 3	115	10.2		524523	CANYON_EAST3	115	4.7
531418	CTYSERV3	115	10.1		523237	HILMARCHZ 3	115	4.5
531405	WALKMYR3	115	10.1		523246	DALHART 3	115	4.5
525212	SWISHER 3	115	10.0		523168	SHERMAN 3	115	4.3
584640	GEN-2015-022	115	10.0		539690	E-PINE 3	115	4.3
587250	GEN-2016-039	115	10.0		523198	EXCELN4-HV13	115	4.3
524606	HEREFORD 3	115	10.0		523325	EXELL 3	115	4.3
523410	CRMWA_#4 3	115	9.9		523120	COLE 3	115	4.2
523277	VALERO 3	115	9.8		523240	RB-EXUM 3	115	4.1
523518	W_BORGER 3	115	9.8		512086	JERICHO3	115	3.9
576397	G10-014-XF-1	115	9.5		523636	GRAY_CNTY 3	115	3.9
531433	SCOTCTY3	115	9.4		531408	PIERCVL3	115	3.9
523815	LLANO_WND 3	115	9.3		523220	XIT_INTG 3	115	3.8
523186	SPEARMAN 3	115	9.1		531440	WILLIAM3	115	3.8
524567	NE_HEREFORD3	115	9.0		523216	RB-HOGUE 3	115	3.7
524266	BUSHLAND 3	115	8.9		523147	WADE 3	115	3.6
525056	BC-EARTH 3	115	8.8		523106	TXPHSF 3	115	3.6
579370	G06-044-MV1A	115	8.5		523149	NP-CHAPARAL3	115	3.6
523315	RB-S&S 3	115	8.5		523772	COBRN_CREEK3	115	3.3
525636	LAMB_CNTY 3	115	8.5		523135	LISPCOMB 3	115	2.7
523090	TEXAS_CNTY 3	115	8.4		523811	MCLEAN 3	115	2.3
525050	BC-KELLEY 3	115	8.4		523099	TC-WHITING 3	115	2.2
523131	NBLWND-HV3 3	115	8.2		523012	TC-ANTHY_TP3	115	2.0
523945	PANTEX_S 3	115	8.2		523024	TC-BEAVER 3	115	1.6

Table 41: Short circuit analysis results Cluster 2025 Summer Peak Group 02 (345kV Bus)

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
515497	MATHWSN7	345	32.2		584210	GEN-2014-037	345	11.8
532796	WICHITA7	345	26.1		515448	CRSRDSW7	345	11.5
560033	G1524&G1525T	345	21.2		560087	G16-073-TAP	345	11.4
515375	WWRDEHV7	345	21.1		587500	GEN-2016-073	345	11.4
515554	BVRCNTY7	345	17.9		585440	PRSIMN_CRK2	345	11.0
562075	G11-051-TAP	345	17.5		531449	HOLCOMB7	345	11.0
583110	GEN-2011-051	345	17.5		585080	GEN-2015-071	345	10.9
523097	HITCHLAND 7	345	17.0		523853	FINNEY 7	345	10.9
560010	G14-037-TAP	345	17.0		531501	BUCKNER7	345	10.4
523101	NOBLE_WND 7	345	16.9		582708	G-2011-008-1	345	10.4
523112	NOVUS1 7	345	16.7		585410	GREAT_WESTRN	345	10.3
539800	CLARKCOUNTY7	345	16.7		584700	GEN-2015-029	345	9.9
539801	THISTLE7	345	16.7		560081	G16-049-TAP	345	9.7
515407	TATONGA7	345	16.6		523961	POTTER_CO 7	345	9.7
515800	GRACMNT7	345	16.5		582908	G-2011-008-2	345	9.5
531469	SPERVIL7	345	16.0		562334	G13-010-TAP	345	9.4
560071	G16-003-TAP	345	15.9		583600	GEN-2013-010	345	9.4
587020	GEN-2016-003	345	15.9		515582	SLNGWND7	345	9.3
560000	G11-14-TAP	345	15.6		579272	G0744&1403HV	345	9.3
560002	IRONWOOD7	345	15.5		560078	G16-037-TAP	345	9.1
539803	IRONWOOD7	345	15.5		587340	GEN-2016-049	345	8.9
581148	GEN-2011-022	345	15.4		560035	GRAPEVINE	345	8.9
579480	GEN-2008-124	345	14.9		515458	BORDER 7	345	8.3
560070	G16-001-TAP	345	14.7		531504	CIMWD2 7	345	8.3
560072	G16-005-TAP	345	14.7		582016	GEN-2011-016	345	8.1
515590	PALDR2W7	345	14.6		531502	CIMRRN 7	345	8.1
585180	GEN-2015-081	345	14.3		531512	WALKTAP7	345	7.9
560080	G16-046-TAP	345	14.0		585420	COWBOY_RIDGE	345	7.9
578542	GEN-2010-001	345	14.0		587230	GEN-2016-037	345	7.8
583760	GEN-2013-030	345	13.8		531465	SETAB 7	345	7.6
515585	MAMTHPW7	345	13.8		585190	GEN-2015-082	345	7.4
515599	G07621119-20	345	13.8		580049	GEN-2010-045	345	7.3
581112	GEN-2011-014	345	13.8		525549	TOLK 7	345	7.1
583370	GEN-2012-024	345	13.7		583090	G1149&G1504	345	7.1

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
511553	CHISHOLM7	345	13.3		531451	MINGO 7	345	7.1
525832	TUCO_INT 7	345	13.0		585030	GEN-2015-065	345	6.5
582008	GEN-2011-008	345	12.9		587450	GEN-2016-067	345	6.5
587000	GEN-2016-001	345	12.2		523118	BUFF_DUNES 7	345	6.4
515634	PALDR1W7	345	12.1		640325	REDWILO3	345	6.4
587310	GEN-2016-046	345	12.1		584990	GEN-2015-061	345	5.8
576395	GEN-2010-014	345	12.1		527656	CROSSROADS 7	345	5.5
585430	PRSIMN_CRK1	345	12.1		524296	SPNSPUR_WND7	345	5.0
587040	GEN-2016-005	345	11.8		599950	LAMAR7	345	2.5

Table 42: Short circuit analysis results Cluster 2025 Summer Peak Group 02 (230kV Bus)

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
523977	HARRNG_WST 6	230	28.8		524911	ROSEVELT_S 6	230	8.9
523978	HARRNG_MID 6	230	28.8		524915	SW_4K33 6	230	8.9
523979	HARRNG_EST 6	230	28.8		599955	PNM-DC6	230	8.9
524044	NICHOLS 6	230	27.7		560050	G15-031-TAP	230	8.7
525524	TOLK_EAST 6	230	26.9		584750	GEN-2015-031	230	8.7
525531	TOLK_WEST 6	230	26.9		539679	GRTBEND6	230	8.5
525543	TOLK_TAP 6	230	26.9		530680	HEIZER 6	230	8.5
525481	PLANT_X 6	230	23.6		511490	ELKCITY6	230	7.9
525830	TUCO_INT 6	230	23.4		511541	SWEETWT6	230	7.9
525840	ANTELOPE_1 6	230	23.2		524623	DEAFSMITH 6	230	7.6
526337	JONES 6	230	22.0		523551	HUTCHISON 6	230	7.3
523959	POTTER_CO 6	230	21.9		560051	G15-039-TAP	230	7.3
524010	ROLLHILLS 6	230	20.6		523779	STLN-DEMARC6	230	7.0
523095	HITCHLAND 6	230	15.4		523309	MOORE_CNTY 6	230	6.7
526161	CARLISLE 6	230	15.2		524290	WILDOR2_JUS6	230	6.3
524365	RANDALL 6	230	14.7		584800	GEN-2015-039	230	6.1
522823	LP-MILWAKEE6	230	14.6		523777	WHEELER 6	230	5.8
524163	EAST_PLANT 6	230	14.5		511542	BUFFCK6	230	5.8
587370	GEN-2016-056	230	14.3		525637	LAMB_CNTY 6	230	5.7
526525	WOLFFORTH 6	230	14.2		523771	GRAPEVINE 6	230	5.6
524415	AMA_SOUTH 6	230	13.7		511544	DEMPSEY6	230	5.0

539695	SPEARVL6	230	13.5		524276	WILDOR_WND 6	230	4.7
511557	CHISHOLM6	230	11.9		511547	ROARK6	230	4.5
526435	SUNDOWN 6	230	10.9		523267	PRINGLE 6	230	4.3
525461	NEWHART 6	230	10.7		523155	OCHILTREE 6	230	4.2
525213	SWISHER 6	230	10.2		587400	GEN-2016-059	230	4.0
526460	AMOCO_SS 6	230	9.5		587240	GEN-2016-038	230	3.9
524267	BUSHLAND 6	230	9.3		587404	GEN-2016-059	230	3.9
583340	GEN-2012-020	230	9.3		523869	CHAN/TASCOS6	230	3.8
562480	G13-027-TAP	230	9.1		587244	GEN2-016-038	230	3.7
524909	ROSEVELT_N 6	230	8.9		523221	XIT_INTG 6	230	2.5

Table 43: Short circuit analysis results Cluster 2025 Summer Peak Group 02 (138kV Bus)

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
587260	GEN-2016-041	138	38.4		514785	WOODWRD4	138	12.1
515376	WWRDEHV4	138	24.2		515398	OUSPRT 4	138	9.1
515997	WWPAR4	138	17.3		515394	KEENAN 4	138	8.2
539804	THISTLE4	138	17.2		514796	IODINE-4	138	7.4
539638	FLATRDG4	138	15.4		514787	DEWEY 4	138	7.3
					584980	GEN-2015-060	138	5.7

Table 44: Short circuit analysis results Cluster 2025 Summer Peak Group 02 (115kV Bus)

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
524043	NICHOLS 3	115	31.9		523090	TEXAS_CNTY 3	115	8.1
524018	ASARCO_TP 3	115	29.8		523928	MARTIN 3	115	8.1
524016	ASARCO 3	115	27.4		523131	NBLWND-HV3 3	115	8.0
525480	PLANT_X 3	115	26.8		525414	LAMTON 3	115	7.9
524162	EAST_PLANT 3	115	23.4		523494	MEREDITH 3	115	7.8
531448	HOLCOMB3	115	22.5		531476	SWNDTAP3	115	7.8
524058	WHITAKER 3	115	22.5		531393	PLYMELL3	115	7.8
524364	RANDALL 3	115	20.8		579490	ASGI-GEN0757	115	7.7
525828	TUCO_INT 3	115	20.2		523770	GRAPEVINE 3	115	7.6
523111	NOVUS1 3	115	19.8		523404	CRMWA_#1TP 3	115	7.6
524007	ROLLHILLS 3	115	19.4		523405	CRMWA_#2 3	115	7.5

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
524185	PIERCE_TP 3	115	19.3		525124	HART_INDUST3	115	7.4
524224	MANHATTAN 3	115	18.6		523352	HERRING_TP 3	115	7.3
524009	CHERRY 3	115	18.5		539654	CIM-PLT3	115	7.2
523093	HITCHLAND 3	115	17.3		523924	CARSON_SUB 3	115	7.2
524414	AMA_SOUTH 3	115	16.6		523926	MAJESTC_WND3	115	7.1
524322	GEORGIA 3	115	16.4		539749	N-CIMRN3	115	7.1
523544	HUTCH_N 3	115	15.5		524331	PULLMAN 3	115	7.1
523546	HUTCH_S 3	115	15.5		524124	BUSH 3	115	7.0
524306	COULTER 3	115	15.1		523492	FRITCH 3	115	7.0
524388	CROUSE_HIND3	115	15.1		523160	FRISCO_WND 3	115	6.9
524377	FARMERS 3	115	15.1		599041	DEWIND-HV	115	6.9
524282	34TH_ST 3	115	14.9		531420	FLETCHR3	115	6.9
524404	OWENSCORN 3	115	14.8		531392	PIONTAP3	115	6.9
531445	GRDNCTY3	115	14.7		524530	PALO_DURO 3	115	6.8
531480	KSAVWTP3	115	14.1		587570	ASGI1604	115	6.8
525460	NEWHART 3	115	14.0		523748	BOWERS 3	115	6.7
523485	CAMX/AGR TP3	115	13.9		523366	RB-SNEED 3	115	6.7
524136	HASTINGS 3	115	13.9		525179	TULIA_TP 3	115	6.6
524345	OSAGE 3	115	13.8		523817	MIDSTRM_TP 3	115	6.5
524397	ARROWHEAD 3	115	13.6		523174	GOODWELLWND3	115	6.5
526160	CARLISLE 3	115	13.4		525019	EMU&VLY_TP 3	115	6.5
531429	MINGO 3	115	13.4		523407	CRMWA_#3 3	115	6.5
576396	G10-014-XFMR	115	13.4		523403	CRMWA_#1 3	115	6.3
523377	RIVERVIEW 3	115	13.4		523776	WHEELER 3	115	6.3
524192	PIERCE 3	115	13.1		524544	SPRING_DRW 3	115	6.3
524425	ESTACADO_TP3	115	13.1		523113	TC-MCMURRY 3	115	6.3
523486	CAMEX/AGRM 3	115	12.8		539652	CMRIVTP3	115	6.2
539771	NFTDODG3	115	12.8		524065	HIGHLAND 3	115	6.1
539671	FTDODGE3	115	12.8		525225	KRESS_RURAL3	115	6.1
539678	GRTBEND3	115	12.7		523203	SPEARMNSUB 3	115	6.1
576407	G10-014-XF-2	115	12.6		531481	HUGOTON3	115	5.9
530601	HEIZER 3	115	12.6		525154	HAPPY_INT 3	115	5.9
531419	DOBSON 3	115	12.5		587010	GEN-2016-002	115	5.9
524300	HILLSIDE 3	115	12.4		524590	DAWN 3	115	5.9
523516	W_BORGER_TP3	115	12.3		539640	HAYNE3	115	5.8
523344	BLKHAWK_W 3	115	12.2		523154	OCHILTREE 3	115	5.8

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
523346	BLKHAWK_E 3	115	12.2		523177	RB-SPURLOCK3	115	5.6
539759	SPRVL 3	115	12.1		523318	DUMAS_19ST 3	115	5.6
524252	SONCY_TP 3	115	12.1		523175	LASLEY 3	115	5.6
523470	CPCOKER 3	115	12.1		523158	PERRYTON 3	115	5.5
523931	HIGHLAND_TP3	115	11.8		523176	RB-ELKS 3	115	5.5
524746	CASTRO_CNTY3	115	11.7		523712	KINGSMILL 3	115	5.5
523478	Q_RYTON_TP 3	115	11.7		523142	TC-AGGIE 3	115	5.4
524432	ESTACADO 3	115	11.6		523339	FAIN 3	115	5.3
525446	SPGLAKE_TP3	115	11.5		524088	KIRBY 3	115	5.3
524249	SUNSET 3	115	11.5		524522	CANYON E_TP3	115	5.2
524106	NORTHWEST 3	115	11.3		523256	ETTER 3	115	5.2
524622	DEAFSMITH 3	115	11.2		523359	HERRING 3	115	5.2
531379	JONES3	115	11.1		531467	SEWARD-3	115	5.1
525192	KRESS_INT 3	115	11.0		523130	NBLWND-HV2 3	115	5.1
531464	SETAB 3	115	11.0		524516	CANYON_WEST3	115	5.1
524338	SOUTHEAST 3	115	11.0		523140	TXFARMS 3	115	5.1
526434	SUNDOWN 3	115	10.9		523804	MCCLELLAN 3	115	5.0
524734	DS-#21 3	115	10.8		539672	E-LIBER3	115	5.0
539694	SPEARVL3	115	10.8		539775	NATBFTAP-A3	115	5.0
523304	MOORE_W 3	115	10.7		524694	DS-#22 3	115	5.0
523308	MOORE_E 3	115	10.7		539751	NATBEEF3	115	5.0
523266	PRINGLE 3	115	10.7		531483	GRANTTP3	115	5.0
531426	JAMESON3	115	10.6		531400	PK_GOAB3	115	5.0
523103	NOBLE_WND 3	115	10.6		531375	PUCKET 3	115	4.9
584220	GEN-2014-040	115	10.4		524079	CONWAY 3	115	4.9
579377	G06-044-MV2B	115	10.3		523797	HOWARD 3	115	4.9
531416	CTYSERT3	115	10.3		524523	CANYON_EAST3	115	4.8
531510	WALKTAP3	115	10.3		523332	EXELL_TP 3	115	4.8
525454	HALE_CNTY 3	115	10.2		523197	EXCELN4-HV23	115	4.7
523195	HANSFORD 3	115	10.1		523228	DALLAM 3	115	4.6
524606	HEREFORD 3	115	10.1		523237	HILMARCHZ 3	115	4.4
531418	CTYSERV3	115	10.1		523246	DALHART 3	115	4.4
525212	SWISHER 3	115	9.9		539690	E-PINE 3	115	4.3
584640	GEN-2015-022	115	9.9		523325	EXELL 3	115	4.2
587250	GEN-2016-039	115	9.9		523168	SHERMAN 3	115	4.2
531405	WALKMYR3	115	9.9		523198	EXCELN4-HV13	115	4.1

Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)		Bus number	Bus Name	Voltage (KV)	Total Short-circuit Current (kA)
523410	CRMWA_#4 3	115	9.8		523120	COLE 3	115	4.0
523277	VALERO 3	115	9.7		523240	RB-EXUM 3	115	4.0
523518	W_BORGER 3	115	9.7		512086	JERICHO3	115	3.9
531433	SCOTCTY3	115	9.3		523636	GRAY_CNTY 3	115	3.9
576397	G10-014-XF-1	115	9.2		531408	PIERCVL3	115	3.9
525056	BC-EARTH 3	115	9.2		523220	XIT_INTG 3	115	3.9
523815	LLANO_WND 3	115	9.1		523106	TXPHSF 3	115	3.9
524567	NE_HEREFORD3	115	9.1		531440	WILLIAM3	115	3.7
524266	BUSHLAND 3	115	8.9		523216	RB-HOGUE 3	115	3.6
523186	SPEARMAN 3	115	8.9		523147	WADE 3	115	3.5
523945	PANTEX_S 3	115	8.8		523149	NP-CHAPARAL3	115	3.5
525050	BC-KELLEY 3	115	8.6		523772	COBRN_CREEK3	115	3.2
524597	PANDAHFD 3	115	8.5		523135	LISPCOMB 3	115	2.6
523315	RB-S&S 3	115	8.4		523811	MCLEAN 3	115	2.3
579370	G06-044-MV1A	115	8.3		523099	TC-WHITING 3	115	2.1
523938	PANTEX_N 3	115	8.2		523012	TC-ANTHY_TP3	115	2.0
525614	W_LITLFLDTP3	115	8.2		523024	TC-BEAVER 3	115	1.5

Appendix K Fault Definition Contingency List for DISIS-2016-001 Group 02 Cases

Cont. Name	Description	GEN-2015-082	GEN-2016-001	GEN-2016-038	GEN-2016-041	GEN-2016-059	GEN-2016-070
FLT01-3PH	3 phase fault on the G11-014-Tap 345kV (560000) to G16-001 – TAP 345kV (560070) (to Woodward (515375)) CKT 1, near G11-014-Tap. a. Apply fault at the G11-014-Tap 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT02-3PH	3 phase fault on the G16-001-Tap 345kV (560070) to G11-014 – TAP 345kV (560000) CKT 1, near G16-001-Tap. a. Apply fault at the G16-001-Tap 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT03-3PH	3 phase fault on the G11-014-Tap 345kV (560000) to G16-001 – TAP 345kV (560070) CKT 1 & 2, near G11-014-Tap. a. Apply fault at the G11-014-Tap 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).	X	X		X		
FLT04-3PH	3 phase fault on the G16-001-Tap 345kV (560070) to G11-014-Tap 345kV (560000) CKT 1 & 2, near G16-001-Tap. a. Apply fault at the G16-001-Tap 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).	X	X		X		
FLT05-3PH	3 phase fault on the G11-014-Tap 345kV (560000) to Beaver County 345kV (515554) CKT 1, near G11-014-Tap. a. Apply fault at the G11-014-Tap 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT06-3PH	3 phase fault on the G11-014-Tap 345kV (560000) to Beaver County 345kV (515554) CKT 1 & 2, near G11-014-Tap. a. Apply fault at the G11-014-Tap 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).	X	X		X		

Cont. Name	Description	GEN-2015-082	GEN-2016-001	GEN-2016-038	GEN-2016-041	GEN-2016-059	GEN-2016-070
FLT07-3PH	3 phase fault on the G16-001-Tap 345kV (560070) to G16-003 – TAP 345kV (560071) CKT 1, near G16-001-Tap. a. Apply fault at the G16-001-Tap 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT08-3PH	3 phase fault on the G16-001-Tap 345kV (560070) to G16-003 – TAP 345kV (560071) CKT 1 & 2, near G16-001-Tap. a. Apply fault at the G16-001-Tap 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).	X	X		X		
FLT09-3PH	3 phase fault on the G16-003 – TAP 345kV (560071) to Woodward 345kV (515375) CKT 1, near G16-003 – TAP. a. Apply fault at the G16-003 – TAP 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT10-3PH	3 phase fault on the G16-003 – TAP 345kV (560071) to Woodward 345kV (515375) CKT 1 and 2, near G16-003 – TAP. a. Apply fault at the G16-003 – TAP 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).	X	X		X		
FLT11-3PH	3 phase fault on the Woodward 345kV (515375) to Border 345kV (515458) CKT 1, near Woodward. a. Apply fault at the Woodward 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT12-3PH	3 phase fault on the Woodward 345kV (515375) to G11-051 Tap 345kV (562075) CKT 1, near Woodward. a. Apply fault at the Woodward 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT13-3PH	3 phase fault on the Woodward 345kV (515375) to G11-051-Tap 345kV (562075) CKT 1 and 2, near Woodward. a. Apply fault at the Woodward 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).	X	X		X		

Cont. Name	Description	GEN-2015-082	GEN-2016-001	GEN-2016-038	GEN-2016-041	GEN-2016-059	GEN-2016-070
FLT14-3PH	3 phase fault on the Beaver County 345kV (515554) to Optima 345kV (560010) 345kV CKT 1, near Beaver County. a. Apply fault at the Beaver County 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT15-3PH	3 phase fault on the Beaver County 345kV (515554) to Optima 345kV (560010) CKT 1 and 2, near Beaver County. a. Apply fault at the Beaver County 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).	X	X		X		
FLT16-3PH	3 phase fault on Hitchland 345kV (523097) to Optima 345kV (560010) CKT 1, near Hitchland. a. Apply fault at the Hitchland 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT17-3PH	3 phase fault on the Hitchland 345kV (523097) to Optima 345kV (560010) CKT 1 and 2, near Hitchland. a. Apply fault at the Hitchland 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).	X	X		X		
FLT18-3PH	3 phase fault on the Woodward 345kV (515375) to Woodward 138kV (515376) Woodward 13.8kV (515799) XFMR CKT 2, near Woodward 345kV. a. Apply fault at the Woodward 345kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.	X	X		X		
FLT19-3PH	3 phase fault on the Border 345kV (515458) to Tuco 345kV (525832) CKT 1, near Border. a. Apply fault at the Border 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X				
FLT20-3PH	3 phase fault on the Tuco 345kV (525832) to G14-074-Tap 345kV (560027) CKT 1, near Tuco. a. Apply fault at the Tuco 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X				

Cont. Name	Description	GEN-2015-082	GEN-2016-001	GEN-2016-038	GEN-2016-041	GEN-2016-059	GEN-2016-070
FLT21-3PH	3 phase fault on the G14-074-Tap 345kV (560027) to Oklaunion 345kV (511456) CKT 1, near G14-074-Tap. a. Apply fault at the G14-074-Tap 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X				
FLT22-3PH	3 phase fault on the Thistle 345kV (539801) to Woodward 345kV (515375) CKT 1, near Woodward. a. Apply fault at the Woodward 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X				
FLT23-3PH	3 phase fault on the Thistle 345kV (539801) to Woodward 345kV (515375) CKT 1 and 2, near Thistle. a. Apply fault at the Thistle 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).	X	X				
FLT24-3PH	3 phase fault on the Thistle 345kV (539801) to G1524&G1525T 345kV (560033) CKT 1, near Thistle. a. Apply fault at the Thistle 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X				
FLT25-3PH	3 phase fault on the Thistle 345kV (539801) to G1524&G1525T 345kV (560033) CKT 1 and 2, near Thistle. a. Apply fault at the Thistle 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).	X	X				
FLT26-3PH	3 phase fault on the Thistle 345kV (539801) to G16-005 TAP 345kV (560072) CKT 1, near Thistle. a. Apply fault at the Thistle 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X				
FLT27-3PH	3 phase fault on the Thistle 345kV (539801) to G16-005 TAP 345kV (560072) CKT 1 and 2, near Thistle. a. Apply fault at the Thistle 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).	X	X				

Cont. Name	Description	GEN-2015-082	GEN-2016-001	GEN-2016-038	GEN-2016-041	GEN-2016-059	GEN-2016-070
FLT28-3PH	3 phase fault on the Thistle 345kV (539801) to Thistle 138kV (539804) Thistle 13.8kV (539802) XFMR CKT 1, near Thistle 345kV. a. Apply fault at the Thistle 345kV bus. b. Clear fault after 5 cycles and trip the faulted transformer	X	X				
FLT29-3PH	3 phase fault on the G16-005 TAP 345kV (560072) to Clark County 345kV (539800) CKT 1, near G16-005 TAP. a. Apply fault at the G16-005 TAP 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X				
FLT30-3PH	3 phase fault on the G16-005 TAP 345kV (560072) to Clark County 345kV (539800) CKT 1 and 2, near G16-005 TAP. a. Apply fault at the G16-005 TAP 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).	X	X				
FLT31-3PH	3 phase fault on the Clark County 345kV (539800) to G16-046 TAP (560080) CKT 1, near Clark County. a. Apply fault at the Clark County 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X				
FLT32-3PH	3 phase fault on the Clark County 345kV (539800) to Ironwood 345 kV (560002) CKT 1, near Clark County. a. Apply fault at the Clark County 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X				
FLT33-3PH	3 phase fault on the G16-046 TAP 345kV (560080) to Ironwood 345 kV (539803) CKT 1, near G16-046 TAP. a. Apply fault at the G16-046 TAP 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X				
FLT34-3PH	3 phase fault on the G1524&G1525T 345 kV (560033) to Wichita 345kV (532796) CKT 1, near G1524&G1525T. a. Apply fault at the G1524&G1525T 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X				

Cont. Name	Description	GEN-2015-082	GEN-2016-001	GEN-2016-038	GEN-2016-041	GEN-2016-059	GEN-2016-070
FLT35-3PH	3 phase fault on the G1524&G1525T 345 kV (560033) to Wichita 345kV (532796) CKT 1 and 2, near G1524&G1525T. a. Apply fault at the G1524&G1525T 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).	X	X				
FLT36-3PH	3 phase fault on the Wichita 345kV (532796) to Benton 345kV (532791) CKT 1, near Wichita. a. Apply fault at the Wichita 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X				
FLT37-3PH	3 phase fault on the Wichita 345kV (532796) to Reno 345kV (532771) CKT 1, near Wichita. a. Apply fault at the Wichita 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X				
FLT38-3PH	3 phase fault on the Wichita 345kV (532796) to Viola 345kV (532798) CKT 1, near Wichita. a. Apply fault at the Wichita 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X				
FLT39-3PH	3 phase fault on the G14-001 TAP 345kV (562476) to Wichita 345kV (532796) CKT 1, near Wichita. a. Apply fault at the Wichita 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X				
FLT40-3PH	3 phase fault on the Wichita 345kV (532796) to Evans 138kV (533040) Wichita 13.8kV (532829) XFMR CKT 1, near Wichita 345kV. a. Apply fault at the Wichita 345kV bus. b. Clear fault after 5 cycles and trip the faulted transformer	X	X				
FLT41-3PH	3 phase fault on the Benton 345kV (532791) to Benton 138kV (532986), Wichita 13.8kV (532821) XFMR CKT 1, near Benton 345kV. a. Apply fault at the Benton 345kV bus. b. Clear fault after 5 cycles and trip the faulted transformer		X				

Cont. Name	Description	GEN-2015-082	GEN-2016-001	GEN-2016-038	GEN-2016-041	GEN-2016-059	GEN-2016-070
FLT42-3PH	3 phase fault on the Reno 345kV (532771) to Reno 138kV (533416), Reno 13.8kV (532807) XFMR CKT 1, near Reno 345kV. a. Apply fault at the Reno 345kV bus. b. Clear fault after 5 cycles and trip the faulted transformer		X				
FLT43-3PH	3 phase fault on the Benton 345kV (532791) to Wolf Creek 345kV (532797) CKT 1, near Benton. a. Apply fault at the Benton 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X				
FLT44-3PH	3 phase fault on the Benton 345kV (532791) to Rose Hill 345kV (532794) CKT 1, near Benton. a. Apply fault at the Benton 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X				
FLT45-3PH	3 phase fault on the Reno 345kV (532771) to Summit 345kV (532773) CKT 1, near Reno. a. Apply fault at the Reno 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X				
FLT46-3PH	3 phase fault on the Viola 345kV (532798) to Renfrow 345kV (515543) CKT 1, near Viola. a. Apply fault at the Viola 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X				
FLT47-3PH	3 phase fault on the G14-001 TAP 345kV (562476) to Empec 345kV (532768) CKT 1, near G14-001 TAP. a. Apply fault at the G14-001 TAP 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X				

Cont. Name	Description	GEN-2015-082	GEN-2016-001	GEN-2016-038	GEN-2016-041	GEN-2016-059	GEN-2016-070
FLT48-3PH	3 phase fault on the G11-051 TAP 345kV (562075) to Tatonga 345kV (515407) CKT 1, near G11-051 TAP. a. Apply fault at the G11-051 TAP 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X				
FLT49-3PH	3 phase fault on the G11-051 TAP 345kV (562075) to Tatonga 345kV (515407) CKT 1 and 2, near G11-051 TAP. a. Apply fault at the G11-051 TAP 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).	X	X				
FLT50-3PH	3 phase fault on the Mathewson/Spring Creek 345kV (515497) to Tatonga 345kV (515407) CKT 1, near Tatonga. a. Apply fault at the Tatonga 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X				
FLT51-3PH (25SP Only)	3 phase fault on the Mathewson/Spring Creek 345kV (515497) to Tatonga 345kV (515407) CKT 1 and 2, near Tatonga. a. Apply fault at the Tatonga 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).	X	X				
FLT52-3PH	3 phase fault on the Mathewson/Spring Creek 345kV (515497) to Cimarron 345kV (514901) CKT 1, near Mathewson/Spring Creek. a. Apply fault at the Mathewson/Spring Creek 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X				
FLT53-3PH	3 phase fault on the Mathewson/Spring Creek 345kV (515497) to Cimarron 345kV (514901) CKT 1 and 2, near Mathewson/Spring Creek. a. Apply fault at the Mathewson/Spring Creek 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).	X	X				
FLT54-3PH	3 phase fault on the Mathewson/Spring Creek 345kV (515497) to Northwest 345kV (514880) CKT 1, near Mathewson/Spring Creek. a. Apply fault at the Mathewson/Spring Creek 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X				

Cont. Name	Description	GEN-2015-082	GEN-2016-001	GEN-2016-038	GEN-2016-041	GEN-2016-059	GEN-2016-070
FLT55-3PH	3 phase fault on the Northwest 345kV (514880) to Cimarron 345kV (514901) CKT 1, near Northwest. a. Apply fault at the Northwest 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X				
FLT56-3PH (17SP and 25SP Only)	3 phase fault on the Hitchland 345kV (523097) to Walk Tap 345kV (531512) CKT 1, near Hitchland. a. Apply fault at the Hitchland 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT57-3PH (16WP only)	3 phase fault on the Hitchland 345kV (523097) to Finney 345kV (523853) CKT 1, near Hitchland. a. Apply fault at the Hitchland 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT58-3PH	3 phase fault on the Hitchland 345kV (523097) to Hitchland 230kV (523095) Hitchland 13.2kV (523091) XFMR CKT 1, near Hitchland 345kV. a. Apply fault at the Hitchland 345kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.	X	X		X		
FLT59-3PH	3 phase fault on the Hitchland 345kV (523097) to Potter County 345kV (523961) CKT 1, near Hitchland. a. Apply fault at the Hitchland 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT60-3PH	3 phase fault on the Potter County 345kV (523961) to Potter County 230kV (523959) Potter County 13.2kV (523957) XFMR CKT 1, near Potter County 345kV. a. Apply fault at the Potter County 345kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.	X	X	X	X	X	
FLT61-3PH	3 phase fault on the Hitchland 230kV (523095) to Ochiltree 230kV (523155) CKT 1, near Hitchland. a. Apply fault at the Hitchland 230kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		

Cont. Name	Description	GEN-2015-082	GEN-2016-001	GEN-2016-038	GEN-2016-041	GEN-2016-059	GEN-2016-070
FLT62-3PH	3 phase fault on the Hitchland 230kV (523095) to Moore County 230kV (523309) CKT 1, near Hitchland. a. Apply fault at the Hitchland 230kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT63-3PH	3 phase fault on the Hitchland 230kV (523095) to Hitchland 115kV (523093) Hitchland 13.2kV (523092) XFMR CKT 1, near Hitchland 230kV. a. Apply fault at the Hitchland 230kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.	X	X		X		
FLT64-3PH	3 phase fault on the Finney 345kV (523853) to Holcomb 345kV (531449) CKT 1, near Finney. a. Apply fault at the Finney 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT65-3PH	3 phase fault on the Finney 345kV (523853) to Lamar 345kV (599950) CKT 1, near Finney. a. Apply fault at the Finney 345kV bus. b. Clear fault after 5 cycles and trip the faulted line.	X	X		X		
FLT66-3PH	3 phase fault on the Holcomb 345kV (531449) to Buckner 345kV (531501) CKT 1, near Holcomb. a. Apply fault at the Holcomb 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X			X		
FLT67-3PH	3 phase fault on the Holcomb 345kV (531449) to Setab 345kV (531465) CKT 1, near Holcomb. a. Apply fault at the Holcomb 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X			X		
FLT68-3PH	3 phase fault on the Harrington East (523979) to Potter County (523959) 230 kV line circuit 1, near Harrington East. a. Apply fault at the Harrington East 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X		X	X	X	

Cont. Name	Description	GEN-2015-082	GEN-2016-001	GEN-2016-038	GEN-2016-041	GEN-2016-059	GEN-2016-070
FLT69-3PH	3 phase fault on Potter County 230kV (523959) to Rolling Hills 230kV (524010) CKT 1, near Potter County. a. Apply fault at the Potter County 230kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X		X	X	X	
FLT70-3PH	3 phase fault on Potter County 230kV (523959) to Bushland 230kV (524267) CKT 1, near Potter County. a. Apply fault at the Potter County 230kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X		X	X	X	
FLT71-3PH	3 phase fault on Potter County 230kV (523959) to Newhart 230kV (525461) CKT 1, near Potter County. a. Apply fault at the Potter County 230kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X		X	X	X	
FLT72-3PH	3 phase fault on Martin Switching Station 115kV (523928) to Pantex North 115kV (523938) CKT 1, near Martin Switching Station. a. Apply fault at the Martin Switching Station 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X
FLT73-3PH	3 phase fault on Martin Switching Station 115kV (523928) to Hutchison South 115kV (523546) CKT 1, near Martin Switching Station. a. Apply fault at the Martin Switching Station 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X
FLT74-3PH	3 phase fault on the Hutchison South 115kV (523546) to Hutchison 230kV (523551) Hutchison 13.2kV (523541) XFMR CKT 1, near Hutchison South 115kV. a. Apply fault at the Hutchison South 115kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.						X

Cont. Name	Description	GEN-2015-082	GEN-2016-001	GEN-2016-038	GEN-2016-041	GEN-2016-059	GEN-2016-070
FLT75-3PH	3 phase fault on the Hutchison South 115kV (523546) to Hutchison 69kV (523543) Hutchison 13.2kV (523542) XFMR CKT 1, near Hutchison South 115kV. a. Apply fault at the Hutchison South 115kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.						X
FLT76-3PH	3 phase fault on Hutchison South 115kV (523546) to Riverview 115kV (523377) CKT 1, near Hutchison South. a. Apply fault at the Hutchison South 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X
FLT77-3PH	3 phase fault on Hutchison South 115kV (523546) to Gray County 115kV (523636) CKT 1, near Hutchison South. a. Apply fault at the Hutchison South 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X
FLT78-3PH	3 phase fault on Hutchison North 115kV (523544) to Blackhawk 115kV (523344) CKT 1, near Hutchison North. a. Apply fault at the Hutchison North 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X
FLT79-3PH	3 phase fault on Pantex South 115 kV (523945) to Highland Tap 115kV (523931) to Asarco Tap 115kV (524018) CKT 1, near Pantex South. a. Apply fault at the Pantex South 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X
FLT80-3PH	3 phase fault on Nichols 230kV (524044) to Amarillo South 230kV (524415) CKT 1, near Nichols. a. Apply fault at the Nichols 230kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X		X	X

Cont. Name	Description	GEN-2015-082	GEN-2016-001	GEN-2016-038	GEN-2016-041	GEN-2016-059	GEN-2016-070
FLT81-3PH	3 phase fault on Harrington West 230kV (523977) to Rollhills 230kV (524010) CKT 1, near Harrington West. a. Apply fault at the Harrington West 230kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X	X	X	X
FLT82-3PH	3 phase fault on the Harrington (523978) to Nichols (524044) 230 kV line circuit 1, near Harrington. a. Apply fault at the Harrington 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X		X	X
FLT83-3PH	3 phase fault on the Harrington (523978) to Randall (524365) 230 kV line circuit 1, near Harrington. a. Apply fault at the Harrington 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X	X	X	
FLT84-3PH	3 phase fault on the Harrington East (523979) to Pringle (523267) 230 kV line circuit 1, near Harrington East. a. Apply fault at the Harrington East 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X		X	
FLT85-3PH	3 phase fault on the Harrington West (523977) to Nichols (524044) 230 kV line circuit 1, near Harrington West. a. Apply fault at the Harrington West 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X		X	X
FLT86-3PH	3 phase fault on the Harrington West (523977) to East Plant (524163) 230 kV line circuit 1, near Harrington West. a. Apply fault at the Harrington West 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X		X	X

Cont. Name	Description	GEN-2015-082	GEN-2016-001	GEN-2016-038	GEN-2016-041	GEN-2016-059	GEN-2016-070
FLT87-3PH	3 phase fault on the Randall 230 kV (524365) to Randall 115 kV (524364) to Randall 13.2 kV (524361) XFMR CKT 1, near Randall 230 kV. a. Apply fault at the Randall 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.			X		X	
FLT88-PO (17SP and 25SP Only)	Prior outage on the Hitchland (523097) to Walk Tap (531512) 345kV 3 phase fault on Hitchland 345kV (523097) to Potter County 345kV (523961) CKT 1, near Hitchland. a. Apply fault at the Hitchland 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT89-PO (17SP and 25SP Only)	Prior outage on the Hitchland (523097) to Walk Tap (531512) 345kV 3 phase fault on Hitchland 345kV (523097) to G14-037-Tap 345kV (560010) CKT 1, near Hitchland. a. Apply fault at the Hitchland 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT90-PO (16WP Only)	Prior outage on the Hitchland (523097) to Finney (523853) 3 phase fault on Hitchland 345kV (523097) to Potter County 345kV (523961) CKT 1, near Hitchland. a. Apply fault at the Hitchland 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT91-PO (16WP Only)	Prior outage on the Hitchland (523097) to Finney (523853) 3 phase fault on Hitchland 345kV (523097) to G14-037-Tap 345kV (560010) CKT 1, near Hitchland. a. Apply fault at the Hitchland 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		

Cont. Name	Description	GEN-2015-082	GEN-2016-001	GEN-2016-038	GEN-2016-041	GEN-2016-059	GEN-2016-070
FLT92-PO	Prior outage on the Hitchland (523097) to Potter County (523961) 345kV 3 phase fault on Hitchland 345kV (523097) to G14-037-Tap 345kV (560010) CKT 1, near Hitchland. a. Apply fault at the Hitchland 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT93-PO (17SP and 25SP Only)	Prior outage on the Hitchland (523097) to Potter County (523961) 345kV 3 phase fault on Hitchland (523097) – Walk Tap (531512) CKT 1, near Hitchland. a. Apply fault at the Hitchland 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X	X		X		
FLT94-SB	G11-14-Tap 345kV Stuck Breaker a. Apply single phase fault at the G11-14-Tap (560000) 345kV bus b. Wait 16 cycles, and then drop G11-14-Tap (560000) – G16-001-TAP (560070) 345kV circuit 1 and remove fault.	X	X		X		
FLT95-SB	G16-001-Tap 345kV Stuck Breaker a. Apply single phase fault at the G16-001-Tap (560070) 345kV bus b. Wait 16 cycles, and then drop G16-001-Tap (560070) – G16-003-TAP (560071) 345kV circuit 1 and remove fault.	X	X				
FLT96-SB	Woodward 345kV Stuck Breaker a. Apply single phase fault at the Woodward (515375) 345kV bus on the Woodward – G11-051-Tap (562075) 345kV circuit 1 b. Wait 16 cycles, and then drop Woodward (515375) 345kV to Thistle (539801) 345kV CKT 1 c. Trip Woodward to G11-051-Tap 345kV CKT 1 and remove the fault	X	X		X		
FLT97-SB	Hitchland 345kV Stuck Breaker a. Apply single phase fault at the Hitchland (523097) 345kV bus b. Wait 16 cycles, and then drop Hitchland – Optima (560010) 345kV circuit 1 and remove fault	X	X		X		
FLT98-SB (16WP Only)	Hitchland 345kV Stuck Breaker a. Apply single phase fault at the Hitchland (523097) 345kV bus b. Wait 16 cycles, and then drop Hitchland – Finney (523853) 345kV circuit 1 and remove fault	X	X		X		

Cont. Name	Description	GEN-2015-082	GEN-2016-001	GEN-2016-038	GEN-2016-041	GEN-2016-059	GEN-2016-070
FLT99-SB	Beaver 345kV Stuck Breaker a. Apply single phase fault at the Beaver County (515554) 345kV bus b. Wait 16 cycles, and then drop Beaver County – G11-14-Tap (560000) 345kV circuit 1 and remove fault	X	X		X		
FLT100-SB	Woodward 345kV Stuck Breaker a. Apply single phase fault at the Woodward (515375) 345kV bus b. Wait 16 cycles, and then drop Woodward (515375) – Border (515458) 345kV circuit 1 and remove fault	X	X		X		
FLT101-PO	Prior outage on the Martin Switching Station (523928) to Hutchison South (523546) 115kV 3 phase fault on Martin Switching Station (523928) 115kV to Pantex North (523938) 115kV CKT 1, near Martin Switching Station. a. Apply fault at the Martin Switching Station 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X
FLT102-PO	Prior outage on the Martin Switching Station (523928) to Pantex North (523938) 115kV 3 phase fault on Martin Switching Station (523928) 115kV to Hutchison South (523546) 115kV CKT 1, near Martin Switching Station. a. Apply fault at the Martin Switching Station 115kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X
FLT103-SB	Martin Switching Station 115kV Stuck Breaker a. Apply single phase fault at the Martin Switching Station (523928) 115kV to Hutchison South (523546) 115kV CKT 1, near Martin Switching Station. b. Wait 16 cycles, and then drop Martin Switching Station (523928) 115kV to Hutchison South (523546) 115kV CKT 1. c. Martin Switching Station (523928) 115kV to Carson (523924) 115kV CKT 1. d. Trip Carson (523923) unit 1, disconnect buses 523923 and 523924 and remove the fault.						X
FLT104-PO	Prior Outage of the Harrington (523978) to Nichols (524044) 230 kV line circuit 1; 3 phase fault on the Harrington (523978) to Randall (524365) 230 kV line circuit 1, near Harrington. a. Apply fault at the Harrington 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.			X		X	

Cont. Name	Description	GEN-2015-082	GEN-2016-001	GEN-2016-038	GEN-2016-041	GEN-2016-059	GEN-2016-070
FLT105-PO	Prior Outage of the Harrington (523978) to Randall (524365) 230 kV line circuit 1; 3 phase fault on the Harrington East (523979) to Potter County (523959) 230 kV line circuit 1, near Harrington East. a. Apply fault at the Harrington East 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line			X		X	
FLT106-PO	Prior Outage of the Harrington (523978) to Randall (524365) 230 kV line circuit 1; 3 phase fault on the Nichols (524044) to Amarillo South (524415) 230 kV line circuit 1, near Nichols. a. Apply fault at the Nichols 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line			X		X	
FLT107-PO	Prior Outage of the Harrington West (523977) to Nichols (524044) 230 kV line circuit 1; 3 phase fault on the Harrington West (523977) to Rolling Hills (524010) 230 kV line circuit 1, near Harrington West. a. Apply fault at the Harrington West 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line			X		X	
FLT108-SB	Single phase fault with stuck breaker at Harrington (523978) 230 kV a. Apply fault at the Harrington 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Harrington (523978) – Nichols (524044) 230 kV d. Harrington (523978) – Randall (524365) 230 kV e. Harrington unit #2 (Unit 1 at 523972)			X		X	
FLT109-SB	Single phase fault with stuck breaker at Nichols (524044) 230 kV a. Apply fault at the Nichols 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Nichols (524044) – Harrington (523978) 230 kV			X		X	X
FLT110-SB	Single phase fault with stuck breaker at Harrington West (523977) 230 kV a. Apply fault at the Harrington West 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Harrington West (523977) – East Plant (524163) 230 kV d. Harrington West (523977) – Rolling Hills (524010) 230 kV e. Harrington West (523977) – Nichols (524044) 230 kV f. Harrington unit #1 (Unit 1 at 523971)			X		X	
FLT111-SB	Single phase fault with stuck breaker at Harrington East (523979) 230 kV a. Apply fault at the Harrington East 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Harrington East (523979) – Pringle (523267) 230 kV d. Harrington East (523979) – Potter County (523959) 230 kV e. Harrington unit #3 (Unit 1 at 523973)			X		X	

11.17.3 J3: GROUP 3 DYNAMIC STABILITY ANALYSIS REPORT

S&C ELECTRIC COMPANY
Excellence Through Innovation

DISIS-2016-001 (GROUP 03)

LITTLE ROCK, AR

SOUTHWEST POWER POOL

DEFINITIVE INTERCONNECTION SYSTEM IMPACT STUDY

S&C PROJECT NUMBER: 10994

DOCUMENT NUMBER: E-857

REVISION: 0

FINAL REPORT

CONFIDENTIAL

JANUARY 26, 2017

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REPORT REVISION HISTORY:

REV	DATE	PREPARED BY	REVIEWED BY	APPROVED BY	DESCRIPTION
A	01/09/2017	EE & MA	SK	SK	Preliminary report issued
0	01/26/2017	MA	SK	SK	Final report issued

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1. EXECUTIVE SUMMARY

S&C Electric Company (S&C) has performed several analysis as part of a Definitive Interconnection System Impact Study, DISIS-2016-001 (Group 3), in response to a request through Southwest Power Pool (SPP) to administer a subsection of Attachment V to the SPP Open Access Transmission Tariff (Tariff). Group 3 consists of four (4) new wind generator interconnection requests (GEN-2016-005, GEN-2016-016, GEN-2016-046, and GEN-2016-049).

S&C has performed dynamic stability analysis for Group 3 under Cluster and Stand-Alone (SA) scenarios. The cluster studies were performed using three (3) cluster base cases (2016 Winter Peak (WP), 2017 Summer Peak (SP), and 2025 SP) provided by SPP. In the cluster studies, all four new interconnection requests and prior-queued projects were studied at 100% of nameplate MW capacity. The standalone studies were performed using three (3) standalone base cases (2016 WP, 2017 SP, and 2025 SP) provided by SPP and by placing an interconnection request into service, one at a time. The in-service interconnection project was dispatched at 100% power and the three (3) out of service interconnection projects were set to zero generation or to its pre-project value if the project is an increase to an existing project or facility. The dynamic stability study revealed that Group 3 projects met the SPP transient voltage requirements, with the solutions illustrated in the dynamic stability results section of this report.

S&C has performed power factor analysis on Group 3 Cluster scenarios. Power factor analysis reported the power factors at the study projects point of interconnection (POI) for all N-1 three-phase contingences and marked the contingency at which the required power factor at the POI of study projects to maintain the voltages at the desired level is beyond the normal required capability (from 0.95 lagging to 0.95 leading) of the studied projects. The power factor requirement for GEN-2016-005, GEN-2016-016, GEN-2016-046, and GEN-2016-049 interconnection requests is from 0.95 lagging to 0.95 leading power factor at the POIs.

S&C has performed an analysis of low wind/low solar irradiance conditions for interconnection requests that are renewable energy projects. The low wind/low solar irradiance analysis was performed only under the cluster cases by taking the interconnection generation out of service and determining the Mvar size of a shunt reactor to offset the reactive power generated from the

capacitance of the project's transmission lines and collector cables. The shunt reactor Mvars are given in Section 8.

S&C has performed a short-circuit analysis for the 2017 Summer Peak and 2025 Summer Peak under Group 3 Cluster and reported short circuit results at all buses up to five (5) levels away from the POI of the study projects.

2. INTRODUCTION

S&C has performed several analysis as part of a Definitive Interconnection System Impact Study, DISIS-2016-001 (Group 3), in response to a request through the SPP to administer a subsection of Attachment V to the SPP Tariff. Group 3 consist of four (4) new generator interconnection requests listed in Table 1 and nineteen (19) previously queued projects listed in Table 2.

Table 1: Group 3 Generation Interconnection Requests

Project	Size (MW)	Generator Model	Generator Bus(es)	Point of Interconnection (POI)	POI Bus
GEN-2016-005	150	Vestas V110 2.0MW wind	587044	GEN-2016-005-TAP 345 kV (Tap on Clark County – Thistle 345 kV line)	539800-539801 (560072)
GEN-2016-016	78.2	GE 2.3MW wind	587123	North Kinsley 115 kV	530619
GEN-2016-046	299	GE 2.3MW wind	587313	GEN-2016-046-TAP 345 kV (Tap on Clark County – Ironwood 345 kV line)	539800-539803 (560080)
GEN-2016-049	310.2	Vestas V117 GS 3.3MW wind	587343/ 587346	GEN-2016-049-TAP 345 kV (Tap on GEN-2013-010 Tap/Post Rock – Spearville 345 kV line)	530583 /562334-531469 (560081)

Table 2: Prior Queued Projects

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2001-039A	104.0	GE 1.6MW	Shooting Star 115 kV (539763)
GEN-2002-025A	150.0	GE 1.5 MW	Spearville 230 kV (539695)
GEN-2004-014	154.5	GE 1.5 MW	Spearville 230 kV (539695)
GEN-2005-012	250.7	Siemens 2.3MW	Ironwood 345 kV (539803)
GEN-2006-021	100.0	Clipper 2.5MW	Flat Ridge 138 kV (539638)
GEN-2007-040	200.1	Siemens 2.3MW	Buckner 345 kV (531501)
GEN-2008-018	250.0	GE 1.85 MW	Finney 345 kV (523853)
GEN-2008-079	98.9	Siemens 2.3MW	CRKCK 115 kV line (539783)
GEN-2008-124	200.1	Siemens 2.3MW	Ironwood 345 kV (539803)
GEN-2010-009	165.6	Siemens 2.3MW	Buckner 345 kV (531501)
GEN-2010-045	197.8	Siemens 2.3MW	Buckner 345 kV (531501)
GEN-2011-008	600.0	Vestas 2.0MW	Clark County 345 kV (539800)
GEN-2011-016	200.1	Siemens 2.3MW	Spearville 345 kV (531469)
GEN-2012-007	96.0 Summer 120.0 Winter	GENSAL	Rubart 115 kV (531200)
ASGI-2012-006	20.74 Summer 21.21 Winter	GENSAL	ABBK 69 kV (531494)

GEN-2012-024	180.0	Vestas V112-3.0MW	Clark County 345 kV (539800)
GEN-2013-010	99.0	Siemens 3.0MW (583603)	GEN-2013-010 Tap 345 kV (562334) (Tap on Spearville to Post Rock 345 kV line)
GEN-2015-021	20.0	AE 1000NX 1MW PV Inverter (584633)	Johnson Corner 115 kV (531424)
ASGI-2015-001	4.27 Summer 6.13 Winter	GENSAL (584713)	Ninnescah 115 kV (539648)

3. TRANSMISSION SYSTEM AND STUDY AREA

The interconnection requests in Group 3 will interconnect into Midwest Energy (MIDW, Area #531) and Sunflower Electric Power Corporation (SUNC, Area #534). In addition to Areas #531 and #534, the following area was also monitored: Southwestern Public Service (SPS, Area #526)

4. POWER FLOW BASE CASES

DISIS-2016-001 (Group 3) and prior-queued projects were modeled as aggregated generating units in the base cases from SPP.

Cluster Scenario Base Cases

- **MDWG15-16WP_DIS1601_G03.sav** – 2016 Winter Peak Cluster Base Case for Group 3. DISIS-2016-001 interconnection requests and prior queued projects within Group 3 are at 100% output power.
- **MDWG15-17SP_DIS1601_G03.sav** – 2017 Summer Peak Cluster Base Case for Group 3. DISIS-2016-001 interconnection requests and prior queued projects within Group 3 are at 100% output power.
- **MDWG15-25SP_DIS1601_G03.sav** – 2025 Summer Peak Cluster Base Case for Group 3. DISIS-2016-001 interconnection requests and prior queued projects within Group 3 are at 100% output power.

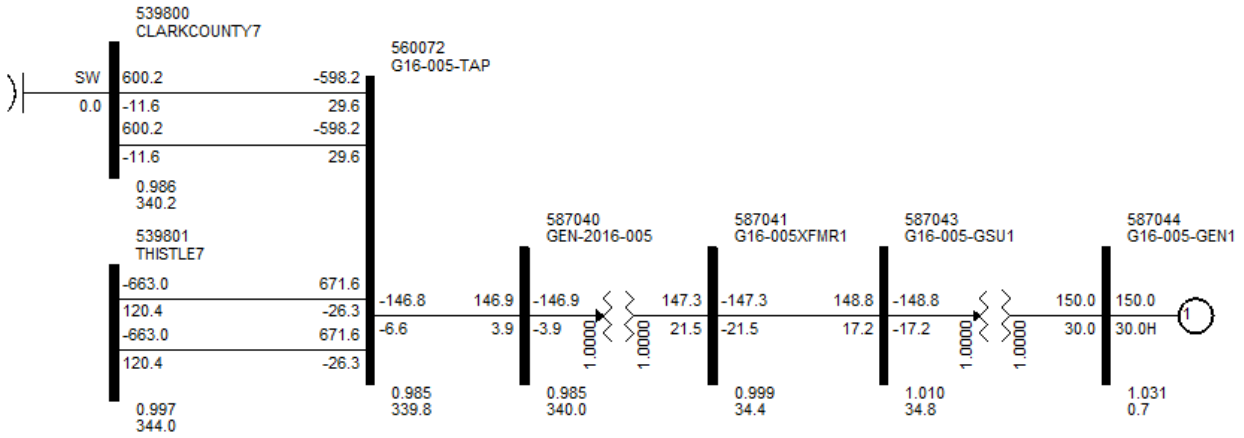
Stand-Alone Scenario Base Cases

- **MDWG15-16WP_DIS1601_G03_SA.sav** – 2016 Winter Peak SA Base Case for Group 3. DISIS-2016-001 interconnection requests currently out of service. Prior queued projects within Group 3 are at 100% output power.
- **MDWG15-17SP_DIS1601_G03_SA.sav** – 2017 Summer Peak SA Base Case for Group 3. DISIS-2016-001 interconnection requests currently out of service. Prior queued projects within Group 3 are at 100% output power.
- **MDWG15-25SP_DIS1601_G03_SA.sav** – 2025 Summer Peak SA Base Case for Group 3. DISIS-2016-001 interconnection requests currently out of service. Prior queued projects within Group 3 are at 100% output power.

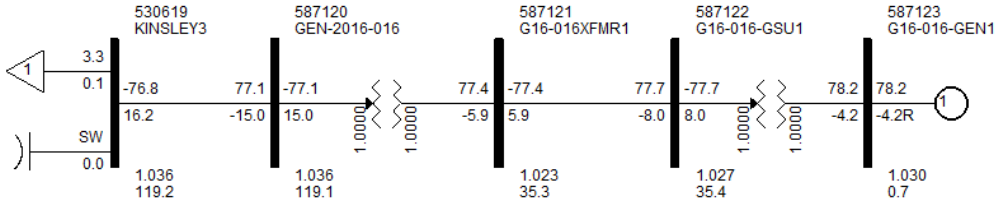
On November 30, 2016, S&C received an IDV file titled "RemoveGEN-2011-016erroneousTransmissionLead.idv" to correct an identified modeling error included in the group 3 base cases provided by SPP. The IDV was applied to each Base Case prior to performing the study.

5. POWER FLOW MODEL

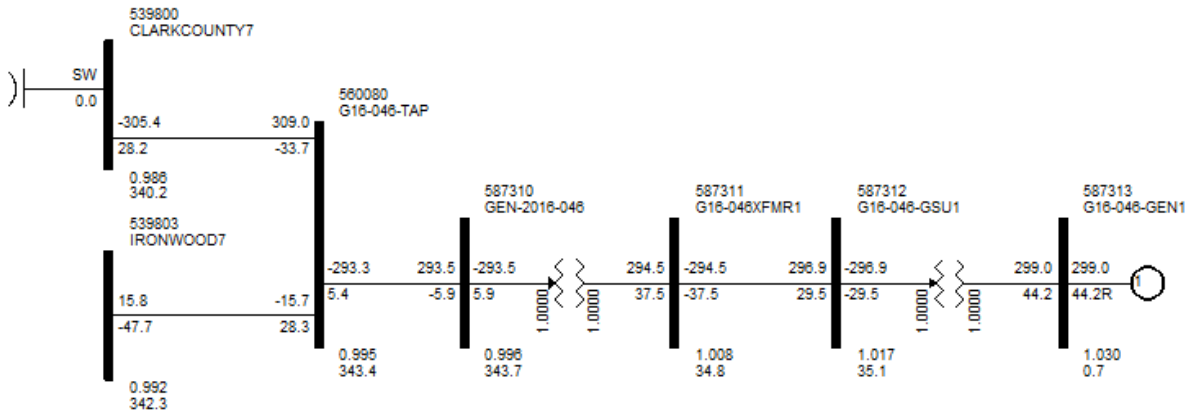
SPP's base case power flow models were built in PSS/E 32.2.1. In PSS/E of the same version, S&C created one-line diagrams depicted in Figure 1 for each interconnection request.



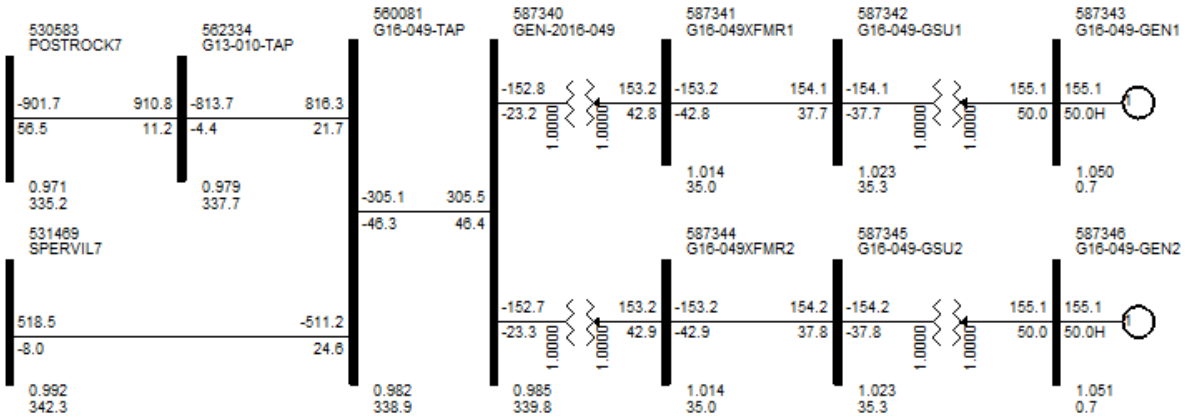
(a) Interconnection request GEN-2016-005



(b) Interconnection request GEN-2016-016



(c) Interconnection request GEN-2016-046



(d) Interconnection request GEN-2016-049

Figure 1: One-line Diagrams of the Interconnection Request Projects

6. DYNAMIC STABILITY ANALYSIS

6.1. ASSUMPTIONS

Dynamic stability analysis was performed for all the SPP contingencies listed in Appendix A. Three phase faults were simulated as bolted faults, while single line-to-ground faults were simulated under the assumption that a single line-to-ground fault will cause a 40% drop in the positive-sequence voltage at the fault location.

6.2. STABILITY CRITERIA

Dynamic stability studies were performed to ensure system stability following critical faults on the system. The system is considered stable if the following conditions are met:

(1) Disturbances including three-phase and single-phase to ground faults, should not cause synchronous and asynchronous plants to disconnect from the transmission grid.

(2) The angular positions of synchronous machine rotor become constant following an aperiodic system disturbance.

(3) Voltage magnitudes and frequencies at terminals of asynchronous generators should not exceed magnitudes and durations that will cause protection elements to operate. Furthermore, the response after the disturbance needs to be studied at the terminals of the machine to ensure that there are no sustained oscillations in power output, speed, frequency, etc.

(4) Voltage magnitudes and angles after the disturbance should settle to a constant and acceptable operating level. Frequencies should settle to the acceptable range within nominal 60 Hz power frequency.

In addition, performance of the transmission system is measured against the SPP Disturbance Criteria Requirements on Angular oscillations and Transient Voltage Recovery, detailed in Appendix B.

6.3. DYNAMIC STABILITY RESULTS

Some concerns surfaced during preliminary dynamic stability simulations. A detailed list of such concerns and how they were addressed is shown below.

- Low voltage conditions were observed near GEN-2016-005, GEN-2016-046 and GEN-2016-049 during initial power flow solutions. Furthermore, simulation of FLTs 11-14 caused PSS/E to crash.
    - To resolve the issue, SPP provided an IDV file titled "Disable_reactors.idv" to set the Base Case initial state of each reactor bank to 0 MVAR for various reactors in the surrounding area. The reactors were located at the following stations: Axtell, Beaver County, Border, Buckner, Clark County, Holcomb, Mingo, Post Rock, Spearville, Thistle, Setab, Wichita, & Woodward EHV.
    - In addition, SPP also provided an IDV file titled "Increase_Qgen_GEN-2011-008_V32.IDV" to increase the cumulative reactive power set point of Prior Queued Project GEN-2011-008 to $Q_{GEN}=Q_{MAX}=Q_{MIN}=105$ Mvar.
    - The "Increase_Qgen_GEN-2011-008_V32.IDV" file was also utilized to eliminate power oscillation concerns that later surfaced with Prior Queued Project GEN-2011-008

- Relay SLNOS #1 protecting line 523853-531449 was causing tripping during FLT23 and FLT24 in 2017SP
    - To resolve the issue, this relay was removed from service
    - The Transmission Owner(s) should review the relay settings on this line during the facility study for Group 3.

Dynamic stability simulations were performed once again after implementing the solutions described above. Table 3 below summarizes the dynamic stability results for each contingency and each season.

Table 3: Group 3 Dynamic Stability Results
(YES = STABLE, NO = UNSTABLE)

Cont. No.	Cont. Name	16WP: Cluster	16WP: GEN-16-05	16WP: GEN-16-16	16WP: GEN-16-46	16WP: GEN-16-49	17SP: Cluster	17SP: GEN-16-05	17SP: GEN-16-16	17SP: GEN-16-46	17SP: GEN-16-49	25SP: Cluster	25SP: GEN-16-05	25SP: GEN-16-16	25SP: GEN-16-46	25SP: GEN-16-49
1	FLT01-3PH	YES	YES	-	YES	-	YES	YES	-	YES	-	YES	YES	-	YES	-
2	FLT02-3PH	YES	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-
3	FLT03-3PH	YES	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-
4	FLT04-3PH	YES	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-
5	FLT05-3PH	YES	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-
6	FLT06-SB	YES	YES	-	YES	-	YES	YES	-	YES	-	YES	YES	-	YES	-
7	FLT07-SB	YES	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-
8	FLT08-SB	YES	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-
9	FLT09-SB	YES	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-
10	FLT10-SB	YES	YES	-	YES	-	YES	YES	-	YES	-	YES	YES	-	YES	-
11	FLT11-PO	YES	YES	-	YES	-	YES	YES	-	YES	-	YES	YES	-	YES	-
12	FLT12-PO	YES	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-
13	FLT13-PO	YES	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-
14	FLT14-PO	YES	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-
15	FLT15-PO	YES	YES	-	YES	-	YES	YES	-	YES	-	YES	YES	-	YES	-
16	FLT16-3PH	YES	-	YES	-	-	YES	-	YES	-	-	YES	-	YES	-	-
17	FLT17-3PH	YES	-	YES	-	-	YES	-	YES	-	-	YES	-	YES	-	-
18	FLT18-SB	YES	-	YES	-	-	YES	-	YES	-	-	YES	-	YES	-	-
19	FLT19-SB	YES	-	YES	-	-	YES	-	YES	-	-	YES	-	YES	-	-
20	FLT20-SB	YES	-	YES	-	-	YES	-	YES	-	-	YES	-	YES	-	-
21	FLT21-PO	YES	-	YES	-	-	YES	-	YES	-	-	YES	-	YES	-	-
22	FLT22-PO	YES	-	YES	-	-	YES	-	YES	-	-	YES	-	YES	-	-
23	FLT23-3PH	YES	YES	-	YES	-	YES	YES	-	YES	-	YES	YES	-	YES	-
24	FLT24-3PH	YES	-	-	YES	-	YES	-	-	YES	-	YES	-	-	YES	-
25	FLT25-3PH	YES	YES	-	YES	-	YES	YES	-	YES	-	YES	YES	-	YES	-
26	FLT26-SB	YES	YES	-	YES	-	YES	YES	-	YES	-	YES	YES	-	YES	-
27	FLT27-SB	YES	YES	-	YES	-	YES	YES	-	YES	-	YES	YES	-	YES	-
28	FLT28-PO	YES	YES	-	YES	-	YES	YES	-	YES	-	YES	YES	-	YES	-
29	FLT29-PO	YES	YES	-	YES	-	YES	YES	-	YES	-	YES	YES	-	YES	-
30	FLT30-3PH	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES
31	FLT31-3PH	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES
32	FLT32-3PH	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES
33	FLT33-3PH	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES
34	FLT34-3PH	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES
35	FLT35-3PH	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES
36	FLT36-3PH	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES
37	FLT37-3PH	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES
38	FLT38-3PH	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES
39	FLT39-3PH	YES	-	-	YES	YES	YES	-	-	YES	YES	YES	-	-	YES	YES
40	FLT40-SB	YES	-	-	YES	YES	YES	-	-	YES	YES	YES	-	-	YES	YES
41	FLT41-SB	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES
42	FLT42-SB	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES

Cont. No.	Cont. Name	16WP: Cluster	16WP: GEN-16-05	16WP: GEN-16-16	16WP: GEN-16-46	16WP: GEN-16-49	17SP: Cluster	17SP: GEN-16-05	17SP: GEN-16-16	17SP: GEN-16-46	17SP: GEN-16-49	25SP: Cluster	25SP: GEN-16-05	25SP: GEN-16-16	25SP: GEN-16-46	25SP: GEN-16-49
43	FLT43-SB	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES
44	FLT44-SB	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES
45	FLT45-SB	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES
46	FLT46-SB	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES
47	FLT47-PO	YES	-	-	YES	YES	YES	-	-	YES	YES	YES	-	-	YES	YES
48	FLT48-PO	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES
49	FLT49-PO	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES
50	FLT50-PO	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES
51	FLT51-PO	YES	-	-	-	YES	YES	-	-	-	YES	YES	-	-	-	YES

Given the adjustments mentioned, dynamic stability analysis thus concluded that Group 3 is expected to successfully ride-through all contingencies specified by SPP and the nearby areas retained frequency and voltage stability. Detailed plots of cluster dynamic stability results for each contingency and each peak season, are given in Appendix C. Plots of stand-alone dynamic stability result for each contingency and each season are given Appendix D.

7. POWER FACTOR ANALYSIS

The power factor analysis was performed under the cluster bases and for all N-1 three-phase contingencies shown in the Fault Definition table in Appendix A. Single-phase contingencies, N-1-1 contingencies and N-2 contingencies were excluded from the study. Prior to the run, the cluster base cases were slightly altered, by turning off the renewable energy projects and replacing them by a generator at the high voltage bus with the MW rating of the renewable project at that POI and no var capability. A new var generator was placed at each renewable energy project high voltage bus for supporting the reactive power. The var generators were set to hold the voltage schedule at the interconnection project consistent with the voltage schedules in the provided base case or 1.0 p.u. voltage, whichever is higher. Table 4 gives the voltage schedule at each interconnection request location in the original cluster base cases.

Table 4: Base Case Voltages at the Interconnection Request POI Bus

Request	POI	2016 Winter Peak (p.u.)	2017 Summer Peak (p.u.)	2025 Summer Peak (p.u.)
GEN-2016-005	560072	0.968	0.931	0.940
GEN-2016-016	530619	1.036	1.020	1.022
GEN-2016-046	560080	0.981	0.951	0.958
GEN-2016-049	560081	0.974	0.950	0.963

The power factor analysis results for Group 3 interconnection requests for each N-1 three phase contingency were presented in Appendix E. We marked in pink color the contingencies at which the required power factor at the POI of the study project is beyond the normal required capability (from 0.95 lagging to 0.95 leading) of the studied renewable energy project. We also provided a summary Table 5 of the maximum leading/lagging reactive power demand and power factor found by the power factor analysis at the POIs.

The power factor requirement for GEN-2016-005, GEN-2016-016, GEN-2016-046, and GEN-2016-049 interconnection requests is from 0.95 lagging to 0.95 leading power factor at the POIs.

Table 5: Summary of Power Factor Analysis at the POI

Request	Capacity	POI	Reactive Power/Power Factor at the POI	
			Leading (absorbing vars)	Lagging (providing vars)
GEN-2016-005	150 MW	560072	N/A	690.9 Mvar / 0.210
GEN-2016-016	78.2 MW	530619	-17.9 Mvar / 0.975	N/A
GEN-2016-046	299 MW	560080	-92.5 Mvar / 0.955	105 Mvar / 0.943
GEN-2016-049	310.2 MW	560081	-42.4 Mvar / 0.991	270.1 Mvar / 0.753

NOTE: Per the SPP Tariff as reactive power is required for all projects, the final requirement in the GIA will be the pro-forma 95% lagging to 95% leading at the point of interconnection.

8. Low Wind/Low Solar irradiance Conditions Analysis

S&C has performed an analysis of low wind/low solar irradiance conditions for the interconnection requests that is a renewable energy project. The low wind/low solar irradiance analysis was performed under the Cluster scenarios by taking the interconnection renewable energy project out of service and placing a shunt reactor at the project substation high side to offset the reactive power generated from the capacitance of the project's transmission lines and collector cables. The size of the shunt reactor was adjusted such that the net Mvar flow into the POI from the studied renewable energy project was approximately zero. Table 6 gives the shunt reactor Mvars for the studied projects.

Table 6: Shunt Reactor Mvar Determined by Low Wind/Low Irradiance Study

Request	POI	2016 Winter Peak	2017 Summer Peak	2025 Summer Peak
GEN-2016-005	560072	9.6	9.6	9.6
GEN-2016-016	530619	2.7	2.7	2.7
GEN-2016-046	560080	13.9	13.9	13.9
GEN-2016-049	560081	16.0	16.0	16.0

9. SHORT-CIRCUIT STUDY

A short-circuit study has been performed on the power flow models for the 2017 SP and 2025 SP Seasons for each generator using the Cluster Scenario model. Short-circuit analysis includes applying a 3-phase fault on buses up to 5 levels away from the POI of each interconnection request project. PSS/E "Automatic Sequence Fault Calculation (ASCC)" fault analysis module was used for the purpose of short-circuit analysis. The results of the short-circuit analysis have been recorded for all the buses up to five levels away from the point of interconnection of each interconnection request project. Detailed results of the short-circuit study are provided in Appendix F.

10. CONCLUSIONS AND RECOMMENDATIONS

With the adjustments mentioned in Section 6, Group 3's dynamic results (Cluster and Stand-Alone) indicated that the interconnection request projects are expected to successfully ride through all N-1, N-1-1 and N-2 fault contingencies specified in appendix A, retaining angular, frequency and voltage stability at the nearby areas and meeting the transient voltage recovery requirement by SPP. It is thus concluded that Group 3 study projects are expected to successfully interconnect into the transmission system at their desired locations for 100% power outputs.

The results of power factor analysis indicate that all the interconnection requests are required to maintain a power factor of 0.95 lagging to 0.95 leading at the POI to meet SPP's requirements.

The project's low wind/low solar irradiance study suggested that to offset the reactive power from the capacitance of the project's transmission lines and collector cables during the low wind/low irradiance conditions, a 9.6 Mvar shunt reactor size is required for the GEN-2016-005 substation high voltage side bus, 2.7 Mvar for GEN 2016 016, 13.9 Mvar for GEN-2016-046, and 16.0 Mvar for GEN 2016 049.

A short-circuit study has been performed on the power flow models for the 2017 Summer Peak Season and 2025 Summer Peak Season for each generator using the Cluster Scenario model. A 3-phase fault is applied on buses up to 5 levels away from the POI of each interconnection request project and the results of the study have been presented.

APPENDIX A

SPP GROUP 3 FAULT DEFINITIONS

Fault Definitions

Cont. No.	Cont. Name	Description
1	FLT01-3PH	3 phase fault on G16-005-TAP 345 kV (560072) to CLARKCOUNTY7 345 kV (539800) CKT 1, near G16-005-TAP. a. Apply fault at the G16-005-TAP 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
2	FLT02-3PH	3 phase fault on G16-005-TAP 345 kV (560072) to THISTLE7 345 kV (539801) CKT 1, near G16-005-TAP. a. Apply fault at the G16-005-TAP 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
3	FLT03-3PH	3 phase fault on the THISTLE7 345 kV (539801) to THISTLE4 138 kV (539804) to THISTLE T1 13.8 kV (539802) XFMR, near THISTLE7 345 kV. a. Apply fault at the THISTLE7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
4	FLT04-3PH	3 phase fault on THISTLE7 345 kV (539801) to G1524&G1525T 345 kV (560033) CKT 1, near THISTLE7. a. Apply fault at the THISTLE7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
5	FLT05-3PH	3 phase fault on THISTLE7 345 kV (539801) to WWRDEHV7 345 kV (515375) CKT 1, near THISTLE7. a. Apply fault at the THISTLE7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
6	FLT06-SB	**Stuck Breaker at G16-005-TAP (560072)** a. Apply single phase fault at G16-005-TAP. b. Clear fault after 16 cycles and trip the following elements c. G16-005-TAP (560072) - CLARKCOUNTY7 (539800), CKT 1 d. G16-005-TAP (560072) - THISTLE7 (539801), CKT 1
7	FLT07-SB	**Stuck Breaker at THISTLE7 (539801)** a. Apply single phase fault at THISTLE7 bus. b. Clear fault after 16 cycles and trip the following elements c. THISTLE7 (539801) - G16-005-TAP (560072), CKT 1 d. THISTLE7 (539801) - G1524&G1525T (560033), CKT 1

Fault Definitions

Cont. No.	Cont. Name	Description
8	FLT08-SB	**Stuck Breaker at THISTLE7 (539801)** a. Apply single phase fault at THISTLE7 bus. b. Clear fault after 16 cycles and trip the following elements c. THISTLE7 (539801) - G16-005-TAP (560072), CKT 1 d. THISTLE7 345kV (539801) / THISTLE4 138 kV (539804) / THISTLE T1 13.8 kV (539802) transformer
9	FLT09-SB	**Stuck Breaker at THISTLE7 (539801)** a. Apply single phase fault at THISTLE7 bus. b. Clear fault after 16 cycles and trip the following elements c. THISTLE7 (539801) - G16-005-TAP (560072), CKT 1 d. THISTLE7 (539801) - WWRDEHV7 (515375), CKT 1
10	FLT10-SB	**Stuck Breaker at CLARKCOUNTY7 (539800)** a. Apply single phase fault at CLARKCOUNTY7. b. Clear fault after 16 cycles and trip the following elements c. CLARKCOUNTY7 (539800) - G16-005-TAP (560072) d. CLARKCOUNTY7 (539800) - IRONWOOD7 (560002)
11	FLT11-PO	**Prior Outage of G16-005-TAP (560072) to CLARKCOUNTY7 (539800), CKT 1;** 3 phase fault on G16-005-TAP (560072) –THISTLE7 (539801), CKT 1 near G16-005-TAP a. Apply fault at the G16-005-TAP bus. b. Clear fault after 5 cycles and trip the faulted line.
12	FLT12-PO	**Prior Outage of THISTLE7 (539801) - G16-005-TAP (560072), CKT 1;** 3 phase fault on THISTLE7 (539801) - G1524&G1525T (560033), CKT 1 near THISTLE7 a. Apply fault at the THISTLE7 bus. b. Clear fault after 5 cycles and trip the faulted line.
13	FLT13-PO	**Prior Outage of THISTLE7 (539801) - G16-005-TAP (560072), CKT 1;** 3 phase fault on THISTLE7 345kV (539801) / THISTLE4 138 kV (539804) / THISTLE T1 13.8 kV (539802) transformer near THISTLE7 a. Apply fault at the THISTLE7 bus. b. Clear fault after 5 cycles and trip the faulted transformer.
14	FLT14-PO	**Prior Outage of THISTLE7 (539801) - G16-005-TAP (560072), CKT 1;** 3 phase fault on THISTLE7 (539801) - WWRDEHV7 (515375), CKT 1 near THISTLE7 a. Apply fault at the THISTLE7 bus. b. Clear fault after 5 cycles and trip the faulted line.
15	FLT15-PO	**Prior Outage of CLARKCOUNTY7 (539800) - G16-005-TAP (560072), CKT 1;** 3 phase fault on CLARKCOUNTY7 (539800) - IRONWOOD7 (560002) near CLARKCOUNTY7 a. Apply fault at the CLARKCOUNTY7 bus. b. Clear fault after 5 cycles and trip the faulted line.

Fault Definitions

Cont. No.	Cont. Name	Description
16	FLT16-3PH	3 phase fault on ST JOHN3 115 kV (530624) to ST-JOHN3 115 kV (539696), near ST JOHN3. a. Apply fault at the ST JOHN3 115 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
17	FLT17-3PH	3 phase fault on ST JOHN3 115 kV (530624) to HUNTSVL3 115 kV (530618), near ST JOHN3. a. Apply fault at the ST JOHN3 115 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
18	FLT18-SB	**Stuck Breaker at ST-JOHN3 (539696)** a. Apply single phase fault at ST-JOHN3. b. Clear fault after 16 cycles and trip the following elements c. ST-JOHN3 (539696) - NINNESC3 (539648) d. ST-JOHN3 (539696) - SEWARD 3 (539692)
19	FLT19-SB	**Stuck Breaker at ST-JOHN3 (539696)** a. Apply single phase fault at ST-JOHN3. b. Clear fault after 16 cycles and trip the following elements c. ST-JOHN3 (539696) - ST JOHN3 (530624) d. ST-JOHN3 (539696) - SEWARD 3 (539692)
20	FLT20-SB	**Stuck Breaker at ST-JOHN3 (539696)** a. Apply single phase fault at ST-JOHN3. b. Clear fault after 16 cycles and trip the following elements c. ST-JOHN3 (539696) - ST JOHN3 (530624) d. ST-JOHN3 (539696) - NINNESC3 (539648)
21	FLT21-PO	**Prior Outage of ST-JOHN3 (539696) - NINNESC3 (539648) line;** 3 phase fault on ST-JOHN3 (539696) - SEWARD 3 (539692) near ST-JOHN3 a. Apply fault at the ST-JOHN3 bus. b. Clear fault after 5 cycles and trip the faulted line.
22	FLT22-PO	**Prior Outage of ST-JOHN3 (539696) - ST JOHN3 (530624) line;** 3 phase fault on ST-JOHN3 (539696) - SEWARD 3 (539692) near ST-JOHN3 a. Apply fault at the ST-JOHN3 bus. b. Clear fault after 5 cycles and trip the faulted line.
23	FLT23-3PH	3 phase fault on G16-046-TAP 345 kV (560080) to CLARKCOUNTY7 345 kV (539800), near G16-046-TAP. a. Apply fault at the G16-046-TAP 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Fault Definitions

Cont. No.	Cont. Name	Description
24	FLT24-3PH	3 phase fault on G16-046-TAP 345 kV (560080) to IRONWOOD7 345 kV (539803), near G16-046-TAP. a. Apply fault at the G16-046-TAP 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
25	FLT25-3PH	3 phase fault on CLARKCOUNTY7 345 kV (539800) to IRONWOOD7 345 kV (560002), near CLARKCOUNTY7. a. Apply fault at the CLARKCOUNTY7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
26	FLT26-SB	**Stuck Breaker at CLARKCOUNTY7 (539800)** a. Apply single phase fault at CLARKCOUNTY7. b. Clear fault after 16 cycles and trip the following elements c. CLARKCOUNTY7 (539800) - G16-046-TAP (560080) d. CLARKCOUNTY7 (539800) - IRONWOOD7 (560002)
27	FLT27-SB	**Stuck Breaker at CLARKCOUNTY7 (539800)** a. Apply single phase fault at CLARKCOUNTY7. b. Clear fault after 16 cycles and trip the following elements c. CLARKCOUNTY7 (539800) - G16-046-TAP (560080) d. CLARKCOUNTY7 (539800) - G16-005-TAP (560072), CKT 1
28	FLT28-PO	**Prior Outage of CLARKCOUNTY7 (539800) - G16-046-TAP (560080) line;** 3 phase fault on CLARKCOUNTY7 (539800) - IRONWOOD7 (560002) near CLARKCOUNTY7 a. Apply fault at the CLARKCOUNTY7 bus. b. Clear fault after 5 cycles and trip the faulted line.
29	FLT29-PO	**Prior Outage of CLARKCOUNTY7 (539800) - G16-046-TAP (560080) line;** 3 phase fault on CLARKCOUNTY7 (539800) - G16-005-TAP (560072) CKT 1, near CLARKCOUNTY7 a. Apply fault at the CLARKCOUNTY7 bus. b. Clear fault after 5 cycles and trip the faulted line.
30	FLT30-3PH	3 phase fault on G16-049-TAP 345 kV (560081) to G13-010-TAP 345 kV (562334), near G16-049-TAP. a. Apply fault at the G16-049-TAP 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Fault Definitions

Cont. No.	Cont. Name	Description
31	FLT31-3PH	3 phase fault on G16-049-TAP 345 kV (560081) to SPERVIL7 345 kV (531469), near G16-049-TAP. a. Apply fault at the G16-049-TAP 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
32	FLT32-3PH	3 phase fault on G13-010-TAP 345 kV (562334) to POSTROCK7 345 kV (530583), near G13-010-TAP. a. Apply fault at the G13-010-TAP 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
33	FLT33-3PH	3 phase fault on POSTROCK7 345 kV (530583) to G16-050-TAP 345 kV (560082), near POSTROCK7. a. Apply fault at the POSTROCK7345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
34	FLT34-3PH	3 phase fault on the POSTROCK7 345 kV (530583) to POSTROCK6 230 kV (530584) to POSTROCK1 13.8 kV (530673) XFMR, near POSTROCK7 345 kV. a. Apply fault at the POSTROCK7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
35	FLT35-3PH	3 phase fault on the SPERVIL7 345 kV (531469) to SPEARVL6 230 kV (539695) to SPERTER1 13.8 kV (531468) XFMR, near SPERVIL7 345 kV. a. Apply fault at the SPERVIL7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
36	FLT36-3PH	3 phase fault on SPERVIL7 345 kV (531469) to BUCKNER7 345 kV (531501), near SPERVIL7 345 kV. a. Apply fault at the SPERVIL7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
37	FLT37-3PH	3 phase fault on the SPERVIL7 345 kV (531469) to SPRVL 3 115 kV (539759) to SPRVL-T 13.8 kV (539960) XFMR, near SPERVIL7 345 kV. a. Apply fault at the SPERVIL7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.

Fault Definitions

Cont. No.	Cont. Name	Description
38	FLT38-3PH	3 phase fault on SPERVIL7 345 kV (531469) to IRONWOOD7 345 kV (560002), near SPERVIL7 345 kV. a. Apply fault at the SPERVIL7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
39	FLT39-3PH	3 phase fault on SPERVIL7 345 kV (531469) to IRONWOOD7 345 kV (539803), near SPERVIL7 345 kV. a. Apply fault at the SPERVIL7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
40	FLT40-SB	**Stuck Breaker at SPERVIL7 (531469)** a. Apply single phase fault at SPERVIL7. b. Clear fault after 16 cycles and trip the following elements c. SPERVIL7 (531469) - G16-049-TAP (560081) d. SPERVIL7 (531469) - IRONWOOD7 (539803)
41	FLT41-SB	**Stuck Breaker at SPERVIL7 (531469)** a. Apply single phase fault at SPERVIL7. b. Clear fault after 16 cycles and trip the following elements c. SPERVIL7 (531469) - G16-049-TAP (560081) d. SPERVIL7 345kV (531469) / SPRVL 3 115 kV (539759) / SPRVL-T 13.8 kV (539960) transformer
42	FLT42-SB	**Stuck Breaker at SPERVIL7 (531469)** a. Apply single phase fault at SPERVIL7. b. Clear fault after 16 cycles and trip the following elements c. SPERVIL7 (531469) - G16-049-TAP (560081) d. SPERVIL7 345kV (531469) / SPEARVL6 230 kV (539695) / SPERTER1 13.8 kV (531468) transformer
43	FLT43-SB	**Stuck Breaker at SPERVIL7 (531469)** a. Apply single phase fault at SPERVIL7. b. Clear fault after 16 cycles and trip the following elements c. SPERVIL7 (531469) - G16-049-TAP (560081) d. SPERVIL7 (531469) - BUCKNER7 (531501)
44	FLT44-SB	**Stuck Breaker at SPERVIL7 (531469)** a. Apply single phase fault at SPERVIL7. b. Clear fault after 16 cycles and trip the following elements c. SPERVIL7 (531469) - G16-049-TAP (560081) d. SPERVIL7 (531469) - IRONWOOD7 (560002)
45	FLT45-SB	**Stuck Breaker at POSTROCK7 (530583)** a. Apply single phase fault at POSTROCK7. b. Clear fault after 16 cycles and trip the following elements c. POSTROCK7 (530583) - G13-010-TAP (562334) d. POSTROCK7 (530583) - G16-050-TAP (560082)

Fault Definitions

Cont. No.	Cont. Name	Description
46	FLT46-SB	**Stuck Breaker at POSTROCK7 (530583)** a. Apply single phase fault at POSTROCK7. b. Clear fault after 16 cycles and trip the following elements c. POSTROCK7 (530583) - G13-010-TAP (562334) d. POSTROCK7 345kV (530583) / POSTROCK6 230 kV (530584) / POSTROCK1 13.8 kV (530673) transformer
47	FLT47-PO	**Prior Outage of SPERVIL7 (531469) - G16-049-TAP (560081) line;** 3 phase fault on SPERVIL7 (531469) - IRONWOOD7 (539803) near SPERVIL7 a. Apply fault at the SPERVIL7 bus. b. Clear fault after 5 cycles and trip the faulted line.
48	FLT48-PO	**Prior Outage of SPERVIL7 (531469) - G16-049-TAP (560081) line;** 3 phase fault on the SPERVIL7 345kV (531469) / SPRVL 3 115 kV (539759) / SPRVL-T 13.8 kV (539960) transformer near SPERVIL7 a. Apply fault at the SPERVIL7 bus. b. Clear fault after 5 cycles and trip the faulted transformer.
49	FLT49-PO	**Prior Outage of SPERVIL7 (531469) - G16-049-TAP (560081) line;** 3 phase fault on SPERVIL7 345kV (531469) / SPEARVL6 230 kV (539695) / SPERTER1 13.8 kV (531468) transformer near SPERVIL7 a. Apply fault at the SPERVIL7 bus. b. Clear fault after 5 cycles and trip the faulted transformer.
50	FLT50-PO	**Prior Outage of SPERVIL7 (531469) - G16-049-TAP (560081) line;** 3 phase fault on SPERVIL7 (531469) - BUCKNER7 (531501) near SPERVIL7 a. Apply fault at the SPERVIL7 bus. b. Clear fault after 5 cycles and trip the faulted line.
51	FLT51-PO	**Prior Outage of SPERVIL7 (531469) - G16-049-TAP (560081) line;** 3 phase fault on SPERVIL7 (531469) - IRONWOOD7 (560002) near SPERVIL7 a. Apply fault at the SPERVIL7 bus. b. Clear fault after 5 cycles and trip the faulted line.

APPENDIX B

SOUTHWEST POWER POOL DISTURBANCE PERFORMANCE REQUIREMENTS (SUBMITTED IN A SEPARATE FILE)

APPENDIX C

DYNAMIC STABILITY PLOTS FOR CLUSTER SCENARIO (SUBMITTED IN SEPARATE FILES FROM APPENDIX C-1 TO C-3)

C-1 Group 3 Cluster Dynamic Stability Plots For 2016 Winter Peak Case

C-2 Group 3 Cluster Dynamic Stability Plots For 2017 Summer Peak Case

C-3 Group 3 Cluster Dynamic Stability Plots For 2025 Summer Peak Case

Each contingency consists of (39) subplots:

- Subplot #1 is the system phase angle channels in the snapshot file provided by SPP.
- Subplot #2 to Subplot #31 are results for (30) generators in the scope of study.
- Subplots #32 to Subplot #35 are voltages at the POI buses in the scope of study.
- Subplots #36 to Subplot #39 are frequencies at the POI buses in the scope of study.

APPENDIX D

DYNAMIC STABILITY PLOTS FOR STAND-ALONE SCENARIO (SUBMITTED IN SEPARATE FILE FROM APPENDIX D-1 TO D-12)

D-1 Group 3 StandAlone “GEN-2016-005” Dynamic Stability Plots For 2016 Winter Peak Case
D-2 Group 3 StandAlone “GEN-2016-005” Dynamic Stability Plots For 2017 Summer Peak Case
D-3 Group 3 StandAlone “GEN-2016-005” Dynamic Stability Plots For 2025 Summer Peak Case
D-4 Group 3 StandAlone “GEN-2016-016” Dynamic Stability Plots For 2016 Winter Peak Case
D-5 Group 3 StandAlone “GEN-2016-016” Dynamic Stability Plots For 2017 Summer Peak Case
D-6 Group 3 StandAlone “GEN-2016-016” Dynamic Stability Plots For 2025 Summer Peak Case
D-7 Group 3 StandAlone “GEN-2016-046” Dynamic Stability Plots For 2016 Winter Peak Case
D-8 Group 3 StandAlone “GEN-2016-046” Dynamic Stability Plots For 2017 Summer Peak Case
D-9 Group 3 StandAlone “GEN-2016-046” Dynamic Stability Plots For 2025 Summer Peak Case
D-10 Group 3 StandAlone “GEN-2016-049” Dynamic Stability Plots For 2016 Winter Peak Case
D-11 Group 3 StandAlone “GEN-2016-049” Dynamic Stability Plots For 2017 Summer Peak Case
D-12 Group 3 StandAlone “GEN-2016-049” Dynamic Stability Plots For 2025 Summer Peak Case

Each contingency consists of (39) subplots:

- Subplot #1 is the system phase angle channels in the snapshot file provided by SPP.
- Subplot #2 to Subplot #31 are results for (30) generators in the scope of study.
- Subplots #32 to Subplot #35 are voltages at the POI buses in the scope of study.
- Subplots #36 to Subplot #39 are frequencies at the POI buses in the scope of study.

APPENDIX E

POWER FACTOR ANALYSIS RESULTS (SUBMITTED IN SEPARATE FILE FROM APPENDIX E-1 TO E-4)

E-1 Group 3 Power Factor Results for Interconnection Request GEN-2016-005 (#560072)

E-2 Group 3 Power Factor Results for Interconnection Request GEN-2016-016 (#530619)

E-3 Group 3 Power Factor Results for Interconnection Request GEN-2016-046 (#560080)

E-4 Group 3 Power Factor Results for Interconnection Request GEN-2016-049 (#560081)

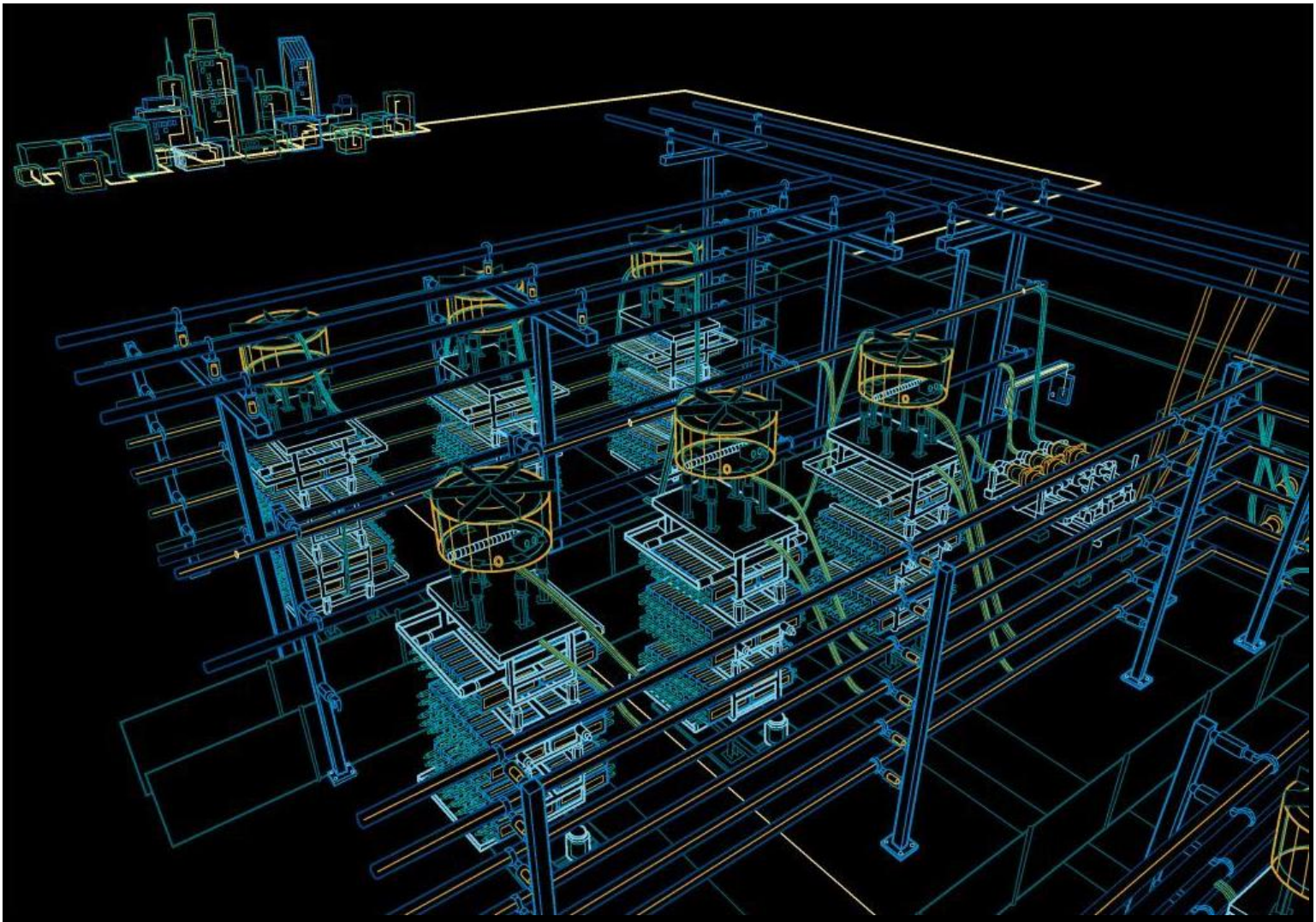
APPENDIX F

SHORT-CIRCUIT STUDY RESULTS (SUBMITTED IN A SEPARATE FILE FROM APPENDIX F-1 TO F-2)

F-1 GROUP 3 17SP Short-Circuit Study Results

F-2 GROUP 3 25SP Short-Circuit Study Results

11.17.4 J4: GROUP 4 DYNAMIC STABILITY ANALYSIS REPORT



Southwest Power Pool
System Impact Study GEN-2016-001 (Group 04)
Final Report

Report No. r02

Jan 6, 2017

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Prepared for: Southwest Power Pool
Report No.: r01
Date: Jan 6, 2017
Revised: Jan 25, 2017

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Rev No.	*Revision Description*	*Date*	*Authored by*	*Reviewed by*	*Approved by*
1	Revised FLT-28 Notes as commented	Jan 13 2017	V.V	L.C	W.W
2	Final Report	Jan 25 2017	V.V	L.C	W.W

SUMMARY

Southwest Power Pool (SPP) has commissioned ABB Inc., to perform a System Impact Study for interconnection request GEN-2016-001 (Group 04) which includes a 73.6 MW wind farm connected at Mingo 345 kV line.

The objective of this study is to evaluate the collective impact of the project on the existing and future planning system. The study is performed on three system scenarios provided by SPP:

- 2016 Winter Peak Case
- 2017 Summer Peak Case
- 2025 Summer Peak Case

FLT28-PO showed instability problem, since the pre-outage and disturbance resulted in outage of two major 345kV outlets. Pre-project cases were created for all three study seasons to simulate the fault, and same condition was observed. Mitigation for this contingency will require the curtailment of GEN-2016-067 and the prior queued projects GEN-2015-065, GEN-2015-064, and GEN-2015-061. For the rest of the studied faults, the simulation results showed no stability problems and no voltage violations for all three seasons. All the simulation results were summarized in Table 2-2 Also, for the contingencies simulated GEN-2016-067 remained on line and, therefore, will comply with FERC Order 661A low voltage ride-through.

System short-circuit current levels at up to five buses away from the point of interconnection were calculated and tabulated for SPP's reference.

Power Factor Analysis was performed to ensure the studied project meets FERC and SPP power factor requirements for wind farm interconnections. Study results show that GEN-2016-067 will be required to meet the SPP pro-forma 95% lagging (providing vars) and 95% leading (absorbing vars) power factor requirements at the Point of Interconnection.

The Low Wind/no wind analysis shows that 2.97 MVAr of shunt reactance is required to bring the MVAr flow at the POI down to approximately zero for all three studied seasons. The reactor bank size is approximate and the final size will be determined in the final facility and collector system design.

The results of this analysis are based on available data and assumptions made at the time of conducting this study. If any of the data and/or assumptions made in developing the study model change, the results provided in this report may not apply.

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1 Introduction

Southwest Power Pool (SPP) has commissioned ABB Inc., to perform a Definitive Impact Study for DISIS-2016-001 (Group 04) which includes generation interconnection request GEN-2016-067 (73.6 MW wind farm connected to Mingo 345kV line) as shown in Table 1-1.

Table 1-1 Group 04 Generation Interconnection Requests

Request	Size (MW)	Wind Turbine Model	Point of Interconnection
GEN-2016-067	73.6	Siemens 2.3MW	Mingo 345kV (531451)

The objective of this study is to evaluate the impact of project GEN-2016-067 on the existing and future planning system. The study is performed on three system scenarios provided by SPP:

- 2016 Winter Peak Case
- 2017 Summer Peak Case
- 2025 Summer Peak Case

SPP provided the study cases for all three system scenarios with the three projects included. One line diagrams of the local area for all three seasons are shown in Figure 1-1. The studied generator is circled red.

Three system scenarios supplied by SPP included the following prior queued projects for Group 04:

Table 1-2 Group 04 Prior Queued Projects

Request	Size (MW)	Wind Turbine Model	Point of Interconnection
GEN-2001-039M	99.0	Vestas V90VCRS 3.0MW	Central Plains 115kV (531485)
GEN-2003-006A	201.0	Vestas V90VCRS	Elm Creek 230kV (539639)
GEN-2003-019	249.3	GE 1.5MW & Vestas 3.0MW	Smoky Hills 230kV (530592)
GEN-2006-031	76.0	GENROU (530674, Machine ID 01; 530675, Machine ID 07)	Knoll 115kV (530561)

Request	Size (MW)	Wind Turbine Model	Point of Interconnection
GEN-2008-092	201.0	GE 1.5MW	Knoll 230kV (530558)
GEN-2009-008	198.9	GE 1.7MW	South Hays 230kV (530582)
GEN-2009-020/GEN-2014-025	50.75	Siemens SWT-2.415MW-108	Tap on the Balzine to Nekoma 69kV line (560306)
GEN-2010-048	70	Nordex 2.5MW	Tap on the Ross Beach to Redline 115kV line (560336)
GEN-2010-057	201.0	GE 1.5MW	Rice County 230kV (530686)
ASGI-2013-004	27.6 Summer	GENSAL (583693)	Morris 115kV (531430)
GEN-2013-033	28.0 (uprate of GEN-2006-031)	GENSAL (Bus 530675, Machine ID 10)	Knoll 115kV (530561)
GEN-2014-041	123.1	Siemens SWT-2.415MW-108	Arnold 115kV (531409)
GEN-2015-061	200.0	GE 2.0MW	Mingo (531451) to Setab (531465) 345kV
GEN-2015-064	197.8	Siemens 2.3MW	Mingo 115kV (531429)
GEN-2015-065	202.4	Siemens 2.3MW	Mingo 345kV (531451)

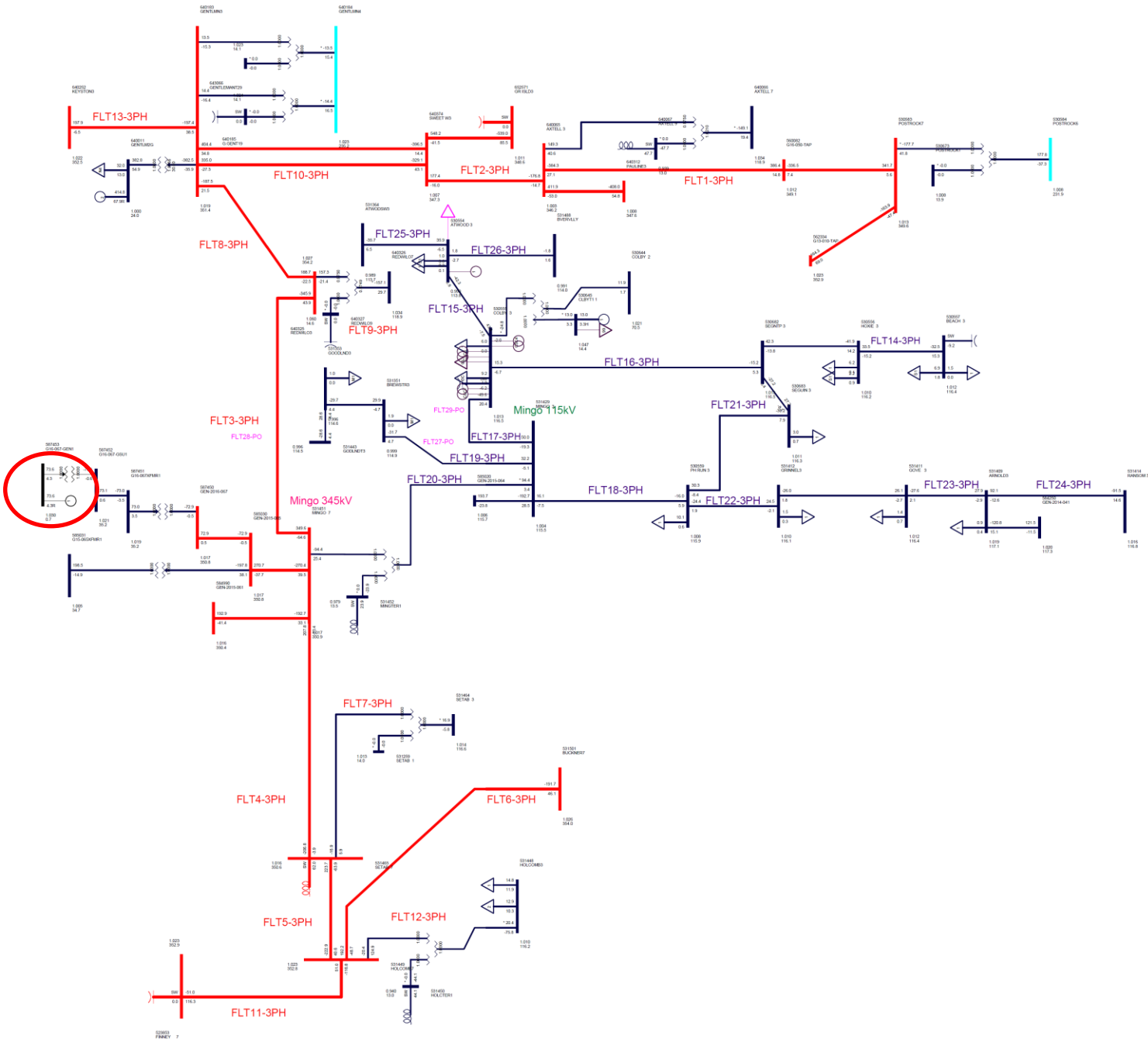


Figure 1-1 (a): One Line Diagram for 2016 Winter Peak Case

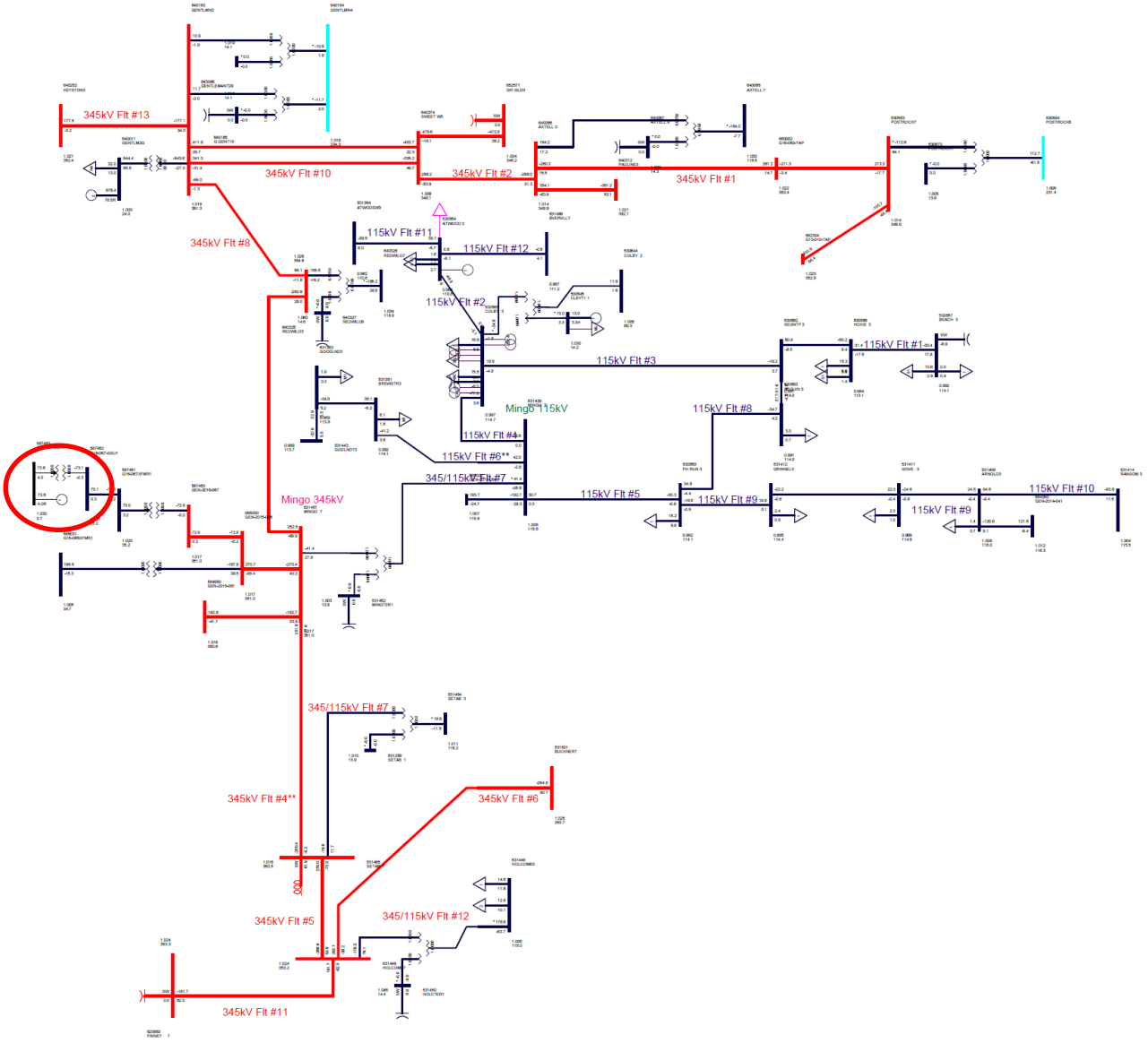


Figure 1-1 (b): One Line Diagram for 2017 Summer Peak Case

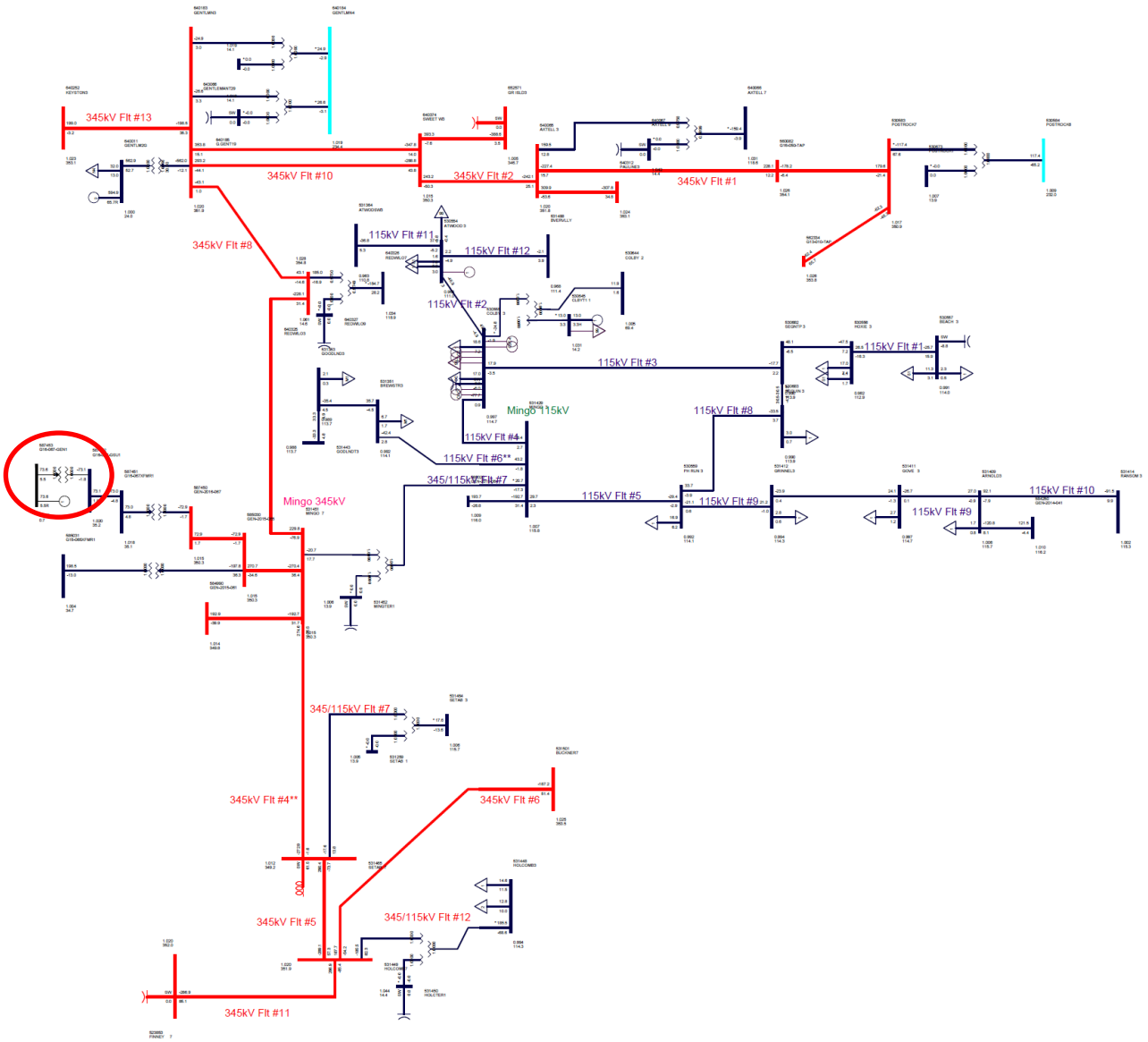


Figure 1-1 (c): One Line Diagram for 2025 Summer Peak Case

2 Study Methodology

In this study, ABB investigated the stability of the system for faults in the vicinity of the proposed plant as defined by SPP. The studied faults involve three-phase transformer faults with normal clearing, three-phase line faults with normal clearing and re-closing test, and single-line-to-ground (SLG) faults with stuck breaker.

2.1 Stability Analysis Methodology

Stability analysis is performed to determine whether the electric system would meet stability criteria following the addition of GEN-2016-067.

Stability analysis was performed using Siemens-PTI's PSS/E dynamics program V32.2.0.

All the faults listed in Table 2-1 were simulated for 20 seconds.

Table 2-1: List of Faults of Stability Analysis

Cont. No.	Cont. Name	Description
1	FLT1-3PH	3 phase fault on the Post Rock 345kV (530583) to Axtell 345kV (640065) CKT 1, near Post Rock. a. Apply fault at the Post Rock 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
2	FLT2-3PH	3 phase fault on the Axtell 345kV (640065) to Sweetwater 345 kV (640374) CKT 1, near Axtell. a. Apply fault at the Axtell 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
3	FLT3-3PH	3 phase fault on the Mingo 345kV (531451) to Red Willow 345kV (640325) CKT 1, near Mingo. a. Apply fault at the Mingo 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Cont. No.	Cont. Name	Description
4	FLT4-3PH	3 phase fault on the Mingo 345kV (531451) to Setab 345kV (531465) CKT 1, near Mingo. a. Apply fault at the Mingo 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
5	FLT5-3PH	3 phase fault on the Setab 345kV (531465) to Holcomb 345kV (531449) CKT 1, near Setab. a. Apply fault at the Setab 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
6	FLT6-3PH	3 phase fault on the Holcomb 345kV (531449) to Buckner 345kV (531501) CKT 1, near Holcomb. a. Apply fault at the Holcomb 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
7	FLT7-3PH	3 phase fault on the Setab 345kV (531465) to Setab 115kV (531464) to Setab 13.8kV (531259) XFMR CKT 1, near Setab 345kV. a. Apply fault at the Setab 345kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
8	FLT8-3PH	3 phase fault on the Red Willow 345kV (640325) to Gentleman 345kV (640183) CKT 1, near Red Willow. a. Apply fault at the Red Willow 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
9	FLT9-3PH	3 phase fault on the Red Willow 345kV (640325) to Red Willow 115kV (640326) to Red Willow 13.8kV (640327) XFMR CKT 1, near Red Willow. a. Apply fault at the Red Willow 345kV bus.

Cont. No.	Cont. Name	Description
		b. Clear fault after 5 cycles by tripping the faulted transformer.
10	FLT10-3PH	3 phase fault on the Gentleman 345kV (640183) to Sweetwater 345kV (640374) CKT 1, near Gentleman. a. Apply fault at the Gentleman 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
11	FLT11-3PH	3 phase fault on the Holcomb 345kV (531449) to Finney 345kV (523853) CKT 1, near Holcomb. a. Apply fault at the Holcomb 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
12	FLT12-3PH	3 phase fault on the Holcomb 345kV (531449) to Holcomb 115kV (531448) to Holcomb 13.8kV (531450) XFMR CKT 1, near Holcomb 345kV. a. Apply fault at the Holcomb 345kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
13	FLT13-3PH	3 phase fault on the Gentleman 345kV (640183) to Keystone 345kV (640252) CKT 1, near Gentleman. a. Apply fault at the Gentleman 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
14	FLT14-3PH	3 phase fault on the Beach 115kV (530557) to Hoxie 115kV (530556) CKT 1, near Beach. a. Apply fault at the Beach 115kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
15	FLT15-3PH	3 phase fault on the Colby 115kV (530555) to Atwood 115kV (530554) CKT 1, near Colby.

Cont. No.	Cont. Name	Description
		a. Apply fault at the Colby 115kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
16	FLT16-3PH	3 phase fault on the Colby 115kV (530555) to Seguin Tap 115kV (530682) CKT 1, near Colby. a. Apply fault at the Colby 115kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
17	FLT17-3PH	3 phase fault on the Colby 115kV (530555) to Mingo 115kV (531429) CKT 1, near Colby. a. Apply fault at the Colby 115kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
18	FLT18-3PH	3 phase fault on the Mingo 115kV (531429) to Pheasant Run 115kV (530559) CKT 1, near Mingo. a. Apply fault at the Mingo 115kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
19	FLT19-3PH	3 phase fault on the Mingo 115kV (531429) to Brewster 115kV (531351) CKT 1, near Mingo. a. Apply fault at the Mingo 115kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
20	FLT20-3PH	3 phase fault on the Mingo 115kV (531429) to Mingo 345kV (531451) to Mingo 13.8kV (531452) XFMR CKT 1, near Mingo 115kV. a. Apply fault at the Mingo 115kV bus.

Cont. No.	Cont. Name	Description
		b. Clear fault after 5 cycles by tripping the faulted transformer.
21	FLT21-3PH	3 phase fault on the Pheasant Run 115kV (530559) to Seguin 115kV (530683) CKT 1, near Pheasant Run. a. Apply fault at the Pheasant Run 115kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
22	FLT22-3PH	3 phase fault on the Pheasant Run 115kV (530559) to Grinnell 115kV (531412) CKT 1, near Pheasant Run. a. Apply fault at the Pheasant Run 115kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
23	FLT23-3PH	3 phase fault on the Gove 115kV (531411) to Arnold 115kV (531409) CKT 1, near Gove. a. Apply fault at the Gove 115kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
24	FLT24-3PH	3 phase fault on the Arnold 115kV (531409) to Ransom 115kV (531414) CKT 1, near Arnold. a. Apply fault at the Arnold 115kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
25	FLT25-3PH	3 phase fault on the Atwood 115kV (530554) to Atwood SW 115kV (531364) CKT 1, near Atwood. a. Apply fault at the Atwood 115kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Cont. No.	Cont. Name	Description
26	FLT26-3PH	3 phase fault on the Atwood 115kV (530554) to Beaver Valley 115kV (531488) CKT 1, near Atwood. a. Apply fault at the Atwood 115kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
27	FLT27-PO	**Prior Outage of Mingo to Brewster 115kV**. 3 phase fault on the Mingo – Pheasant Run 115kV line. a. Prior outage Mingo (531429) 115kV to Brewster (531351) 115kV (solve network for steady state solution). b. 3 phase fault on the Mingo (531429) 115kV to Pheasant Run (530559) 115kV, near Mingo 115kV. c. Leave fault on for 5 cycles, then trip the faulted line in (b).
28	FLT28-PO	**Prior Outage of Mingo to Red Willow 345kV**. 3 phase fault on the G15-061-Tap – Setab 345kV line. a. Prior outage Mingo (531451) 345kV to Red Willow (640325) 345kV (solve network for steady state solution). b. 3 phase fault on the Mingo (531451) 345kV to Setab (531465) 345kV, near G15-051-Tap 345kV. c. Leave fault on for 5 cycles, then trip the faulted line in (b).
29	FLT29-PO	**Prior Outage of Setab to Mingo 345kV**. 3 phase fault on the Mingo – Colby 115kV line. a. Prior outage Setab (531465) 345kV to Mingo (531451) 345kV (solve network for steady state solution). b. 3 phase fault on the Mingo (531429) 115kV to Colby (530555) 115kV, near Mingo 115kV. c. Leave fault on for 5 cycles, then trip the faulted line in (b).
30	FLT30-SB	**Mingo 115kV Stuck Breaker** a. Apply single phase fault at the Mingo (531429)115kV bus on the Mingo – Brewster (531351) 115kV line. b. Wait 16 cycles, and then trip Mingo (531429) to Brewster (531351) 115kV. c. Trip Mingo (531429) to Colby (530555) 115kV and remove the fault.

Cont. No.	Cont. Name	Description
31	FLT31-SB	**Mingo 345kV Stuck Breaker** a. Apply single phase fault at the Mingo (531451) 345kV bus on the Mingo – Red Willow (640325) 345kV line. b. Wait 16 cycles, and then trip Mingo (531451) to Red Willow (640325) 345kV. c. Trip Mingo (531451) 345kV to Mingo (531429) 115kV to Mingo (531452) 13.8kV transformer and remove the fault.
32	FLT32-SB	**Holcomb 345kV Stuck Breaker** a. Apply single phase fault at the Holcomb (531449) 345kV bus on the Holcomb – Buckner (531501) 345kV line. b. Wait 16 cycles, and then trip Holcomb (531449) to Buckner (531501) 345kV. c. Trip Holcomb (531449) 345kV to Holcomb (531448) 115kV to Holcomb (531450) 13.8kV transformer and remove the fault.

Single-line-to-ground faults were simulated with the standard method of applying fault impedance to the positive sequence network to represent the effect of the negative and zero sequence networks on the positive sequence network. The SLG fault impedance was computed by assuming a positive sequence voltage at the fault location at approximately 60% of pre-fault voltage, which is a typical value.

The Southwest Pool Disturbance Performance Criteria Requirements in Appendix A were used to evaluate the system response during the initial transient period following a disturbance on the system. Generator response and bus voltages (115 kV and above) in Area 520, 524, 525, 526, 531, 534, 536 and 640 were monitored to ensure the system performance meets criteria requirements. Rotor angles of the nearby synchronous machines were investigated to make sure they maintained synchronism and had adequate damping following system faults.

Any wind generator must comply with FERC Order 661A on low voltage ride through requirements for wind farms. Therefore, the wind generators should not be tripped off line for faults by under voltage relay actuation. Generator speed of pre-queued projects was also monitored to ensure they stay online under system contingencies. For contingencies that result in a prior queued project tripping off-line; the contingency shall be re-run with the prior queued project's voltage and frequency tripping disabled.

2.2 Study Results -

One prior outage case (FLT28-PO) showed instability problem. This condition exists with or without the GEN-2015-067 interconnection.

It is observed for FLT28-PO (prior outage at 345kV Mingo – 345kV Red Willow with 3-ph fault on 345kV Mingo to 345kV Setab line) could result in voltage collapse at Mingo 345kV. This is due to loss of two major 345 kV lines (Mingo – Red Willow 345kV and Mingo - Setab 345 kV) that were interconnected to the prior queued projects GEN-2015-065 (200MW) & GEN-2015-061 (200MW). Also, the transformers at Mingo 345 kV were not rated to transfer this generation. . In a discussion with SPP the prior queued projects GEN-2015-065, GEN-2015-064, and GEN-2015-061 were studied in DISIS-2015-002 Group 4 and demonstrated the same instability for the prior outage at 345kV Mingo – 345kV Red Willow with 3-ph fault on 345kV Mingo to 345kV Setab line. Mitigation for this contingency will require the curtailment of GEN-2016-067 and the prior queued projects GEN-2015-065, GEN-2015-064, and GEN-2015-061.

.

For the rest of the studied faults, the simulation results showed no stability problems and no voltage violations for all three seasons. Also, for the contingencies simulated GEN-2016-067 remained on line and, therefore, will comply with FERC Order 661A low voltage ride-through.

All fault results are summarized in Table 2-2, which show results for the 2016 Winter Peak case, the 2017 Summer Peak case, and the 2025 Summer Peak case, respectively. The "Voltage Violation" in the table refers to "*bus voltages on the Bulk Electric System is below 0.70 per unit, after the fault is cleared or bus voltages is above 1.20 per unit after the fault is cleared*". Any voltage violations are highlighted with **red**.

Table 2-2 Study Results Summary, 2016 Winter Peak, 2017 Summer Peak & 2025 Summer Peak

Index	Fault Name	2016 Winter Peak		2017 Summer Peak		2025 Summer Peak	
		GEN-2016-067		GEN-2016-067		GEN-2016-067	
		Stable?	Voltage Violation	Stable?	Voltage Violation	Stable?	Voltage Violation
1	FLT1-3PH	Yes	no	Yes	no	Yes	no
2	FLT2-3PH	Yes	no	Yes	no	Yes	no
3	FLT3-3PH	Yes	no	Yes	no	Yes	no
4	FLT4-3PH	Yes	no	Yes	no	Yes	no
5	FLT5-3PH	Yes	no	Yes	no	Yes	no
6	FLT6-3PH	Yes	no	Yes	no	Yes	no
7	FLT7-3PH	Yes	no	Yes	no	Yes	no
8	FLT8-3PH	Yes	no	Yes	no	Yes	no
9	FLT9-3PH	Yes	no	Yes	no	Yes	no
10	FLT10-3PH	Yes	no	Yes	no	Yes	no
11	FLT11-3PH	Yes	no	Yes	no	Yes	no
12	FLT12-3PH	Yes	no	Yes	no	Yes	no
13	FLT13-3PH	Yes	no	Yes	no	Yes	no
14	FLT14-3PH	Yes	no	Yes	no	Yes	no
15	FLT15-3PH	Yes	no	Yes	no	Yes	no
16	FLT16-3PH	Yes	no	Yes	no	Yes	no
17	FLT17-3PH	Yes	no	Yes	no	Yes	no
19	FLT18-3PH	Yes	no	Yes	no	Yes	no
20	FLT19-3PH	Yes	no	Yes	no	Yes	no
21	FLT20-3PH	Yes	no	Yes	no	Yes	no
22	FLT21-3PH	Yes	no	Yes	no	Yes	no
23	FLT22-3PH	Yes	no	Yes	no	Yes	no
24	FLT23-3PH	Yes	no	Yes	no	Yes	no
25	FLT24-3PH	Yes	no	Yes	no	Yes	no
26	FLT25-3PH	Yes	no	Yes	no	Yes	no
27	FLT26-3PH	Yes	no	Yes	no	Yes	no
28	FLT27-PO	Yes	no	Yes	no	Yes	no
29	FLT28-PO	Yes*	no	Yes*	no	Yes*	no
30	FLT29-PO	Yes	no	Yes	no	Yes	no
31	FLT30-SB	Yes	no	Yes	no	Yes	no
32	FLT31-SB	Yes	no	Yes	no	Yes	no
33	FLT32-SB	Yes	no	Yes	no	Yes	no

* Requires curtailment of GEN-2016-067 and prior queued projects GEN-2015-065, GEN-2015-064, and GEN-2015-061 after the prior outage.

3 Short Circuit Analysis

Short circuit analysis was performed on the 2017 Summer Peak and 2025 Summer Peak power flow case using the PSS/E program. Since the power flow model does not contain negative and zero sequence data, only three-phase symmetrical fault current levels were calculated at up to five buses away from the point of interconnection.

Table 3-1 tabulates all the three-phase fault current levels, and the calculated values were listed here for SPP's reference.

Table 3-1 (a): Three-Phase Fault Currents GEN-2016-067 – 2017 Summer Peak

Bus Number	Bus Name kV	3PH (Amps)	Bus Number	Bus Name kV	3PH (Amps)
531459	S2 GEN 1 13.800	53122.2	640265	MALONEY7 115.00	11151.3
531461	S4 GEN 1 13.200	40362.2	640267	MAXWELS7 115.00	6110.9
531462	S5 GEN 1 13.200	38142.5	640269	MCCOOK 7 115.00	7888.7
531464	SETAB 3 115.00	11017.5	640270	MCCOOK 8 69.000	4572.9
531465	SETAB 7 345.00	7596.2	640271	MCCOOL 3 345.00	10326.5
640010	GENTLM1G 23.000	171017.7	531220	LUDELLT3 115.00	2522.3
640011	GENTLM2G 24.000	179020	652571	GR ISLD3 345.00	11890.9
531468	SPERTER1 13.800	13356.3	584990	GEN-2015-061345.00	5618.2
531469	SPERVIL7 345.00	15518	584991	G15-061XFMR134.500	11718.3
640017	MCCOOK G 13.800	14350.7	584992	G15-061-GSU134.500	9921.6
640018	N.PLATTG 13.800	16911.6	584993	G15-061-GEN10.6900	417603.3
531476	SWNDTAP3 115.00	7757.3	584994	G15-061XFMR234.500	11833
531480	KSAVWTP3 115.00	13987.6	584995	G15-061-GSU234.500	10515.4
652314	GR ISL19 13.800	25355.7	584996	G15-061-GEN20.6900	436227.8
643099	MCCOOK T1 913.800	4293.1	640302	OGALALA4 230.00	7825.9
643100	MCCOOK T3 913.800	3205.7	531421	GC-C 1 34.500	5477.8
531485	CNTRLPL3 115.00	6229.7	640304	OGALALANPPD7115.00	14611.8
531486	CNTRLPL2 34.500	11846.2	531254	GC-CITY 13.800	6651.7
531487	MCDONLD3 115.00	2249	531256	SCOTCTY1 13.800	4201.6
531488	BVERVLLY 115.00	2338.3	531258	GRDNCYT1 13.800	3919.3
531489	ONEOK 3 115.00	1890.1	531259	SETAB 1 13.800	27638.4
643106	NORTHPLT T2913.800	4226.9	585020	GEN-2015-064115.00	8275.7
643107	NORTHPLT T7913.800	6443.6	585021	G15-064XFMR134.500	16401.7
531493	GANO 3 115.00	6945.4	585022	G15-064-GSU134.500	15842.6
643115	OGALLALA T1913.800	18941	585023	G15-064-GEN10.6900	702744.2
531500	FLETCHER-T 13.200	5639.3	640325	REDWILO3 345.00	6257.1
531501	BUCKNER7 345.00	10483.1	585030	GEN-2015-065345.00	6339.5
531502	CIMRRN 7 345.00	8104.9	585031	G15-065XFMR134.500	22390.8
539695	SPEARVL6 230.00	13378.6	585032	G15-065-GSU134.500	20846.2
531504	CIMWD2 7 345.00	8284	585033	G15-065-GEN10.6900	865181.7

Bus Number	Bus Name kV	3PH (Amps)	Bus Number	Bus Name kV	3PH (Amps)
531505	CIMWD2 1 34.500	24428.2	539960	SPRVL-T 13.800	28151.1
531510	WALKTAP3 115.00	10536.7	659800	GRANTNB7 115.00	6424.4
531511	WALKETP-T 13.800	27063.3	523097	HITCHLAND 7345.00	16089.2
531512	WALKTAP7 345.00	8085.9	531409	ARNOLD3 115.00	3389.9
640065	AXTELL 3 345.00	10055	523114	BUFF_DN_TR1113.200	561002.7
640066	AXTELL 7 115.00	14795.7	523115	BUFF_DN_TR2113.200	555691.4
640067	AXTELL 9 13.800	23783.5	523116	BUFF_DUNES1134.500	26743.8
652871	GR ISLD-LNX3345.00	11890.9	640365	STOCKVL7 115.00	4713.4
643146	STOCKVLLET1913.800	4141.9	640366	STOCKVL8 69.000	3522.5
523853	FINNEY 7345.00	11002.5	531262	CNTRLPL1 13.800	30444.5
640082	BEVERLY7 115.00	4815.3	640374	SWEET W3 345.00	10110.1
640083	BEVERLY8 69.000	4356.1	560002	IRONWOOD7 345.00	14992.2
640093	C.CREEK4 230.00	7025.3	599950	LAMAR7 345.00	2490.1
587451	G16-067XFMR134.500	29766.8	531351	BREWSTR3 115.00	2990.1
640100	CAMBRIG7 115.00	4161.9	531353	GOODLND3 115.00	2587.6
640101	CAMBRIG8 69.000	2278.1	531357	RULETON3 115.00	2536.6
531503	CIMRRN 1 34.500	16433.6	531360	DIGHTNT3 115.00	3700.3
539759	SPRVL 3 115.00	12106.7	531362	MANNGT 3 115.00	5211.1
530554	ATWOOD 3 115.00	2924.3	531363	MANNING3 115.00	4128.6
530555	COLBY 3 115.00	5759.6	531364	ATWODSW3 115.00	2608.2
530556	HOXIE 3 115.00	3569.8	640326	REDWILO7 115.00	10901.9
530557	BEACH 3 115.00	4031.8	531369	NATWOOD3 115.00	2487.6
530559	PH RUN 3 115.00	4518.1	640327	REDWILO9 13.800	15606
523118	BUFF_DUNES 7345.00	6510.4	531379	JONES3 115.00	11168.1
539803	IRONWOOD7 345.00	15008.3	531392	PIONTAP3 115.00	6907.4
659133	SIDNEY 3 345.00	6464.4	531393	PLYMELL3 115.00	7802.2
640167	ENDERS 7 115.00	3842.8	531399	LAKIN3 34.500	3688.5
640168	ENDERS 8 69.000	3179.6	531400	PK_GOAB3 115.00	4989.8
652316	GR ISL29 13.800	25470.1	643017	BEVERLY T1 913.800	4235
640286	N.PLATT4 230.00	12792.3	643018	BEVERLY T2 913.800	4065.9
640183	GENTLMN3 345.00	14533.7	531408	PIERCVL3 115.00	3899.8
640184	GENTLMN4 230.00	18502.4	580049	GEN-2010-045345.00	7310.3
640185	G.GENT19 13.800	28511.1	560082	G16-050-TAP 345.00	8111.4
587450	GEN-2016-067345.00	6339.5	531411	GOVE 3 115.00	3006.7
640287	N.PLATT7 115.00	17756.4	531412	GRINNEL3 115.00	3784.4
587452	G16-067-GSU134.500	29398	531416	CTYSERT3 115.00	10334.8
587453	G16-067-GEN10.6900	1571664.4	531417	CTYSERV2 69.000	965.6
659134	SIDNEY 4 230.00	6447	531418	CTYSERV3 115.00	10083.6
640312	PAULINE3 345.00	8545.5	531420	FLETCHR3 115.00	6899.2
640288	N.PLATT8 69.000	5233.3	643066	GENTLEMANT2913.800	27746.1

Bus Number	Bus Name kV	3PH (Amps)	Bus Number	Bus Name kV	3PH (Amps)
640194	GOSPER 7 115.00	4369	531423	GARDNCY2 69.000	3565.9
640289	N.PLATT9 34.500	7021.1	659425	SIDNEY1-LNX3345.00	6464.4
640200	GR ISLD4 230.00	16425.2	531426	JAMESON3 115.00	10645.6
640290	N.PT8 9 13.800	24592.8	531427	SCOTCTY2 69.000	3390
640291	N.PT9 9 13.800	24592.8	531428	LEOTI 3 115.00	4383.3
530644	COLBY 2 69.000	3934	531429	MINGO 3 115.00	10108.2
530645	CLBYT1 1 13.800	7243.8	531432	PILE 3 115.00	6637.9
530646	CLBY34 1 34.500	3894.6	531433	SCOTCTY3 115.00	9292.8
530647	CLBY-DSL 13.000	9838	643055	ENDERS T1 913.800	3906.8
641244	ATHEY 7 115.00	3147	531440	WILLIAM3 115.00	3785.4
560081	G16-049-TAP 345.00	9715.7	531443	GODLNDT3 115.00	2575.3
580050	G10-045XFMR134.500	12511.9	531444	GOODCTY3 115.00	2074.6
640238	JEFFREY7 115.00	6117.4	531445	GRDNCTY3 115.00	14544.9
580051	G10-045XFMR234.500	12339.8	531447	HOLCGEN1 22.000	93248.3
643028	CAMBRIDGET1913.800	3029.2	531448	HOLCOMB3 115.00	22557.5
530682	SEGNTP 3 115.00	4278.7	531449	HOLCOMB7 345.00	11104.9
530683	SEGUIN 3 115.00	4064.8	531450	HOLCTER1 13.800	18452.3
640252	KEYSTON3 345.00	8508.3	531451	MINGO 7 345.00	6883.8
640253	KEYSTON7 115.00	14645.8	531452	MINGTER1 13.800	26518.9
640254	KEYSTON9 13.800	16300.2	643071	GR ISLD T6 913.800	37296.4
640255	KINGSLY7 115.00	9168.9			

Table 3-2 (b): Three-Phase Fault Currents GEN-2016-067 – 2025 Summer Peak

Bus Number	Bus Name kV	3PH (Amps)	Bus Number	Bus Name kV	3PH (Amps)
531459	S2 GEN 1 13.800	53228.1	640269	MCCOOK 7 115.00	7945.3
531461	S4 GEN 1 13.200	40087.4	640270	MCCOOK 8 69.000	4585.7
531462	S5 GEN 1 13.200	38173.4	640271	MCCOOL 3 345.00	10439
531464	SETAB 3 115.00	10997.1	584650	GEN-2015-023345.00	6689
531465	SETAB 7 345.00	7617.8	531220	LUDELLT3 115.00	2582.6
640010	GENTLM1G 23.000	172969.1	652571	GR ISLD3 345.00	12155.5
640011	GENTLM2G 24.000	183803.7	584990	GEN-2015-061345.00	5691.3
531468	SPERTER1 13.800	13367.7	584991	G15-061XFMR134.500	11734.3
531469	SPERVIL7 345.00	15604.1	584992	G15-061-GSU134.500	9932
640017	MCCOOK G 13.800	14375.5	584993	G15-061-GEN10.6900	418060.1
640018	N.PLATTG 13.800	16923.6	584994	G15-061XFMR234.500	11849.9
531476	SWNDTAP3 115.00	7789.7	584995	G15-061-GSU234.500	10527.8
531480	KSAVWTP3 115.00	14163.5	584996	G15-061-GEN20.6900	436746.2
652314	GR ISL19 13.800	25434.6	640302	OGALALA4 230.00	7921.1
643099	MCCOOK T1 913.800	4295.8	531421	GC-C 1 34.500	5429
643100	MCCOOK T3 913.800	3207.3	640304	OGALALANPPD7115.00	14765.3
531485	CNTRLPL3 115.00	6206	531254	GC-CITY 13.800	6617.9
531486	CNTRLPL2 34.500	11785.6	531256	SCOTCTY1 13.800	4181.6
531487	MCDONLD3 115.00	2302.5	531258	GRDNCYT1 13.800	3967.3
531488	BVERVLLY 115.00	2396.4	531259	SETAB 1 13.800	27529.5
531489	ONEOK 3 115.00	1928.4	585020	GEN-2015-064115.00	10129.1
643106	NORTHPLT T2913.800	4234.7	585021	G15-064XFMR134.500	17984.6
643107	NORTHPLT T7913.800	6462.9	585022	G15-064-GSU134.500	17255.3
531493	GANO 3 115.00	6939.4	585023	G15-064-GEN10.6900	750990.9
643115	OGALLALA T1913.800	18979.3	640325	REDWILO3 345.00	6363.8
531500	FLETCHER-T 13.200	5599.2	585030	GEN-2015-065345.00	6432.6
531501	BUCKNER7 345.00	10507.9	585031	G15-065XFMR134.500	22479.6
531502	CIMRRN 7 345.00	8118.8	585032	G15-065-GSU134.500	20919.8
539695	SPEARVL6 230.00	13438.9	585033	G15-065-GEN10.6900	867778.7
531504	CIMWD2 7 345.00	8298.1	539960	SPRVL-T 13.800	28178.5
531505	CIMWD2 1 34.500	24433	659800	GRANTNB7 115.00	6447.9
531510	WALKTAP3 115.00	10487.1	523097	HITCHLAND 7345.00	16148.5
531511	WALKETP-T 13.800	26886.6	531409	ARNOLD3 115.00	3414.7
531512	WALKTAP7 345.00	8063.4	640359	STAPLETON 7115.00	4268.6
640570	THEDFORD9 13.800	21090.7	523114	BUFF_DN_TR1113.200	563919.3
640065	AXTELL 3 345.00	10116.8	523115	BUFF_DN_TR2113.200	558547.2
640066	AXTELL 7 115.00	14907	523116	BUFF_DUNES1134.500	26737.4
640067	AXTELL 9 13.800	23916.8	640365	STOCKVL7 115.00	4733.4
652871	GR ISLD-LNX3345.00	12155.5	523118	BUFF_DUNES 7345.00	6507.4

Bus Number	Bus Name kV	3PH (Amps)	Bus Number	Bus Name kV	3PH (Amps)
643146	STOCKVLLET1913.800	4144.2	531262	CNTRLPL1 13.800	30308.6
523853	FINNEY 7345.00	11016.1	640374	SWEET W3 345.00	10219.9
643153	THEDFORD T1913.800	2446.1	652832	GRPRAR1-LNX3345.00	6574
640082	BEVERLY7 115.00	4867.6	640381	THEDFRD7 115.00	9216.9
640083	BEVERLY8 69.000	4451	640382	THEDFRD9 34.500	1424.1
640093	C.CREEK4 230.00	7085.8	560002	IRONWOOD7 345.00	15074
640096	CALAMS 7 115.00	3510.4	599950	LAMAR7 345.00	2483.9
587451	G16-067XFMR134.500	29854.7	531351	BREWSTR3 115.00	3138.7
640100	CAMBRIG7 115.00	4177.6	531353	GOODLND3 115.00	2673.5
640101	CAMBRIG8 69.000	2284.3	531357	RULETON3 115.00	2596.8
531503	CIMRRN 1 34.500	16436.6	531360	DIGHTNT3 115.00	3689
539759	SPRVL 3 115.00	12132.6	531362	MANNGT 3 115.00	5194.8
530554	ATWOOD 3 115.00	3016.6	531363	MANNING3 115.00	4114
530555	COLBY 3 115.00	6324.6	531364	ATWODSW3 115.00	2675.1
530556	HOXIE 3 115.00	3680.6	640326	REDWILO7 115.00	11012.7
530557	BEACH 3 115.00	4081.7	531369	NATWOOD3 115.00	2548.6
530559	PH RUN 3 115.00	4782.9	640327	REDWILO9 13.800	15632.1
640366	STOCKVL8 69.000	3530.4	531379	JONES3 115.00	11177.2
539803	IRONWOOD7 345.00	15089.4	531444	GOODCTY3 115.00	2127.9
659133	SIDNEY 3 345.00	6515.4	531392	PIONTAP3 115.00	6878.6
640167	ENDERS 7 115.00	3864.3	531393	PLYMELL3 115.00	7770.4
640168	ENDERS 8 69.000	3191.9	531399	LAKIN3 34.500	3663.1
652316	GR ISL29 13.800	25549.4	531400	PK_GOAB3 115.00	4961.9
640286	N.PLATT4 230.00	13048.5	643017	BEVERLY T1 913.800	4250.2
640183	GENTLMN3 345.00	15658.4	643018	BEVERLY T2 913.800	4082.4
640184	GENTLMN4 230.00	19034.6	531408	PIERCVL3 115.00	3878.5
640185	G.GENT19 13.800	28563.2	580049	GEN-2010-045345.00	7320.7
587450	GEN-2016-067345.00	6432.6	560082	G16-050-TAP 345.00	8154.3
640287	N.PLATT7 115.00	18162.4	531411	GOVE 3 115.00	3060.5
587452	G16-067-GSU134.500	29478.1	531412	GRINNEL3 115.00	3939.6
587453	G16-067-GEN10.6900	1573349	531416	CTYSERT3 115.00	10312.9
659134	SIDNEY 4 230.00	6483.8	531417	CTYSERV2 69.000	961
640312	PAULINE3 345.00	8588.7	531418	CTYSERV3 115.00	10061.5
640288	N.PLATT8 69.000	5228.1	531420	FLETCHR3 115.00	6868.4
640194	GOSPER 7 115.00	4384.3	643066	GENTLEMANT2913.800	27800.1
640289	N.PLATT9 34.500	7092.3	531423	GARDNCY2 69.000	4006.3
640200	GR ISLD4 230.00	16651.8	659425	SIDNEY1-LNX3345.00	6515.4
640290	N.PT8 9 13.800	24726.4	531426	JAMESON3 115.00	10660.4
640291	N.PT9 9 13.800	24726.4	531427	SCOTCTY2 69.000	3375.5
530644	COLBY 2 69.000	4032.9	531428	LEOTI 3 115.00	4365.8

Bus Number	Bus Name kV	3PH (Amps)	Bus Number	Bus Name kV	3PH (Amps)
530645	CLBYT1 1 13.800	7266.6	531429	MINGO 3 115.00	13194.8
530646	CLBY34 1 34.500	3922.7	531432	PILE 3 115.00	6624.1
530647	CLBY-DSL 13.000	9861.4	531433	SCOTCTY3 115.00	9273.3
641244	ATHEY 7 115.00	3160.6	643055	ENDERS T1 913.800	3909.6
560081	G16-049-TAP 345.00	9759.7	531440	WILLIAM3 115.00	3762.5
580050	G10-045XFMR134.500	12511.8	531443	GODLNDT3 115.00	2658.8
640238	JEFFREY7 115.00	6144.6	640500	THEDFRD3 345.00	5721.7
580051	G10-045XFMR234.500	12339.5	531445	GRDNCTY3 115.00	14748.1
643028	CAMBRIDGET1913.800	3034.6	531447	HOLCGEN1 22.000	93030.4
530682	SEGNTP 3 115.00	4482.2	531448	HOLCOMB3 115.00	22606.3
530683	SEGUIN 3 115.00	4254.9	531449	HOLCOMB7 345.00	11119.9
640252	KEYSTON3 345.00	8757.2	531450	HOLCTER1 13.800	18428.4
640253	KEYSTON7 115.00	14877.3	531451	MINGO 7 345.00	6999.3
640254	KEYSTON9 13.800	16379.6	531452	MINGTER1 13.800	29952.2
640255	KINGSLY7 115.00	9246.1	531453	MINGTER 13.800	29952.2
640265	MALONEY7 115.00	11307.6	640510	HOLT.CO3 345.00	7253.7
640267	MAXWELS7 115.00	6786.7	643071	GR ISLD T6 913.800	37429.1

4 Power Factor Analysis

Since the studied project is a renewable energy project, power factor analysis was performed on three provided cluster scenarios upon SPP's request.

4.1 Power Factor Analysis Methodology

Power Factor Analysis was performed for the studied wind farm under system intact and contingency conditions. All N-1, three phase stability faults shown in Table 2-1 were analyzed as power flow contingencies. The power factor requirements for the wind farm were determined to maintain the voltage at the POI to the schedule voltage which is the higher of the POI voltage in the provided base case or 1.0 per unit. Fictitious var generator was added to the studied wind farm to maintain the scheduled voltage following all studied contingencies. The MW and Mvar injections from the studied wind farm at the POI were recorded and the power factors were calculated for all contingencies. The most lagging and most leading power factors determine the minimum power factor range capability required for the studied wind farm.

If more than one studied project share the same POI, the projects were grouped together and common power factor requirements were determined for this group of studied projects. With this method, none of the studied projects is required to provide more or less than its fair share of the reactive power requirements at the same POI. If a prior-queued project is connected at the same POI as the studied project, the prior-queued project was not grouped with the studied project since its reactive power requirements was determined in previous studies. However, the voltage schedules of the prior-queued project and the studied project at the same POI were coordinated and the local existing capacitor banks were set to their maximum capability, if necessary.

Per FERC and SPP requirements, if the power factor needed to maintain the scheduled voltage is less than 0.95 lagging or leading, the requirements is limited to 0.95 lagging or leading.

If the required power factor at the POI is beyond the capability of the studied wind turbine, the approximate size of the additional capacitors were determined.

4.2 Study Results

Table 4-1 summarizes the power factor analysis results. The detailed power factor analysis results for each studied contingency are provided in Appendix C. Per SPP and FERC requirements, the generating facility shall be designed to meet the requirement of 95% lagging (providing vars) and 95% leading (absorbing vars) to the Point of Interconnection.

The detailed power factor analysis results for each studied contingency are provided in Appendix C.

Table 4-1 Power Factor Analysis Results

Request	Size	Generator	POI	Scenario	PF Analysis Worst Scenario		Final PF Requirement	
	(MW)	Model			Leading[1]	Lagging[2]	Leading[1]	Lagging[2]
GEN-2016-067	73.6	Siemens 2.3MW	Mingo 345kV (531451)	16WP	0.971	0.999	0.95	0.95
				17SP	0.969	1.000	0.95	0.95
				25SP	0.981	0.999	0.95	0.95

Notes:

1. Leading is when the generator is absorbing reactive power from the transmission grid.
2. Lagging is when the generator is providing reactive power to the transmission grid.

5 Low Wind/No Wind Analysis

In this study, ABB investigated the GEN-2016-067 project for low wind/no wind conditions, since the interconnected wind farms are connected to 345kV buses.

5.1 Low/No Wind Analysis Methodology

Low wind/No wind analysis is performed to determine the required shunt reactor size at the study project substation high side buses to bring the MVAr flows into the POIs down to approximately zero.

For each studied scenario, the studied wind generators and capacitor bank (none in this case) were switched out of service with the collector system as modeled remaining in service. The resulting reactive power injection into the transmission network coming from the capacitance of the project's transmission lines and collector cables was measured. Then, the required shunt reactor size was calculated to bring the MVAr flows into the POIs down to approximately zero.

5.2 Study Results

Table 5-1 summaries the Low/No Wind analysis results. It is shown that 2.97 MVAr shunt reactors at the substation high side bus (585030) are required to bring the MVAr flows in the POI down to approximately zero under low/no wind conditions for all three studied seasons. The reactor bank size is approximate to be finalized during final facility and collector system design.

Table 5-1 (a): Low/No Wind Analysis Results for POI of GEN-2016-067

Scenario	Reactive Power Injection at POI (MVAr)	Bus 585030 Volt (pu)	Required Shunt Reactor (MVAr)
16WP	3.09	1.0186	**2.97**
17SP	3.09	1.0188	**2.97**
25SP	3.07	1.0164	**2.97**

6 Conclusions

Southwest Power Pool (SPP) has commissioned ABB Inc., to perform a Definitive Impact Study for DISIS-2016-001 (Group 04) which includes generation interconnection requests GEN-2016-067 (73.6 MW wind farm connected at Mingo 345 kV line).

Request	Size (MW)	Generator Model	POI
GEN-2016-067	73.6	Siemens 2.3MW	Mingo 345kV (531451)

The objective of this study is to evaluate the collective impact of the project on the existing and future planning system. The study is performed on three system scenarios provided by SPP:

- 2016 Winter Peak Case
- 2017 Summer Peak Case
- 2025 Summer Peak Case

FLT28-PO showed instability problem, since the pre-outage and disturbance resulted in outage of two major 345kV outlets. Pre-project cases were created for all three study seasons to simulate the fault, and same condition were observed. For the rest of the studied faults, the simulation results showed no stability problems and no voltage violations for all three seasons. All the simulation results were summarized in Table 2-2. Also, for the contingencies simulated GEN-2016-067 remained on line and, therefore, will comply with FERC Order 661A low voltage ride-through.

System short-circuit current levels at up to five buses away from the point of interconnection were calculated and tabulated for SPP's reference.

Power Factor Analysis was performed to ensure the studied project meets FERC and SPP power factor requirements for wind farm interconnections. Study results show that GEN-2016-067 will be required to meet the SPP pro-forma 95% lagging (providing vars) and 95% leading (absorbing vars) power factor requirements at the Point of Interconnection.

The Low Wind/no wind analysis shows that 2.97 MVAr of shunt reactance is required to bring the MVAr flow at the POI down to approximately zero for all three studied seasons. The reactor bank size is approximate and the final size will be determined in the final facility and collector system design.

The results of this analysis are based on available data and assumptions made at the time of conducting this study. If any of the data and/or assumptions made in developing the study model change, the results provided in this report may not apply.

APPENDIX A SOUTHWEST POWER POOL DISTURBANCE PERFORMANCE CRITERIA REQUIREMENTS

OVERVIEW

These Disturbance Performance Requirements ("Requirements") shall be applicable to the Bulk Electric System within the Southwest Power Pool Planning Area. Utilization of these Requirements applies to all registered entities within the Southwest Power Pool Planning Area. These Requirements shall not be applicable to facilities that are not part of Bulk Electric System. More stringent Requirements are at the sole discretion of each Transmission Owner.

Transient and dynamic stability assessments are generally performed to assure adequate avoidance of loss of generator synchronism and prevention of system voltage collapse within the first 20 seconds after a system disturbance. These Requirements provide a basis for evaluating the system response during the initial transient period following a disturbance on the Bulk Electric System by establishing minimum requirements for machine rotor angle damping and transient voltage recovery.

ROTOR ANGLE DAMPING REQUIREMENT

Machine Rotor Angles shall exhibit well damped angular oscillations [as defined below] and acceptable power swings following a disturbance on the Bulk Electric System for all NERC Category A, B and C events.

Well damped angular oscillations shall meet one of the following two requirements when calculated directly from the rotor angle:

1. Successive Positive Peak Ratio (SPPR) must be less than or equal to 0.95 where SPPR is calculated as follows:

$$SPPR = \frac{\text{Peak Rotor Angle of } 2^{nd} \text{ Positive Swing Peak}}{\text{Peak Rotor Angle of } 1^{st} \text{ Positive Swing Peak}} \leq 0.95$$

   -or- Damping Factor % = (1 – SPPR) x 100% ≥ 5%

   The machine rotor angle damping ratio may be determined by appropriate modal analysis (i.e. Prony Analysis) where the following equivalent requirement must be met:

   Damping Ratio ≥ 0.0081633

2. Successive Positive Peak Ratio Five (SPPR5) must be less than or equal to 0.774 where SPPR5 is calculated as follows:

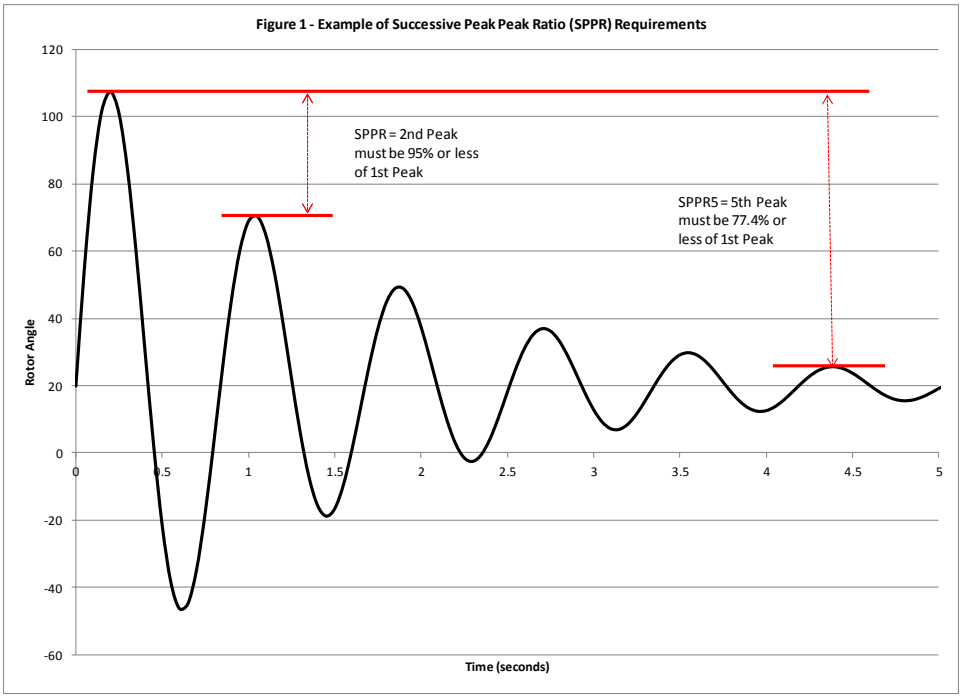
$$SPPR5 = \frac{\text{Peak Rotor Angle of } 5^{th} \text{ Positive Swing Peak}}{\text{Peak Rotor Angle of } 1^{st} \text{ Positive Swing Peak}} \leq 0.774$$

   -or- Damping Factor % = (1 – SPPR5) x 100% ≥ 22.6%

The machine rotor angle damping ratio may be determined by appropriate modal analysis (i.e. Prony Analysis) where the following equivalent requirement must be met:

Damping Ratio ≥ 0.0081633

Qualitatively, these Requirements are shown in Figure 1 below.



TRANSIENT VOLTAGE RECOVERY REQUIREMENT

Any time after a disturbance is cleared; bus voltages on the Bulk Electric System shall not swing outside of the bandwidth of 0.70 per unit to 1.20 per unit.

Qualitatively, this Requirement is shown in Figure 2 below.

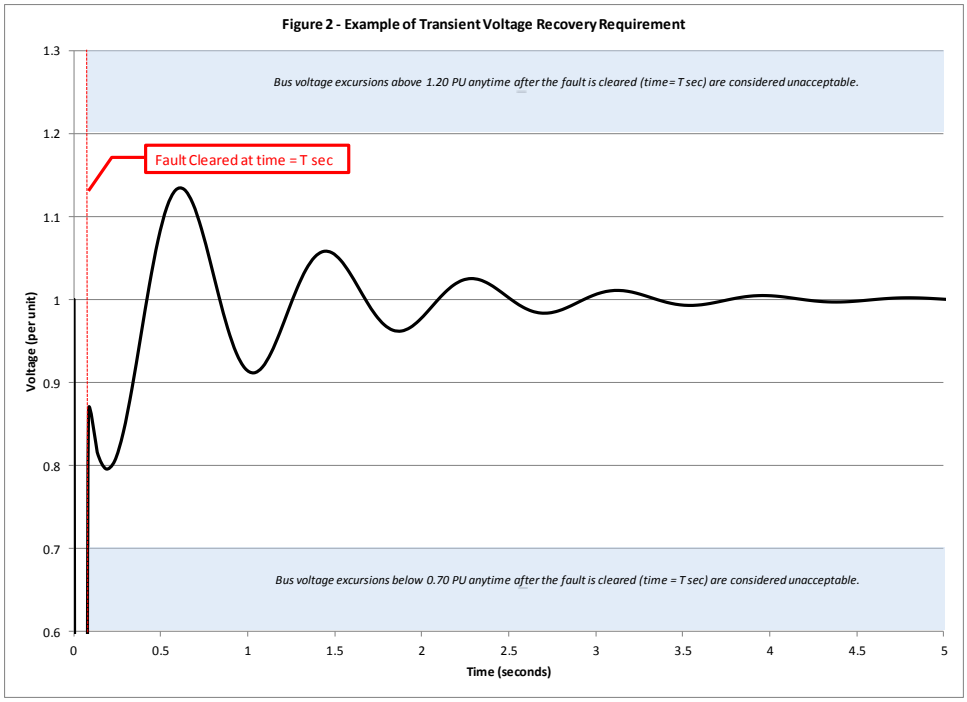


Figure 2 - Example of Transient Voltage Recovery Requirement
Bus voltage excursions above 1.20 PU anytime after the fault is cleared (time= T sec) are considered unacceptable.
Fault Cleared at time = T sec
Bus voltage excursions below 0.70 PU anytime after the fault is cleared (time = T sec) are considered unacceptable.
Voltage (per unit)
Time (seconds)
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5

APPENDIX B POWER FACTOR ANALYSIS RESULTS

All the contingency numbers shown in this appendix match with the fault numbers shown in Table 2-1.

B.1 GEN-2016-067 2016 Winter Peak Case

The GEN-2016-067 POI voltage is 1.0170 pu in the provided 2016 winter peak case. Therefore, the power factor requirements for the wind farm were determined to maintain the voltage at 1.0170 pu. The lowest lagging and leading power factors are highlighted in the table below.

Outage No.		MW	Mvar	PF	
System Intact	0	-270.3	52.2	0.982	leading
Contingency	1	-270.4	38.3	0.99	leading
Contingency	2	-270.3	52.6	0.982	leading
Contingency	3	-270.6	-9.2	**0.999**	lagging
Contingency	4	-270.6	16.9	0.998	leading
Contingency	5	-270.6	13.6	0.999	leading
Contingency	6	-270.5	37.4	0.991	leading
Contingency	7	-270.3	53	0.981	leading
Contingency	8	-270.4	45.6	0.986	leading
Contingency	9	-270.4	46.7	0.985	leading
Contingency	10	-270.3	51.3	0.982	leading
Contingency	11	-270.5	25.7	0.996	leading
Contingency	12	-270.2	65.9	0.972	leading
Contingency	13	-270.3	52.3	0.982	leading
Contingency	14	-270.4	46.8	0.985	leading
Contingency	15	-270.4	49	0.984	leading
Contingency	16	-270.3	50.6	0.983	leading
Contingency	17	-270.4	45.5	0.986	leading
Contingency	18	-270.4	50	0.983	leading
Contingency	19	-270.4	49.2	0.984	leading
Contingency	20	-270.2	66.6	**0.971**	leading
Contingency	21	-270.3	50.5	0.983	leading
Contingency	22	-270.3	52.6	0.982	leading
Contingency	23	-270.3	52.8	0.981	leading
Contingency	24	-270.5	33.3	0.992	leading
Contingency	25	-270.3	50.4	0.983	leading
Contingency	26	-270.3	52	0.982	leading

B.2 GEN-2016-067 2017 Summer Peak Case

The GEN-2016-067 POI voltage is 1.0174 pu in the provided 2017 summer peak case. Therefore, the power factor requirements for the wind farm were determined to maintain the voltage at 1.0174 pu. The lowest lagging and leading power factors are highlighted in the table below.

Outage No.		MW	Mvar	PF	
System Intact	0	-270.3	52.9	0.981	leading
Contingency	1	-270.4	48.5	0.984	leading
Contingency	2	-270.4	50.4	0.983	leading
Contingency	3	-270.6	-6.2	**1**	lagging
Contingency	4	-270.5	18.3	0.998	leading
Contingency	5	-270.6	14.6	0.999	leading
Contingency	6	-270.4	40.5	0.989	leading
Contingency	7	-270.3	55	0.98	leading
Contingency	8	-270.4	48.1	0.985	leading
Contingency	9	-270.4	48.3	0.984	leading
Contingency	10	-270.4	47.8	0.985	leading
Contingency	11	-270.5	34.6	0.992	leading
Contingency	12	-270.3	52.5	0.982	leading
Contingency	13	-270.3	54.1	0.981	leading
Contingency	14	-270.4	47.6	0.985	leading
Contingency	15	-270.4	50	0.983	leading
Contingency	16	-270.3	51.6	0.982	leading
Contingency	17	-270.4	48.5	0.984	leading
Contingency	18	-270.3	51.8	0.982	leading
Contingency	19	-270.4	49.2	0.984	leading
Contingency	20	-270.2	68.6	**0.969**	leading
Contingency	21	-270.3	51.1	0.983	leading
Contingency	22	-270.3	52.3	0.982	leading
Contingency	23	-270.3	52.2	0.982	leading
Contingency	24	-270.5	35.1	0.992	leading
Contingency	25	-270.3	52.3	0.982	leading
Contingency	26	-270.3	52.8	0.981	leading

B.3 GEN-2016-067 2025 Summer Peak Case

The GEN-2016-067 POI voltage is 1.0152 pu in the provided 2025 summer peak case. Therefore, the power factor requirements for the wind farm were determined to maintain the voltage at 1.0152 pu. The lowest lagging and leading power factors are highlighted in the table below.

Outage No.		MW	Mvar	PF	
System Intact	0	-270.3	49.6	0.984	leading
Contingency	1	-270.4	46.6	0.985	leading
Contingency	2	-270.4	47.1	0.985	leading
Contingency	3	-270.6	-10.9	**0.999**	lagging
Contingency	4	-270.5	18.7	0.998	leading
Contingency	5	-270.6	13.7	0.999	leading
Contingency	6	-270.4	37.3	0.991	leading
Contingency	7	-270.3	53.1	**0.981**	leading
Contingency	8	-270.4	43.3	0.987	leading
Contingency	9	-270.4	44.8	0.987	leading
Contingency	10	-270.4	45.8	0.986	leading
Contingency	11	-270.4	33.9	0.992	leading
Contingency	12	-270.3	49.9	0.983	leading
Contingency	13	-270.3	50.6	0.983	leading
Contingency	14	-270.4	44.2	0.987	leading
Contingency	15	-270.4	46.8	0.985	leading
Contingency	16	-270.3	48.5	0.984	leading
Contingency	17	-270.4	45.8	0.986	leading
Contingency	18	-270.3	49.1	0.984	leading
Contingency	19	-270.4	46.8	0.985	leading
Contingency	20	-270.3	53.3	**0.981**	leading
Contingency	21	-270.4	47.7	0.985	leading
Contingency	22	-270.3	49.2	0.984	leading
Contingency	23	-270.3	48.9	0.984	leading
Contingency	24	-270.5	30.1	0.994	leading
Contingency	25	-270.3	49.4	0.984	leading
Contingency	26	-270.3	49.4	0.984	leading

APPENDIX C SIMULATION PLOTS FOR STABILITY ANALYSIS

(Provided to SPP; available from SPP upon request)

11.17.5 J6: GROUP 6 DYNAMIC STABILITY ANALYSIS REPORT

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Southwest Power Pool, Inc. (SPP)

DISIS-2016-001 (Group 06) Definitive Impact Study

Final Report

REP-0044
Revision #02

February 2017

Submitted By:
Mitsubishi Electric Power Products, Inc. (MEPPI)
Power Systems Engineering Services Department
Warrendale, PA

Title: **DISIS-2016-001 (Group 06) Definitive Impact Study: Final Report REP-0044**
Date: February 2017
Author: Nicholas W. Tenza; Engineer II, Power Systems Engineering Dept. *Nicholas W. Tenza*
Approved: Rajat Majumder; Section Manager, Power Systems Engineering Dept. *Rajat Majumder*

EXECUTIVE SUMMARY

SPP requested a Definitive Interconnection System Impact Study (DISIS). The DISIS required a Stability Analysis, Short Circuit Analysis, Power Factor Analysis, and Low Wind/Irradiance Analysis detailing the impacts of the interconnecting projects as shown in Table ES-1.

Table ES-1
Interconnection Projects Evaluated

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2015-018	80.0	GE 2.0 MW (wind; 584603)	Tap on Curry County (524822) to Bailey County (525028) 115kV (G15-018T, 560032)
GEN-2015-033	151.8	Vestas V112 3.45 MW (wind; 584763)	Tap on Tuco (525832) – OKU (511456) 345kV (G14-074-TAP, 560027)
GEN-2015-039	50	Eaton Power Xpert Solar 1.67 MW (solar; 584803)	Deaf Smith (524623) to Plant X (525481) 230kV (G15-039-TAP, 560051)
GEN-2015-040	50.1	Eaton Power Xpert Solar 1.67 MW (solar; 584813)	Mustang 230kV (527151)
GEN-2015-041	5 uprate to GEN-2013-016; total power = 196 Summer / 208 Winter	GENROU (583456) (combustion turbine)	Tuco 345kV (525832)

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2015-078	50.1	Eaton Power Xpert Solar 1.67 MW (solar; 585153)	Mustang 115kV (527146)
ASGI-2016-001	2.5	Envision E110 2.5MW (wind)	Wolfforth 115kV (526524)
ASGI-2016-002	0.35 uprate to ASGI-2015-002; total power = 2.65MW)	GE 2.65MW (584723) (wind)	Hurlwood Substation 69/12.47kV) [Yuma Interchange 115/69kV (526469)]
GEN-2016-002	74	Gamesa G114 2.0MW (wind)	Happy 115 kV substation (525154)
ASGI-2016-004	10	3 x Alstom 3.2MW & 4 x Renewtech 100kW (wind)	Palo Duro 115kV (524530)
GEN-2016-015	100	TMEIC 1.667NW PV inverters (solar)	Andrews 230kV (528604)
GEN-2016-039	112	GE 4.0MW PV inverters (solar)	Swisher 115kV (525212)
GEN-2016-056	200	GE 2.0MW (wind)	Carlisle 230 kV (526161)
GEN-2016-058	200	GE 4.0MW PV inverters (solar)	Yoakum 345kV (526936)
GEN-2016-062	250.7	GE 2.3MW (wind)	Andrews 230kV (528604)
GEN-2016-069	31.35	Hanwha 0.360 MW PV inverters (solar)	Chaves County 115kV (527482)

SUMMARY OF STABILITY ANALYSIS

The Stability Analysis determined that there were multiple contingencies across all seasons that resulted in system/voltage instability, generation tripping offline, and poor post-fault voltage recovery when all generation interconnection requests were at 100% output.

To mitigate the system/voltage instability, voltage violations, generation tripping offline, and poor post-fault steady-state voltages, the following upgrades were provided by SPP and implemented (upgrades provided here are required for 16WP season and thus, implemented in remaining years):

- Crawfish Draw to Seminole 765 kV circuit #1
- Crawfish Draw 765/345 kV transformer 1 & 2
- Seminole 765/345 kV transformer 1 & 2
- Potter County to Grapevine to Chisholm 345 kV circuit #1
- Potter County to Tolk 345 kV circuit #1
- Tolk to Crawfish Draw 345 kV circuit #1
- OKU SVC +300/-100 Mvar (add +200 Mvar)
- Add 200 Mvar Capacitor Bank at OKU 345 kV (550 Mvar capacitor bank total)
- Chaves County – Price – CV Pine – Capitan 115 kV circuit #1
    - Required to be implemented in 16WP and 17SP
    - Line exists in 20WP, 20SP, and 25SP
- Grapevine to Beaver County 345 kV circuit #1
- Beaver County to Clark County 345 kV circuit #1
- Re-terminate the Yoakum to TUCO 345 kV line from TUCO to Crawfish Draw
- TUCO to Crawfish Draw 345 kV circuit #2
- Rio Blanco +300/-100 Mvar SVC

In the 16WP and 20WP seasons, under normal system dispatch, system instability exists for a fault at Crawfish Draw 765 kV that results in the loss of the Crawfish Draw to Seminole 765 kV line. For this reason, it is necessary to limit the flow along the Crawfish Draw to Seminole 765 kV line. The following flow limits are required for the 16WP and 20WP seasons, respectively:

- 16WP Flow Limit on Crawfish Draw to Seminole 765 kV: 1625 MW from Crawfish Draw 765 kV end
- 20WP Flow Limit on Crawfish Draw to Seminole 765 kV: 1395 MW from Crawfish Draw 765 kV end

Several violations exist only in the 20SP, 20WP, and 25SP seasons. Refer below for the additional mitigation required for these seasons (seasons listed in parenthesis for which mitigation is required):

- NA Enrich 115 kV capacitor bank: 28.8 Mvar (20WP, 20SP) (an existing cap bank)
- Drinkard 115 kV capacitor bank: 14.4 Mvar (20WP) (an existing cap bank)
- Additional Andrews to NA Enrich 115 kV circuit #2
- Seminole to Mustang 115 kV circuit #1 (25SP)
- Hereford 115 kV capacitor bank: 25 Mvar (25SP) (a new cap bank)

Note for GEN-2016-015, for a three-phase fault at the point of interconnection (Andrews 230 kV), the TMEIC photovoltaic inverter model (ITMEIC) tripped offline due to over frequency protection and over voltage protection. For this study, the over frequency and over voltage protection were set to 75 Hz and 1.8 p.u., respectively, to avoid instantaneous tripping. It is recommended the supplier of the TMEIC photovoltaic inverter model examine this model for three-phase faults that cause the model to trip on over frequency and over voltage protection.

For GEN-2016-002, the Gamesa User Model (GD0800_V32.lib) exhibited errors in the stability analysis. It was observed that other interconnection projects utilized the Gamesa GXX048 module (GXX048_v32.lib) which exhibited expected response to system disturbances. Therefore, the GXX048 module was used to replace the supplied GD0800 module.

After implementing the above upgrades, the contingency analysis was re-simulated for all contingencies. With the upgrades, the Stability Analysis determined that there was no wind turbine tripping or system instability observed as a result of interconnecting all study projects at 100% output.

SUMMARY OF THE SHORT CIRCUIT ANALYSIS

The short circuit analysis was performed on the 2017 Summer Peak and 2025 Summer Peak power flows for all study projects. Refer to Table ES-2 and Table ES-3 for a list of maximum fault currents observed for each study project for the 17SP and 25SP cases, respectively.

Table ES-2
2017SP: List of Maximum Fault Currents Observed for Each Study Project

Study Project	Fault Current at POI (kA)	Maximum Fault Current (kA)	Fault Location	Bus Voltage (kV)
GEN-2015-018	5.59	28.04	Tolk East/West	230 kV
GEN-2015-033	8.01	31.96	Cimaron	345 kV
GEN-2015-039	7.24	28.04	Tolk East/West	230 kV
GEN-2015-040	15.55	32.93	Hobbs Int	115 kV
GEN-2015-041	19.73	40.49	Seminole	138 kV
GEN-2015-078	22.30	32.93	Hobbs Int	115 kV
ASGI-2016-001	11.29	28.04	Tolk East/West	230 kV
ASGI-2016-002	3.06	25.48	Tuco	230 kV
GEN-2016-002	5.99	25.48	Tuco	230 kV
ASGI-2016-004	6.61	20.62	Nichols	115 kV
GEN-2016-015	8.30	32.93	Hobbs Int	115 kV
GEN-2016-039	10.36	28.04	Tolk East/West	230 kV
GEN-2016-056	11.82	28.04	Tolk East/West	230 kV
GEN-2016-058	8.72	40.49	Seminole	138 kV
GEN-2016-062	8.30	32.93	Hobbs Int	115 kV
GEN-2016-069	6.27	29.59	Cunningham	115 kV

Table ES-3
2025SP: List of Maximum Fault Currents Observed for Each Study Project

Study Project	Fault Current at POI (kA)	Maximum Fault Current (kA)	Fault Location	Bus Voltage (kV)
GEN-2015-018	5.87	28.45	Tolk East/West	230 kV
GEN-2015-033	8.15	35.26	LP-Cook	69 kV
GEN-2015-039	7.52	29.38	Tuco Int	230 kV
GEN-2015-040	15.87	33.75	Hobbs Int	115 kV
GEN-2015-041	21.30	40.63	Seminole	138 kV
GEN-2015-078	23.55	33.75	Hobbs Int	115 kV
ASGI-2016-001	11.99	35.26	LP-Cook	69 kV
ASGI-2016-002	3.09	29.38	Tuco Int	230 kV
GEN-2016-002	6.11	29.38	Tuco Int	230 kV
ASGI-2016-004	6.97	31.88	Nichols	115 kV
GEN-2016-015	9.24	33.75	Hobbs Int	115 kV
GEN-2016-039	10.59	31.88	Nichols	115 kV
GEN-2016-056	15.85	35.26	LP-Cook	69 kV
GEN-2016-058	9.22	40.63	Seminole	138 kV
GEN-2016-062	9.24	33.75	Hobbs Int	115 kV
GEN-2016-069	6.36	30.33	Cunningham	115 kV

SUMMARY OF POWER FACTOR ANALYSIS

The upgrades identified in the Stability Analysis were implemented in the power flow cases and utilized for the Power Factor Analysis. Refer to Table ES-4 for the power factor analysis results for each study generator.

Table ES-4
Power Factor Analysis Summary for Study Projects

Study Project	Power Factor Range for Each Study Project[1]									
	16WP		17SP		20SP		20WP		25SP	
GEN-2015-018	0.990	1.000	-0.973	0.973	-0.995	0.984	-1.000	0.989	-0.992	0.968
GEN-2015-033	-0.970	-0.999	-0.995	0.999	-0.993	0.999	-0.998	0.990	-0.991	0.999
GEN-2015-039	-0.602	0.860	-0.281	0.981	-0.312	0.932	-0.653	0.782	-0.435	0.981
GEN-2015-040	-0.372	0.997	-0.560	-0.940	-0.641	1.000	-0.334	0.996	-0.653	0.940
GEN-2015-041	-0.861	1.000	-0.970	0.985	-0.963	0.996	-0.903	0.998	-0.980	0.987
GEN-2015-078	-0.729	-0.956	-0.664	-0.942	-0.669	-0.885	-0.721	-0.956	-0.584	-0.894
ASGI-2016-001	-0.154	0.485	-0.147	0.248	-0.140	0.251	-0.186	0.522	-0.117	0.315
ASGI-2016-002	-0.691	0.932	-0.653	0.732	-0.636	0.720	-0.793	0.939	-0.565	0.806
GEN-2016-002	-0.999	0.981	-0.964	0.982	-0.972	0.990	0.980	1.000	-0.934	0.971
ASGI-2016-004	-0.514	0.756	-0.518	0.793	-0.458	0.701	-0.490	0.748	-0.492	0.666
GEN-2016-015	-0.999	0.994	-0.982	0.970	-0.998	0.987	-0.999	0.984	-0.998	0.958
GEN-2016-039	-0.999	0.987	-0.993	0.977	-0.995	0.978	-1.000	0.985	-0.983	0.971
GEN-2016-056	-0.994	0.979	-0.871	0.998	-0.781	0.945	-0.949	0.999	-0.869	1.000
GEN-2016-058	-0.985	0.855	-0.761	0.996	-0.899	0.872	-0.969	0.854	-0.946	0.782
GEN-2016-062	-0.999	0.999	-0.997	0.995	-0.999	0.997	-0.999	0.997	-0.999	0.993
GEN-2016-069	0.937	0.975	0.915	0.973	0.967	0.987	0.962	0.986	0.951	0.973

[1]Lagging power factors are negative and leading power factors are positive

SUMMARY OF LOW WIND/IRRADIANCE ANALYSIS

The amount of reactive power injected into the transmission network was recorded at the point of interconnection for each wind and solar powered interconnection request for each season. The maximum reactance needed for zero Mvar flow was 12.7 Mvar for GEN-2016-062 (Andrews 230 kV). The minimum reactance needed for zero Mvar flow was 0.0 Mvar for ASGI-2016-001 (Wolfforth 115 kV) and ASGI-2016-004 (Palo Duro 115 kV).

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SECTION 1: OBJECTIVES

The objective of this report is to provide Southwest Power Pool, Inc. (SPP) with the deliverables for the "DISIS-2016-001 (Group 06) Definitive Impact Study." SPP requested an Interconnection System Impact Study for sixteen (16) generation interconnections for 2016 Winter Peak, 2017 Summer Peak, 2020 Summer Peak, 2020 Winter Peak, and 2025 Summer Peak, which requires a Stability Analysis, Short Circuit Analysis, Power Factor Analysis, Low Wind/Irradiance Analysis, and an Impact Study Report.

SECTION 2: BACKGROUND

The Siemens Power Technologies International PSS/E power system simulation program Version 32.2.2 was used for this study. SPP provided the stability database cases for 2016 Winter Peak, 2017 Summer Peak, 2020 Summer Peak, 2020 Winter Peak, and 2025 Summer Peak conditions and a list of contingencies to be examined. The model includes the study projects shown in Table 2-1 and the previously queued projects listed in Table 2-2. Refer to Appendix A for the steady-state and dynamic model data for the study projects. A power flow one-line diagram for each generation interconnection project is shown in Figures 2-1 through 2-15. Note that the one-line diagrams represent the 2017 Summer Peak case.

The Stability Analysis determined the impacts of the new interconnecting projects on the stability and voltage recovery of the nearby system and the ability of the interconnecting projects to meet FERC Order 661A. If problems with stability or voltage recovery are identified, the need for reactive compensation or system upgrades were investigated. Three-phase faults and single line-to-ground faults were examined as listed in Table 2-3. Note that all contingencies listed were examined for the cluster scenario, and specified contingencies (indicated by an X) were examined for each Stand Alone generator.

A Short Circuit Analysis was performed on the 2017 Summer Peak and 2025 Summer Peak study years for each study generator. The study was performed five buses out from the study generator's point of interconnection and results were documented.

The Power Factor Analysis determined the power factor at the point of interconnection for the wind or solar interconnection projects for pre-contingency and post-contingency conditions. Table 2-3 lists the contingencies developed from the three-phase fault definitions provided in the group's interconnection impact study request.

The Low Wind/Irradiance Analysis was completed for all wind farm and solar farm interconnections. This analysis determined if reactive support was needed to have an Mvar flow of approximately zero at the point of interconnection (POI).

Table 2-1
Interconnection Projects Evaluated

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2015-018	80.0	GE 2.0MW (wind; 584603)	Tap on Curry County (524822) to Bailey County (525028) 115kV (G15-018T, 560032)
GEN-2015-033	151.8	Vestas V112 3.45 MW (wind; 584763)	Tap on Tuco (525832) – OKU (511456) 345kV (G14-074-TAP, 560027)
GEN-2015-039	50	Eaton Power Xpert Solar 1.67 MW (solar; 584803)	Deaf Smith (524623) to Plant X (525481) 230kV (G15-039-TAP, 560051)
GEN-2015-040	50.1	Eaton Power Xpert Solar 1.67 MW (solar; 584813)	Mustang 230kV (527151)
GEN-2015-041	5 uprate to GEN-2013-016; total power = 196 Summer/208 Winter	GENROU (583456) (combustion turbine)	Tuco 345kV (525832)
GEN-2015-078	50.1	Eaton Power Xpert Solar 1.67 MW (solar; 585153)	Mustang 115kV (527146)
ASGI-2016-001	2.5	Envision E110 2.5MW (wind)	Wolfforth 115kV (526524)
ASGI-2016-002	0.35 uprate to ASGI-2015-002; total power = 2.65MW	GE 2.65MW (584723) (wind)	Hurlwood Substation 69/12.47kV) [Yuma Interchange 115/69kV (526469)]

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2016-002	74	Gamesa G114 2.0MW (wind)	Happy 115 kV substation (525154)
ASGI-2016-004	10	3 x Alstom 3.2MW & 4 x Renewtech 100kW (wind)	Palo Duro 115kV (524530)
GEN-2016-015	100	TMEIC 1.667NW PV inverters (solar)	Andrews 230kV (528604)
GEN-2016-039	112	GE 4.0MW PV inverters (solar)	Swisher 115kV (525212)
GEN-2016-056	200	GE 2.0MW (wind)	Carlisle 230 kV (526161)
GEN-2016-058	200	GE 4.0MW PV inverters (solar)	Yoakum 345kV (526936)
GEN-2016-062	250.7	GE 2.3MW (wind)	Andrews 230kV (528604)
GEN-2016-069	31.35	Hanwha 0.360 MW PV inverters (solar)	Chaves County 115kV (527482)

Table 2-2
Previously Queued Nearby Interconnection Projects Included

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2001-033	180	Mitsubishi 1000	San Juan Mesa 230kV (524885)
GEN-2001-036	80	Mitsubishi 1000	Norton 115kV (524502)
GEN-2006-018	170	GENSAL	Tuco 230kV (525830)
GEN-2006-026	502	GENROU (527901, 527902, 527903)	Hobbs 115kV(527891) Hobbs 230kV (527894)
GEN-2008-022	300	Vestas	Tap on Eddy County – Tolk 345kV line (G08-022-POI, 560007)
GEN-2010-006	180 Summer 205 Winter	GENROU	Jones_bus2 230kV(526337)
ASGI-2010-010	42	GENSAL	Lovington 115kV (528334)
ASGI-2010-020	29.9	GE 2.3MW	Tap LE-Tatum to LE-Crsroads 69kV (AS10-020-POI, 560360)
ASGI-2010-021	15	Mitsubishi MPS-1000A 1.0MW	Tap LE-Saundrtp to LE-Anderson 69kV (ASGI-021-POI, 560364)
GEN-2010-046	56	GENSAL	Tuco 230kV (525830)
ASGI-2011-001	27.3	Suzlon 2.1MW	Lovington 115kV (528334)
ASGI-2011-003	10	Sany 2.0MW	Hendricks 69kV (525943)
ASGI-2011-004	19.8	Sany 1.8MW	Crosby 69kV (525915)
GEN-2011-025	78.76	GE 1.79MW	Tap on Floyd County - Crosby County 115kV line (G11-025-POI, 562004)
GEN-2011-045	180 Summer 205 Winter	GENROU	Jones_bus2 230kV (526337)
GEN-2011-046	23 Summer 27 Winter	GENROU	Quay County 115kV (524472)
GEN-2011-048	165 Summer 175 Winter	GENROU	Mustang 230kV (527151)

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2012-001	61.2	CCWE 3.6MW (WT4)	Tap Grassland to Borden 230kV (526679)
ASGI-2012-002	18.15	Vestas 1.65MW V82	Clovis 115kV (524808)
GEN-2012-020	477.12	GE 1.68MW	Tuco 230kV (525830)
GEN-2012-034	7 increase; total power = 157MW	GENROU (unit 4; 527164)	Mustang 230kV (527151)
GEN-2012-035	7 increase; total power = 157MW	GENROU (unit 5; 527165)	Mustang 230kV (527151)
GEN-2012-036	7 increase; total power = 172MW Summer/185MW Winter	GENROU (unit 6; 527166)	Mustang 230kV (527151)
GEN-2012-037	196 Summer 203 Winter	GENROU (525844)	Tuco 345kV (525832)
ASGI-2012-002	18	Vestas 1.65MW V82	Clovis 115kV (524808)
GEN-2013-016	191 Summer 203 Winter	GENROU (583456)	Tuco 345kV (525832)
ASGI-2013-002	18.4	Siemens 2.3MW VS (583613)	Tucumcari 115kV (524509)
ASGI-2013-003	18.4	Siemens 2.3MW VS (583623)	Clovis 115kV (524808)
ASGI-2013-005	1.65 increase; total power = 19.8 MW	Vestas V82 1.65MW (583283)	FE-Clovis 115kV (524808)

Request	Size (MW)	Generator Model	Point of Interconnection
ASGI-2013-006	2.0	Gamesa G114 2MW (583813)	Erskine 115kV (526109)
GEN-2013-022	25.0	Solaron 500kW (583313)	Caprock 115kV (524486)
GEN-2013-027	150.0	Siemens 2.3/2.415	Tap on Yoakum to Tolk 230kV (562480)
GEN-2014-012	186 Summer 225 Winter	GENROU (528607)	Tap Hobbs (527894 in 2015SP/WP, 527896 in 2025SP) to Andrews (528604) 230kV (345kV in 2025SP) (Tap bus is 528611)
ASGI-2014-001	2.5	GE 107m 2.5MW (583816)	Erskine 69kV (526109)
GEN-2014-033	70	17 X GE Prolec 4MVA, 2 X GE Prolec 1 MVA, & 5 X Schneider XC680 0.680 MVA PV inverter	Chaves County 115kV
GEN-2014-034	70	17 X GE Prolec 4MVA PVinverter	Chaves County 115kV
GEN-2014-035	30	8 X GE Prolec 4MVA PV inverter	Chaves County 115kV
GEN-2014-047	40	AE 500NX 0.5 MW PV inverters	Tap Tolk - Eddy County (Crossroads) 345kV
GEN-2014-074	152.0	Vestas V110 2.0MW (584443)	Tap Tuco – OKU 345kV (560027)
ASGI-2015-002	2.3	GE 2.3MW (584723)	Yuma Interchange 115/69kV (526469)

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2015-014	150.0	Vestas V110 2.0MW (584563)	Tap on Cochran – LG Plains 115kV (560030)
GEN-2015-020	100.0	Eaton Power Xpert Solar 1.67MW (584623)	Oasis 115kV (524874)
GEN-2015-022	112.0	GE LV5 4.0MW Inverters (584643)	Swisher 115kV (525212)
GEN-2015-031	150.53	60 X GE 2.3 MW & 7 X GE 1.79 MW (wind)	Swisher (525213) to Amarillo South (524415) 230 kV (560050)
GEN-2015-056	101.2	GE 2.3 MW (wind)	Crossroads 345kV (527656) (Tap Eddy (527802) to Tolk(525549)
GEN-2015-058	50.1	Power Electronics Solar 1.667 MW (solar)	Atoka 115kV (527786)
GEN-2015-068	300	GE 2.0 MW (wind)	Tuco 345kV (525832)
GEN-2015-075	50	GE 3.96 MW (solar)	Carlisle 69kV (526159)
GEN-2015-079	129.2	GE LV5 3.8 MW (solar)	Tap Yoakum (526935) to Hobbs (527894) 230 kV (560059)
GEN-2015-080	129.2	GE LV5 3.8 MW (solar)	Tap Yoakum (526935) to Hobbs (527894) 230 kV (560059)

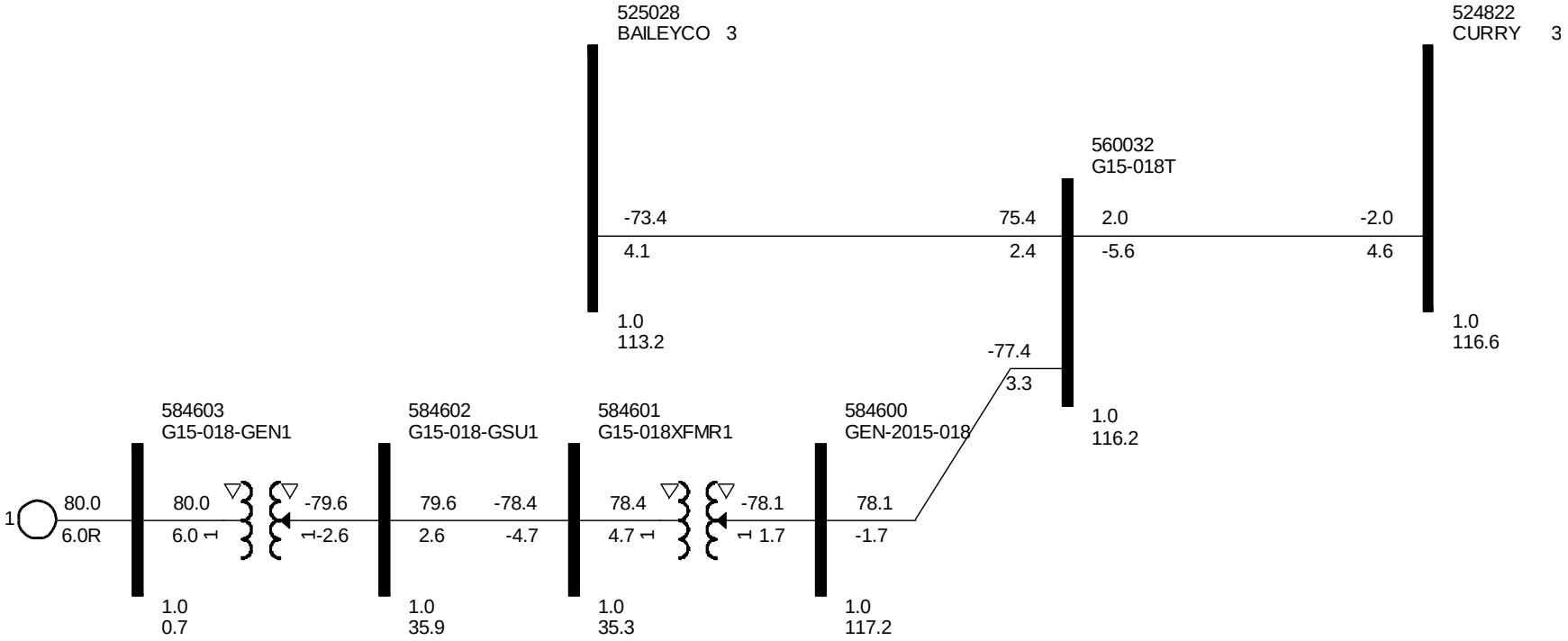

Figure 2-1. Power flow one-line diagram for interconnection project at the Curry County to Bailey County 115 kV Tap POI (GEN-2015-018).

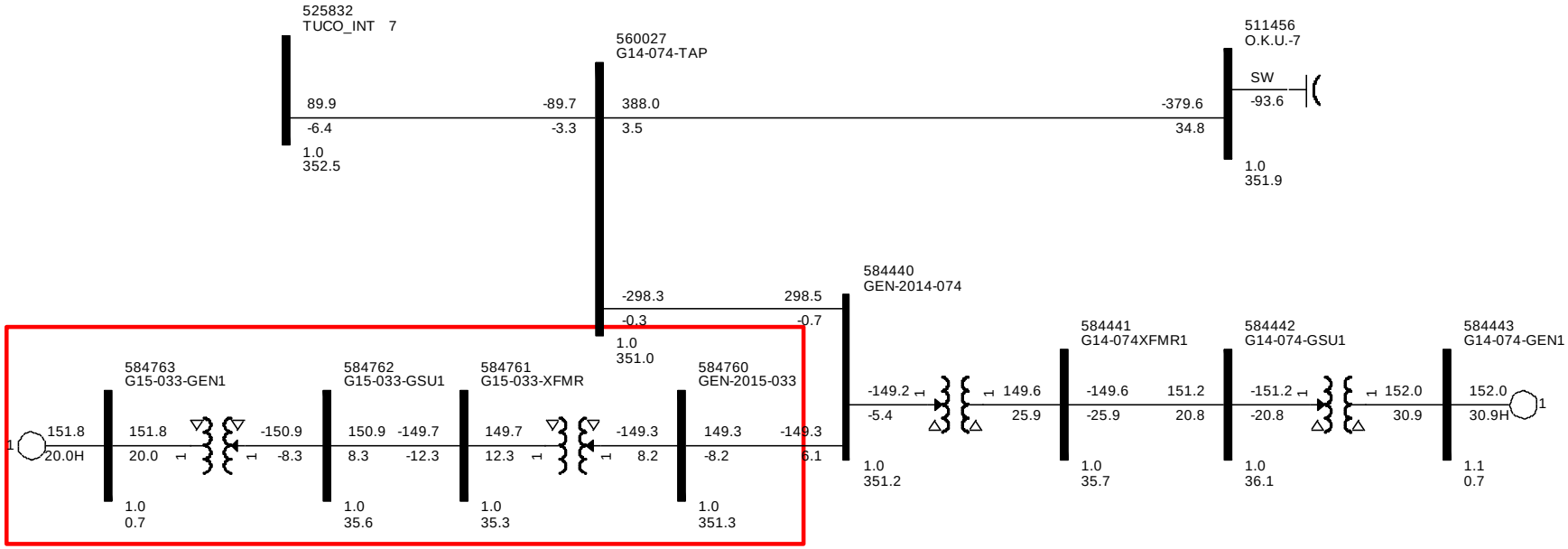

Figure 2-2. Power flow one-line diagram for interconnection project at the Rio Blanco 345 kV POI (GEN-2015-033).

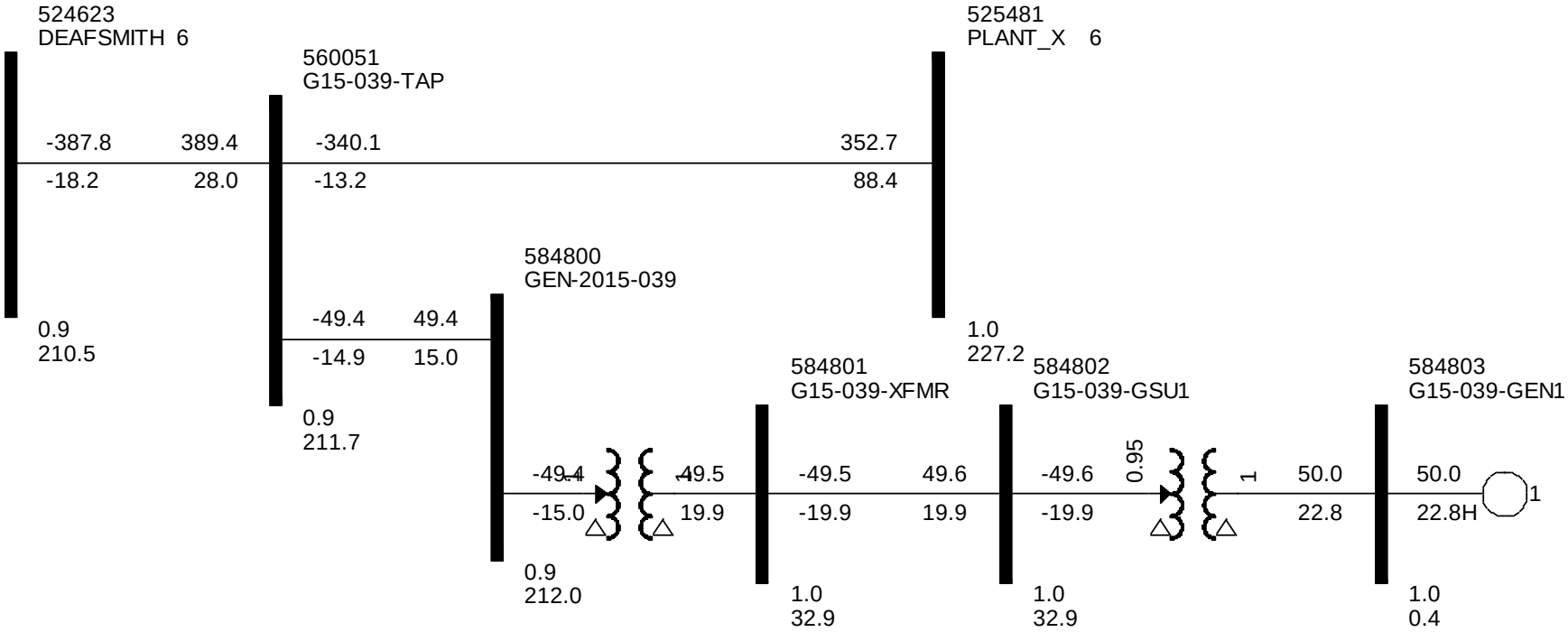

Figure 2-3. Power flow one-line diagram for interconnection project at the Deaf Smith to Plant X 230 kV Tap POI (GEN-2015-039).

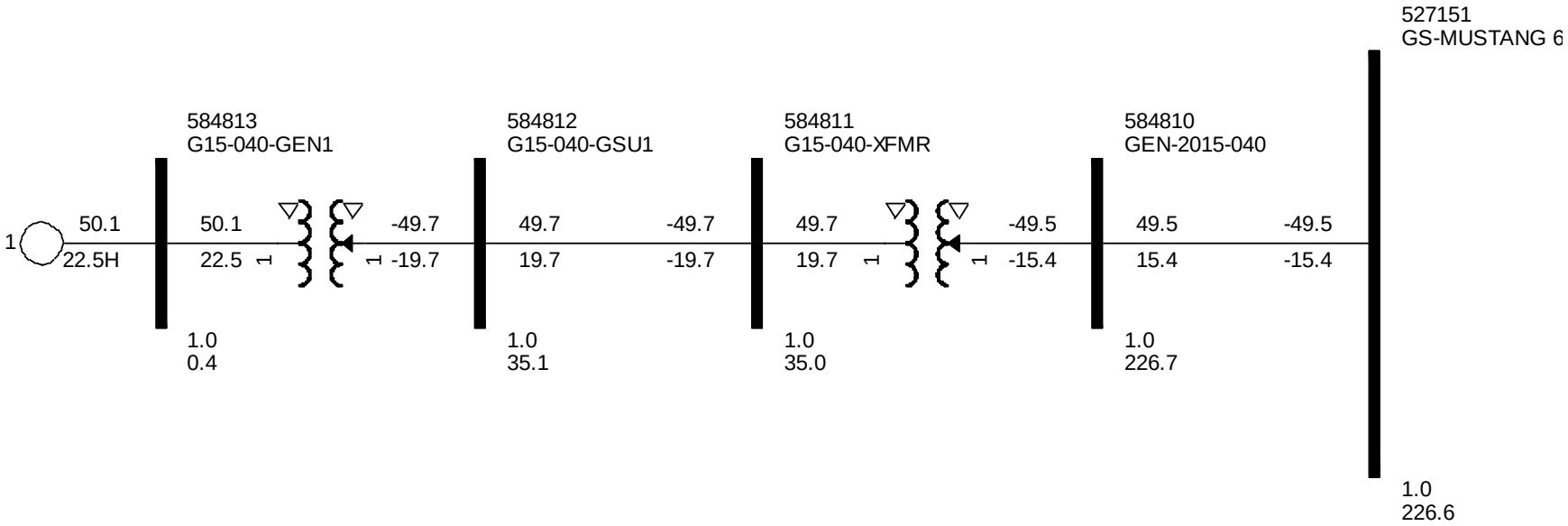

Figure 2-4. Power flow one-line diagram for interconnection project at Mustang 230 kV POI (GEN-2015-040).

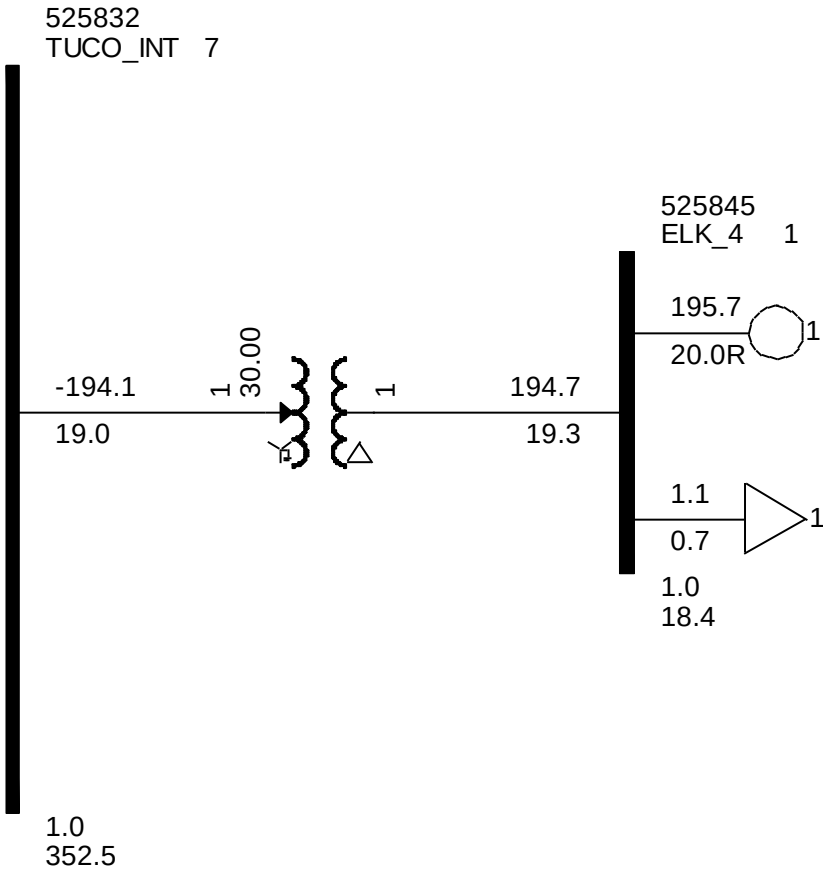

Figure 2-5. Power flow one-line diagram for interconnection project at the Tuco 345 kV POI (GEN-2015-041).

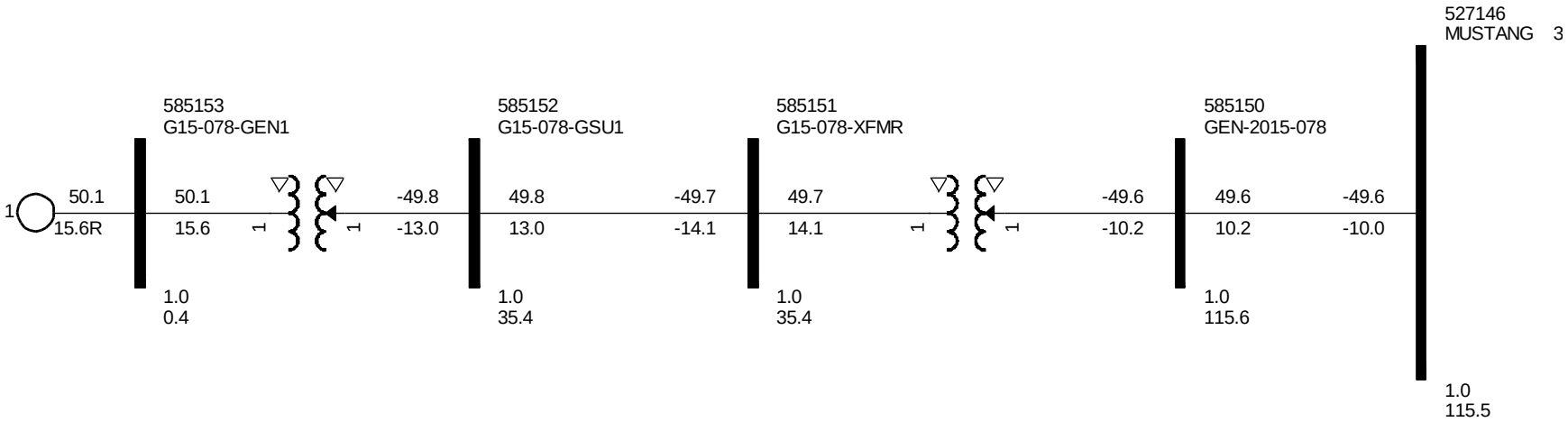

Figure 2-6. Power flow one-line diagram for interconnection project at the Mustang 115 kV POI (GEN-2015-078).

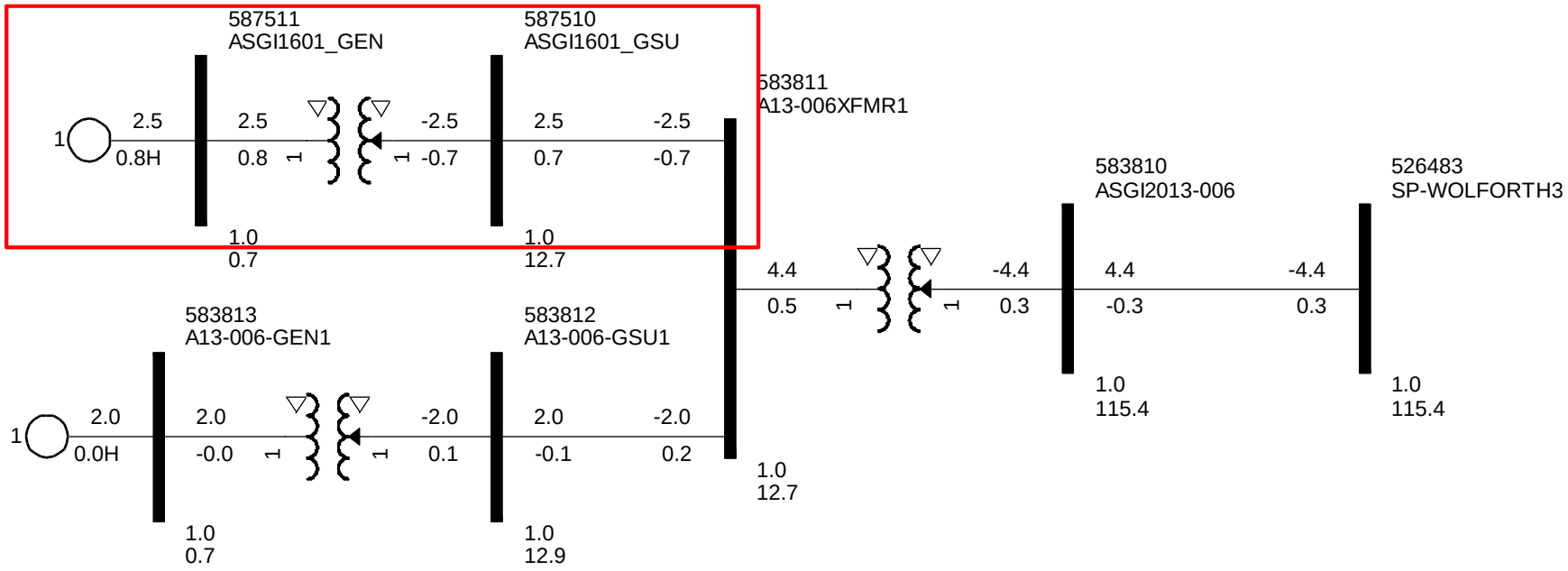

Figure 2-7. Power flow one-line diagram for interconnection project at the Wolfforth 115 kV POI (ASGI-2016-001).

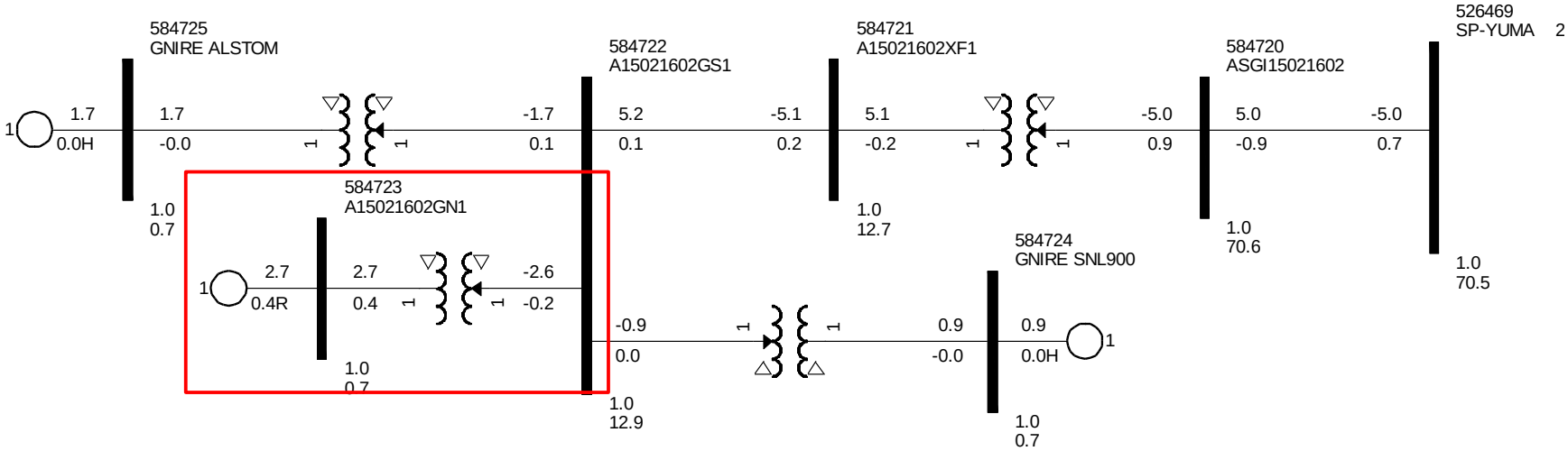

Figure 2-8. Power flow one-line diagram for interconnection project at the Hurlwood 69 kV POI (ASGI-2016-002).

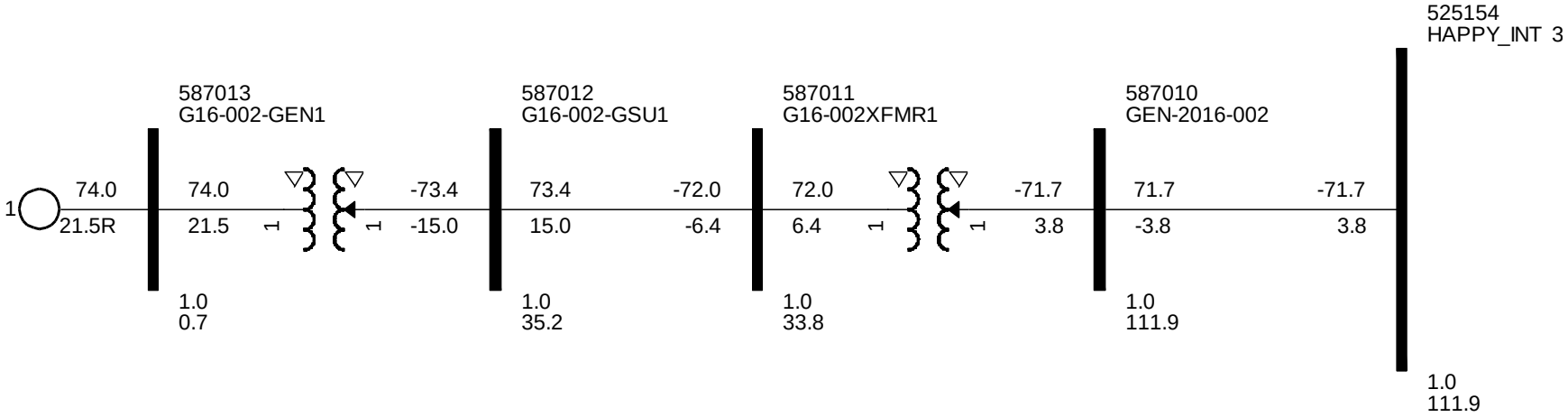

Figure 2-9. Power flow one-line diagram for interconnection project at the Happy 115 kV POI (GEN-2016-002).

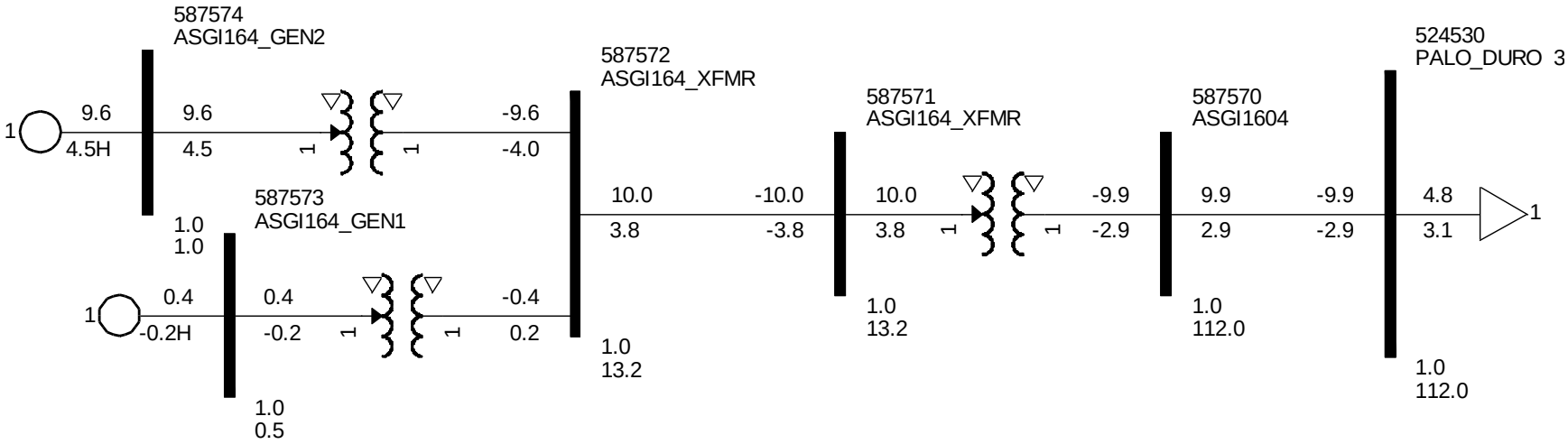

Figure 2-10. Power flow one-line diagram for interconnection project at the Palo Duro 115 kV POI (ASGI-2016-004).

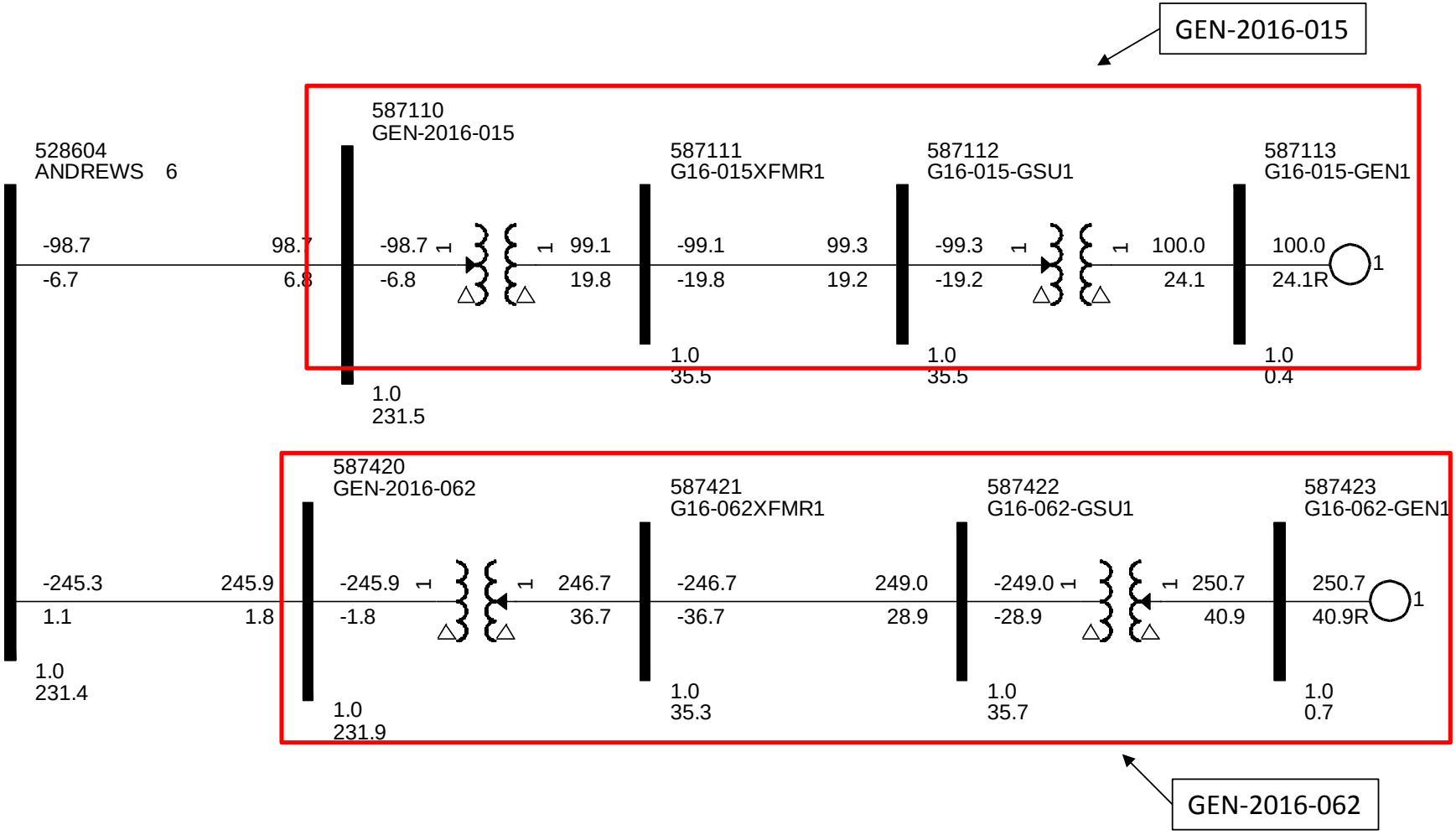

Figure 2-11. Power flow one-line diagram for interconnection project at the Andrews 230 kV POI

(GEN-2016-015 and GEN-2016-062).

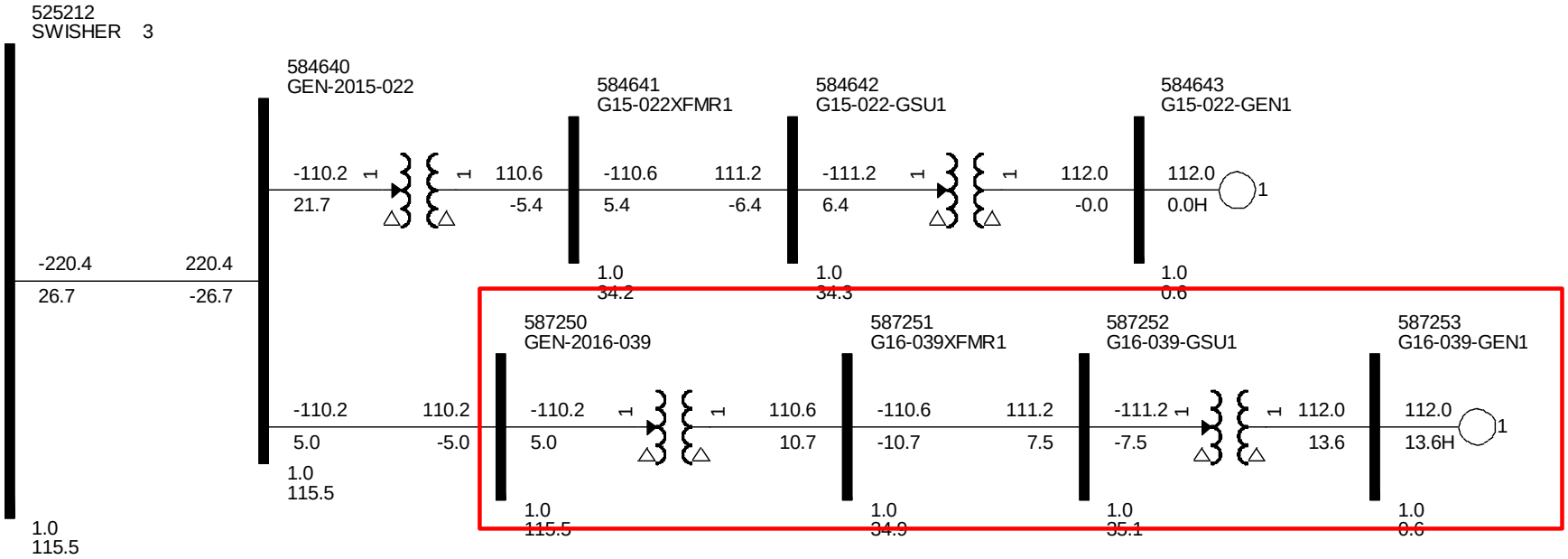

Figure 2-12. Power flow one-line diagram for interconnection project at the Swisher 115 kV POI (GEN-2016-039).

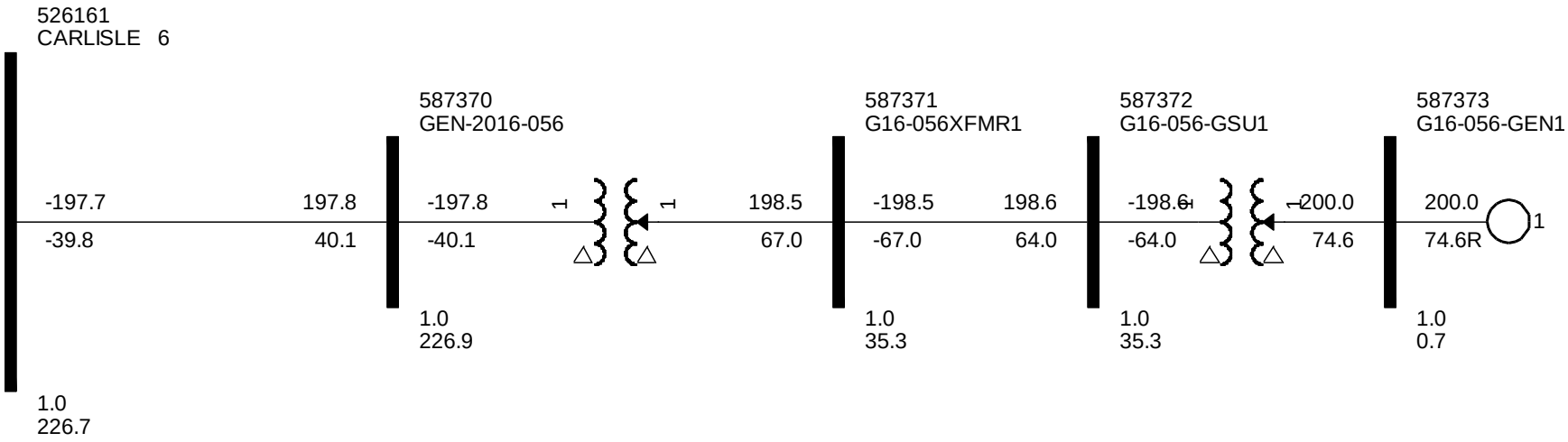

Figure 2-13. Power flow one-line diagram for interconnection project at the Carlisle 230 kV POI (GEN-2016-056).

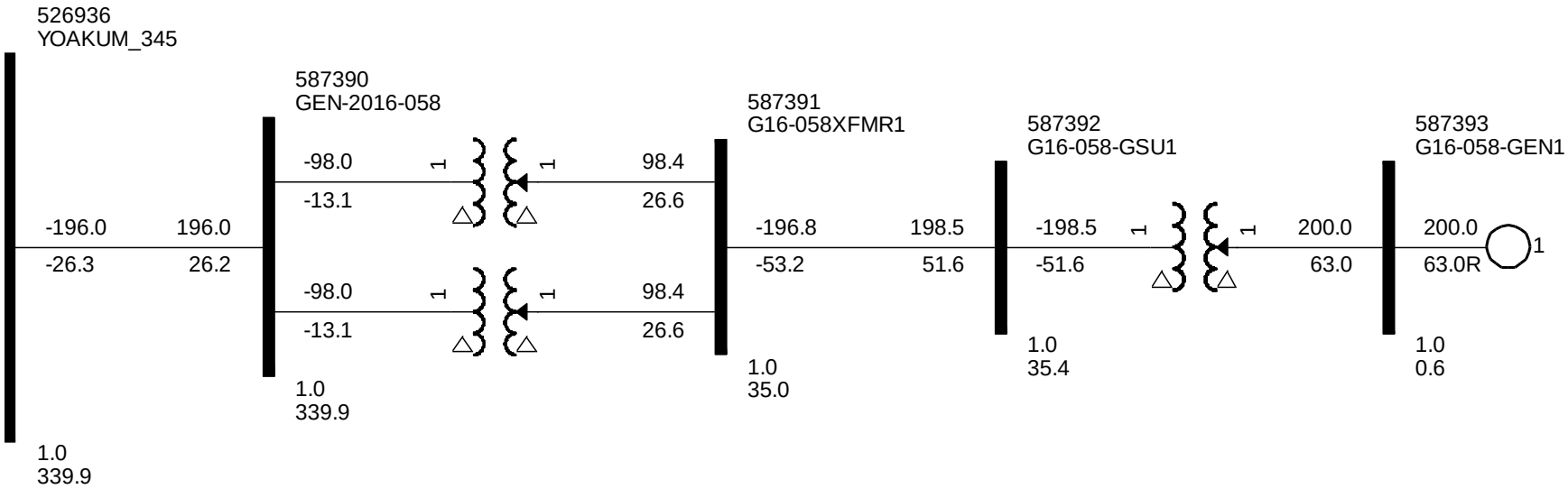

Figure 2-14. Power flow one-line diagram for interconnection project at the Yoakum 345 kV POI (GEN-2016-058).

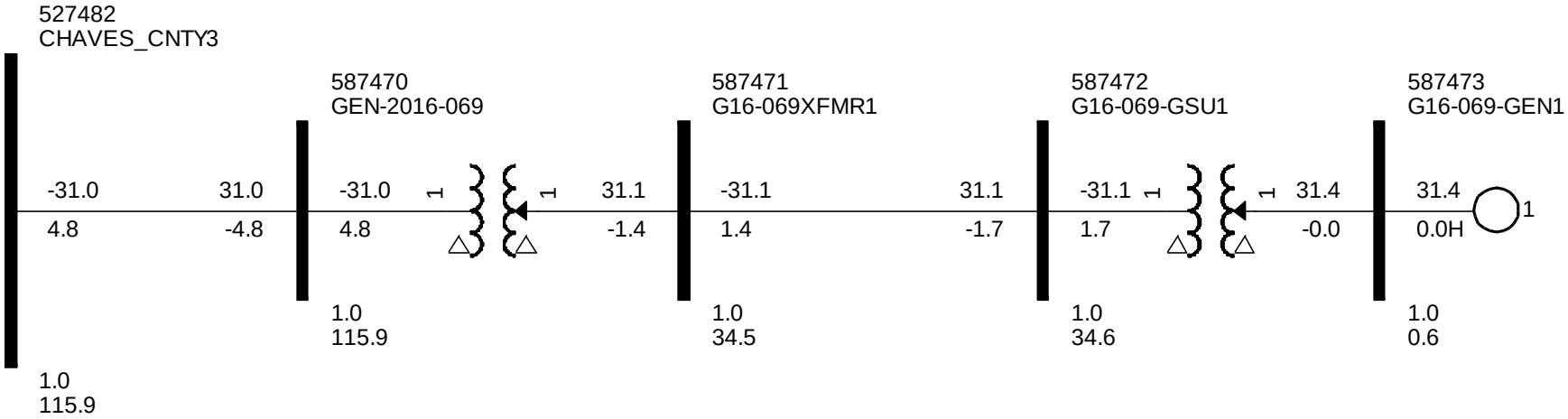

Figure 2-15. Power flow one-line diagram for interconnection project at the Chaves County 115 kV POI (GEN-2016-069).

Table 2-3
Case List with Contingency Description

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
1	FLT01-3PH	3 phase fault on the G15-018T (560032) to Curry (524822) 115 kV line circuit 1, near G15-018T. a. Apply fault at the G15-018T 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X															
2	FLT02-3PH	3 phase fault on the G15-018T (560032) to Bailey County (525028) 115 kV line circuit 1, near G15-018T. a. Apply fault at the G15-018T 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X															

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
3	FLT03-3PH	3 phase fault on the Bailey County 115 kV (525028) to Bailey County 2 69 kV (525027) to Bailey Xfmr 1 13.2 kV (525025) XFMR CKT 1, near Bailey County 115 kV. a. Apply fault at the Bailey County 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.	X															
4	FLT04-3PH	3 phase fault on the Bailey County (525028) to EMU&VLY Tap (525019) 115 kV line circuit 1, near Bailey County. a. Apply fault at the Bailey County 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X															
5	FLT05-3PH	3 phase fault on the Curry (524822) to DS#20 (524669) 115 kV line circuit 1, near Curry. a. Apply fault at the Curry 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X															

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
6	FLT06-3PH	3 phase fault on the Curry (524822) to Norris Tap (524764) 115 kV line circuit 1, near Curry. a. Apply fault at the Curry 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X															
7	FLT07-3PH	3 phase fault on the Curry (524822) to E_Clovis (524773) 115 kV line circuit 1, near Curry. a. Apply fault at the Curry 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X															
8	FLT08-3PH	3 phase fault on the Curry (524822) to FE_Clovis2 (524838) 115 kV line circuit 1, near Curry. a. Apply fault at the Curry 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X															

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
9	FLT09-3PH	3 phase fault on the Curry (524822) to Roosevelt (524908) 115 kV line circuit 2, near Curry. a. Apply fault at the Curry 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X															
10	FLT10-3PH	3 phase fault on the Curry 115 kV (524822) to Curry 69 kV (524821) to Curry 13.2 kV (524819) XFMR CKT 1, near Curry 115 kV. a. Apply fault at the Curry 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.	X															
11	FLT11-3PH	3 phase fault on the EMU&VLY Tap (525019) to Plant X (525480) 115 kV line circuit 1, near EMU&VLY Tap. a. Apply fault at the EMU&VLY Tap 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X															

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
12	FLT12-SB	**Single phase fault with stuck breaker at Curry 115 kV (524822)** a. Apply fault at the Curry 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Curry (524822) – G15-018T (560032) 115 kV d. Curry (524822) – FE-Clovis (524838) 115 kV	X															
13	FLT13-SB	**Single phase fault with stuck breaker at Curry 115 kV (524822)** a. Apply fault at the Curry 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Curry (524822) – Norris TP (524764) 115 kV d. Curry (524822) – G15-018T (560032) 115 kV	X															
14	FLT14-SB	**Single phase fault with stuck breaker at Bailey County 115 kV (525028)** a. Apply fault at the Bailey County 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Bailey County (525028) – EMU&VLY Tap (525019) 115 kV d. Bailey County (525028) – G15-018T (560032) 115 kV	X															

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
15	FLT15-SB	**Single phase fault with stuck breaker at Bailey County 115 kV (525028)** a. Apply fault at the Bailey County 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Bailey County 115 kV (525028)/ 69 kV (525027)/ 13.2 kV (525025) Xfmr d. Bailey County (525028) – G15-018T (560032) 115 kV	X															
16	FLT16-PO	**Prior Outage of Bailey County 115 kV (525028) to EMU&VLY Tap 115 kV (525019) CKT 1;** 3 phase fault on G15-018T 115 kV (560032) to Curry 115 kV (524822) CKT 1, near G15-018T. a. Apply fault at the G15-018T 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.	X															
17	FLT17-PO	**Prior Outage of Roosevelt 115 kV (524908) to Curry 115 kV (524822) CKT 1;** 3 phase fault on G15-018T 115 kV (560032) to Bailey County 115 kV (525028) CKT 1, near G15-018T. a. Apply fault at the G15-018T 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line	X															

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
18	FLT18-PO	**Prior Outage of G15-018T 115 kV (560032) to Curry 115 kV (524822) CKT 1;** 3 phase fault on Bailey County 115 kV (525028) to EMU&VLY Tap (525019) CKT 1, near Bailey County. a. Apply fault at the Bailey County 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.	X															
19	FLT19-PO	**Prior Outage of G15-018T 115 kV (560032) to Bailey County 115 kV (525028) CKT 1;** 3 phase fault on Curry 115 kV (524822) to DS-#20 115 kV (524669) CKT 1, near Curry. a. Apply fault at the Curry 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.	X															
20	FLT20-3PH	3 phase fault on the Rio Blanco 345 kV (560027) to Tuco (525832) 345 kV line circuit 1, near Rio Blanco. a. Apply fault at the Rio Blanco 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X			X											

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
21	FLT21-3PH	3 phase fault on the Rio Blanco 345 kV (560027) to OKU (511456) 345 kV line circuit 1, near Rio Blanco. a. Apply fault at the Rio Blanco 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X			X											
22	FLT22-3PH	3 phase fault on the Tuco 2 (560022) to Border (515458) 345 kV line circuit 1, near Tuco. a. Apply fault at the Tuco 2 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X			X									X		
23	FLT23-3PH	3 phase fault on the Tuco 345 kV (525832) to Tuco 230 kV (525830) to Tuco 13.2 kV (525824) XFMR CKT 1, near Tuco 345 kV bus. a. Apply fault at the Tuco 345 kV bus. b. Clear fault after 5 cycles by tripping the transformer		X			X									X		

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
24	FLT24-3PH	3 phase fault on the Tuco (525832) to Yoakam (526936) 345 kV line circuit 1, near Tuco. a. Apply fault at the Tuco (525832) 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X			X											
25	FLT25-3PH	3 phase fault on the OKU (511456) to Oklaun (599891) 345 kV line circuit 1, near OKU. a. Apply fault at the OKU 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line and remove the fault. c. Block the DC tie at OKU.		X														
26	FLT26-3PH	3 phase fault on the OKU (511456) to L.E.S (511468) 345 kV line circuit 1, near OKU. a. Apply fault at the OKU 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line and remove the fault. c. Block the DC tie at OKU.		X														

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
27	FLT27-SB	**Single phase fault with stuck breaker** at **Tuco (525832)** a. Apply fault at the Tuco 345 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Tuco 345 kV (525832) /230 kV (525830) /13.2 kV (525824) transformer d. Tuco (525832)- Rio Blanco (560027) 345 kV		X			X											
28	FLT28-SB	**Single phase fault with stuck breaker at Tuco Int (525832)** a. Apply fault at the Tuco Int 345 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Tuco Int (525832) – Rio Blanco (560027) 345 kV d. Tuco Int (525832) – Yoakum (526936) 345 kV		X			X									X		
29	FLT29-SB	**Single phase fault with stuck breaker at Tuco 2 (560022)** a. Apply fault at the Tuco 2 345 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Tuco 2 (560022) – Border (515458) 345 kV, Ckt 1 d. Tuco 2 (560022) – Border (515458) 345 kV, Ckt 2		X			X									X		
30	FLT30-SB	**Single phase fault with stuck breaker at Tuco Int (525832)** a. Apply fault at the Tuco Int 345 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Tuco Int (525832) – Tuco 2 (560022) 345 kV d. Tuco Int (525832) – Yoakum (526936) 345 kV		X														

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
31	FLT31-PO	**Prior Outage of the Tuco 345 kV (525832) to Tuco 230 kV (525830) to Tuco 13.2 kV (525824) XFMR CKT 1;** 3 phase fault on the Rio Blanco 345 kV (560027) to OKU (511456) 345 kV line circuit 1, near Rio Blanco. a. Apply fault at the Rio Blanco 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X			X											
32	FLT32-PO	**Prior Outage of the Tuco 345 kV (525832) to Tuco 230 kV (525830) to Tuco 13.2 kV (525824) XFMR CKT 1;** 3 phase fault on the Tuco 2 (560022) to Border (515458) 345 kV line circuit 1, near Tuco. a. Apply fault at the Tuco 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X			X											
33	FLT33-PO	**Prior Outage of the Rio Blanco (560027) to OKU (511456) 345 kV Line;** 3 phase fault on the Tuco Int 345 kV (560022) to Yoakum (526936) 345 kV line circuit 1, near Tuco Int. a. Apply fault at the Tuco Int 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X			X											

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
35	FLT35-3PH	3 phase fault on the G15039_T (560051) to Deaf Smith (524623) 230 kV line circuit 1, near G15039_T. a. Apply fault at the G15039_T 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X													
36	FLT36-3PH	3 phase fault on the G15039_T (560051) to Plant X (525481) 230 kV line circuit 1, near G15039_T. a. Apply fault at the GEN-2015-039 TAP 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X													
37	FLT37-3PH	3 phase fault on the Deaf Smith (524623) to Bushland (524267) 230 kV line circuit 1, near Deaf Smith. a. Apply fault at the Deaf Smith 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X													

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
38	FLT38-3PH	3 phase fault on the Deaf Smith 230 kV (524623) to Deaf Smith 115 kV (524622) to Deaf Smith 13.2 kV (524620) XFMR CKT 1, near Deaf Smith 230 kV. a. Apply fault at the Deaf Smith 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.			X													
39	FLT39-3PH	3 phase fault on the Plant X (525481) to Tolk East (525524) 230 kV line circuit 2, near Plant X. a. Apply fault at the Plant X 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X													
40	FLT40-3PH	3 phase fault on the Plant X (525481) to Newhart (525461) 230 kV line circuit 1, near Plant X. a. Apply fault at the Plant X 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X													

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
41	FLT41-3PH	3 phase fault on the Plant X (525481) to Tolk West (525531) 230 kV line circuit 1, near Plant X. a. Apply fault at the Plant X 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X													
42	FLT42-3PH	3 phase fault on the Plant X (525481) to Sundown (526435) 230 kV line circuit 1, near Plant X. a. Apply fault at the Plant X 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X													
43	FLT43-3PH	3 phase fault on the Plant X 230 kV (525481) to Plant X 115 kV (525480) to Plant X 13.2 kV (525479) XFMR CKT 1, near Plant X 230 kV. a. Apply fault at the Plant X 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.			X													

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
44	FLT44-3PH	**Single phase fault with stuck breaker** on the Tolk West (525531) to Plant X (525481) 230 kV circuit #1 line, near Tolk West. a. Apply fault at the Tolk West 230 kV bus. b. Run 5 cycles, and then open Plant X end of the faulted line. c. Run 10 cycles, and then clear the fault and disconnect Tolk West 230 kV bus (525531).			X													
45	FLT45-3PH	**Single phase fault with stuck breaker** on the Tolk East (525524) to Plant X (525481) 230 kV line circuit #2, near Tolk East. a. Apply fault at the Tolk East 230 kV bus. b. Run 5 cycles, and then open Plant X end of the faulted line. c. Run 10 cycles, and then clear the fault and disconnect Tolk East 230 kV bus (525524).			X													
46	FLT46-SB	**Single phase fault with stuck breaker at Deaf Smith (524623) 230 kV** a. Apply fault at the Deaf Smith 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Deaf Smith (524623) - Bushland (524267) 230 kV d. Deaf Smith (524623) – G15039_T (560051) 230 kV			X													

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
47	FLT47-SB	**Single phase fault with stuck breaker at Plant X (525481) 230 kV** a. Apply fault at the Plant X 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Plant X (525481) – G15039_T (560051) 230 kV d. Plant X (525481) – Newhart (525461) 230 kV			X													
48	FLT48-SB	**Single phase fault with stuck breaker at Plant X (525481) 230 kV** a. Apply fault at the Plant X 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Plant X (525481) – Tolk West (525531) 230 kV d. Plant X (525481) – Sundown (526435) 230 kV			X													
49	FLT49-SB	**Single phase fault with stuck breaker at Plant X (525481) 230 kV** a. Apply fault at the Plant X 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Plant X (525481) 230 kV/ (525480) 115 kV/ (525479) 13.2 kV Xfmr d. Plant X (525481) – Newhart (525461) 230 kV			X													

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
50	FLT50-PO	**Prior Outage of the Plant X 230 kV (525481) to Plant X 115 kV (525480) to Plant X 13.2 kV (525479) XFMR CKT 1;** 3 phase fault on the Plant X 230 kV (525481) to Sundown (526435) 230 kV line circuit 1, near Plant X. a. Apply fault at the Plant X 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.			X													
51	FLT51-PO	**Prior Outage of the Plant X (525481) to Sundown (526435) 230 kV Line;** 3 phase fault on the Plant X 230 kV (525481) to Tolk East (525524) 230 kV line circuit 2, near Plant X. a. Apply fault at the Plant X 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.			X													
52	FLT52-PO	**Prior Outage of the Deaf Smith (524623) to Bushland (524267) 230 kV Line;** 3 phase fault on the Deaf Smith 230 kV to G15039_T (560051) 230 kV line circuit 1, near Deaf Smith. a. Apply fault at the D 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.			X													

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
53	FLT53-3PH	3 phase fault on the Mustang (527149) to Amocowasson (526784) 230 kV line circuit 1, near Mustang. a. Apply fault at the Mustang 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X		X										
54	FLT54-3PH	3 phase fault on the Mustang 230 kV (527149) to Mustang 115 kV (527146) to Mustang 13.2 kV (527143) XFMR CKT 1, near Mustang 230 kV. a. Apply fault at the Mustang 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.				X		X										
55	FLT55-3PH	3 phase fault on the Mustang (527149) to Yoakum (526935) 230 kV line circuit 1, near Mustang. a. Apply fault at the Mustang 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X		X								X		

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
56	FLT56-3PH	3 phase fault on the Mustang (527149) to Seminole (527276) 230 kV line circuit 1, near Mustang. a. Apply fault at the Mustang 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X		X										
57	FLT57-3PH	3 phase fault on the Seminole 230 kV (527276) to Seminole 115 kV (527275) to Seminole 13.2 kV (527273) XFMR CKT 1, near Seminole 230 kV. a. Apply fault at the Seminole 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.				X												
58	FLT58-3PH	3 phase fault on the Amocowasson (526784) to OxyBru Tap (527010) 230 kV line circuit 1, near Amocowasson. a. Apply fault at the Amocowasson 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X												

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
59	FLT59-3PH	3 phase fault on the Yoakum (526935) to G13-027-TAP (562480) 230 kV line, near Yoakum. a. Apply fault at the Yoakum 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X												
60	FLT60-3PH	3 phase fault on the Yoakum 230 kV (526935) to Yoakum 115 kV (526934) to Yoakum 13.2 kV (526931) XFMR CKT 1, near Yoakum 230 kV. a. Apply fault at the Yoakum 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.				X												
61	FLT61-3PH	3 phase fault on the Mustang (527146) to Denver North (527130) 115 kV line circuit 1, near Mustang. a. Apply fault at the Mustang 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X		X										

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
62	FLT62-3PH	3 phase fault on the Mustang (527146) to Seagraves (527202) 115 kV line circuit 1, near Mustang. a. Apply fault at the Mustang 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X		X										
63	FLT63-3PH	3 phase fault on the Mustang (527146) to Denver South (527136) 115 kV line circuit 1, near Mustang. a. Apply fault at the Mustang 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X		X										
64	FLT64-3PH (17SP,25SP)	3 phase fault on the Mustang (527146) to Shell Co (527062) 115 kV line circuit 1, near Mustang. a. Apply fault at the Mustang 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X		X										

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
65	FLT65-3PH	3 phase fault on the Yoakum (526935) to Amoco-SS (526460) 230 kV line, near Yoakum. a. Apply fault at the Yoakum 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X												
66	FLT66-3PH	3 phase fault on the Yoakum (526935) to OxyBru Tap (527010) 230 kV line, near Yoakum. a. Apply fault at the Yoakum 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X												
67	FLT67-3PH	3 phase fault on the Yoakum (526935) to G1579&G1580T (560059) 230 kV line, near Yoakum. a. Apply fault at the Yoakum 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X												

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
68	FLT68-SB	**Single phase fault with stuck breaker at Mustang (527149)** a. Apply fault at the Mustang 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Mustang 230 kV (527149) /115 kV (527146)/13.2 kV (527143) transformer d. Mustang (527149) - Amocowasson (526784) 230 kV				X												
69	FLT69-SB	**Single phase fault with stuck breaker** on the Yoakum (526935) to GEN-2013-027 (562480) 230 kV line, near Yoakum. a. Apply fault at the Yoakum 230 kV bus. b. Run 5 cycles, and then open GEN-2013-027 end of the faulted line. c. Run 10 cycles, and then clear the fault and open Yoakum end of the line in (b) and trip Yoakum (526935) to Yoakum 115 (526934)/13.2 kV (526931) transformer circuit #1.				X												

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
70	FLT70-SB	**Single phase fault with stuck breaker** on the Yoakum (526935) to Amoco-SS (526460) 230 kV line, near Yoakum. a. Apply fault at the Yoakum 230 kV bus. b. Run 5 cycles, and then open Amoco-SS end of the faulted line. c. Run 10 cycles, and then clear the fault and trip Yoakum 230 kV (526935) bus.				X												
71	FLT71-PO	**Prior Outage of the Mustang (527149) to Seminole (527276) 230 kV line circuit 1;** 3 phase fault on the Mustang (527149) to Yoakum (526935) 230 kV line circuit 1, near Mustang. a. Apply fault at the Mustang 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.				X												
72	FLT72-PO	**Prior Outage of the Mustang (527149) to Yoakum (526935) 230 kV line circuit 1;** 3 phase fault on the Mustang (527149) to Seminole (527276) 230 kV line circuit 1, near Mustang. a. Apply fault at the Mustang 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.				X												

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
73	FLT73-3PH	3 phase fault on the Border (515458) to Chisholm (511553) 345 kV line, near Border. a. Apply fault at the Border 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.					X											
74	FLT74-3PH	3 phase fault on the Border (515458) to Tuco 2 (560022) 345 kV line, near Border. a. Apply fault at the Border 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.					X											
75	FLT75-3PH	3 phase fault on the Tuco Int (525830) to Antelope (525840) 230 kV line, near Tuco Int. a. Apply fault at the Tuco Int 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.					X											

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
76	FLT76-3PH	3 phase fault on the Tuco Int (525830) to Carlisle (526161) 230 kV line, near Tuco Int. a. Apply fault at the Tuco Int 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.					X											
77	FLT77-SB	**Single phase fault with stuck breaker at Mustang (527146)** a. Apply fault at the Mustang 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Mustang 230 kV (527149) /115 kV (527146)/13.2 kV (527143) transformer d. Mustang (527146) – Denver South (527136) 115 kV						X										

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
78	FLT78-SB	**Single phase fault with stuck breaker at Mustang (527146)** a. Apply fault at the Mustang 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Mustang (527146) – Seagraves (527202) 115 kV d. Mustang (527146) – Denver North (527130) 115 kV						X										
79	FLT79-SB	**Single phase fault with stuck breaker at Mustang (527146)** a. Apply fault at the Mustang 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Mustang (527146) – Denver South (527136) 115 kV d. Mustang (527146) – Denver North (527130) 115 kV						X										
80	FLT80-SB (No 16WP)	**Single phase fault with stuck breaker at Mustang (527146)** a. Apply fault at the Mustang 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Mustang (527146) – Shell County (527062) 115 kV d. Mustang (527146) – Seagraves (527202) 115 kV						X										

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
81	FLT81-PO	**Prior Outage of the Mustang (527146) to Denver North (527130) 115 kV line circuit 1;** 3 phase fault on the Mustang (527146) to Denver South (527136) 115 kV line circuit 2, near Mustang. a. Apply fault at the Mustang 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.						X										
82	FLT82-PO	**Prior Outage of the Mustang (527149) 230 kV to Mustang (527146) 115 kV transformer, circuit 1;** 3 phase fault on the Mustang (527146) to Denver North (527130) 115 kV line circuit 1, near Mustang. a. Apply fault at the Mustang 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.						X										
83	FLT83-PO (No 16WP)	**Prior Outage of the Mustang (527146) to Shell County (527062) 115 kV line circuit 1;** 3 phase fault on the Mustang (527146) to Denver South (527136) 115 kV line circuit 2, near Mustang. a. Apply fault at the Mustang 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.						X										

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
84	FLT84-3PH	3 phase fault on the Wolfforth (526524) to Yuma (526475) 115 kV line, near Wolfforth a. Apply fault at the Wolfforth 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.							X	X								
85	FLT85-3PH	3 phase fault on the Wolfforth (526524) to Terry County (526736) 115 kV line, near Wolfforth a. Apply fault at the Wolfforth 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.							X	X								
86	FLT86-3PH	3 phase fault on the Wolfforth 115 kV (526524) to Wolfforth 230 kV (526525) to Wolfforth 13.2 kV (526522) XFMR CKT 1, near Wolfforth 115 kV. a. Apply fault at the Wolfforth 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.							X	X					X			

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
87	FLT87-3PH	3 phase fault on the Terry County (526736) to Denver North (527130) 115 kV line, near Terry County a. Apply fault at the Terry County 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.							X									
88	FLT88-3PH	3 phase fault on the Terry County (526736) to LG-Clauene (526491) 115 kV line, near Terry County a. Apply fault at the Terry County 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.							X									
89	FLT89-3PH	3 phase fault on the Terry County (526736) to Sulphur (527262) 115 kV line, near Terry County a. Apply fault at the Terry County 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.							X									

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
90	FLT90-3PH	3 phase fault on the Terry County (526736) to G15-077-Tap (560058) 115 kV line, near Terry County a. Apply fault at the Terry County 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.							X									
91	FLT91-3PH	3 phase fault on the Terry County 115 kV (526736) to Terry County 69 kV (526735) to Terry County 13.2 kV (526733) XFMR CKT 1, near Terry County 115 kV. a. Apply fault at the Terry County 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.							X									
92	FLT92-3PH	3 phase fault on the Yuma (526475) to SP-Wolfforth Tap (526481) 115 kV line, near Yuma a. Apply fault at the Yuma 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.							X	X								

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
93	FLT93-3PH	3 phase fault on the Wolfforth (526525) to Sundown (526435) 230 kV line, near Wolfforth a. Apply fault at the Wolfforth 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.							X	X					X			
94	FLT94-3PH	3 phase fault on the Wolfforth (526525) to Lubbock South (526269) 230 kV line, near Wolfforth a. Apply fault at the Wolfforth 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.							X	X					X			
95	FLT95-3PH (No 16WP)	3 phase fault on the Wolfforth (526525) to Carlisle (526161) 230 kV line, near Wolfforth a. Apply fault at the Wolfforth 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.							X	X					X			

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
96	FLT96-SB	**Single phase fault with stuck breaker at Wolfforth (526524)** a. Apply fault at the Wolfforth 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Wolfforth (526524) – Yuma (526475) 115 kV d. Wolfforth (526524) – Terry County (526736) 115 kV							X									
97	FLT97-SB	**Single phase fault with stuck breaker at Wolfforth (526524)** a. Apply fault at the Wolfforth 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Wolfforth 115 kV (526524)/230 kV (526525)/13.2 kV (526522) xfmr d. Wolfforth (526524) – Terry County (526736) 115 kV							X	X								
98	FLT98-PO	**Prior Outage of the Wolfforth (526524) to Terry County (526736) 115 kV line circuit 1;** 3 phase fault on the Wolfforth 115 kV (526524)/230 kV (526525)/13.2 kV (526522) xfmr, near Wolfforth. a. Apply fault at the Wolfforth 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.							X	X								

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
99	FLT99-PO	**Prior Outage of the Wolfforth (526524) to Yuma (526475) 115 kV line circuit 1;** 3 phase fault on the Wolfforth (526524) to Terry County (526736) 115 kV line circuit 1, near Wolfforth. a. Apply fault at the Wolfforth 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.							X									
100	FLT100-3PH	3 phase fault on the SP-Wolfforth Tap (526481) to LP-Doud Tap (526162) 115 kV line, near SP-Wolfforth Tap a. Apply fault at the SP-Wolfforth Tap 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.								X								
101	FLT101-3PH	3 phase fault on the SP-Wolfforth Tap (526481) to SP-Wolfforth (526483) 115 kV line, near SP-Wolfforth Tap a. Apply fault at the SP-Wolfforth Tap 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.								X								

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
102	FLT102-3PH	**Single phase fault with stuck breaker at SP-Wolfforth Tap (526481)** a. Apply fault at the SP-Wolfforth Tap 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. SP-Wolfforth Tap (526481) – LP-Doud Tap (526162) 115 kV d. SP-Wolfforth Tap (526481) – SP-Wolfforth (526483) 115 kV								X								
103	FLT103-3PH	**Prior Outage of the SP-Wolfforth Tap (526481) to SP-Wolfforth (526483) 115 kV line circuit 1;** 3 phase fault on the SP-Wolfforth Tap (526481) to Yuma (526475) 115 kV line circuit 1, near SP-Wolfforth Tap. a. Apply fault at the SP-Wolfforth Tap 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.								X								
104	FLT104-3PH	3 phase fault on the Happy (525154) to Tulia Tap (525179) 115 kV line, near Happy. a. Apply fault at the Happy 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.									X							

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
105	FLT105-3PH	3 phase fault on the Happy (525154) to Palo Duro (524530) 115 kV line, near Happy. a. Apply fault at the Happy 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.									X	X						
106	FLT106-3PH	3 phase fault on the Happy 115 kV (525154) to Happy 69 kV (525153) to Happy 13.2 kV (525151) XFMR CKT 1, near Happy 115 kV. a. Apply fault at the Happy 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.									X	X						
107	FLT107-3PH	3 phase fault on the Tulia Tap (525179) to Kress (525192) 115 kV line, near Tulia Tap. a. Apply fault at the Tulia Tap 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.									X	X						

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
108	FLT108-3PH	3 phase fault on the Tulia Tap (525179) to MU-Tulia (522800) 115 kV line, near Tulia Tap. a. Apply fault at the Tulia Tap 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.									X	X						
109	FLT109-3PH	3 phase fault on the Palo Duro (524530) to Randall (524364) 115 kV line, near Palo Duro. a. Apply fault at the Paulo Duro 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.									X	X						
110	FLT110-3PH	3 phase fault on the Palo Duro (524530) to Happy (525154) 115 kV line, near Palo Duro. a. Apply fault at the Paulo Duro 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.									X	X						

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
111	FLT111-3PH	3 phase fault on the Happy (525153) to Happy City Tap (525143) 69 kV line, near Happy City Tap. a. Apply fault at the Happy City Tap 69 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.									X	X						
112	FLT112-SB	**Single phase fault with stuck breaker at Happy (525154) 115 kV** a. Apply fault at the Happy 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Happy (525154) – Tulia Tap (525179) 115 kV d. Happy (525154) – Palo Duro (524530) 115 kV									X	X						
113	FLT113-SB	**Single phase fault with stuck breaker at Happy (525154) 115 kV** a. Apply fault at the Happy 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Happy (525154) – Tulia Tap (525179) 115 kV d. Happy 115 kV (525154)/69 kV (525153)/13.2 kV (525151) Xfmr									X	X						

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
114	FLT114-PO	**Prior Outage of the Happy (525154) to Tulia Tap (525179) 115 kV line circuit 1;** 3 phase fault on the Happy (525154) to Palo Duro (524530) 115 kV line circuit 1, near Happy. a. Apply fault at the Happy 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.									X	X						
115	FLT115-PO	**Prior Outage of the Happy 115 kV (525154)/69 kV (525153)/13.2 kV (525152) Xfmr, circuit 2;** 3 phase fault on the Happy (525154) to Palo Duro (524530) 115 kV line circuit 1, near Happy. a. Apply fault at the Happy 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.									X	X						
116	FLT116-PO	**Prior Outage of the Happy 115 kV (525154)/69 kV (525153)/13.2 kV (525152) Xfmr, circuit 2;** 3 phase fault on the Happy (525154) to Tulia Tap (525179) 115 kV line circuit 1, near Happy. a. Apply fault at the Happy 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.									X	X						

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
117	FLT117-3PH	3 phase fault on the Randall (524364) to Manhattan (524224) 115 kV line, near Randall. a. Apply fault at the Randall 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.										X						
118	FLT118-3PH	3 phase fault on the Randall (524364) to Southeast (524338) 115 kV line, near Randall. a. Apply fault at the Randall 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.										X						
119	FLT119-3PH	3 phase fault on the Randall (524364) to Georgia (524322) 115 kV line, near Randall. a. Apply fault at the Randall 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.										X						

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
120	FLT120-3PH	3 phase fault on the Randall (524364) to Canyon East (524522) 115 kV line, near Randall. a. Apply fault at the Randall 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.										X						
121	FLT121-3PH	3 phase fault on the Randall 230 kV (524365) to Randall 115 kV (524364) to Randall 13.2 kV (524361) XFMR CKT 1, near Randall 115 kV. a. Apply fault at the Randall 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.										X						
122	FLT122-SB	**Single phase fault with stuck breaker at Randall (524364) 115 kV** a. Apply fault at the Randall 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Randall (524364) – Georgia (524322) 115 kV d. Randall (524364) – Palo Duro (524530) 115 kV										X						

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
123	FLT123-SB	**Single phase fault with stuck breaker at Randall (524364) 115 kV** a. Apply fault at the Randall 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Randall (524364) – Georgia (524322) 115 kV d. Randall (524364) – Canyon E (524522) 115 kV										X						
124	FLT124-PO	**Prior Outage of the Randall (524364) to Georgia (524322) 115 kV line circuit 1;** 3 phase fault on the Happy (525154) to Palo Duro (524530) 115 kV line circuit 1, near Palo Duro. a. Apply fault at the Palo Duro 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.										X						
125	FLT125-PO	**Prior Outage of the Happy (525154) to Palo Duro (524530) 115 kV line circuit 1;** 3 phase fault on the Randall (524364) to Manhattan (524224) 115 kV line circuit 1, near Randall. a. Apply fault at the Randall 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.										X						

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
126	FLT126-3PH	3 phase fault on Andrews (528604) to Hobbs (527894) 230 kV line circuit 1, near Andrews. a. Apply fault at the Andrews 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.											X				X	
127	FLT127-3PH	3 phase fault on the Andrews 230 kV (528604) to Andrews 115 kV (528602) to Andrews 13.2 kV (528601) XFMR CKT 1, near Andrews 230 kV. a. Apply fault at the Andrews 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.											X				X	
128	FLT128-3PH	3 phase fault on the GEN-2015-079 Tap (560059) to Hobbs (527894) 230 kV line circuit 1, near Hobbs. a. Apply fault at the Hobbs 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.											X				X	

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
129	FLT129-3PH	3 phase fault on the Hobbs (527894) to Cunningham (527865) 230 kV line circuit 1, near Hobbs. a. Apply fault at the Hobbs 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.											X				X	
130	FLT130-3PH	3 phase fault on the Hobbs 230 kV (527894) to Hobbs 115 kV (527891) to Hobbs 13.2 kV (527890) XFMR CKT 1, near Hobbs 230 kV. a. Apply fault at the Hobbs 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.											X				X	
131	FLT131-3PH	3 phase fault on the Andrews (528602) to NA Enrich (528603) 115 kV line circuit 1, near Andrews. a. Apply fault at the Andrews 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.											X				X	

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
132	FLT132-3PH	3 phase fault on the G1579&G1580T (560059) to Yoakum (526935) 230 kV line circuit 1, near G1579&G1580T. a. Apply fault at the G1579&G1580T 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.											X				X	
133	FLT133-3PH	3 phase fault on the Cunningham (527865) to Potash Junction (527963) 230 kV line circuit 1, near Cunningham. a. Apply fault at the Cunningham 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.											X				X	
134	FLT134-SB	**Single phase fault with stuck breaker at Hobbs (527894) 230 kV** a. Apply fault at the Hobbs 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Hobbs (527894) – Andrews (528604) 230 kV											X				X	

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
135	FLT135-SB	**Single phase fault with stuck breaker at Hobbs (527894) 230 kV** a. Apply fault at the Hobbs 230 kV bus. b. Clear fault after 16 cycles and trip the following elements d. Hobbs (527894) – Cunningham (527865) 230 kV											X				X	
136	FLT136-SB	**Single phase fault with stuck breaker at Hobbs (527894) 230 kV** a. Apply fault at the Hobbs 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Hobbs (527894) – G1579&G1580T (560059) 230 kV d. Hobbs (527894) – Cunningham (527865) 230 kV											X				X	
137	FLT137-PO	**Prior Outage of the G1579&G1580T Tap (560059) to Hobbs (527894) 230 kV line circuit 1;** 3 phase fault on the Hobbs (527894) to Cunningham (527865) 230 kV line circuit 1, near Hobbs. a. Apply fault at the Hobbs 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.											X				X	

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
138	FLT138-PO	**Prior Outage of the Hobbs (527894) to Cunningham (527865) 230 kV line circuit 1;** 3 phase fault on the Hobbs 230 kV (527894)/115 kV (527891)/13.2 kV (527890) Xfmr, ckt 1, near Hobbs. a. Apply fault at the Hobbs 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.											X				X	
139	FLT139-PO	**Prior Outage of the Andrews (528602) to NA Enrich (528603) 115 kV line circuit 1;** 3 phase fault on the Andrews 230 kV (528604)/115 kV (528602)/13.2 kV (528601) Xfmr, ckt 1, near Andrews 230 kV. a. Apply fault at the Andrews 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.											X				X	
140	FLT140-3PH	3 phase fault on the Swisher (525212) to Kress (525192) 115 kV line circuit 1, near Swisher. a. Apply fault at the Swisher 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X				

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
141	FLT141-3PH	3 phase fault on the Swisher 230 kV (525213) to Swisher 115 kV (525212) to Swisher 13.2 kV (525211) XFMR CKT 1, near Swisher 115 kV. a. Apply fault at the Swisher 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.												X				
142	FLT142-3PH	3 phase fault on the Kress (525192) to Kress Rural (525225) 115 kV line circuit 1, near Kress. a. Apply fault at the Kress 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X				
143	FLT143-3PH	3 phase fault on the Kress (525192) to Newhart (525460) 115 kV line circuit 1, near Kress. a. Apply fault at the Kress 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X				

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
144	FLT144-3PH	3 phase fault on the Kress (525192) to Tulia Tap (525179) 115 kV line circuit 1, near Kress. a. Apply fault at the Kress 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X				
145	FLT145-3PH	3 phase fault on the Kress (525192) to Hale County (525454) 115 kV line circuit 1, near Kress. a. Apply fault at the Kress 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X				
146	FLT146-3PH	3 phase fault on the Kress 115 kV (525192) to Kress 69 kV (525191) to Kress 13.2 kV (525190) XFMR CKT 1, near Kress 115 kV. a. Apply fault at the Kress 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.												X				

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
147	FLT147-3PH	3 phase fault on the Swisher (525213) to Tuco 2 (560021) 230 kV line circuit 1, near Swisher. a. Apply fault at the Swisher 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X				
148	FLT148-3PH	3 phase fault on the Swisher (525213) to Newhart (525461) 230 kV line circuit 1, near Swisher. a. Apply fault at the Swisher 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X				
149	FLT149-SB	**Single phase fault with stuck breaker at Swisher (525213) 230 kV** a. Apply fault at the Swisher 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Swisher (525213) – Newhart (525461) 230 kV d. Swisher 230 kV (525213)/115 kV (525212)/13.2 kV (525211) Xfmr												X				

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
150	FLT150-SB	**Single phase fault with stuck breaker at Swisher (525213) 230 kV** a. Apply fault at the Swisher 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Swisher (525213) – Tuco 2 (560021) 230 kV d. Swisher 230 kV (525213)/115 kV (525212)/13.2 kV (525211) Xfmr												X				
151	FLT151-SB	**Single phase fault with stuck breaker at Kress (525192) 115 kV** a. Apply fault at the Kress 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Kress (525192) – Swisher (525212) 115 kV												X				
152	FLT152-SB	**Single phase fault with stuck breaker at Kress (525192) 115 kV** a. Apply fault at the Kress 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Kress (525192) – Newhart (525460) 115 kV d. Kress (525192) – Hale County (525454) 115 kV												X				

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
153	FLT153-PO	**Prior Outage of the Swisher (525213) to Tuco (525830) 230 kV line circuit 1;** 3 phase fault on the Swisher (525212) to Kress (525192) 115 kV line circuit 1, near Swisher. a. Apply fault at the Swisher 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line												X				
154	FLT154-PO	**Prior Outage of the Swisher (525213) to Tuco (525830) 230 kV line circuit 1;** 3 phase fault on the Swisher 230 (525213)/115 kV (525212)/13.2 kV (525211) Xfmr, near Swisher 115 kV. a. Apply fault at the Swisher 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line												X				
155	FLT155-PO	**Prior Outage of the Kress (525192) to Hale County (525454) 115 kV line circuit 1;** 3 phase fault on the Swisher (525212) to Kress (525192) 115 kV line circuit 1, near Swisher. a. Apply fault at the Swisher 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line												X				

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
156	FLT156-PO	**Prior Outage of the Kress (525192) to Newhart (525454) 115 kV line circuit 1;** 3 phase fault on the Swisher 230 (525213)/115 kV (525212)/13.2 kV (525211) Xfmr, near Swisher 115 kV. a. Apply fault at the Swisher 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line												X				
157	FLT157-3PH	3 phase fault on the Carlisle 230 kV (526161) to Carlisle 115 kV (525160) to Carlisle 13.2 kV (526157) XFMR CKT 1, near Carlisle 230 kV. a. Apply fault at the Carlisle 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.													X			
158	FLT158-3PH	3 phase fault on the Carlisle (526161) to Tuco (525830) 230 kV line circuit 1, near Carlisle. a. Apply fault at the Carlisle 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.													X			

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
159	FLT159-3PH	3 phase fault on the Carlisle (526161) to LP-Milwaukee (522823) 230 kV line circuit 1, near Carlisle. a. Apply fault at the Carlisle 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.													X			
160	FLT160-SB	**Single phase fault with stuck breaker at Carlisle (526161) 230 kV** a. Apply fault at the Carlisle 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Carlisle (526161) – Tuco (525830) 230 kV d. Carlisle 230 kV (526161)/115 kV (526160)/13.2 kV (526157) Xfmr													X			
161	FLT161-SB (No 16WP)	**Single phase fault with stuck breaker at Carlisle (526161) 230 kV** a. Apply fault at the Carlisle 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Carlisle (526161) – Wolfforth (526525) 230 kV d. Carlisle 230 kV (526161)/115 kV (526160)/13.2 kV (526157) Xfmr													X			

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
162	FLT162-SB (No 16WP)	**Single phase fault with stuck breaker at Carlisle (526161) 230 kV** a. Apply fault at the Carlisle 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Carlisle (526161) – Wolfforth (526525) 230 kV d. Carlisle (526161) – Tuco (525830) 230 kV													X			
163	FLT163-SB	**Single phase fault with stuck breaker at Carlisle (526161) 230 kV** a. Apply fault at the Carlisle 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Carlisle (526161) – LP-Milwaukee (522823) 230 kV d. Carlisle (526161) – Tuco (525830) 230 kV													X			
164	FLT164-SB	**Single phase fault with stuck breaker at Tuco (525830) 230 kV** a. Apply fault at the Tuco 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Tuco 230 kV (525830)/115 kV (525828)/13.2 kV (525819) Xfmr #2 d. Tuco 230 kV (525830)/115 kV (525828)/13.2 kV (525821) Xfmr #1													X			

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
165	FLT165-PO (No 16WP)	**Prior Outage of the Carlisle (526161) to Tuco (525830) 230 kV line circuit 1;** 3 phase fault on the Carlisle (526161) to Wolfforth (526525) 230 kV line circuit 1, near Carlisle. a. Apply fault at the Carlisle 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line													X			
166	FLT166-PO (No 16WP)	**Prior Outage of the Carlisle (526161) to Wolfforth (526525) 230 kV line circuit 1;** 3 phase fault on the Carlisle (526161) to Tuco (525830) 230 kV line circuit 1, near Carlisle. a. Apply fault at the Carlisle 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line													X			
167	FLT167-PO (No 16WP)	**Prior Outage of the Carlisle (526161) to Wolfforth (526525) 230 kV line circuit 1;** 3 phase fault on the Carlisle 230 kV (526161)/115 kV (526160)/13.2 kV (526157) Xfmr circuit 1, near Carlisle. a. Apply fault at the Carlisle 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line													X			

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
168	FLT168-3PH	3 phase fault on the Yoakum (526936) to Tuco (525832) 345 kV line circuit 1, near Yoakum. a. Apply fault at the Yoakum 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.														X		
169	FLT169-3PH	3 phase fault on the Yoakum (526936) to Hobbs (527896) 345 kV line circuit 1, near Yoakum. a. Apply fault at the Yoakum 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.														X		
170	FLT170-3PH	3 phase fault on the Yoakum 345/230/13.2kV transformer (526936/526935/526937), near Yoakum. a. Apply fault at the Yoakum 345 kV bus. b. Leave fault on for 5 cycles, then trip the line and remove fault.														X		

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
171	FLT171-3PH	3 phase fault on the Yoakum (526935) to G1579&G1580T (560059) 230 kV line circuit 1, near Yoakum. a. Apply fault at the Yoakum 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.														X		
172	FLT172-3PH	3 phase fault on the Yoakum (526935) to G13-027-Tap (562480) 230 kV line circuit 1, near Yoakum. a. Apply fault at the Yoakum 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.														X		
173	FLT173-3PH	3 phase fault on the Yoakum (526935) to OxyBru Tap (527010) 230 kV line circuit 1, near Yoakum. a. Apply fault at the Yoakum 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.														X		

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
174	FLT174-3PH	3 phase fault on the Yoakum (526935) to Amoco (526460) 230 kV line circuit 1, near Yoakum. a. Apply fault at the Yoakum 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.														X		
175	FLT175-3PH	3 phase fault on the Yoakum 230/115/13.2kV (526935/526934/526931) transformer, near Yoakum. a. Apply fault at the Yoakum 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.														X		
176	FLT176-3PH (25SP)	3 phase fault on the Hobbs (527896) to Kiowa (527965) 345 kV line circuit 1, near Hobbs. a. Apply fault at the Hobbs 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.														X		

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
177	FLT177-SB	**Single phase fault with stuck breaker at Yoakum (526936) 345 kV** a. Apply fault at the Yoakum 345 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Yoakum (526936) – Tuco (525832) 345 kV d. Yoakum (526936) – Hobbs (527896) 345 kV														X		
178	FLT178-SB	**Single phase fault with stuck breaker at Yoakum (526935) 230 kV** a. Apply fault at the Yoakum 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Yoakum (526935) – G13-027-Tap (562480) 230 kV d. Yoakum (526935) – Mustang (527149) 230 kV														X		
179	FLT179-SB	**Single phase fault with stuck breaker at Yoakum (526935) 230 kV** a. Apply fault at the Yoakum 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Yoakum 230/115/13.2kV (526935/526934/526931) transformer d. Yoakum 230/115/13.2kV (526935/526934/526932) transformer														X		

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
180	FLT180-PO	**Prior Outage of the Yoakum (526935) to G13-027-Tap (562480) 230 kV line circuit 1;** 3 phase fault on the Yoakum (526935) to G1579&G1580T (560059) 230 kV line circuit 1, near Yoakum. a. Apply fault at the Yoakum 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line														X		
181	FLT181-PO	**Prior Outage of the Yoakum (526935) to G13-027-Tap (562480) 230 kV line circuit 1;** 3 phase fault on the Yoakum (526935) to Mustang (527149) 230 kV line circuit 1, near Yoakum. a. Apply fault at the Yoakum 230 kV bus. b. Clear fault after 5 cycles by tripping the faulted line														X		
182	FLT182-PO	**Prior Outage of the Yoakum (526936) to Tuco (525832) 345 kV line circuit 1;** 3 phase fault on the Yoakum (526936) to Hobbs (527896) 345 kV line circuit 1, near Yoakum. a. Apply fault at the Yoakum 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line														X		

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
183	FLT183-PO	**Prior Outage of the Yoakum (526936) to Tuco (525832) 345 kV line circuit 1;** 3 phase fault on the Yoakum 345/230/13.2kV (526936/526935/526937) transformer, near Yoakum. a. Apply fault at the Yoakum 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line														X		
184	FLT184-3PH	3 phase fault on Chaves County 115 kV (527482) to Urton 115 kV (527501) CKT 1, near Chaves County. a. Apply fault at the Chaves County 115 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.																X
185	FLT185-3PH	3 phase fault on the Chaves County 115 kV (527482) to Chaves County 230 kV (527483) to Chaves County 13.2 kV (527478) XFMR CKT 1, near Chaves County 115 kV. a. Apply fault at the Chaves County 115 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.																X

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
186	FLT186-3PH	3 phase fault on Chaves County 115 kV (527482) to Samson 115 kV (527546) CKT 1, near Chaves County. a. Apply fault at the Chaves County 115 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.																X
187	FLT187-3PH (25SP)	3 phase fault on Chaves County 115 kV (527482) to Price 115 kV (527508) CKT 1, near Chaves County. a. Apply fault at the Chaves County 115 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.																X
188	FLT188-3PH	3 phase fault on Chaves County 230 kV (527483) to San Juan Tap 230 kV (524885) CKT 1, near Chaves County. a. Apply fault at the Chaves County 230 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.																X

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
189	FLT189-3PH	3 phase fault on Chaves County 230 kV (527483) to Eddy North 230 kV (527799) CKT 1, near Chaves County. a. Apply fault at the Chaves County 230 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.																X
190	FLT190-3PH (25SP)	3 phase fault on Price 115 kV (527508) to CV-Pine 115 kV (527515) CKT 1, near Price. a. Apply fault at the Price 115 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.																X

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
191	FLT191-SB	**Single phase fault with stuck breaker** at **Chaves County (527482)** a. Apply fault at the Chaves 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Chaves County 115 kV (527482)/ 230 kV (527483)/13.2 kV (527478) transformer d. Chaves County (527482) - Samson (527546) 115 kV																X
192	FLT192-SB	**Single phase fault with stuck breaker** at **Chaves County (527482)** a. Apply fault at the Chaves 115 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Chaves County (527482) - Urton (527501) 115 kV d. Chaves County (527482) - Samson (527546) 115 kV																X
193	FLT193-PO	**Prior Outage of Chaves County 115 kV (527482) to Samson 115 kV (527546) CKT 1;** 3 phase fault on Chaves County 115 kV (527482) to Urton 115 kV (527501) CKT 1, near Chaves County. a. Apply fault at the Chaves 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.																X

Cont. No.	Cont. Name	Description	GEN-2015-018	GEN-2015-033	GEN-2015-039	GEN-2015-040	GEN-2015-041	GEN-2015-078	ASGI-2016-001	ASGI-2016-002	GEN-2016-002	ASGI-2016-004	GEN-2016-015	GEN-2016-039	GEN-2016-056	GEN-2016-058	GEN-2016-062	GEN-2016-069
194	FLT194-PO	**Prior Outage of Chaves County 115 kV (527482) to Urton 115 kV (527501) CKT 1;** 3 phase fault on Chaves County 115 kV (527482) to Samson 115 kV (527546) CKT 1, near Chaves County. a. Apply fault at the Chaves 115 kV bus. b. Clear fault after 5 cycles by tripping the faulted line.																X
195	FLT195-3PH	3 phase fault on the Seminole 765 kV (560101) to Crawfish 765 kV (560100) CKT 1, near Seminole 765 kV. a. Apply fault at the Seminole 765 kV bus. b. Clear fault after 5 cycles and trip the faulted line.																
196	FLT196-3PH	3 phase fault on the Seminole 765 kV (560101) to Crawfish 765 kV (560100) CKT 1, near Crawfish 765 kV. a. Apply fault at the Crawfish 765 kV bus. b. Clear fault after 5 cycles and trip the faulted line.																

SECTION 3: STABILITY ANALYSIS

The objective of the Stability Analysis was to determine the impacts of the generator interconnections on the stability and voltage recovery on the SPP transmission system. If problems with stability or voltage recovery were identified, the need for reactive compensation or system upgrades was investigated.

3.1 Approach

SPP provided MEPPI with the following five power flow cases:

- MDWG15-16WP_DIS1601_G06
- MDWG15-17SP_DIS1601_G06
- MDWG15-20SP_DIS1601_G06
- MDWG15-20WP_DIS1601_G06
- MDWG15-25SP_DIS1601_G06

Each case was examined prior to the Stability Analysis to ensure the case contained the proposed study projects and any previously queued projects listed in Tables 2-1 and 2-2 respectively. There was no suspect power flow data in the study area. The dynamic datasets were also verified and stable initial system conditions (i.e., "flat lines") were achieved. Three-phase and single phase-to-ground faults listed in Table 2-3 were examined. Single-phase fault impedances were calculated for each season to result in a voltage of approximately 60% of the pre-fault voltage. Refer to Table 3-1 for a list of the calculated single-phase fault impedances utilized.

Table 3-1
Calculated Single-Phase Fault Impedances

Cont. No.*	Cont. Name	Single-Phase Fault Impedance (MVA)				
		2016 Winter	2017 Summer	2020 Summer	2020 Winter	2025 Summer
12	FLT12-SB	-1375.0	-1375.0	-1375.0	-1375.0	-1375.0
13	FLT13-SB	-1375.0	-1375.0	-1375.0	-1375.0	-1375.0
14	FLT14-SB	-687.5	-687.5	-687.5	-687.5	-687.5
15	FLT15-SB	-687.5	-687.5	-687.5	-687.5	-687.5
27	FLT27-SB	-6062.5	-6062.5	-6062.5	-6062.5	-6062.5
28	FLT28-SB	-6062.5	-6062.5	-6062.5	-6062.5	-6062.5
29	FLT29-SB	-6062.5	-6062.5	-6062.5	-6062.5	-6062.5
30	FLT30-SB	-6062.5	-6062.5	-6062.5	-6062.5	-6062.5
44	FLT44-SB	-6875.0	-6875.0	-6875.0	-6875.0	-6875.0
45	FLT45-SB	-6875.0	-6875.0	-6875.0	-6875.0	-6875.0
46	FLT46-SB	-1500.0	-1500.0	-1500.0	-1500.0	-1500.0
47	FLT47-SB	-5656.3	-5656.3	-5656.3	-5656.3	-5656.3
48	FLT48-SB	-5656.3	-5656.3	-5656.3	-5656.3	-5656.3
49	FLT49-SB	-5656.3	-5656.3	-5656.3	-5656.3	-5656.3
68	FLT68-SB	-4031.3	-4031.3	-4031.3	-4031.3	-4031.3
69	FLT69-SB	-4437.5	-4437.5	-4437.5	-4437.5	-4437.5
70	FLT70-SB	-4437.5	-4437.5	-4437.5	-4437.5	-4437.5
77	FLT77-SB	-2812.5	-2812.5	-2812.5	-2812.5	-2812.5
78	FLT78-SB	-2812.5	-2812.5	-2812.5	-2812.5	-2812.5
79	FLT79-SB	-2812.5	-2812.5	-2812.5	-2812.5	-2812.5
96	FLT96-SB	-1375.0	-1375.0	-1375.0	-1375.0	-1375.0
97	FLT97-SB	-1375.0	-1375.0	-1375.0	-1375.0	-1375.0
102	FLT102-SB	-1375.0	-1375.0	-1375.0	-1375.0	-1375.0
112	FLT112-SB	-750.0	-750.0	-750.0	-750.0	-750.0
113	FLT113-SB	-750.0	-750.0	-750.0	-750.0	-750.0
122	FLT122-SB	-1750.0	-1750.0	-1750.0	-1750.0	-1750.0
123	FLT123-SB	-1750.0	-1750.0	-1750.0	-1750.0	-1750.0
134	FLT134-SB	-3625.0	-3625.0	-3625.0	-3625.0	-3625.0
135	FLT135-SB	-3625.0	-3625.0	-3625.0	-3625.0	-3625.0
136	FLT136-SB	-3625.0	-3625.0	-3625.0	-3625.0	-3625.0
149	FLT149-SB	-2203.1	-2203.1	-2203.1	-2203.1	-2203.1
150	FLT150-SB	-2203.1	-2203.1	-2203.1	-2203.1	-2203.1
151	FLT151-SB	-1375.0	-1375.0	-1375.0	-1375.0	-1375.0
152	FLT152-SB	-1375.0	-1375.0	-1375.0	-1375.0	-1375.0
160	FLT160-SB	-1750.0	-1750.0	-1750.0	-1750.0	-1750.0
161	FLT161-SB	N/A	-1750.0	-1750.0	N/A	-1750.0
162	FLT162-SB	N/A	-1750.0	-1750.0	N/A	-1750.0
163	FLT163-SB	-1750.0	-1750.0	-1750.0	-1750.0	-1750.0
164	FLT164-SB	-5250.0	-5250.0	-5250.0	-5250.0	-5250.0
177	FLT177-SB	-4031.3	-4031.3	-4031.3	-4031.3	-4031.3
178	FLT178-SB	-4437.5	-4437.5	-4437.5	-4437.5	-4437.5
179	FLT179-SB	-4437.5	-4437.5	-4437.5	-4437.5	-4437.5
191	FLT191-SB	-812.5	-812.5	-812.5	-812.5	-812.5
192	FLT192-SB	-812.5	-812.5	-812.5	-812.5	-812.5

*Refer to Table 2-3 for a description of the contingency scenario

Bus voltages, machine rotor angles, and previously queued generation in the study area were monitored in addition to bus voltages and machine rotor angles in the following areas:

- 520 AEPW
- 524 OKGE
- 525 WFEC
- 526 SPS
- 531 MIDW
- 534 SUNC
- 536 WERE

Requested and previously queued generation outside the above study area was also monitored.

The results of the analysis determined if reactive compensation or system upgrades were required to obtain acceptable system performance. If additional reactive compensation was required, the size, type, and location were determined. The proposed reactive reinforcements would ensure the wind or solar farm meets FERC Order 661A low voltage requirements and return the wind or solar farm to its pre-disturbance operating voltage. If the results indicated the need for fast responding reactive support, dynamic support such as an SVC or STATCOM was investigated. If tripping of the prior queued projects was observed during the stability analysis (for under/over voltage or under/over frequency) the simulations were re-ran with the prior queued project's voltage and frequency tripping disabled.

3.2 Cluster Scenario Stability Analysis Results

The Stability Analysis determined that there were multiple contingencies across all seasons that resulted in system/voltage instability, generation tripping offline, and poor post-fault voltage recovery when all generation interconnection requests were at 100% output.

Refer to Table 3-2 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3. Table 3-2 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, 2020 Summer Peak, 2020 Winter Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline, if acceptable voltage recovery was observed after the fault was cleared, and if the voltage recovered to above 0.9 p.u. and below 1.1 p.u. post fault steady-state conditions. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady-state voltage (for N-1 contingencies) at the pre-contingent level or at least above 0.9 p.u. and below 1.1. p.u.

Refer to Appendix B, Appendix C, Appendix D, Appendix E, and Appendix F for a complete set of plots for all contingencies for 2016 Winter Peak, 2017 Summer Peak, 2020 Summer Peak, 2020 Winter Peak, and 2025 Summer Peak conditions, respectively.

Table 3-2
Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, 2020 Summer, 2020 Winter, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2020 Winter Peak				2020 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
1	FLT01-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
2	FLT02-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
3	FLT03-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
4	FLT04-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
5	FLT05-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
6	FLT06-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
7	FLT07-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
8	FLT08-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
9	FLT09-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
10	FLT10-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
11	FLT11-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
12	FLT12-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
13	FLT13-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
14	FLT14-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	V < 0.9[3]	Stable
15	FLT15-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
16	FLT16-PO	-	-	Compliant	Stable	-	-	V < 0.9	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
17	FLT17-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
18	FLT18-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
19	FLT19-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
20	FLT20-3PH	-	-	V > 1.1	Unstable[2]	-	-	Compliant	Stable	-	-	V > 1.1	Unstable[2]	-	-	Compliant	Stable	-	-	Compliant	Stable
21	FLT21-3PH	System Instability				-	-	Compliant	Stable	Voltage Collapse				-	-	Compliant	Stable	-	-	Compliant	Stable
22	FLT22-3PH	Voltage Collapse				-	-	Compliant	Stable	Voltage Collapse				-	-	Compliant	Stable	-	-	Compliant	Stable
23	FLT23-3PH	Voltage Collapse				-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
24	FLT24-3PH	System Instability				-	-	V < 0.9	Stable	System Instability				-	-	V < 0.9	Stable	-	-	Compliant	Stable
25	FLT25-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
26	FLT26-3PH	System Instability				-	-	Compliant	Stable	Voltage Collapse				-	-	Compliant	Stable	-	-	Compliant	Stable
27	FLT27-SB	System Instability				-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
28	FLT28-SB	System Instability				-	-	V < 0.9	Stable	System Instability				-	-	V < 0.9	Stable	-	-	Compliant	Stable
29	FLT29-SB	Voltage Collapse				-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
30	FLT30-SB	System Instability				System Instability				System Instability				-	-	Compliant	Unstable[2]	-	-	Compliant	Stable
31	FLT31-PO	Voltage Collapse				-	-	Compliant	Stable	Voltage Collapse				-	-	Compliant	Stable	-	-	Compliant	Stable
32	FLT32-PO	System Instability				-	-	Compliant	Stable	Voltage Collapse				-	-	Compliant	Stable	-	-	Compliant	Stable
33	FLT33-PO	Steady-State Divergence				-	-	V < 0.7	Unstable[2]	Steady-State Divergence				-	-	Compliant	Unstable[2]	-	-	Compliant	Stable
35	FLT35-3PH	-	-	V < 0.9	Stable	-	-	V < 0.9	Stable	-	-	Compliant	Stable	-	-	V < 0.9	Stable	-	-	Compliant	Stable
36	FLT36-3PH	-	-	V < 0.9	Stable	-	-	V < 0.9	Stable	-	-	Compliant	Stable	-	-	V < 0.9	Stable	-	-	Compliant	Stable
37	FLT37-3PH	System Instability				-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
38	FLT38-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
39	FLT39-3PH	System Instability				-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
40	FLT40-3PH	System Instability				-	-	Compliant	Stable	System Instability				-	-	V < 0.9	Stable	-	-	Compliant	Stable
41	FLT41-3PH	Voltage Collapse				-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable

Note 1: Gen Stab = Generator Instability
Note 2: Poor voltage damping
Note 3: Existing condition, not mitigated

Table 3-2 (continued)
Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, 2020 Summer, 2020 Winter, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2020 Winter Peak				2020 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
42	FLT42-3PH	-	-	V < 0.7	Gen Trip	-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
43	FLT43-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
44	FLT44-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
45	FLT45-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
46	FLT46-SB	System Instability				-	-	V < 0.9	Stable	System Instability				-	-	V < 0.9	Stable	-	-	V < 0.9	Stable
47	FLT47-SB	System Instability				-	-	V < 0.9	Stable	System Instability				-	-	V < 0.9	Stable	-	-	Compliant	Stable
48	FLT48-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
49	FLT49-SB	System Instability				-	-	Compliant	Stable	System Instability				-	-	V < 0.9	Stable	-	-	Compliant	Stable
50	FLT50-PO	System Instability				-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
51	FLT51-PO	-	-	V < 0.7	Gen Trip	-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
52	FLT52-PO	System Instability				-	-	V < 0.9	Stable	Steady-State Divergence				-	-	V < 0.9	Stable	-	-	V < 0.9	Stable
53	FLT53-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
54	FLT54-3PH	-	-	Compliant	Gen Trip	-	-	Compliant	Stable	-	-	V < 0.7	Unstable[2]	-	-	Compliant	Stable	-	-	Compliant	Stable
55	FLT55-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
56	FLT56-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	V < 0.9	Stable	-	-	V < 0.9	Stable
57	FLT57-3PH	-	-	V < 0.9	Unstable[2]	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
58	FLT58-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
59	FLT59-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	V < 0.7	Gen Trip	-	-	Compliant	Stable	-	-	Compliant	Stable
60	FLT60-3PH	-	-	V < 0.7	Gen Trip	-	-	Compliant	Stable	-	-	V < 0.7	Gen Trip	-	-	Compliant	Stable	-	-	Compliant	Stable
61	FLT61-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
62	FLT62-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
63	FLT63-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
64	FLT64-3PH (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
65	FLT65-3PH	-	-	Compliant	Gen Trip Unstable[2]	-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
66	FLT66-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
67	FLT67-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
68	FLT68-SB	-	-	V < 0.9	Unstable[2]	-	-	Compliant	Stable	-	-	Compliant	Unstable[2]	-	-	Compliant	Stable	-	-	Compliant	Stable
69	FLT69-SB	-	-	V < 0.9	Unstable[2]	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
70	FLT70-SB	-	-	V < 0.7	Gen Trip	-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
71	FLT71-PO	-	-	V < 0.9	Unstable[2]	-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
72	FLT72-PO	System Instability				-	-	Compliant	Stable	System Instability				-	-	V < 0.9	Stable	-	-	V < 0.9	Stable
73	FLT73-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
74	FLT74-3PH	System Instability				-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
75	FLT75-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
76	FLT76-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
77	FLT77-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
78	FLT78-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

Note 1: Gen Stab = Generator Instability
Note 2: Poor voltage damping
Note 3: Existing condition, not mitigated

Table 3-2 (continued)
Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, 2020 Summer, 2020 Winter, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2020 Winter Peak				2020 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
79	FLT79-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
80	FLT80-SB (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
81	FLT81-PO	-	-	V < 0.9	Unstable[2]	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
82	FLT82-PO	-	-	V < 0.9	Unstable[2]	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
83	FLT83-PO (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
84	FLT84-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
85	FLT85-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
86	FLT86-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
87	FLT87-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
88	FLT88-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
89	FLT89-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
90	FLT90-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
91	FLT91-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
92	FLT92-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
93	FLT93-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
94	FLT94-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
95	FLT95-3PH (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
96	FLT96-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
97	FLT97-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
98	FLT98-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
99	FLT99-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
100	FLT100-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
101	FLT101-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
102	FLT102-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
103	FLT103-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
104	FLT104-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
105	FLT105-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
106	FLT106-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
107	FLT107-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
108	FLT108-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
109	FLT109-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
110	FLT110-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
111	FLT111-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
112	FLT112-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
113	FLT113-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
114	FLT114-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
115	FLT115-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
116	FLT116-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

Note 1: Gen Stab = Generator Instability
Note 2: Poor voltage damping
Note 3: Existing condition, not mitigated

Table 3-2 (continued)
Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, 2020 Summer, 2020 Winter, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2020 Winter Peak				2020 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
117	FLT117-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
118	FLT118-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
119	FLT119-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
120	FLT120-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
121	FLT121-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
122	FLT122-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
123	FLT123-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
124	FLT124-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
125	FLT125-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
126	FLT126-3PH	-	-	Compliant	Gen Trip	-	-	Compliant	Gen Trip	-	-	V < 0.9	Gen Trip	-	-	Compliant	Gen Trip	-	-	Compliant	Gen Trip
127	FLT127-3PH	-	-	Compliant	Gen Trip	-	-	Compliant	Gen Trip	-	-	V < 0.9	Gen Trip	-	-	Compliant	Gen Trip	-	-	Compliant	Gen Trip
128	FLT128-3PH	System Instability				-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
129	FLT129-3PH	-	-	Compliant	Gen Trip	-	-	Compliant	Gen Trip	System Instability				-	-	Compliant	Gen Trip	-	-	Compliant	Gen Trip
130	FLT130-3PH	-	-	V < 0.9	Gen Trip	-	-	Compliant	Gen Trip	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
131	FLT131-3PH	-	-	V < 0.9	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
132	FLT132-3PH	System Instability				-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
133	FLT133-3PH	-	-	V < 0.9	Unstable[2]	-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
134	FLT134-SB	-	-	V < 0.9	Unstable[2]	-	-	Compliant	Stable	System Instability				System Instability				-	-	Compliant	Stable
135	FLT135-SB	-	-	V < 0.9	Unstable[2]	-	-	Compliant	Stable	System Instability				System Instability				-	-	Compliant	Stable
136	FLT136-SB	-	-	V < 0.9	Unstable[2]	-	-	Compliant	Stable	-	-	V < 0.9	Unstable[2]	-	-	Compliant	Stable	-	-	Compliant	Stable
137	FLT137-PO	-	-	V < 0.9	Gen Trip	-	-	Compliant	Gen Trip	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
138	FLT138-PO	-	-	V < 0.9	Gen Trip	-	-	Compliant	Gen Trip	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
139	FLT139-PO	-	-	Compliant	Gen Trip	-	-	Compliant	Gen Trip	-	-	Compliant	Gen Trip	-	-	Compliant	Gen Trip	-	-	Compliant	Gen Trip
140	FLT140-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
141	FLT141-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
142	FLT142-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
143	FLT143-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
144	FLT144-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
145	FLT145-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
146	FLT146-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
147	FLT147-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
148	FLT148-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
149	FLT149-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
150	FLT150-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
151	FLT151-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	V < 0.9	Stable
152	FLT152-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
153	FLT153-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

Note 1: Gen Stab = Generator Instability

Note 2: Poor voltage damping

Table 3-2 (continued)
Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, 2020 Summer, 2020 Winter, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2020 Winter Peak				2020 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
154	FLT154-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
155	FLT155-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
156	FLT156-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
157	FLT157-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
158	FLT158-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
159	FLT159-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
160	FLT160-SB	-	-	Compliant	Gen Stab	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
161	FLT161-SB (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
162	FLT162-SB (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
163	FLT163-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
164	FLT164-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Unstable[2]	-	-	Compliant	Stable	-	-	Compliant	Stable
165	FLT165-PO (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
166	FLT166-PO (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
167	FLT167-PO (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
168	FLT168-3PH	System Instability				-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
169	FLT169-3PH	-	-	Compliant	Unstable[2]	-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
170	FLT170-3PH	-	-	V < 0.7	Stable	-	-	Compliant	Stable	-	-	V < 0.7	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
171	FLT171-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
172	FLT172-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
173	FLT173-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Unstable[2]	-	-	Compliant	Stable	-	-	Compliant	Stable
174	FLT174-3PH	-	-	Compliant	Unstable[2]	-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
175	FLT175-3PH	-	-	V < 0.7	Gen Trip	-	-	Compliant	Stable	-	-	V < 0.7	Gen Trip	-	-	Compliant	Stable	-	-	Compliant	Stable
176	FLT176-3PH (25SP)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	Compliant	Stable
177	FLT177-SB	System Instability				-	-	V < 0.9	Stable	System Instability				-	-	V < 0.9	Stable	-	-	Compliant	Stable
178	FLT178-SB	-	-	V < 0.9	Unstable[2]	-	-	Compliant	Stable	-	-	V < 0.9	Unstable[2]	-	-	Compliant	Stable	-	-	Compliant	Stable
179	FLT179-SB	-	-	V < 0.9	Unstable[2]	-	-	Compliant	Stable	-	-	V < 0.9	Unstable[2]	-	-	Compliant	Stable	-	-	Compliant	Stable
180	FLT180-PO	System Instability				-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
181	FLT181-PO	System Instability				-	-	Compliant	Stable	System Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
182	FLT182-PO	Steady-State Divergence				-	-	V < 0.9	Stable	Steady-State Divergence				-	-	Compliant	Stable	-	-	Compliant	Stable
183	FLT183-PO	Steady-State Divergence				-	-	Compliant	Stable	Steady-State Divergence				-	-	Compliant	Stable	-	-	Compliant	Stable
184	FLT184-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
185	FLT185-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
186	FLT186-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
187	FLT187-3PH (25SP)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	Compliant	Stable
188	FLT188-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

Note 1: Gen Stab = Generator Instability

Note 2: Poor voltage damping

Note 3: Existing condition, not mitigated

Table 3-2 (continued)
Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, 2020 Summer, 2020 Winter, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2020 Winter Peak				2020 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
189	FLT189-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
190	FLT190-3PH (25SP)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	Compliant	Stable
191	FLT191-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
192	FLT192-SB	-	-	V < 0.9	Stable	-	-	Compliant	Stable	-	-	V < 0.9	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
193	FLT193-PO	-	-	V < 0.9	Stable	-	-	Compliant	Stable	-	-	V < 0.9	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
194	FLT194-PO	-	-	V < 0.9	Stable	-	-	Compliant	Stable	-	-	V < 0.9	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
195	FLT195-3PH	System Instability				System Instability				System Instability				System Instability				-	-	Compliant	Stable
196	FLT196-3PH	System Instability				System Instability				System Instability				System Instability				-	-	Compliant	Stable

Note 1: Gen Stab = Generator Instability

Note 2: Poor voltage damping

Note 3: Existing condition, not mitigated

To mitigate the system/voltage instability, voltage violations, generation tripping offline, and poor post-fault steady-state voltages, the following upgrades were provided by SPP and implemented (upgrades provided here are required for 16WP season and thus, implemented in remaining years):

- Crawfish Draw to Seminole 765 kV circuit #1
- Crawfish Draw 765/345 kV transformer 1 & 2
- Seminole 765/345 kV transformer 1 & 2
- Potter County to Grapevine to Chisholm 345 kV circuit #1
- Potter County to Tolk 345 kV circuit #1
- Tolk to Crawfish Draw 345 kV circuit #1
- OKU SVC +300/-100 Mvar (add +200 Mvar)
- Add 200 Mvar Capacitor Bank at OKU 345 kV (550 Mvar capacitor bank total)
- Chaves County – Price – CV Pine – Capitan 115 kV circuit #1
    - Required to be implemented in 16WP and 17SP
    - Line exists in 20WP, 20SP, and 25SP
- Grapevine to Beaver County 345 kV circuit #1
- Beaver County to Clark County 345 kV circuit #1
- Re-terminate the Yoakum to TUCO 345 kV line from TUCO to Crawfish Draw
- TUCO to Crawfish Draw 345 kV circuit #2
- Rio Blanco +300/-100 Mvar SVC

In the 16WP and 20WP seasons, under normal system dispatch, system instability exists for a fault at Crawfish Draw 765 kV that results in the loss of the Crawfish Draw to Seminole 765 kV line. For this reason, it is necessary to limit the flow along the Crawfish Draw to Seminole 765 kV line. The following flow limits are required for the 16WP and 20WP seasons, respectively:

- 16WP Flow Limit on Crawfish Draw to Seminole 765 kV: 1625 MW from Crawfish Draw 765 kV end
- 20WP Flow Limit on Crawfish Draw to Seminole 765 kV: 1395 MW from Crawfish Draw 765 kV end

Several violations exist only in the 20SP, 20WP, and 25SP seasons. Refer below for the additional mitigation required for these seasons (seasons listed in parenthesis for which mitigation is required):

- NA Enrich 115 kV capacitor bank: 28.8 Mvar (20WP, 20SP) (an existing cap bank)
- Drinkard 115 kV capacitor bank: 14.4 Mvar (20WP) (an existing cap bank)
- Additional Andrews to NA Enrich 115 kV circuit #2
- Seminole to Mustang 115 kV circuit #1 (25SP)
- Hereford 115 kV capacitor bank: 25 Mvar (25SP) (a new cap bank)

FLT20-3PH, a three-phase fault resulting in the loss of Rio Blanco to Tuco 345 kV, was observed to have voltages above 1.1 p.u. post fault steady-state, poor voltage damping, and generation tripping offline (due to high voltage protection settings). Refer to Figure 3-1 for a representative comparison plot of Oklaunion and Tuco area voltages for the 2016 Winter Peak case with and without system upgrades. Refer to Figure 3-2 for comparison plot of GEN-2014-074's and GEN-2015-033's real power for the 2016 Winter Peak case with and without system upgrades. After the upgrades as stated earlier were implemented, there was no additional voltage violations or generation tripping off-line. The system recovered within SPP criteria.

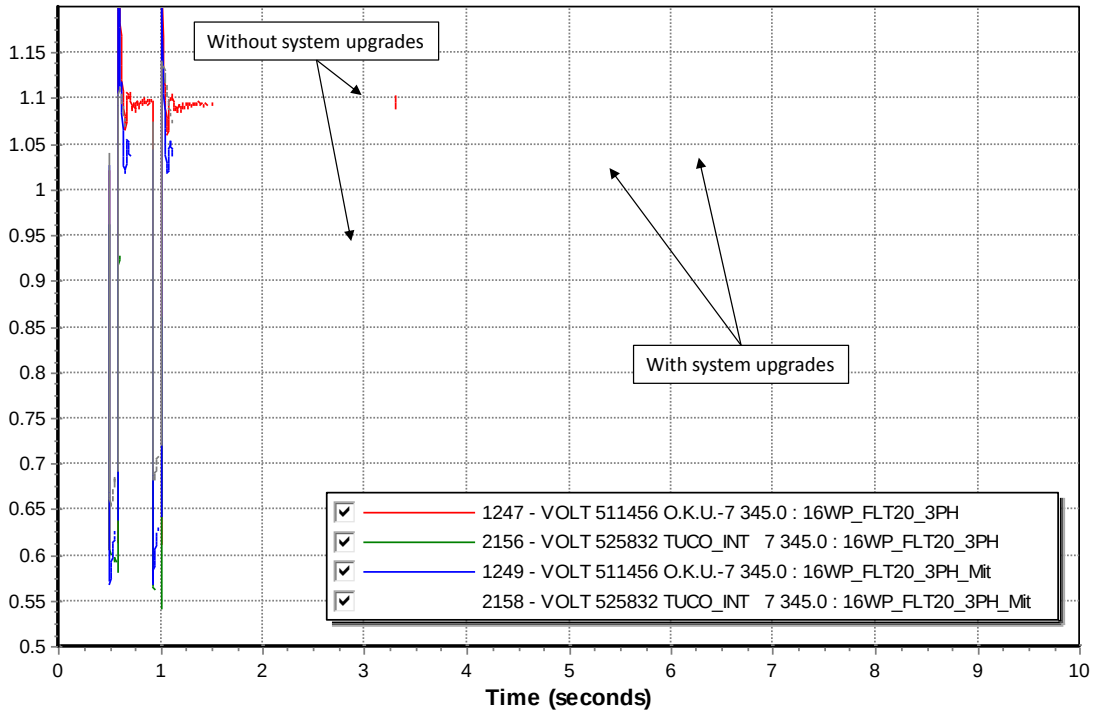

Figure 3-1: Representative plot of Oklaunion and Tuco area voltages for 2016 Winter Peak conditions with and without system upgrades for FLT20.

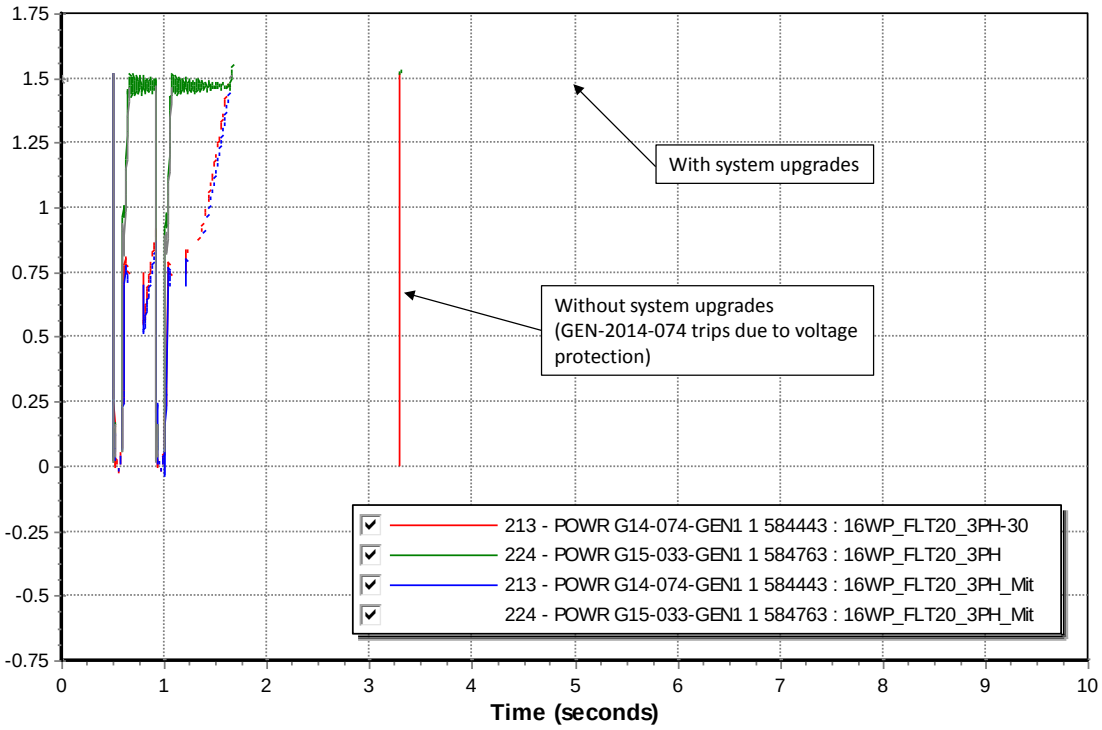

Figure 3-2: Comparison plot of GEN-2014-074's and GEN-2015-033's real power for 2016 Winter Peak conditions with and without system upgrades for FLT20.

FLT21-3PH, a three-phase fault resulting in the loss of Rio Blanco to OKU 345 kV, was observed to have system instability and generation tripping offline. Refer to Figure 3-3 for a representative comparison plot of Oklaunion and Tuco area voltages for the 2016 Winter Peak case with and without system upgrades. Refer to Figure 3-4 for comparison plot of GEN-2014-074's and GEN-2015-033's real power for the 2016 Winter Peak case with and without system upgrades. After the upgrades as stated earlier were implemented, there was no additional voltage violations or generation tripping off-line. The system recovered within SPP criteria.

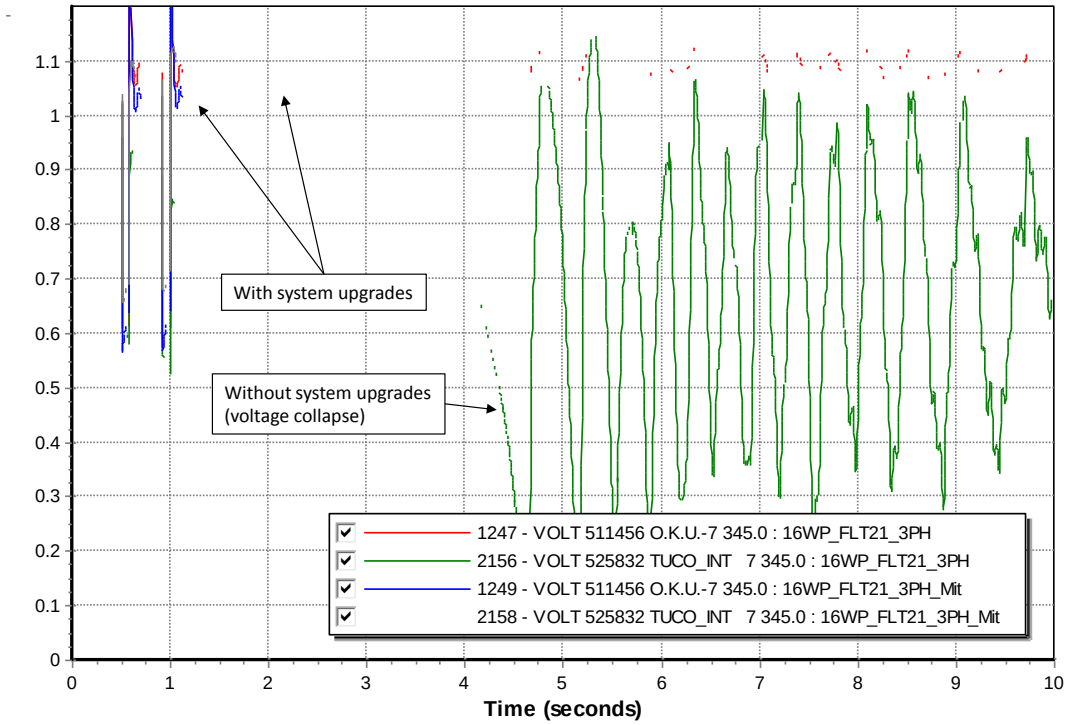

Figure 3-3: Representative plot of Oklaunion and Tuco area voltages for 2016 Winter Peak conditions with and without system upgrades for FLT21.

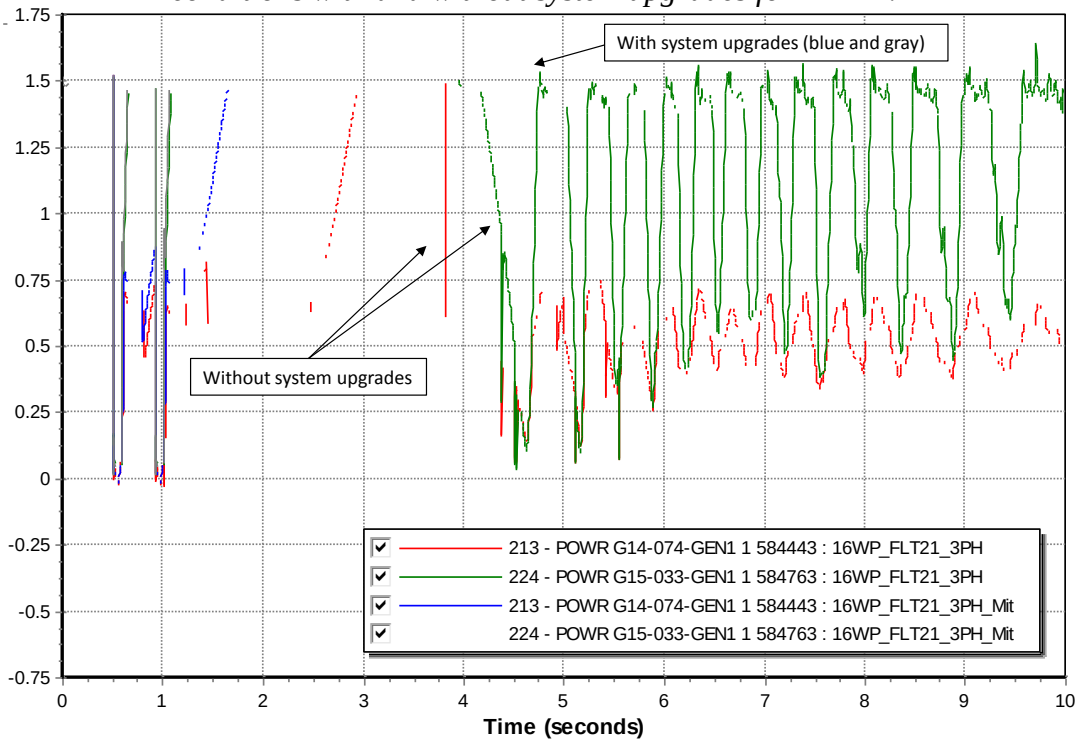

Figure 3-4: Comparison plot of GEN-2014-074's and GEN-2015-033's real power for 2016 Winter Peak conditions with and without system upgrades for FLT21.

FLT40-3PH, a three-phase fault resulting in the loss of Plant X to Newhart 230 kV, was observed to have system instability and generation tripping offline. Refer to Figure 3-5 for a representative comparison plot of Plant X and Newhart area voltages for the 2016 Winter Peak case with and without system upgrades. Refer to Figure 3-6 for comparison plot of GEN-2015-039's and GEN-2015-031's real power for the 2016 Winter Peak case with and without system upgrades. After the upgrades as stated earlier were implemented, there was no additional voltage violations or generation tripping off-line. The system recovered within SPP criteria.

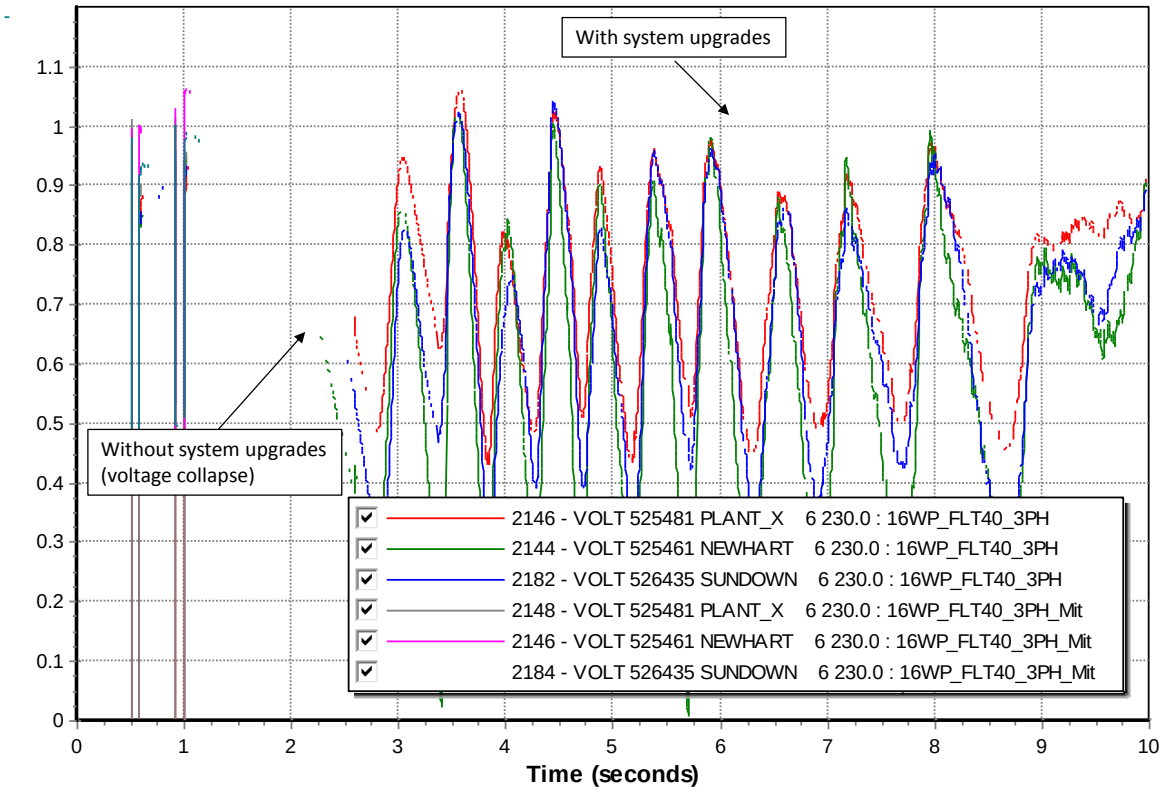

Figure 3-5: Representative plot of Plant X and Newhart area voltages for 2016 Winter Peak conditions with and without system upgrades for FLT40.

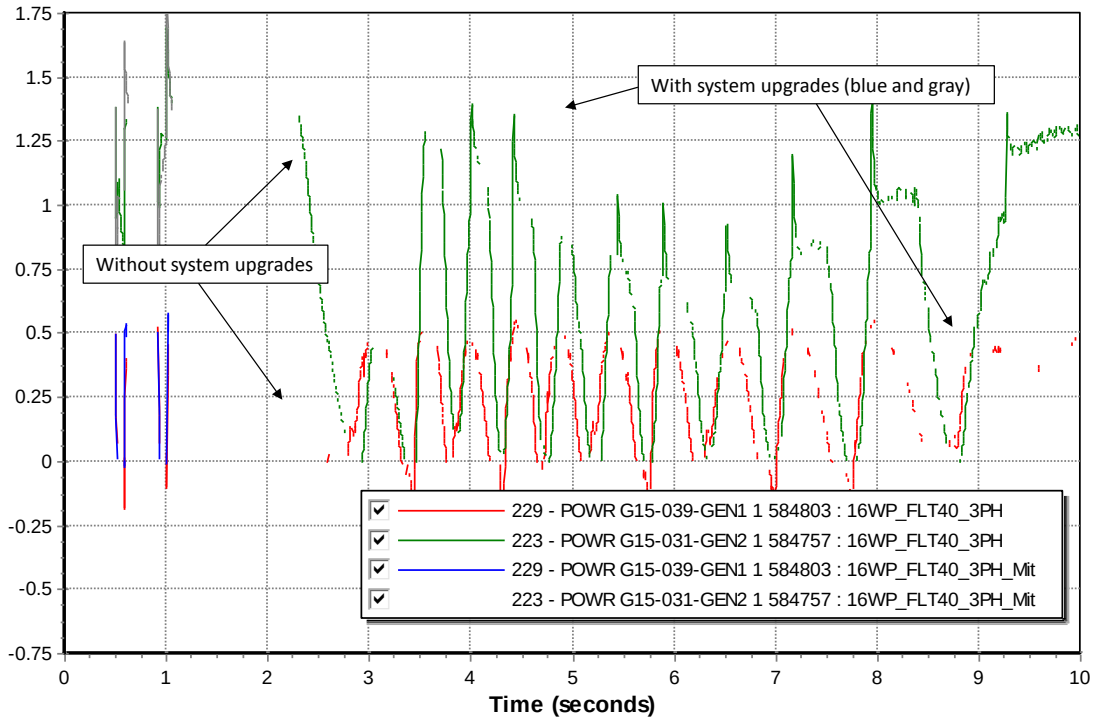

Figure 3-6: Comparison plot of GEN-2015-039's and GEN-2015-031's real power for 2016 Winter Peak conditions with and without system upgrades for FLT40.

FLT70-1PH, a single-phase stuck breaker fault resulting in the loss of Yoakum to Amoco-SS 230 kV, was observed to have voltage instability and generation tripping offline. Refer to Figure 3-7 for a representative comparison plot of Yoakum and Deaf Smith area voltages for the 2020 Winter Peak case with and without system upgrades. Refer to Figure 3-8 for comparison plot of GEN-2016-039's and GEN-2015-022's real power for the 2020 Winter Peak case with and without system upgrades. After the upgrades as stated earlier were implemented, there was no additional voltage violations or generation tripping off-line. The system recovered within SPP criteria.

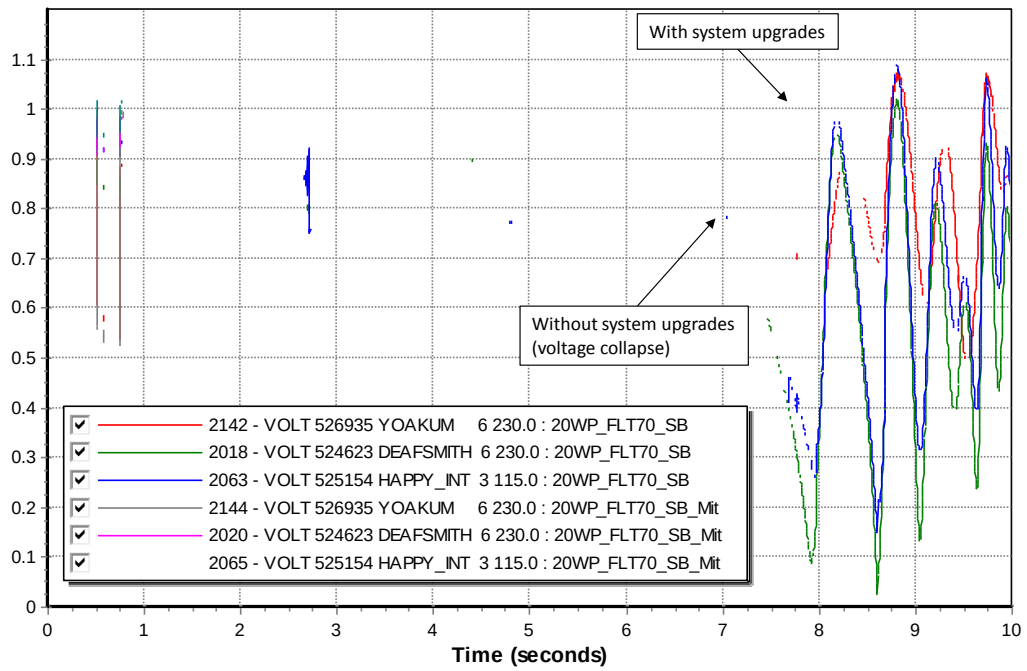

Figure 3-7: Representative plot of Yoakum and Deaf Smith area voltages for 2020 Winter Peak conditions with and without system upgrades for FLT70.

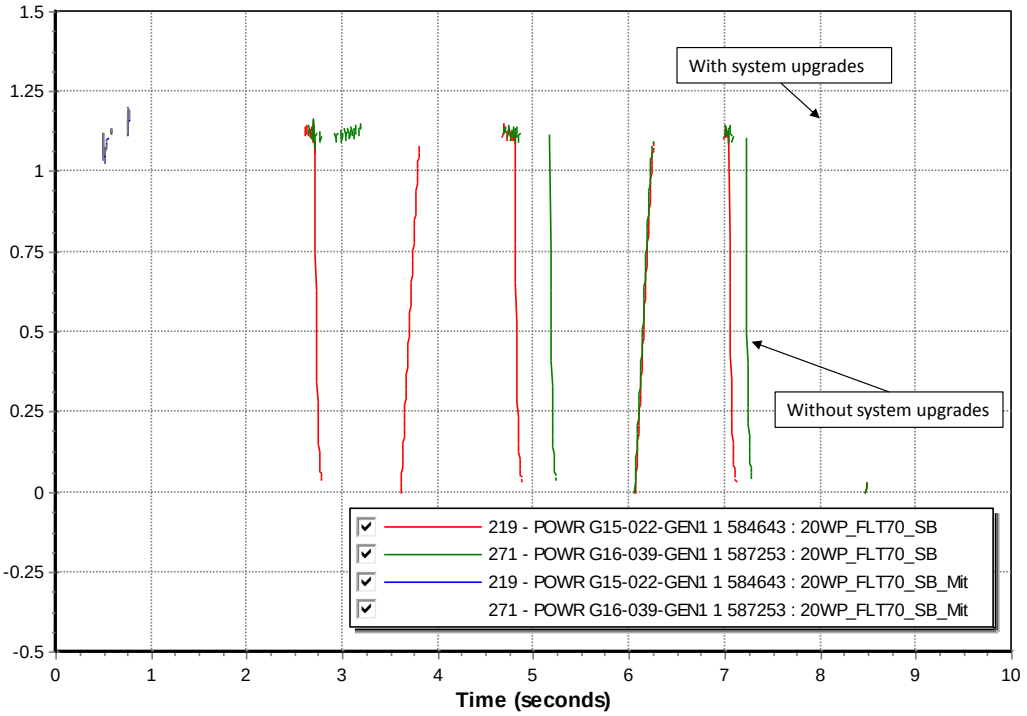

Figure 3-8: Comparison plot of GEN-2016-039's and GEN-2015-022's real power for 2020 Winter Peak conditions with and without system upgrades for FLT70.

FLT134-1PH, a single-phase stuck breaker fault resulting in the loss of Hobbs to Gaines Generation Tap 230 kV, was observed to have system instability and generator tripping. Refer to Figure 3-9 for a representative comparison plot of Hobbs area voltages for the 2020 Winter Peak case with and without system upgrades. Refer to Figure 3-10 for comparison plot of GEN-2016-015's and GEN-2016-062's real power for the 2020 Winter Peak case with and without system upgrades. The upgrades as stated in the beginning of this section were implemented. Additionally, the capacitor bank at NA Enrich 115 kV (28.8 Mvar) and Drinkard 115 kV (14.4 Mvar) were locked at full output. With the addition of these capacitor banks, there was no additional voltage violations or generation tripping off-line. The system recovered within SPP criteria. Note after discussion with SPP, it was determined a second circuit from Andrews to NEF 115 kV will be implemented which will help the voltage issue in this area.

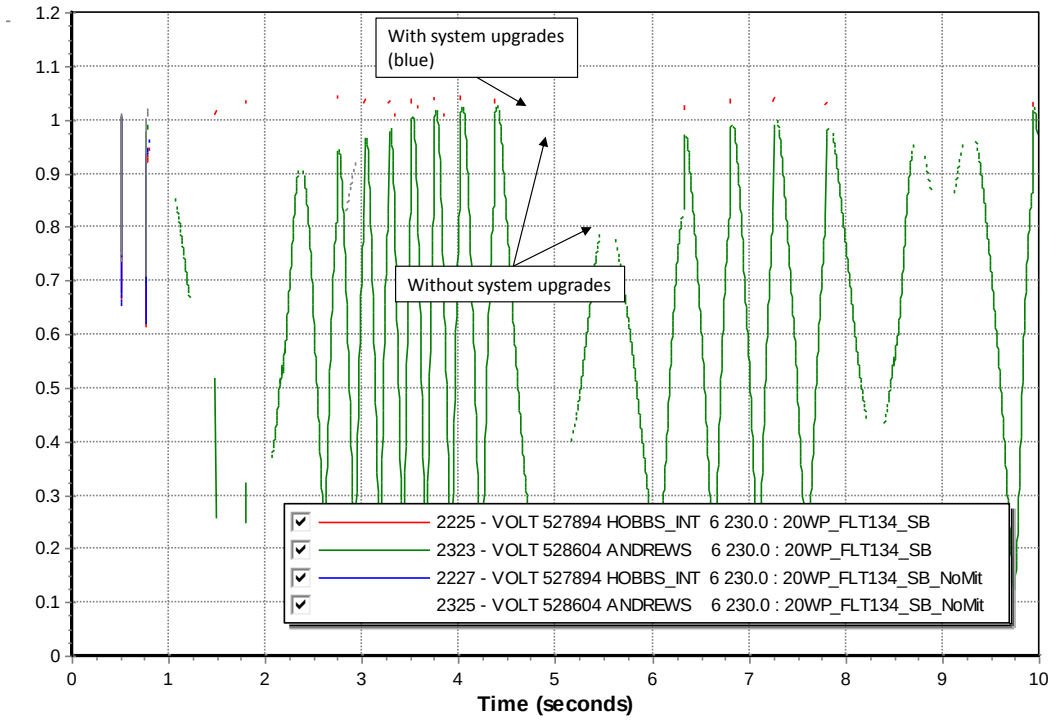

Figure 3-9: Representative plot of Andrews area voltages for 2020 Winter Peak conditions with and without system upgrades for FLT134.

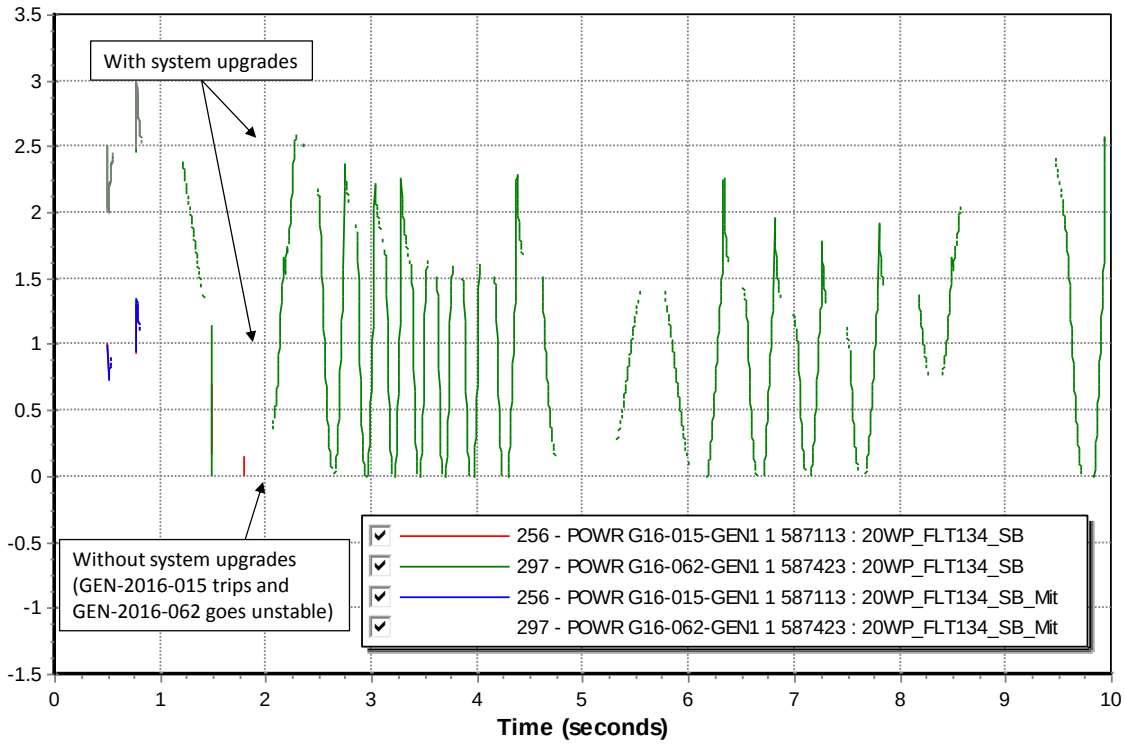

Figure 3-10: Comparison plot of GEN-2016-015's and GEN-2016-062's real power for 2020 Winter Peak conditions with and without system upgrades for FLT134.

FLT192-1PH, a single-phase stuck breaker fault resulting in the loss of Chaves County to Samson 115 kV and Chaves County to Urton 115 kV, was observed to have voltage recovery below 0.9 p.u. Refer to Figure 3-11 for a representative comparison plot of Chaves County area voltages for the 2016 Winter Peak case with and without system upgrades. After the upgrades as stated earlier were implemented, there was no additional voltage violations or generation tripping off-line. The system recovered within SPP criteria.

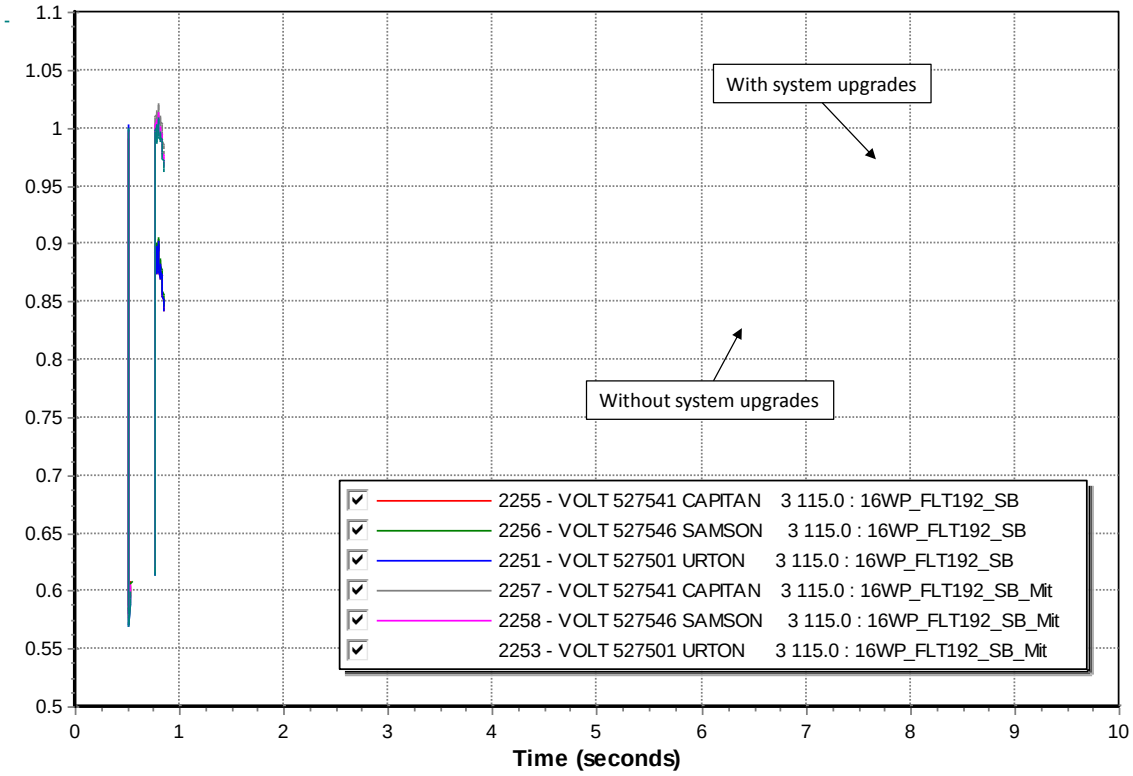

Figure 3-11: Representative plot of Chaves County area voltages for 2016 Winter Peak conditions with and without system upgrades for FLT192.

FLT196-3PH, a three-phase fault at Crawfish Draw 765 kV resulting in the loss of Crawfish Draw to Seminole 765 kV, was observed to have system instability. Refer to Figure 3-12 for a representative comparison plot of OKU 345 kV area voltages for the 2016 Winter Peak case with and without system upgrades. In addition to the upgrades as previously stated, it was necessary to limit the flow along the Crawfish Draw to Seminole 765 kV line in both the 2016 Winter Peak case and the 2020 Winter Peak case. The following are the flow limits along the Crawfish Draw to Seminole 765 kV line:

- 2016 Winter Peak: 1625 MW
- 2020 Winter Peak: 1395 MW

With the addition of these flow limits, there was no additional voltage violations or generation tripping off-line. The system recovered within SPP criteria.

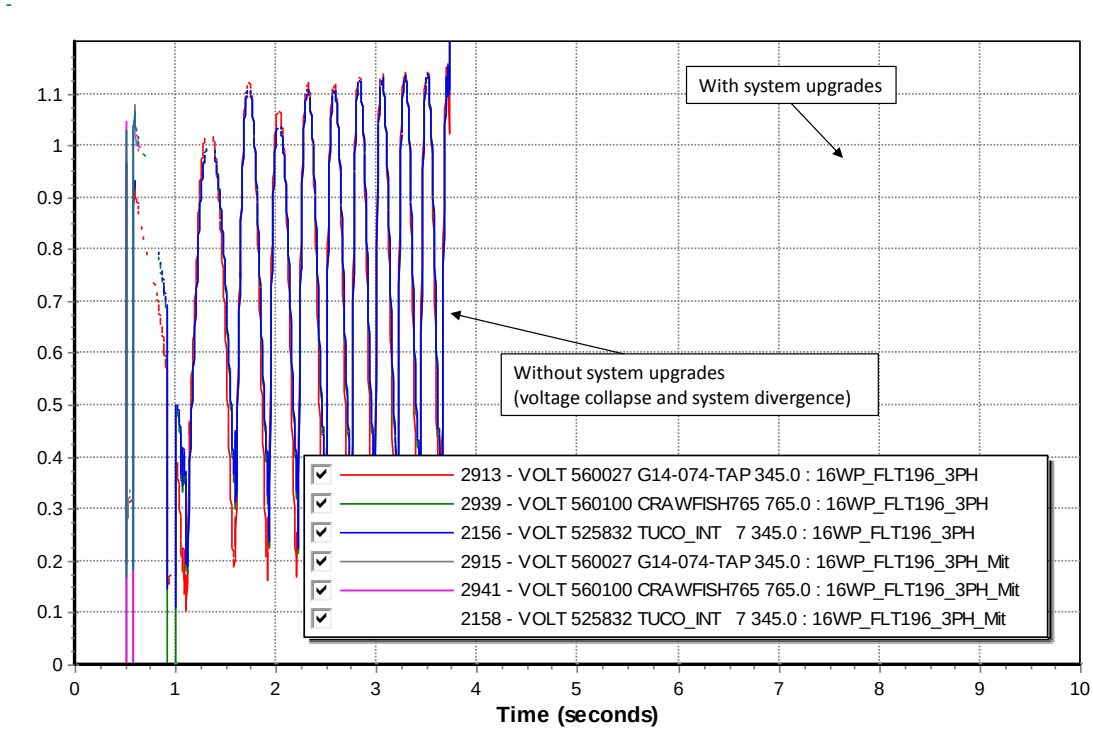

Figure 3-12: Representative plot of OKU 345 kV area voltages for 2016 Winter Peak conditions with and without system upgrades for FLT196.

For the 25SP case, low voltages were observed in the Seminole and Mustang 230 kV area for faults resulting in the loss of Seminole to Mustang 230 kV. With the addition of the Seminole to Mustang 115 kV circuit #1, these low voltage were mitigated. Refer to Figure 3-13 for a representative comparison plot of bus voltages in the Seminole 230 kV area for FLT56-3PH (three-phase fault resulting in loss of Seminole to Mustang 230 kV circuit #1) with and without system upgrades.

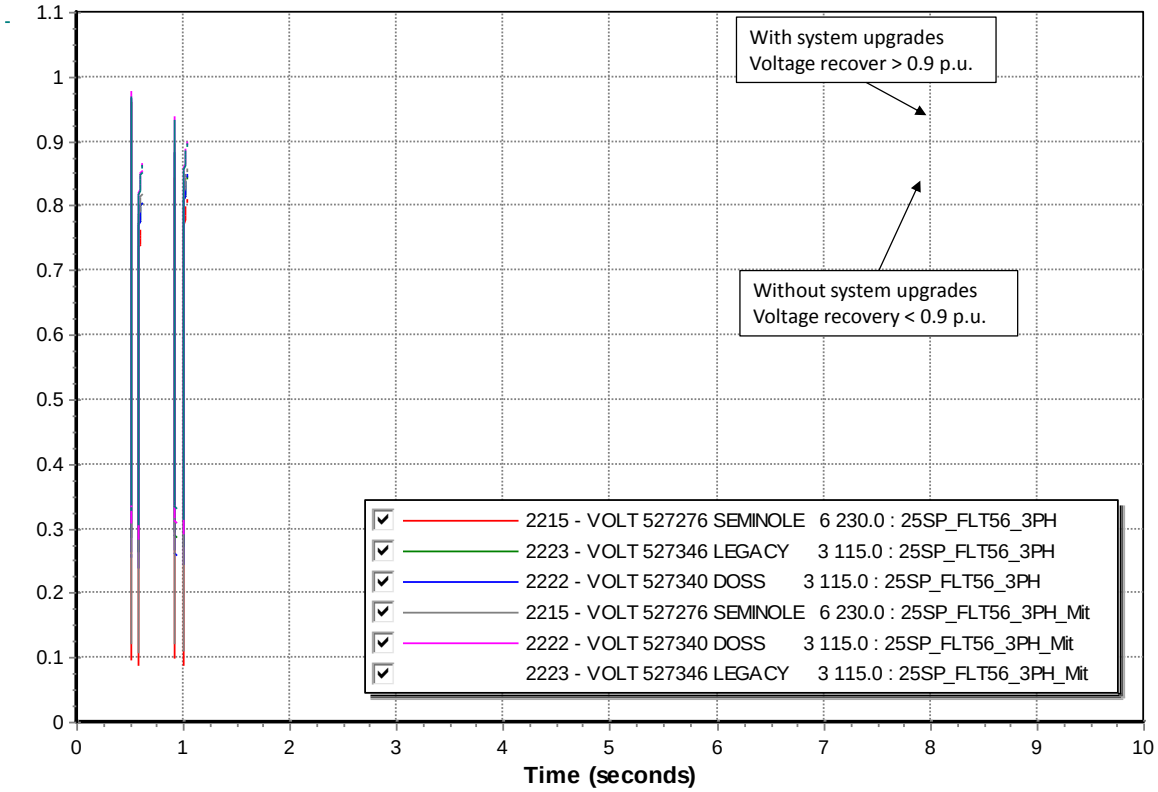

Figure 3-13: Representative plot of Seminole area voltages for 2025 Summer Peak conditions with and without system upgrades for FLT56.

For faults FLT104 through FLT116, which are three-phase faults involving GEN-2016-002, GEN-2016-002 trips offline due to modeling issues with the supplied Gamesa User Model (GD0800_V32.lib). For this study, another version of the Gamesa User Model that has been utilized previously with expected recovery characteristics was implemented. The GXX048 Gamesa User Model (GXX048_V32.lib) was utilized for this study and was observed to behave correctly. It is recommended the GD0800 Gamesa User Model be investigated before implementing in the DISIS-2016-001 Group 6 study.

For faults FLT126 through FLT139, which are three-phase faults near Hobbs 230 kV and adjacent buses, GEN-2016-015 trips offline due to over frequency and over voltage protection. For this study, the over frequency and over voltage protection of the TMEIC photovoltaic inverter model (ITMEIC) were set to 75 Hz and 1.8 p.u., respectively, to avoid instantaneous tripping. It is recommended the developer of the TMEIC photovoltaic inverter model examine this model for three-phase faults that cause the model to trip on over frequency and over voltage protection.

After the upgrades were implemented, the Stability Analysis was re-simulated to determine system stability. With the required upgrade, the Stability Analysis determined that there was no wind turbine tripping or system instability as a result of interconnected all study projects at 100% output.

3.3 Stand Alone Scenario Stability Analysis Results: GEN-2015-018

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions when GEN-2015-018 was interconnected at 100% output. Refer to Table 3-3 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2015-018 Stand Alone Analysis. Table 3-3 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u. Note the voltage at Bailey County 115 kV recovered below 0.9 p.u. for several faults at Bailey County 115 kV but these violations were determined to be pre-existing conditions and are not mitigated in this study.

Refer to Appendix G, Appendix H, and Appendix J for a complete set of plots for all Stand Alone Scenario contingencies for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions, respectively

Table 3-3
Stand Alone Scenario GEN-2015-018: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
1	FLT01-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
2	FLT02-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
3	FLT03-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
4	FLT04-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
5	FLT05-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
6	FLT06-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
7	FLT07-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
8	FLT08-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
9	FLT09-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
10	FLT10-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
11	FLT11-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
12	FLT12-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
13	FLT13-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
14	FLT14-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	V < 0.9[1]	Stable
15	FLT15-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
16	FLT16-PO	-	-	Compliant	Stable	-	-	V < 0.9[1]	Stable	-	-	Compliant	Stable
17	FLT17-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
18	FLT18-PO	-	-	Compliant	Stable	-	-	V < 0.9[1]	Stable	-	-	Compliant	Stable
19	FLT19-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

Note 1: Pre-existing condition, not mitigated

3.4 Stand Alone Scenario Stability Analysis Results: GEN-2015-033

The Stand Alone Scenario Stability Analysis determined that there multiple contingencies across all seasons that resulted in system/voltage instability and generation tripping offline when GEN-2015-033 was interconnected at 100% output.

Refer to Table 3-4 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2015-033 Stand Alone Analysis. Table 3-4 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

It was determined that the following upgrades were required to mitigate the violations observed:

- Potter County to Grapevine to Chisholm 345 kV circuit #1
- Potter County to Tolk 345 kV circuit #1
- Tolk to Crawfish Draw 345 kV circuit #1
- OKU SVC +300/-100 Mvar (add +200 Mvar)
- Add 200 Mvar Capacitor Bank at OKU 345 kV (550 Mvar capacitor bank total)

After the above upgrades were implemented, there were no additional voltage violations or system instability and all voltages and generators recovered within SPP criteria.

Table 3-4
Stand Alone Scenario GEN-2015-033: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
20	FLT20-3PH	-	-	V > 1.1	Gen Trip	-	-	V > 1.1	Gen Trip	-	-	Compliant	Gen Trip
21	FLT21-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
22	FLT22-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
23	FLT23-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
24	FLT24-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
25	FLT25-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
26	FLT26-3PH	-	-	V > 1.1	Gen Trip	-	-	V > 1.1	Gen Trip	-	-	Compliant	Stable
27	FLT27-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
28	FLT28-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
29	FLT29-SB	System Instability				System Instability				-	-	Compliant	Stable
30	FLT30-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
31	FLT31-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
32	FLT32-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
33	FLT33-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

3.5 Stand Alone Scenario Stability Analysis Results: GEN-2015-039

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for 2016 Winter Peak and 2017 Summer Peak when GEN-2015-039 was interconnected at 100% output. However, two contingencies resulted in low voltage recovery below 0.9 p.u. in the 2025 Summer Peak case.

Refer to Table 3-5 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2015-039 Stand Alone Analysis. Table 3-5 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

It was determined that the following upgrades were required to mitigate the 2025 Summer Peak violations observed:

- 25 Mvar capacitor bank at Hereford 115 kV

After the above upgrades were implemented, there were no additional voltage violations or system instability and all voltages and generators recovered within SPP criteria.

Table 3-5
Stand Alone Scenario GEN-2015-039: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
35	FLT35-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
36	FLT36-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
37	FLT37-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
38	FLT38-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
39	FLT39-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
40	FLT40-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
41	FLT41-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
42	FLT42-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
43	FLT43-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
44	FLT44-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
45	FLT45-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
46	FLT46-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	V < 0.9	Stable
47	FLT47-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
48	FLT48-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
49	FLT49-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
50	FLT50-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
51	FLT51-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
52	FLT52-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	V < 0.9	Stable

3.6 Stand Alone Scenario Stability Analysis Results: GEN-2015-040

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for 2016 Winter Peak and 2017 Summer Peak when GEN-2015-040 was interconnected at 100% output. However, two contingencies resulted in low voltage recovery below 0.9 p.u. in the 2025 Summer Peak case.

Refer to Table 3-6 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2015-040 Stand Alone Analysis. Table 3-6 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

It was determined that the following upgrades were required to mitigate the 2025 Summer Peak violations observed:

- Seminole to Mustang 115 kV circuit #1

After the above upgrades were implemented, there were no additional voltage violations or system instability and all voltages and generators recovered within SPP criteria.

Table 3-6
Stand Alone Scenario GEN-2015-040: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
53	FLT53-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
54	FLT54-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
55	FLT55-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
56	FLT56-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	V < 0.9	Stable
57	FLT57-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
58	FLT58-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
59	FLT59-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
60	FLT60-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
61	FLT61-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
62	FLT62-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
63	FLT63-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
64	FLT64-3PH (No 16WP)	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
65	FLT65-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
66	FLT66-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
67	FLT67-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
68	FLT68-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
69	FLT69-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
70	FLT70-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
71	FLT71-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
72	FLT72-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	V < 0.9	Stable

3.7 Stand Alone Scenario Stability Analysis Results: GEN-2015-041

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for 2025 Summer Peak when GEN-2015-041 was interconnected at 100% output. However, several contingencies resulted in high voltages, system instability, and generator tripping in the 2016 Winter Peak Case and 2017 Summer Peak case.

Refer to Table 3-7 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2015-041 Stand Alone Analysis. Table 3-7 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

It was determined that the following upgrades were required to mitigate the 2025 Summer Peak violations observed:

- Potter County to Grapevine to Chisholm 345 kV circuit #1
- Potter County to Tolk 345 kV circuit #1
- Tolk to Crawfish Draw 345 kV circuit #1
- OKU SVC +300/-100 Mvar (add +200 Mvar)
- Add 200 Mvar Capacitor Bank at OKU 345 kV (550 Mvar capacitor bank total)

After the above upgrades were implemented, there were no additional voltage violations or system instability and all voltages and generators recovered within SPP criteria.

Table 3-7
Stand Alone Scenario GEN-2015-041: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
20	FLT20-3PH	-	-	V > 1.1	Gen Trip	-	-	V > 1.1	Gen Trip	-	-	Compliant	Stable
21	FLT21-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
22	FLT22-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
23	FLT23-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
24	FLT24-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
27	FLT27-SB	-	-	Compliant	Stable	-	-	V > 1.1	Stable	-	-	Compliant	Stable
28	FLT28-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
29	FLT29-SB	Voltage Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
31	FLT31-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
32	FLT32-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
33	FLT33-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
73	FLT73-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
74	FLT74-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
75	FLT75-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
76	FLT76-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

3.8 Stand Alone Scenario Stability Analysis Results: GEN-2015-078

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for 2016 Winter Peak and 2017 Summer Peak when GEN-2015-078 was interconnected at 100% output. However, one contingency resulted in low voltage recovery below 0.9 p.u. in the 2025 Summer Peak case.

Refer to Table 3-8 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2015-078 Stand Alone Analysis. Table 3-8 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

It was determined that the following upgrades were required to mitigate the 2025 Summer Peak violation observed:

- Seminole to Mustang 115 kV circuit #1

After the above upgrades were implemented, there were no additional voltage violations or system instability and all voltages and generators recovered within SPP criteria.

Table 3-8
Stand Alone Scenario GEN-2015-078: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
53	FLT53-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
54	FLT54-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
55	FLT55-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
56	FLT56-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	V < 0.9	Stable
61	FLT61-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
62	FLT62-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
63	FLT63-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
64	FLT64-3PH (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable
77	FLT77-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
78	FLT78-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
79	FLT79-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
80	FLT80-SB (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable
81	FLT81-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
82	FLT82-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
83	FLT83-PO (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable

3.9 Stand Alone Scenario Stability Analysis Results: ASGI-2016-001

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak when ASGI-2016-001 was interconnected at 100% output.

Refer to Table 3-9 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the ASGI-2016-001 Stand Alone Analysis. Table 3-9 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

Table 3-9
Stand Alone Scenario ASGI-2016-001: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
84	FLT84-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
85	FLT85-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
86	FLT86-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
87	FLT87-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
88	FLT88-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
89	FLT89-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
90	FLT90-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
91	FLT91-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
92	FLT92-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
93	FLT93-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
94	FLT94-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
95	FLT95-3PH (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable
96	FLT96-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
97	FLT97-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
98	FLT98-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
99	FLT99-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

3.10 Stand Alone Scenario Stability Analysis Results: ASGI-2016-002

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak when ASGI-2016-002 was interconnected at 100% output.

Refer to Table 3-10 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the ASGI-2016-002 Stand Alone Analysis. Table 3-10 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

Table 3-10
Stand Alone Scenario ASGI-2016-002: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
84	FLT84-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
85	FLT85-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
86	FLT86-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
92	FLT92-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
93	FLT93-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
94	FLT94-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
95	FLT95-3PH (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable
97	FLT97-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
98	FLT98-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
100	FLT100-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
101	FLT101-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
102	FLT102-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
103	FLT103-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

3.11 Stand Alone Scenario Stability Analysis Results: GEN-2016-002

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak when GEN-2016-002 was interconnected at 100% output.

Refer to Table 3-11 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-002 Stand Alone Analysis. Table 3-11 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

For GEN-2016-002, GEN-2016-002 trips offline due to modeling issues with the supplied Gamesa User Model (GD0800_V32.lib). For this study, another version of the Gamesa User Model that has been utilized previously with expected recovery characteristics was implemented. The GXX048 Gamesa User Model (GXX048_V32.lib) was utilized for this study and was observed to behave correctly. It is recommended the GD0800 Gamesa User Model be investigated before implementing in the DISIS-2016-001 Group 6 study.

Table 3-11
Stand Alone Scenario GEN-2016-002: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
104	FLT104-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
105	FLT105-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
106	FLT106-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
107	FLT107-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
108	FLT108-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
109	FLT109-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
110	FLT110-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
111	FLT111-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
112	FLT112-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
113	FLT113-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
114	FLT114-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
115	FLT115-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
116	FLT116-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

3.12 Stand Alone Scenario Stability Analysis Results: ASGI-2016-004

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak when ASGI-2016-004 was interconnected at 100% output.

Refer to Table 3-12 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the ASGI-2016-004 Stand Alone Analysis. Table 3-12 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

Table 3-12
Stand Alone Scenario ASGI-2016-004: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
105	FLT105-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
106	FLT106-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
107	FLT107-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
108	FLT108-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
109	FLT109-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
110	FLT110-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
111	FLT111-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
112	FLT112-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
113	FLT113-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
114	FLT114-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
115	FLT115-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
116	FLT116-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
117	FLT117-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
118	FLT118-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
119	FLT119-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
120	FLT120-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
121	FLT121-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
122	FLT122-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
123	FLT123-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
124	FLT124-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
125	FLT125-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

3.13 Stand Alone Scenario Stability Analysis Results: GEN-2016-015

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak when GEN-2016-015 was interconnected at 100% output.

Refer to Table 3-13 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-015 Stand Alone Analysis. Table 3-13 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

For faults FLT126 through FLT139, which are three-phase faults near Hobbs 230 kV and adjacent buses, GEN-2016-015 trips offline due to over frequency and over voltage protection. For this study, the over frequency and over voltage protection of the TMEIC photovoltaic inverter model (ITMEIC) were set to 75 Hz and 1.8 p.u., respectively, to avoid instantaneous tripping. It is recommended the developer of the TMEIC photovoltaic inverter model examine this model for three-phase faults that cause the model to trip on over frequency and over voltage protection.

Table 3-13
Stand Alone Scenario GEN-2016-015: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
126	FLT126-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
127	FLT127-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
128	FLT128-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
129	FLT129-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
130	FLT130-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
131	FLT131-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
132	FLT132-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
133	FLT133-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
134	FLT134-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
135	FLT135-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
136	FLT136-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
137	FLT137-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
138	FLT138-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
139	FLT139-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

3.14 Stand Alone Scenario Stability Analysis Results: GEN-2016-039

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak when GEN-2016-039 was interconnected at 100% output.

Refer to Table 3-14 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-039 Stand Alone Analysis. Table 3-14 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

Table 3-14
Stand Alone Scenario GEN-2016-039: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
140	FLT140-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
141	FLT141-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
142	FLT142-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
143	FLT143-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
144	FLT144-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
145	FLT145-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
146	FLT146-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
147	FLT147-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
148	FLT148-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
149	FLT149-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
150	FLT150-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
151	FLT151-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
152	FLT152-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
153	FLT153-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
154	FLT154-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
155	FLT155-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
156	FLT156-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

3.15 Stand Alone Scenario Stability Analysis Results: GEN-2016-056

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak when GEN-2016-056 was interconnected at 100% output.

Refer to Table 3-15 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-056 Stand Alone Analysis. Table 3-15 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

Table 3-15
Stand Alone Scenario GEN-2016-056: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
86	FLT86-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
93	FLT93-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
94	FLT94-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
95	FLT95-3PH (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable
157	FLT157-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
158	FLT158-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
159	FLT159-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
160	FLT160-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
161	FLT161-SB (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable
162	FLT162-SB (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable
163	FLT163-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
164	FLT164-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
165	FLT165-PO (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable
166	FLT166-PO (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable
167	FLT167-PO (No 16WP)	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable

3.16 Stand Alone Scenario Stability Analysis Results: GEN-2016-058

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for 2017 Summer Peak and 2025 Summer Peak when GEN-2016-058 was interconnected at 100% output. However, one contingency resulted in voltage stability in the 2016 Winter Peak case.

Refer to Table 3-16 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-058 Stand Alone Analysis. Table 3-16 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

It was determined that the following upgrades were required to mitigate the 2016 Winter Peak violations observed:

- Potter County to Grapevine to Chisholm 345 kV circuit #1
- Potter County to Tolk 345 kV circuit #1
- Tolk to Crawfish Draw 345 kV circuit #1
- OKU SVC +300/-100 Mvar (add +200 Mvar)
- Add 200 Mvar Capacitor Bank at OKU 345 kV (550 Mvar capacitor bank total)

After the above upgrades were implemented, there were no additional voltage violations or system instability and all voltages and generators recovered within SPP criteria.

Table 3-16
Stand Alone Scenario GEN-2016-058: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
22	FLT22-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
23	FLT23-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
28	FLT28-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
29	FLT29-SB	Voltage Instability				-	-	Compliant	Stable	-	-	Compliant	Stable
55	FLT55-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
168	FLT168-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
169	FLT169-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
170	FLT170-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
171	FLT171-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
172	FLT172-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
173	FLT173-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
174	FLT174-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
175	FLT175-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
176	FLT176-3PH (25SP)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	Compliant	Stable
177	FLT177-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
178	FLT178-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
179	FLT179-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
180	FLT180-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
181	FLT181-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
182	FLT182-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
183	FLT183-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

3.17 Stand Alone Scenario Stability Analysis Results: GEN-2016-062

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak when GEN-2016-062 was interconnected at 100% output.

Refer to Table 3-17 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-062 Stand Alone Analysis. Table 3-17 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

Table 3-17
Stand Alone Scenario GEN-2016-062: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
126	FLT126-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
127	FLT127-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
128	FLT128-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
129	FLT129-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
130	FLT130-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
131	FLT131-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
132	FLT132-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
133	FLT133-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
134	FLT134-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
135	FLT135-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
136	FLT136-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
137	FLT137-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
138	FLT138-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
139	FLT139-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

3.18 Stand Alone Scenario Stability Analysis Results: GEN-2016-069

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for 2025 Summer Peak when GEN-2016-069 was interconnected at 100% output. However, several contingencies resulted in low voltages in the 2016 Winter Peak and 2017 Summer Peak case.

Refer to Table 3-18 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-069 Stand Alone Analysis. Table 3-18 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

It was determined that the following upgrades were required to mitigate the 2016 Winter Peak and 2017 Summer Peak violations observed:

- Potter County to Grapevine to Chisholm 345 kV circuit #1
- Potter County to Tolk 345 kV circuit #1
- Tolk to Crawfish Draw 345 kV circuit #1
- Chaves County – Price – CV Pine – Capitan 115 kV circuit #1
    - Required to be implemented in 16WP and 17SP
    - Line exists in 25SP

After the above upgrades were implemented, there were no additional voltage violations or system instability and all voltages and generators recovered within SPP criteria.

Table 3-18
Stand Alone Scenario GEN-2016-069: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
184	FLT184-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
185	FLT185-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
186	FLT186-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
187	FLT187-3PH (25SP)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	Compliant	Stable
188	FLT188-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
189	FLT189-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
190	FLT190-3PH (25SP)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	Compliant	Stable
191	FLT191-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
192	FLT192-SB	-	-	V < 0.9	Stable	-	-	V < 0.9	Stable	-	-	Compliant	Stable
193	FLT193-PO	-	-	V < 0.9	Stable	-	-	V < 0.9	Stable	-	-	Compliant	Stable
194	FLT194-PO	-	-	V < 0.9	Stable	-	-	V < 0.9	Stable	-	-	Compliant	Stable

SECTION 4: SHORT CIRCUIT ANALYSIS

The objective of this task is to quantify the three-phase to ground fault currents for the 2017 Summer Peak and 2025 Summer Peak seasons for each interconnecting generator.

4.1 Approach

The short-circuit analysis will assess breaker adequacy and fault duties for the generator interconnection bus and five buses away from the point of interconnection. MEPPI will assume no outages to find maximum short-circuit currents that flow through the breaker. The Automatic Sequencing Fault Calculation (ASCC) function in PSS/E was utilized to perform this task. FLAT conditions were applied to pre-fault conditions and the following adjustments were utilized:

- All synchronous and asynchronous machine P and Q output was set to zero
- All transformer tap ratios were set to 1.0 p.u. and all phase shift angles were set to zero
- All generator reactance's were fixed to the subtransient reactance
- All line charging was set to zero
- All shunts were set to zero
- All loads were set to zero
- All pre-fault bus voltages were set to 1.0 p.u. and a phase shift angle of zero

Note upgrades found to be necessary for the Stability Analysis were included in the Short-Circuit Analysis.

4.2 Short Circuit Results: 2017 Summer Peak

The maximum fault current for each bus is provided for the 2017 Summer Peak conditions. The following tables show the short circuit results for the study generators for the 2017 Summer Peak condition:

- Table 4-1: Short Circuit Analysis for GEN-2015-018 (17SP)
- Table 4-2: Short Circuit Analysis for GEN-2015-033 (17SP)
- Table 4-3: Short Circuit Analysis for GEN-2015-039 (17SP)
- Table 4-4: Short Circuit Analysis for GEN-2015-040 (17SP)
- Table 4-5: Short Circuit Analysis for GEN-2015-041 (17SP)
- Table 4-6: Short Circuit Analysis for GEN-2015-078 (17SP)
- Table 4-7: Short Circuit Analysis for ASGI-2016-001 (17SP)
- Table 4-8: Short Circuit Analysis for ASGI-2016-002 (17SP)
- Table 4-9: Short Circuit Analysis for GEN-2016-002 (17SP)
- Table 4-10: Short Circuit Analysis for ASGI-2016-004 (17SP)
- Table 4-11: Short Circuit Analysis for GEN-2016-015 and GEN-2016-062 (17SP)
- Table 4-12: Short Circuit Analysis for GEN-2016-039 (17SP)

- Table 4-13: Short Circuit Analysis for GEN-2016-056 (17SP)
- Table 4-14: Short Circuit Analysis for GEN-2016-058 (17SP)
- Table 4-15: Short Circuit Analysis for GEN-2016-069 (17SP)

Table 4-1
Short Circuit Analysis for Study Project GEN-2015-018 (17SP)

Study Generator GEN-2015-018											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
524486	CAPROCK 3	115	2.85	524908	ROOSEVELT 3	115	10.30	525393	SPRINGLAKE 3	115	8.84
524502	NORTON 3	115	2.72	524909	ROSEVELT_N 6	230	8.86	525414	LAMTON 3	115	7.62
524509	FE-TUCMCARI3	115	1.93	524911	ROSEVELT_S 6	230	8.86	525440	LC-S_OLTON 3	115	7.21
524648	CARGILL 3	115	3.89	524915	SW_4K33 6	230	8.86	525446	SPGLAKE_TP3	115	9.87
524662	PARMER_CO 3	115	4.08	524923	PORTALES 2	69	7.12	525453	HALE_CNTY 2	69	6.88
524664	DS-#24 3	115	4.03	524924	PORTALES 3	115	7.23	525454	HALE_CNTY 3	115	10.04
524669	DS-#20 3	115	4.81	524929	RO-PORT_MTR2	69	7.12	525461	NEWHART 6	230	10.54
524764	NORRIS_TP 3	115	10.54	524934	ZODIAC 2	69	5.30	525480	PLANT_X 3	115	17.91
524768	PLSNT_HILL 3	115	9.81	524935	KILGORE 3	115	5.64	525481	PLANT_X 6	230	22.53
524770	PLSNT_HILL 6	230	6.11	524941	PORTALES#1 2	69	5.49	525524	TOLK_EAST 6	230	28.04
524773	E_CLOVIS 3	115	8.44	524987	LARIAT 2	69	2.09	525531	TOLK_WEST 6	230	28.04
524776	N_CLOVIS_TP3	115	7.14	524996	BC-PROGRESS2	69	2.67	525543	TOLK_TAP 6	230	28.04
524777	N_CLOVIS 3	115	6.47	525001	W_MULESHOE 2	69	3.77	525635	LAMB_CNTY 2	69	5.90
524783	W_CLOVIS 2	69	2.41	525008	MULESH_CTY 2	69	3.92	525636	LAMB_CNTY 3	115	8.43
524797	PERIMETER 3	115	6.33	525017	EMULESH&VLY2	69	3.93	525637	LAMB_CNTY 6	230	5.36
524801	NORRIS 3	115	9.68	525018	EMULESH&VLY3	115	4.70	525828	TUCO_INT 3	115	19.98
524808	FE-CLVS_INT3	115	6.66	525019	EMU&VLY_TP 3	115	5.07	526020	HOCKLEY 3	115	5.48
524821	CURRY 2	69	4.35	525023	BC-BAIL_MTR2	69	4.79	526435	SUNDOWN 6	230	10.75
524822	CURRY 3	115	10.57	525027	BAILEYCO 2	69	4.79	560032	G15-018T	115	5.60
524831	FE-HOLLAND 3	115	8.69	525028	BAILEYCO 3	115	4.87	560051	G15-039-TAP	230	7.24
524838	FE-CLOVIS2 3	115	10.02	525038	BAILEY_PMP 2	69	2.68	562480	G13-027-TAP	230	9.29
524846	FARWELL 2	69	2.08	525045	LC-BECK 2	69	1.94	584600	GEN-2015-018	115	4.23
524853	DS-#10 2	69	1.69	525050	BC-KELLEY 3	115	8.12	584620	GEN-2015-020	115	9.32
524863	FE-CHZPLT 3	115	7.68	525056	BC-EARTH 3	115	8.43	599955	PNM-DC6	230	8.86
524874	OASIS 3	115	9.56	525192	KRESS_INT 3	115	11.29				
524875	OASIS 6	230	7.35	525326	COX 3	115	5.87				

Table 4-2
Short Circuit Analysis for Study Project GEN-2015-033 (17SP)

Study Generator GEN-2015-033											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
511422	FLETCHR4	138	7.64	524911	ROSEVELT_S 6	230	8.86	526676	GRASSLAND 3	115	5.63
511423	FLE TAP4	138	8.33	524915	SW_4K33 6	230	8.86	526677	GRASSLAND 6	230	5.35
511431	LWS S4	138	10.66	525192	KRESS_INT 3	115	11.29	526679	CIRRUS_WND 6	230	4.34
511436	COMANC-2	69	9.67	525212	SWISHER 3	115	10.36	526934	YOAKUM 3	115	16.71
511437	COMANC-4	138	17.60	525213	SWISHER 6	230	10.27	526935	YOAKUM 6	230	17.40
511439	LWSTAP 4	138	11.10	525326	COX 3	115	5.87	526936	YOAKUM_345	345	8.72
511456	O.K.U.-7	345	5.85	525414	LAMTON 3	115	7.62	527010	OXYBRU_TP 6	230	13.85
511466	L.E.S.-2	69	16.39	525453	HALE_CNTY 2	69	6.88	527149	MUSTANG 6	230	15.55
511467	L.E.S.-4	138	23.63	525454	HALE_CNTY 3	115	10.04	527656	CROSSROADS 7	345	6.56
511468	L.E.S.-7	345	12.73	525461	NEWHART 6	230	10.54	527802	EDDY_CNTY 7	345	4.33
511469	LGORE-N2	69	7.95	525480	PLANT_X 3	115	17.91	527894	HOBBS_INT 6	230	19.06
511470	LGORE-S2	69	6.90	525481	PLANT_X 6	230	22.53	527896	HOBBS_INT 7	345	7.43
511474	SHERID4	138	11.91	525524	TOLK_EAST 6	230	28.04	529304	OMDUNCN4	138	6.62
511477	S.W.S.-4	138	27.28	525531	TOLK_WEST 6	230	28.04	560013	G14-057T	345	9.71
511486	ELGINJT4	138	9.72	525543	TOLK_TAP 6	230	28.04	560021	TUCO_2	230	21.95
511487	ELGINJT2	69	8.41	525549	TOLK 7	345	12.49	560022	TUCO_2	345	20.05
511488	112GORE4	138	12.07	525731	SP-ABERNTHY2	69	3.02	560027	G14-074-TAP	345	8.01
511494	COMMTAP4	138	20.77	525738	HALECENTER 2	69	2.46	560034	CHISHOLM2	345	14.94
511512	RPPAPER4	138	11.44	525779	FLOYD_CNTY 2	69	5.29	560035	GRAPEVINE	345	9.45
511537	ARTVLTP4	138	11.30	525780	FLOYD_CNTY 3	115	5.98	560050	G15-031-TAP	230	8.78
511553	CHISHOLM7	345	14.94	525816	TUCO_INT2 2	69	4.67	560051	G15-039-TAP	230	7.24
511563	ELSWORTH 4	138	9.64	525826	TUCO_INT 2	69	7.91	560059	G1579&G1580T	230	9.23
514801	MINCO 7	345	16.99	525828	TUCO_INT 3	115	19.98	560078	G16-037-TAP	345	9.42
514809	JOHNCO 7	345	9.35	525830	TUCO_INT 6	230	25.48	560088	G16-063-TAP	345	6.63
514901	CIMARON7	345	31.96	525832	TUCO_INT 7	345	19.73	560100	CRAWFISH765	765	7.77
515045	SEMINOL7	345	29.78	525840	ANTELOPE_1 6	230	25.23	560101	SEMINOLE765	765	10.18
515135	SUNNYSD4	138	17.24	525853	LH-WIL&ELLN2	69	2.58	562004	G11-025-TAP	115	4.55
515136	SUNNYSD7	345	10.19	525885	SP-NEWDEAL 2	69	3.39	562480	G13-027-TAP	230	9.29
515375	WWRDEHV7	345	19.72	525926	CROSBY 3	115	4.41	577103	GEN-2008-022	345	6.09
515444	MCNOWND7	345	16.94	526076	STANTON_W 3	115	9.31	583090	G1149&G1504	345	9.50
515458	BORDER 7	345	11.96	526109	SP-ERSKINE 3	115	11.24	583340	GEN-2012-020	230	9.51
515549	MNCWND37	345	11.65	526146	INDIANA 3	115	9.64	584070	G1457&G1642	345	6.33
515800	GRACMNT7	345	16.25	526159	CARLISLE 2	69	2.56	584260	GEN-2014-047	345	5.09
515802	GRACMNT4	138	26.27	526160	CARLISLE 3	115	13.00	584440	GEN-2014-074	345	7.52
520814	ANADARK4	138	28.30	526161	CARLISLE 6	230	11.82	584760	GEN-2015-033	345	7.01
521089	WASHITA4	138	24.69	526162	LP-DOUD_TP 3	115	11.48	584940	GEN-2015-056	345	5.65
522823	LP-MILWAKEE6	230	11.02	526192	MURPHY 3	115	10.35	585060	GEN-2015-068	345	14.23
522828	LP-MILWAKEE2	69	7.36	526268	LUBBCK_STH 3	115	15.73	585270	GEN-2015-093	345	9.55
522861	LP-SOUTHEST6	230	10.13	526269	LUBBCK_STH 6	230	11.90	585280	GEN-2015-092	345	6.13
522866	LP-COOK 2	69	28.40	526297	LUBBCK_EST 2	69	7.70	587230	GEN-2016-037	345	7.95
522870	LP-HOLLY 6	230	10.07	526298	LUBBCK_EST 3	115	13.37	587370	GEN-2016-056	230	11.30
522888	LP-WADSWRTH6	230	8.95	526299	LUBBCK_EST 6	230	9.38	587390	GEN-2016-058	345	8.66
523097	HITCHLAND 7	345	17.58	526337	JONES 6	230	11.96	590001	OKLEHV24	138	4.79
523959	POTTER_CO 6	230	16.56	526435	SUNDOWN 6	230	10.75	590003	OKLEHV14	138	4.80
523961	POTTER_CO 7	345	11.06	526460	AMOCO_SS 6	230	9.51	599891	OKLAUN 7	345	4.04
524296	SPNSPUR_WND7	345	5.45	526524	WOLFFORTH 3	115	11.29	599955	PNM-DC6	230	8.86
524909	ROSEVELT_N 6	230	8.86	526525	WOLFFORTH 6	230	12.11				

Table 4-3
Short Circuit Analysis for Study Project GEN-2015-039 (17SP)

Study Generator GEN-2015-039											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
522823	LP-MILWAKEE6	230	11.02	524911	ROSEVELT_S 6	230	8.86	525840	ANTELOPE_1 6	230	25.23
522861	LP-SOUTHEST6	230	10.13	524915	SW_4K33 6	230	8.86	526019	HOCKLEY 2	69	5.14
522870	LP-HOLLY 6	230	10.07	524924	PORTALES 3	115	7.23	526020	HOCKLEY 3	115	5.48
523095	HITCHLAND 6	230	15.49	525018	EMULESH&VLY3	115	4.70	526036	LC-OPDYKE 3	115	5.79
523097	HITCHLAND 7	345	17.58	525019	EMU&VLY_TP 3	115	5.07	526076	STANTON_W 3	115	9.31
523221	XIT_INTG 6	230	2.54	525027	BAILEYCO 2	69	4.79	526160	CARLISLE 3	115	13.00
523267	PRINGLE 6	230	3.88	525028	BAILEYCO 3	115	4.87	526161	CARLISLE 6	230	11.82
523308	MOORE_E 3	115	10.54	525050	BC-KELLEY 3	115	8.12	526268	LUBBCK_STH 3	115	15.73
523309	MOORE_CNTY 6	230	6.44	525056	BC-EARTH 3	115	8.43	526269	LUBBCK_STH 6	230	11.90
523869	CHAN/TASCOS6	230	3.70	525124	HART_INDUST3	115	7.49	526298	LUBBCK_EST 3	115	13.37
523959	POTTER_CO 6	230	16.56	525179	TULIA_TP 3	115	6.70	526299	LUBBCK_EST 6	230	9.38
523961	POTTER_CO 7	345	11.06	525191	KRESS_INT 2	69	4.44	526337	JONES 6	230	11.96
523977	HARRNG_WST 6	230	15.66	525192	KRESS_INT 3	115	11.29	526361	COCHRAN 3	115	6.96
523978	HARRNG_MID 6	230	15.66	525212	SWISHER 3	115	10.36	526424	PACIFIC 3	115	9.67
523979	HARRNG_EST 6	230	15.66	525213	SWISHER 6	230	10.27	526434	SUNDOWN 3	115	11.42
524007	ROLLHILLS 3	115	15.67	525225	KRESS_RURAL3	115	6.26	526435	SUNDOWN 6	230	10.75
524010	ROLLHILLS 6	230	14.09	525272	KISER 3	115	5.08	526445	AMOCO_TP 3	115	10.76
524266	BUSHLAND 3	115	8.75	525291	PLAINVW_TP 2	69	6.46	526452	AMOCO_CRYO 3	115	6.58
524267	BUSHLAND 6	230	8.87	525298	S_PLAINVEW 2	69	2.58	526460	AMOCO_SS 6	230	9.51
524276	WILDOR_WND 6	230	4.76	525325	COX 2	69	3.36	526475	YUMA_INT 3	115	10.83
524290	WILDOR2_JUS6	230	6.25	525326	COX 3	115	5.87	526484	LG-LEVELAND3	115	9.83
524296	SPNSPUR_WND7	345	5.45	525393	SPRINGLAKE 3	115	8.84	526524	WOLFFORTH 3	115	11.29
524300	HILLSIDE 3	115	11.22	525413	LAMTON 2	69	5.17	526525	WOLFFORTH 6	230	12.11
524306	COULTER 3	115	13.22	525414	LAMTON 3	115	7.62	526677	GRASSLAND 6	230	5.35
524415	AMA_SOUTH 6	230	10.54	525432	SP-HALFWAY 2	69	5.84	526736	TERRY_CNTY 3	115	10.81
524516	CANYON_WEST3	115	4.77	525440	LC-S_OLTON 3	115	7.21	526934	YOAKUM 3	115	16.71
524554	CENTRE_ST 2	69	3.79	525446	SPGLAKE_TP3	115	9.87	526935	YOAKUM 6	230	17.40
524561	DS-MTR 2	69	5.99	525453	HALE_CNTY 2	69	6.88	526936	YOAKUM_345	345	8.72
524567	NE_HEREFORD3	115	9.37	525454	HALE_CNTY 3	115	10.04	527010	OXYBRU_TP 6	230	13.85
524573	NE_HEREFORD2	69	6.67	525460	NEWHART 3	115	14.83	527149	MUSTANG 6	230	15.55
524580	DS-#9 2	69	3.18	525461	NEWHART 6	230	10.54	527656	CROSSROADS 7	345	6.56
524590	DAWN 3	115	5.12	525480	PLANT_X 3	115	17.91	560021	TUCO_2	230	21.95
524597	PANDAHFD 3	115	8.18	525481	PLANT_X 6	230	22.53	560022	TUCO_2	345	20.05
524605	HEREFORD 2	69	4.40	525524	TOLK_EAST 6	230	28.04	560027	G14-074-TAP	345	8.01
524606	HEREFORD 3	115	10.48	525531	TOLK_WEST 6	230	28.04	560032	G15-018T	115	5.60
524622	DEAFSMITH 3	115	11.66	525543	TOLK_TAP 6	230	28.04	560035	GRAPEVINE	345	9.45
524623	DEAFSMITH 6	230	7.45	525549	TOLK 7	345	12.49	560050	G15-031-TAP	230	8.78
524629	DS-#6 3	115	6.09	525613	W_LITTLFLD 2	69	2.97	560051	G15-039-TAP	230	7.24
524633	DS-#4 2	69	3.24	525620	LTFLD_S&CTY2	69	4.17	560059	G1579&G1580T	230	9.23
524655	FRIONA 3	115	3.90	525635	LAMB_CNTY 2	69	5.90	562480	G13-027-TAP	230	9.29
524694	DS-#22 3	115	4.92	525636	LAMB_CNTY 3	115	8.43	583340	GEN-2012-020	230	9.51
524734	DS-#21 3	115	10.62	525637	LAMB_CNTY 6	230	5.36	583840	GEN-2013-027	230	8.25
524745	CASTRO_CNTY2	69	9.51	525650	LC-LITTLFLD2	69	4.93	584220	GEN-2014-040	115	10.22
524746	CASTRO_CNTY3	115	11.43	525687	LC-LUMSCHAP2	69	4.61	584640	GEN-2015-022	115	10.36
524768	PLSNT_HILL 3	115	9.81	525780	FLOYD_CNTY 3	115	5.98	584750	GEN-2015-031	230	8.78
524770	PLSNT_HILL 6	230	6.11	525816	TUCO_INT2 2	69	4.67	584800	GEN-2015-039	230	6.16
524822	CURRY 3	115	10.57	525826	TUCO_INT 2	69	7.91	585060	GEN-2015-068	345	14.23
524875	OASIS 6	230	7.35	525828	TUCO_INT 3	115	19.98	587370	GEN-2016-056	230	11.30
524908	ROOSEVELT 3	115	10.30	525830	TUCO_INT 6	230	25.48	599955	PNM-DC6	230	8.86
524909	ROSEVELT_N 6	230	8.86	525832	TUCO_INT 7	345	19.73				

Table 4-4
Short Circuit Analysis for Study Project GEN-2015-040 (17SP)

Study Generator GEN-2015-040											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
515458	BORDER 7	345	11.96	527047	OXY_WILRD1 3	115	10.46	527276	SEMINOLE 6	230	7.25
524909	ROSEVELT_N 6	230	8.86	527051	ODC_TP 3	115	13.10	527286	XTO_RUSSEL 3	115	10.03
525481	PLANT_X 6	230	22.53	527056	ODC 3	115	9.89	527313	MIDAMERI_TP2	69	2.15
525531	TOLK_WEST 6	230	28.04	527062	SHELL_CO2 3	115	15.79	527321	GAINES 2	69	4.13
525543	TOLK_TAP 6	230	28.04	527068	SHELLC3_TP 3	115	10.51	527322	GAINES 3	115	8.55
525549	TOLK 7	345	12.49	527080	EL_PASO 3	115	15.56	527325	OXY_WSEM_TP3	115	8.47
525637	LAMB_CNTY 6	230	5.36	527099	DC_EAST 2	69	6.08	527339	DOSS 2	69	4.08
525832	TUCO_INT 7	345	19.73	527105	SAN_ANDS_TP3	115	16.40	527340	DOSS 3	115	7.15
526434	SUNDOWN 3	115	11.42	527106	SAN_ANDRES 3	115	11.69	527346	LEGACY 3	115	7.05
526435	SUNDOWN 6	230	10.75	527111	WASSON 2	69	5.95	527363	HIGG 3	115	10.21
526460	AMOCO_SS 6	230	9.51	527125	DENVER_CTY 2	69	8.62	527865	CUNNINHAM 6	230	17.37
526491	LG-CLAUENE 3	115	9.09	527130	DENVER_N 3	115	20.73	527891	HOBBS_INT 3	115	32.93
526524	WOLFFORTH 3	115	11.29	527136	DENVER_S 3	115	20.73	527894	HOBBS_INT 6	230	19.06
526525	WOLFFORTH 6	230	12.11	527146	MUSTANG 3	115	22.30	527896	HOBBS_INT 7	345	7.43
526735	TERRY_CNTY 2	69	7.07	527149	MUSTANG 6	230	15.55	528604	ANDREWS 6	230	8.30
526736	TERRY_CNTY 3	115	10.81	527151	GS-MUSTANG 6	230	15.55	528626	LE-PLNSINT 2	69	4.36
526784	AMOCOWASSON6	230	13.79	527183	JAYBEE 2	69	4.36	560021	TUCO_2	230	21.95
526792	PRENTICE 3	115	5.93	527194	LG-PLSHILL 3	115	7.53	560022	TUCO_2	345	20.05
526928	PLAINS_INT 3	115	9.85	527201	SEAGRAVES 2	69	5.40	560058	G15-077-TAP	115	8.20
526934	YOAKUM 3	115	16.71	527202	SEAGRAVES 3	115	8.53	560059	G1579&G1580T	230	9.23
526935	YOAKUM 6	230	17.40	527212	DIAMONDBACK3	115	3.11	560100	CRAWFISH765	765	7.77
526936	YOAKUM_345	345	8.72	527217	MOSS 2	69	5.30	562480	G13-027-TAP	230	9.29
526944	LG-PLAINS 3	115	7.93	527223	LG-MC&SEMNL2	69	2.58	583840	GEN-2013-027	230	8.25
526993	LG-WELLMAN 2	69	3.06	527238	ROZ 3	115	9.27	584810	GEN-2015-040	230	14.22
527010	OXYBRU_TP 6	230	13.85	527242	AMERADA 3	115	9.37	585150	GEN-2015-078	115	16.40
527018	BENNETT 3	115	13.09	527261	SULPHUR 2	69	3.36	585160	G1579&G1580	230	8.75
527036	SHELL_C2 3	115	12.76	527262	SULPHUR 3	115	5.69	587390	GEN-2016-058	345	8.66
527041	ARCO_TP 3	115	13.00	527275	SEMINOLE 3	115	11.43				

Table 4-5
Short Circuit Analysis for Study Project GEN-2015-041 (17SP)

Study Generator GEN-2015-041											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
510907	PITTSB-7	345	13.43	525413	LAMTON 2	69	5.17	526679	CIRRUS_WND 6	230	4.34
511423	FLE TAP4	138	8.33	525414	LAMTON 3	115	7.62	526694	GRAHAM 3	115	2.58
511437	COMANC-4	138	17.60	525432	SP-HALFWAY 2	69	5.84	526736	TERRY_CNTY 3	115	10.81
511439	LWSTAP 4	138	11.10	525440	LC-S_OLTON 3	115	7.21	526784	AMOCOWASSON6	230	13.79
511456	O.K.U.-7	345	5.85	525446	SPGLAKE_TP3	115	9.87	526792	PRENTICE 3	115	5.93
511466	L.E.S.-2	69	16.39	525453	HALE_CNTY 2	69	6.88	526928	PLAINS_INT 3	115	9.85
511467	L.E.S.-4	138	23.63	525454	HALE_CNTY 3	115	10.04	526934	YOAKUM 3	115	16.71
511468	L.E.S.-7	345	12.73	525460	NEWHART 3	115	14.83	526935	YOAKUM 6	230	17.40
511474	SHERID4	138	11.91	525461	NEWHART 6	230	10.54	526936	YOAKUM_345	345	8.72
511486	ELGINJT4	138	9.72	525480	PLANT_X 3	115	17.91	527010	OXYBRU_TP 6	230	13.85
511494	COMMTAP4	138	20.77	525481	PLANT_X 6	230	22.53	527041	ARCO_TP 3	115	13.00
511553	CHISHOLM7	345	14.94	525524	TOLK_EAST 6	230	28.04	527146	MUSTANG 3	115	22.30
511557	CHISHOLM6	230	12.34	525531	TOLK_WEST 6	230	28.04	527149	MUSTANG 6	230	15.55
514801	MINCO 7	345	16.99	525543	TOLK_TAP 6	230	28.04	527151	GS-MUSTANG 6	230	15.55
514908	ARCADIA7	345	25.37	525549	TOLK 7	345	12.49	527194	LG-PLSHILL 3	115	7.53
514934	DRAPER 7	345	21.50	525636	LAMB_CNTY 3	115	8.43	527276	SEMINOLE 6	230	7.25
515044	SEMINOL4	138	40.49	525637	LAMB_CNTY 6	230	5.36	527656	CROSSROADS 7	345	6.56
515045	SEMINOL7	345	29.78	525724	COUNTYLINE 2	69	2.21	527799	EDDY_NORTH 6	230	7.58
515136	SUNNYSD7	345	10.19	525731	SP-ABERNTHY2	69	3.02	527802	EDDY_CNTY 7	345	4.33
515224	MUSKOGE7	345	28.91	525738	HALECENTER 2	69	2.46	527865	CUNNINHAM 6	230	17.37
515375	WWRDEHV7	345	19.72	525745	LH-HALECTR 2	69	2.43	527891	HOBBS_INT 3	115	32.93
515376	WWRDEHV4	138	23.61	525769	BARWISE 2	69	3.75	527894	HOBBS_INT 6	230	19.06
515458	BORDER 7	345	11.96	525779	FLOYD_CNTY 2	69	5.29	527896	HOBBS_INT 7	345	7.43
515554	BVRCNTY7	345	18.58	525780	FLOYD_CNTY 3	115	5.98	528604	ANDREWS 6	230	8.30
515599	G07621119-20	345	13.17	525790	FLOYDADA_TP2	69	2.49	531512	WALKTAP7	345	8.02
515800	GRACMNT7	345	16.25	525811	LH-HARMONY 2	69	4.23	539801	THISTLE7	345	16.57
515802	GRACMNT4	138	26.27	525816	TUCO_INT2 2	69	4.67	560010	G14-037-TAP	345	17.55
522819	LP-NORTHEST2	69	9.81	525826	TUCO_INT 2	69	7.91	560013	G14-057T	345	9.71
522822	LP-NORTHWST2	69	4.30	525828	TUCO_INT 3	115	19.98	560021	TUCO_2	230	21.95
522823	LP-MILWAKEE6	230	11.02	525830	TUCO_INT 6	230	25.48	560022	TUCO_2	345	20.05
522828	LP-MILWAKEE2	69	7.36	525832	TUCO_INT 7	345	19.73	560027	G14-074-TAP	345	8.01
522832	LP-VICKSBRG2	69	11.07	525840	ANTELOPE_1 6	230	25.23	560034	CHISHOLM2	345	14.94
522857	LP-SOUTHEST2	69	20.07	525853	LH-WIL&ELLN2	69	2.58	560035	GRAPEVINE	345	9.45
522861	LP-SOUTHEST6	230	10.13	525860	SP-BECTON 2	69	2.29	560050	G15-031-TAP	230	8.78
522866	LP-COOK 2	69	28.40	525885	SP-NEWDEAL 2	69	3.39	560051	G15-039-TAP	230	7.24
522870	LP-HOLLY 6	230	10.07	525892	WHITE&MONRO2	69	2.56	560059	G1579&G1580T	230	9.23
522879	LP-WADSWRTH2	69	18.41	525925	CROSBY 2	69	4.72	560071	G16-003-TAP	345	15.67
522888	LP-WADSWRTH6	230	8.95	525926	CROSBY 3	115	4.41	560078	G16-037-TAP	345	9.42
523095	HITCHLAND 6	230	15.49	526076	STANTON_W 3	115	9.31	560100	CRAWFISH765	765	7.77
523097	HITCHLAND 7	345	17.58	526109	SP-ERSKINE 3	115	11.24	560101	SEMINOLE765	765	10.18
523101	NOBLE_WND 7	345	17.49	526130	SP-CARLISLE2	69	2.11	562004	G11-025-TAP	115	4.55
523112	NOVUS1 7	345	17.20	526146	INDIANA 3	115	9.64	562075	G11-051-TAP	345	12.48
523309	MOORE_CNTY 6	230	6.44	526159	CARLISLE 2	69	2.56	562480	G13-027-TAP	230	9.29
523869	CHAN/TASCOS6	230	3.70	526160	CARLISLE 3	115	13.00	576395	GEN-2010-014	345	12.40
523959	POTTER_CO 6	230	16.56	526161	CARLISLE 6	230	11.82	577103	GEN-2008-022	345	6.09
523961	POTTER_CO 7	345	11.06	526162	LP-DOUD_TP 3	115	11.48	577104	G08-022-WEST	345	5.61
523979	HARRNG_EST 6	230	15.66	526176	LP-DOUD 3	115	8.95	581137	GEN-2011-025	115	4.55
524010	ROLLHILLS 6	230	14.09	526184	SW_6878 2	69	2.16	581148	GEN-2011-022	345	15.80
524267	BUSHLAND 6	230	8.87	526192	MURPHY 3	115	10.35	583090	G1149&G1504	345	9.50
524296	SPNSPUR_WND7	345	5.45	526199	SP-FRANKFRD3	115	9.25	583340	GEN-2012-020	230	9.51
524415	AMA_SOUTH 6	230	10.54	526213	ALLEN 3	115	9.92	583819	ASGI2014-001	115	11.24
524623	DEAFSMITH 6	230	7.45	526267	LUBBCK_STH 2	69	4.24	583840	GEN-2013-027	230	8.25
524770	PLSNT_HILL 6	230	6.11	526268	LUBBCK_STH 3	115	15.73	584070	G1457&G1642	345	6.33
524875	OASIS 6	230	7.35	526269	LUBBCK_STH 6	230	11.90	584260	GEN-2014-047	345	5.09
524908	ROOSEVELT 3	115	10.30	526284	PLANTERS 2	69	6.10	584440	GEN-2014-074	345	7.52
524909	ROSEVELT_N 6	230	8.86	526297	LUBBCK_EST 2	69	7.70	584640	GEN-2015-022	115	10.36
524911	ROSEVELT_S 6	230	8.86	526298	LUBBCK_EST 3	115	13.37	584750	GEN-2015-031	230	8.78
524915	SW_4K33 6	230	8.86	526299	LUBBCK_EST 6	230	9.38	584760	GEN-2015-033	345	7.01
525019	EMU&VLY_TP 3	115	5.07	526310	CLUTTER 2	69	5.29	584800	GEN-2015-039	230	6.16
525056	BC-EARTH 3	115	8.43	526337	JONES 6	230	11.96	584940	GEN-2015-056	345	5.65
525124	HART_INDUST3	115	7.49	526434	SUNDOWN 3	115	11.42	585060	GEN-2015-068	345	14.23
525179	TULIA_TP 3	115	6.70	526435	SUNDOWN 6	230	10.75	585080	GEN-2015-071	345	11.98
525191	KRESS_INT 2	69	4.44	526460	AMOCO_SS 6	230	9.51	585120	GEN-2015-075	69	1.54
525192	KRESS_INT 3	115	11.29	526475	YUMA_INT 3	115	10.83	585160	G1579&G1580	230	8.75
525212	SWISHER 3	115	10.36	526481	SP-WOLF_TP 3	115	11.00	585270	GEN-2015-093	345	9.55
525213	SWISHER 6	230	10.27	526524	WOLFFORTH 3	115	11.29	587370	GEN-2016-056	230	11.30
525225	KRESS_RURAL3	115	6.26	526525	WOLFFORTH 6	230	12.11	587390	GEN-2016-058	345	8.66
525272	KISER 3	115	5.08	526562	SLATON 2	69	2.45	590001	OKLEHV24	138	4.79
525291	PLAINVW_TP 2	69	6.46	526602	SP-WOODROW 3	115	8.46	590003	OKLEHV14	138	4.80
525298	S_PLAINVEW 2	69	2.58	526656	LYNN_CNTY 3	115	5.23	599891	OKLAUN 7	345	4.04
525325	COX 2	69	3.36	526676	GRASSLAND 3	115	5.63	599955	PNM-DC6	230	8.86
525326	COX 3	115	5.87	526677	GRASSLAND 6	230	5.35				

Table 4-6
Short Circuit Analysis for Study Project GEN-2015-078 (17SP)

Study Generator GEN-2015-078											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
515458	BORDER 7	345	11.96	527024	ALLRED_SUB 3	115	7.81	527271	LG-FOSTER 2	69	2.71
524909	ROSEVELT_N 6	230	8.86	527030	ALRDCRTZ_TP3	115	8.58	527275	SEMINOLE 3	115	11.43
525481	PLANT_X 6	230	22.53	527036	SHELL_C2 3	115	12.76	527276	SEMINOLE 6	230	7.25
525531	TOLK_WEST 6	230	28.04	527041	ARCO_TP 3	115	13.00	527284	RUSSELL 3	115	9.08
525543	TOLK_TAP 6	230	28.04	527047	OXY_WILRD1 3	115	10.46	527286	XTO_RUSSEL 3	115	10.03
525549	TOLK 7	345	12.49	527051	ODC_TP 3	115	13.10	527291	LE-KCM 2	69	2.63
525637	LAMB_CNTY 6	230	5.36	527056	ODC 3	115	9.89	527305	LG-SAWYERFL2	69	1.80
525832	TUCO_INT 7	345	19.73	527062	SHELL_CO2 3	115	15.79	527313	MIDAMERI_TP2	69	2.15
526161	CARLISLE 6	230	11.82	527068	SHELLC3_TP 3	115	10.51	527321	GAINES 2	69	4.13
526269	LUBBCK_STH 6	230	11.90	527074	SHELLC3 3	115	9.46	527322	GAINES 3	115	8.55
526434	SUNDOWN 3	115	11.42	527080	EL_PASO 3	115	15.56	527325	OXY_WSEM_TP3	115	8.47
526435	SUNDOWN 6	230	10.75	527093	SW_7848 2	69	4.22	527331	RILEY 2	69	3.85
526445	AMOCO_TP 3	115	10.76	527096	OXY_DC_WST 2	69	4.49	527339	DOSS 2	69	4.08
526460	AMOCO_SS 6	230	9.51	527099	DC_EAST 2	69	6.08	527340	DOSS 3	115	7.15
526469	SP-YUMA 2	69	3.06	527105	SAN_ANDS_TP3	115	16.40	527346	LEGACY 3	115	7.05
526475	YUMA_INT 3	115	10.83	527106	SAN_ANDRES 3	115	11.69	527360	MAPCO 3	115	10.35
526481	SP-WOLF_TP 3	115	11.00	527111	WASSON 2	69	5.95	527362	JOHNSON_DRW3	115	10.58
526484	LG-LEVELAND3	115	9.83	527117	SW_7814 2	69	3.13	527363	HIGG 3	115	10.21
526491	LG-CLAUENE 3	115	9.09	527125	DENVER_CTY 2	69	8.62	527865	CUNNINHAM 6	230	17.37
526499	LG-MEADOW 2	69	3.74	527130	DENVER_N 3	115	20.73	527891	HOBBS_INT 3	115	32.93
526506	LG-DOCWEBR 2	69	5.00	527136	DENVER_S 3	115	20.73	527894	HOBBS_INT 6	230	19.06
526524	WOLFFORTH 3	115	11.29	527146	MUSTANG 3	115	22.30	527896	HOBBS_INT 7	345	7.43
526525	WOLFFORTH 6	230	12.11	527149	MUSTANG 6	230	15.55	528325	LE-WAITS 3	115	6.72
526735	TERRY_CNTY 2	69	7.07	527151	GS-MUSTANG 6	230	15.55	528413	TAYLOR 3	115	14.60
526736	TERRY_CNTY 3	115	10.81	527183	JAYBEE 2	69	4.36	528433	NEW_NHOBBS 3	115	8.04
526747	LG-BROWNFLD2	69	3.59	527189	LG-SEAGRAVE2	69	3.73	528604	ANDREWS 6	230	8.30
526754	BROWNFIELD 2	69	3.07	527194	LG-PLSHILL 3	115	7.53	528626	LE-PLNSINT 2	69	4.36
526784	AMOCOWASSON6	230	13.79	527201	SEAGRAVES 2	69	5.40	528775	LE-ERF 3	115	10.58
526792	PRENTICE 3	115	5.93	527202	SEAGRAVES 3	115	8.53	528778	LE-ROZ 2	69	3.21
526928	PLAINS_INT 3	115	9.85	527211	DIAMONDBACK2	69	3.26	560021	TUCO_2	230	21.95
526934	YOAKUM 3	115	16.71	527212	DIAMONDBACK3	115	3.11	560022	TUCO_2	345	20.05
526935	YOAKUM 6	230	17.40	527217	MOSS 2	69	5.30	560058	G15-077-TAP	115	8.20
526936	YOAKUM_345	345	8.72	527223	LG-MC&SEMNL2	69	2.58	560059	G1579&G1580T	230	9.23
526944	LG-PLAINS 3	115	7.93	527228	RILEY_TP 2	69	3.98	560100	CRAWFISH765	765	7.77
526965	KINNEY 2	69	2.41	527229	OZRK_MAH02 2	69	1.52	562480	G13-027-TAP	230	9.29
526971	TOKIO_TP 2	69	3.64	527235	LG-ASHMORE 2	69	2.47	583840	GEN-2013-027	230	8.25
526979	LG-JS_SMITH2	69	2.11	527238	ROZ 3	115	9.27	584810	GEN-2015-040	230	14.22
526985	WELLMAN 2	69	2.85	527242	AMERADA 3	115	9.37	585150	GEN-2015-078	115	16.40
526993	LG-WELLMAN 2	69	3.06	527247	CEDARLAKE 2	69	2.82	585160	G1579&G1580	230	8.75
526999	UNION_TX 2	69	2.38	527253	ADAIR 2	69	2.62	587390	GEN-2016-058	345	8.66
527010	OXYBRU_TP 6	230	13.85	527261	SULPHUR 2	69	3.36				
527018	BENNETT 3	115	13.09	527262	SULPHUR 3	115	5.69				

Table 4-7
Short Circuit Analysis for Study Project ASGI-2016-001 (17SP)

Study Generator ASGI-2016-001											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
522822	LP-NORTHWST2	69	4.30	526256	IVORY_TP 2	69	3.83	527096	OXY_DC_WST 2	69	4.49
522823	LP-MILWAKEE6	230	11.02	526267	LUBBCK_STH 2	69	4.24	527099	DC_EAST 2	69	6.08
522828	LP-MILWAKEE2	69	7.36	526268	LUBBCK_STH 3	115	15.73	527105	SAN_ANDS_TP3	115	16.40
522832	LP-VICKSBRG2	69	11.07	526269	LUBBCK_STH 6	230	11.90	527106	SAN_ANDRES 3	115	11.69
522853	LP-SLATON 2	69	15.06	526297	LUBBCK_EST 2	69	7.70	527111	WASSON 2	69	5.95
522857	LP-SOUTHEST2	69	20.07	526298	LUBBCK_EST 3	115	13.37	527117	SW_7814 2	69	3.13
522861	LP-SOUTHEST6	230	10.13	526299	LUBBCK_EST 6	230	9.38	527125	DENVER_CTY 2	69	8.62
522866	LP-COOK 2	69	28.40	526337	JONES 6	230	11.96	527130	DENVER_N 3	115	20.73
522870	LP-HOLLY 6	230	10.07	526361	COCHRAN 3	115	6.96	527136	DENVER_S 3	115	20.73
522884	LP-OLIVER 2	69	11.39	526416	SLAUGTER_TP2	69	3.16	527146	MUSTANG 3	115	22.30
522888	LP-WADSWRTH6	230	8.95	526424	PACIFIC 3	115	9.67	527149	MUSTANG 6	230	15.55
523959	POTTER_CO 6	230	16.56	526434	SUNDOWN 3	115	11.42	527151	GS-MUSTANG 6	230	15.55
524623	DEAFSMITH 6	230	7.45	526435	SUNDOWN 6	230	10.75	527183	JAYBEE 2	69	4.36
524909	ROSEVELT_N 6	230	8.86	526445	AMOCO_TP 3	115	10.76	527189	LG-SEAGRAVE2	69	3.73
524911	ROSEVELT_S 6	230	8.86	526452	AMOCO_CRYO 3	115	6.58	527194	LG-PLSHILL 3	115	7.53
525019	EMU&VLY_TP 3	115	5.07	526460	AMOCO_SS 6	230	9.51	527201	SEAGRAVES 2	69	5.40
525056	BC-EARTH 3	115	8.43	526469	SP-YUMA 2	69	3.06	527202	SEAGRAVES 3	115	8.53
525213	SWISHER 6	230	10.27	526475	YUMA_INT 3	115	10.83	527211	DIAMONDBACK2	69	3.26
525446	SPGLAKE_TP3	115	9.87	526481	SP-WOLF_TP 3	115	11.00	527212	DIAMONDBACK3	115	3.11
525454	HALE_CNTY 3	115	10.04	526483	SP-WOLFORTH3	115	8.58	527217	MOSS 2	69	5.30
525460	NEWHART 3	115	14.83	526484	LG-LEVELAND3	115	9.83	527223	LG-MC&SEMNL2	69	2.58
525461	NEWHART 6	230	10.54	526491	LG-CLAUENE 3	115	9.09	527228	RILEY_TP 2	69	3.98
525480	PLANT_X 3	115	17.91	526499	LG-MEADOW 2	69	3.74	527229	OZRK_MAH02 2	69	1.52
525481	PLANT_X 6	230	22.53	526506	LG-DOCWEBR 2	69	5.00	527235	LG-ASHMORE 2	69	2.47
525524	TOLK_EAST 6	230	28.04	526524	WOLFFORTH 3	115	11.29	527247	CEDARLAKE 2	69	2.82
525531	TOLK_WEST 6	230	28.04	526525	WOLFFORTH 6	230	12.11	527253	ADAIR 2	69	2.62
525543	TOLK_TAP 6	230	28.04	526602	SP-WOODROW 3	115	8.46	527261	SULPHUR 2	69	3.36
525636	LAMB_CNTY 3	115	8.43	526656	LYNN_CNTY 3	115	5.23	527262	SULPHUR 3	115	5.69
525637	LAMB_CNTY 6	230	5.36	526676	GRASSLAND 3	115	5.63	527271	LG-FOSTER 2	69	2.71
525780	FLOYD_CNTY 3	115	5.98	526677	GRASSLAND 6	230	5.35	527275	SEMINOLE 3	115	11.43
525816	TUCO_INT2 2	69	4.67	526679	CIRRUS_WND 6	230	4.34	527276	SEMINOLE 6	230	7.25
525826	TUCO_INT 2	69	7.91	526711	LG-DIXON 2	69	2.51	527284	RUSSELL 3	115	9.08
525828	TUCO_INT 3	115	19.98	526735	TERRY_CNTY 2	69	7.07	527286	XTO_RUSSEL 3	115	10.03
525830	TUCO_INT 6	230	25.48	526736	TERRY_CNTY 3	115	10.81	527291	LE-KCM 2	69	2.63
525832	TUCO_INT 7	345	19.73	526747	LG-BROWNFLD2	69	3.59	527313	MIDAMERI_TP2	69	2.15
525840	ANTELOPE_1 6	230	25.23	526754	BROWNFIELD 2	69	3.07	527362	JOHNSON_DRW3	115	10.58
525926	CROSBY 3	115	4.41	526761	BROWNFLD_TP2	69	2.84	527363	HIGG 3	115	10.21
526020	HOCKLEY 3	115	5.48	526784	AMOCOWASSON6	230	13.79	528433	NEW_NHOBBS 3	115	8.04
526036	LC-OPDYKE 3	115	5.79	526792	PRENTICE 3	115	5.93	528626	LE-PLNSINT 2	69	4.36
526076	STANTON_W 3	115	9.31	526928	PLAINS_INT 3	115	9.85	560021	TUCO_2	230	21.95
526109	SP-ERSKINE 3	115	11.24	526934	YOAKUM 3	115	16.71	560022	TUCO_2	345	20.05
526130	SP-CARLISLE2	69	2.11	526935	YOAKUM 6	230	17.40	560027	G14-074-TAP	345	8.01
526146	INDIANA 3	115	9.64	526936	YOAKUM_345	345	8.72	560051	G15-039-TAP	230	7.24
526159	CARLISLE 2	69	2.56	526944	LG-PLAINS 3	115	7.93	560058	G15-077-TAP	115	8.20
526160	CARLISLE 3	115	13.00	526993	LG-WELLMAN 2	69	3.06	560059	G1579&G1580T	230	9.23
526161	CARLISLE 6	230	11.82	526999	UNION_TX 2	69	2.38	562480	G13-027-TAP	230	9.29
526162	LP-DOUD_TP 3	115	11.48	527010	OXYBRU_TP 6	230	13.85	583340	GEN-2012-020	230	9.51
526176	LP-DOUD 3	115	8.95	527018	BENNETT 3	115	13.09	583810	ASGI2013-006	115	8.58
526184	SW_6878 2	69	2.16	527036	SHELL_C2 3	115	12.76	583819	ASGI2014-001	115	11.24
526192	MURPHY 3	115	10.35	527041	ARCO_TP 3	115	13.00	584720	ASGI15021602	69	2.15
526199	SP-FRANKFRD3	115	9.25	527047	OXY_WILRD1 3	115	10.46	584800	GEN-2015-039	230	6.16
526205	IVORY 2	69	3.84	527051	ODC_TP 3	115	13.10	585060	GEN-2015-068	345	14.23
526213	ALLEN 3	115	9.92	527062	SHELL_CO2 3	115	15.79	585120	GEN-2015-075	69	1.54
526236	LP-WHEELOCK3	115	8.07	527068	SHELLC3_TP 3	115	10.51	585150	GEN-2015-078	115	16.40
526243	SP-QUAKER 3	115	9.21	527080	EL_PASO 3	115	15.56	587370	GEN-2016-056	230	11.30

Table 4-8
Short Circuit Analysis for Study Project ASGI-2016-002 (17SP)

Study Generator ASGI-2016-002											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
522823	LP-MILWAKEE6	230	11.02	526435	SUNDOWN 6	230	10.75	526934	YOAKUM 3	115	16.71
522861	LP-SOUTHEST6	230	10.13	526460	AMOCO_SS 6	230	9.51	527080	EL_PASO 3	115	15.56
525481	PLANT_X 6	230	22.53	526469	SP-YUMA 2	69	3.06	527125	DENVER_CTY 2	69	8.62
525830	TUCO_INT 6	230	25.48	526475	YUMA_INT 3	115	10.83	527130	DENVER_N 3	115	20.73
526109	SP-ERSKINE 3	115	11.24	526481	SP-WOLF_TP 3	115	11.00	527136	DENVER_S 3	115	20.73
526159	CARLISLE 2	69	2.56	526483	SP-WOLFORTH3	115	8.58	527146	MUSTANG 3	115	22.30
526160	CARLISLE 3	115	13.00	526484	LG-LEVELAND3	115	9.83	527202	SEAGRAVES 3	115	8.53
526161	CARLISLE 6	230	11.82	526491	LG-CLAUENE 3	115	9.09	527212	DIAMONDBACK3	115	3.11
526162	LP-DOUD_TP 3	115	11.48	526506	LG-DOCWEBR 2	69	5.00	527261	SULPHUR 2	69	3.36
526176	LP-DOUD 3	115	8.95	526524	WOLFFORTH 3	115	11.29	527262	SULPHUR 3	115	5.69
526192	MURPHY 3	115	10.35	526525	WOLFFORTH 6	230	12.11	527286	XTO_RUSSEL 3	115	10.03
526268	LUBBCK_STH 3	115	15.73	526735	TERRY_CNTY 2	69	7.07	560058	G15-077-TAP	115	8.20
526269	LUBBCK_STH 6	230	11.90	526736	TERRY_CNTY 3	115	10.81	583810	ASGI2013-006	115	8.58
526337	JONES 6	230	11.96	526747	LG-BROWNFLD2	69	3.59	584720	ASGI15021602	69	2.15
526434	SUNDOWN 3	115	11.42	526792	PRENTICE 3	115	5.93	587370	GEN-2016-056	230	11.30

Table 4-9
Short Circuit Analysis for Study Project GEN-2016-002 (17SP)

Study Generator GEN-2016-002											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
522800	MU-TULIA 3	115	5.35	524530	PALO_DURO 3	115	6.61	525326	COX 3	115	5.87
523959	POTTER_CO 6	230	16.56	524590	DAWN 3	115	5.12	525413	LAMTON 2	69	5.17
523977	HARRNG_WST 6	230	15.66	524694	DS-#22 3	115	4.92	525414	LAMTON 3	115	7.62
523978	HARRNG_MID 6	230	15.66	524734	DS-#21 3	115	10.62	525432	SP-HALFWAY 2	69	5.84
523979	HARRNG_EST 6	230	15.66	524745	CASTRO_CNTY2	69	9.51	525440	LC-S_OLTON 3	115	7.21
524044	NICHOLS 6	230	15.33	524746	CASTRO_CNTY3	115	11.43	525446	SPGLAKE_TP3	115	9.87
524058	WHITAKER 3	115	16.78	525019	EMU&VLY_TP 3	115	5.07	525453	HALE_CNTY 2	69	6.88
524136	HASTINGS 3	115	11.76	525050	BC-KELLEY 3	115	8.12	525454	HALE_CNTY 3	115	10.04
524161	EAST_PLANT 2	69	8.32	525056	BC-EARTH 3	115	8.43	525460	NEWHART 3	115	14.83
524162	EAST_PLANT 3	115	17.92	525124	HART_INDUST3	115	7.49	525461	NEWHART 6	230	10.54
524163	EAST_PLANT 6	230	10.17	525136	HAPPY_CTY 2	69	2.20	525480	PLANT_X 3	115	17.91
524185	PIERCE_TP 3	115	15.49	525143	HAPPY_CTYTP2	69	3.38	525481	PLANT_X 6	230	22.53
524209	LAWRENPRK1 2	69	6.27	525153	HAPPY_INT 2	69	3.68	525636	LAMB_CNTY 3	115	8.43
524224	MANHATTAN 3	115	15.25	525154	HAPPY_INT 3	115	5.99	525780	FLOYD_CNTY 3	115	5.98
524282	34TH_ST 3	115	13.04	525164	SHAMRCK_PMP2	69	2.64	525816	TUCO_INT2 2	69	4.67
524306	COULTER 3	115	13.22	525179	TULIA_TP 3	115	6.70	525826	TUCO_INT 2	69	7.91
524321	GEORGIA 2	69	6.39	525191	KRESS_INT 2	69	4.44	525828	TUCO_INT 3	115	19.98
524322	GEORGIA 3	115	14.08	525192	KRESS_INT 3	115	11.29	525830	TUCO_INT 6	230	25.48
524331	PULLMAN 3	115	6.65	525203	SW-KRESS 2	69	4.44	526076	STANTON_W 3	115	9.31
524338	SOUTHEAST 3	115	9.94	525212	SWISHER 3	115	10.36	526298	LUBBCK_EST 3	115	13.37
524364	RANDALL 3	115	17.38	525213	SWISHER 6	230	10.27	560021	TUCO_2	230	21.95
524365	RANDALL 6	230	10.87	525224	KRESS_RURL 2	69	2.51	560050	G15-031-TAP	230	8.78
524377	FARMERS 3	115	13.09	525225	KRESS_RURAL3	115	6.26	584220	GEN-2014-040	115	10.22
524388	CROUSE_HIND3	115	13.10	525249	LH-PLW&FNY 2	69	1.60	584640	GEN-2015-022	115	10.36
524414	AMA_SOUTH 3	115	14.18	525257	N_PLAINVEW 3	115	5.08	587010	GEN-2016-002	115	5.99
524415	AMA_SOUTH 6	230	10.54	525272	KISER 3	115	5.08	587240	GEN-2016-038	230	3.95
524516	CANYON_WEST3	115	4.77	525291	PLAINVW_TP 2	69	6.46	587250	GEN-2016-039	115	10.36
524522	CANYON E_TP3	115	4.99	525298	S_PLAINVEW 2	69	2.58	587400	GEN-2016-059	230	4.00
524523	CANYON_EAST3	115	4.65	525325	COX 2	69	3.36	587570	ASGI1604	115	6.61

Table 4-10
Short Circuit Analysis for Study Project ASGI-2016-004 (17SP)

Study Generator ASGI-2016-004											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
522800	MU-TULIA 3	115	5.35	524306	COULTER 3	115	13.22	525164	SHAMRCK_PMP2	69	2.64
523267	PRINGLE 6	230	3.88	524321	GEORGIA 2	69	6.39	525179	TULIA_TP 3	115	6.70
523551	HUTCHISON 6	230	5.96	524322	GEORGIA 3	115	14.08	525191	KRESS_INT 2	69	4.44
523771	GRAPEVINE 6	230	5.42	524331	PULLMAN 3	115	6.65	525192	KRESS_INT 3	115	11.29
523959	POTTER_CO 6	230	16.56	524338	SOUTHEAST 3	115	9.94	525203	SW-KRESS 2	69	4.44
523977	HARRNG_WST 6	230	15.66	524345	OSAGE 3	115	11.90	525212	SWISHER 3	115	10.36
523978	HARRNG_MID 6	230	15.66	524364	RANDALL 3	115	17.38	525213	SWISHER 6	230	10.27
523979	HARRNG_EST 6	230	15.66	524365	RANDALL 6	230	10.87	525224	KRESS_RURL 2	69	2.51
524007	ROLLHILLS 3	115	15.67	524377	FARMERS 3	115	13.09	525225	KRESS_RURAL3	115	6.26
524010	ROLLHILLS 6	230	14.09	524388	CROUSE_HIND3	115	13.10	525257	N_PLAINVEW 3	115	5.08
524043	NICHOLS 3	115	20.62	524397	ARROWHEAD 3	115	11.84	525326	COX 3	115	5.87
524044	NICHOLS 6	230	15.33	524404	OWENSCORN 3	115	12.86	525414	LAMTON 3	115	7.62
524058	WHITAKER 3	115	16.78	524414	AMA_SOUTH 3	115	14.18	525453	HALE_CNTY 2	69	6.88
524136	HASTINGS 3	115	11.76	524415	AMA_SOUTH 6	230	10.54	525454	HALE_CNTY 3	115	10.04
524149	VANBUREN#2 2	69	6.29	524425	ESTACADO_TP3	115	11.68	525460	NEWHART 3	115	14.83
524161	EAST_PLANT 2	69	8.32	524516	CANYON_WEST3	115	4.77	525461	NEWHART 6	230	10.54
524162	EAST_PLANT 3	115	17.92	524522	CANYON E_TP3	115	4.99	525480	PLANT_X 3	115	17.91
524163	EAST_PLANT 6	230	10.17	524523	CANYON_EAST3	115	4.65	525828	TUCO_INT 3	115	19.98
524177	VNBUREN_TP 2	69	7.93	524530	PALO_DURO 3	115	6.61	560050	G15-031-TAP	230	8.78
524185	PIERCE_TP 3	115	15.49	524544	SPRING_DRW 3	115	5.97	584640	GEN-2015-022	115	10.36
524192	PIERCE 3	115	11.21	524590	DAWN 3	115	5.12	584750	GEN-2015-031	230	8.78
524209	LAWRENPRK1 2	69	6.27	524597	PANDAHFD 3	115	8.18	587010	GEN-2016-002	115	5.99
524216	LAWRENPRK2 2	69	6.27	524746	CASTRO_CNTY3	115	11.43	587240	GEN-2016-038	230	3.95
524224	MANHATTAN 3	115	15.25	525124	HART_INDUST3	115	7.49	587244	GEN2-016-038	230	3.69
524256	PUCKETT 3	115	11.20	525136	HAPPY_CTY 2	69	2.20	587400	GEN-2016-059	230	4.00
524282	34TH_ST 3	115	13.04	525143	HAPPY_CTYTP2	69	3.38	587404	GEN-2016-059	230	3.90
524300	HILLSIDE 3	115	11.22	525153	HAPPY_INT 2	69	3.68	587570	ASGI1604	115	6.61
524305	COULTER 2	69	4.16	525154	HAPPY_INT 3	115	5.99				

Table 4-11
Short Circuit Analysis for Study Project GEN-2016-015 and GEN-2016-062 (17SP)

Study Generator GEN-2016-015 and GEN-2016-062											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
515458	BORDER 7	345	11.96	527809	CV-8_MILE 3	115	5.14	528435	MILLEN 3	115	11.67
525531	TOLK_WEST 6	230	28.04	527864	CUNNINHAM 3	115	29.59	528442	NE_HOBBS 3	115	11.97
525549	TOLK 7	345	12.49	527865	CUNNINHAM 6	230	17.37	528463	SANGER_SW 3	115	16.22
525832	TUCO_INT 7	345	19.73	527891	HOBBS_INT 3	115	32.93	528484	SW_4J44 3	115	11.32
526435	SUNDOWN 6	230	10.75	527894	HOBBS_INT 6	230	19.06	528491	MONUMENT 3	115	15.75
526460	AMOCO_SS 6	230	9.51	527896	HOBBS_INT 7	345	7.43	528498	W_HOBBS 3	115	11.90
526784	AMOCOWASSON6	230	13.79	527930	PCA 3	115	8.31	528512	EUNICE 3	115	6.14
526792	PRENTICE 3	115	5.93	527961	POTASH_JCT 2	69	7.02	528526	TEAGUE 3	115	5.74
526928	PLAINS_INT 3	115	9.85	527962	POTASH_JCT 3	115	8.89	528533	DRINKARD_TP3	115	7.89
526934	YOAKUM 3	115	16.71	527963	POTASH_JCT 6	230	6.51	528568	MONUMNT_TP 3	115	10.05
526935	YOAKUM 6	230	17.40	527999	INTREPDW_TP3	115	8.09	528575	OXYPERMIAN 3	115	15.54
526936	YOAKUM_345	345	8.72	528025	RDRUNNER 3	115	6.01	528582	BYRD 3	115	7.99
527010	OXYBRU_TP 6	230	13.85	528027	RDRUNNER 6	230	3.66	528589	DRINKARD 3	115	8.04
527041	ARCO_TP 3	115	13.00	528094	7-RIVERS 3	115	7.63	528596	NA_ENRICHTP3	115	6.85
527146	MUSTANG 3	115	22.30	528095	7-RIVERS 6	230	5.66	528602	ANDREWS 3	115	10.99
527149	MUSTANG 6	230	15.55	528160	CARLSBAD 3	115	8.86	528603	NA_ENRICH 3	115	10.45
527151	GS-MUSTANG 6	230	15.55	528178	PECOS 3	115	9.34	528604	ANDREWS 6	230	8.30
527194	LG-PLSHILL 3	115	7.53	528179	PECOS 6	230	5.85	528605	TARGA 3	115	7.82
527276	SEMINOLE 6	230	7.25	528317	ENRON_TP 3	115	6.39	528618	LE-LOVINTON2	69	7.24
527284	RUSSELL 3	115	9.08	528325	LE-WAITS 3	115	6.72	528627	LE-TXACO_TP3	115	7.20
527286	XTO_RUSSEL 3	115	10.03	528333	LE-WEST_SUB3	115	8.66	560021	TUCO_2	230	21.95
527362	JOHNSON_DRW3	115	10.58	528334	LE-LOVINTON3	115	8.56	560022	TUCO_2	345	20.05
527363	HIGG 3	115	10.21	528348	BUCKEYE_TP 3	115	8.39	560059	G1579&G1580T	230	9.23
527483	CHAVES_CNTY6	230	4.05	528355	MADDOX 3	115	27.76	560100	CRAWFISH765	765	7.77
527597	TWEEDY 3	115	4.89	528385	BUCKEYE 3	115	7.53	562480	G13-027-TAP	230	9.29
527711	EAGLE_CREEK3	115	6.96	528392	PEARLE 3	115	6.28	583840	GEN-2013-027	230	8.25
527793	EDDY_STH 3	115	10.46	528394	QUAHADA 3	115	7.41	585160	G1579&G1580	230	8.75
527798	EDDY_NTH 3	115	10.46	528399	LEA_NATIONL3	115	6.43	587110	GEN-2016-015	230	7.98
527799	EDDY_NORTH 6	230	7.58	528413	TAYLOR 3	115	14.60	587390	GEN-2016-058	345	8.66
527800	EDDY_SOUTH 6	230	7.58	528422	DCP_ZIA TP 3	115	6.49	587420	GEN-2016-062	230	7.36
527802	EDDY_CNTY 7	345	4.33	528433	NEW_NHOBBS 3	115	8.04	599960	EPTNP-D6	230	7.58

Table 4-12
Short Circuit Analysis for Study Project GEN-2016-039 (17SP)

Study Generator GEN-2016-039											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
515458	BORDER 7	345	11.96	525132	LC-N_OLTON 2	69	3.08	525826	TUCO_INT 2	69	7.91
522800	MU-TULIA 3	115	5.35	525143	HAPPY_CTYTP2	69	3.38	525828	TUCO_INT 3	115	19.98
522823	LP-MILWAKEE6	230	11.02	525153	HAPPY_INT 2	69	3.68	525830	TUCO_INT 6	230	25.48
522870	LP-HOLLY 6	230	10.07	525154	HAPPY_INT 3	115	5.99	525832	TUCO_INT 7	345	19.73
523095	HITCHLAND 6	230	15.49	525179	TULIA_TP 3	115	6.70	525840	ANTELOPE_1 6	230	25.23
523097	HITCHLAND 7	345	17.58	525191	KRESS_INT 2	69	4.44	525853	LH-WIL&ELLN2	69	2.58
523221	XIT_INTG 6	230	2.54	525192	KRESS_INT 3	115	11.29	525885	SP-NEWDEAL 2	69	3.39
523267	PRINGLE 6	230	3.88	525203	SW-KRESS 2	69	4.44	525926	CROSBY 3	115	4.41
523308	MOORE_E 3	115	10.54	525212	SWISHER 3	115	10.36	526020	HOCKLEY 3	115	5.48
523309	MOORE_CNTY 6	230	6.44	525213	SWISHER 6	230	10.27	526076	STANTON_W 3	115	9.31
523551	HUTCHISON 6	230	5.96	525224	KRESS_RURL 2	69	2.51	526146	INDIANA 3	115	9.64
523771	GRAPEVINE 6	230	5.42	525225	KRESS_RURAL3	115	6.26	526160	CARLISLE 3	115	13.00
523869	CHAN/TASCOS6	230	3.70	525249	LH-PLW&FNY 2	69	1.60	526161	CARLISLE 6	230	11.82
523959	POTTER_CO 6	230	16.56	525256	SW_9848 2	69	3.08	526268	LUBBCK_STH 3	115	15.73
523961	POTTER_CO 7	345	11.06	525257	N_PLAINVEW 3	115	5.08	526269	LUBBCK_STH 6	230	11.90
523977	HARRNG_WST 6	230	15.66	525271	KISER 2	69	3.46	526297	LUBBCK_EST 2	69	7.70
523978	HARRNG_MID 6	230	15.66	525272	KISER 3	115	5.08	526298	LUBBCK_EST 3	115	13.37
523979	HARRNG_EST 6	230	15.66	525284	WESTRIDGE 2	69	4.25	526299	LUBBCK_EST 6	230	9.38
524007	ROLLHILLS 3	115	15.67	525291	PLAINVW_TP 2	69	6.46	526337	JONES 6	230	11.96
524010	ROLLHILLS 6	230	14.09	525298	S_PLAINVEW 2	69	2.58	526434	SUNDOWN 3	115	11.42
524043	NICHOLS 3	115	20.62	525307	E_PLAINVEW 2	69	2.44	526435	SUNDOWN 6	230	10.75
524044	NICHOLS 6	230	15.33	525316	LH-PROVDNCE2	69	3.36	526460	AMOCO_SS 6	230	9.51
524266	BUSHLAND 3	115	8.75	525325	COX 2	69	3.36	526525	WOLFFORTH 6	230	12.11
524267	BUSHLAND 6	230	8.87	525326	COX 3	115	5.87	526677	GRASSLAND 6	230	5.35
524290	WILDOR2_JUS6	230	6.25	525339	AIKEN_RURL 2	69	2.44	526935	YOAKUM 6	230	17.40
524296	SPNSPUR_WND7	345	5.45	525393	SPRINGLAKE 3	115	8.84	526936	YOAKUM_345	345	8.72
524364	RANDALL 3	115	17.38	525404	LC-OLTON 2	69	4.49	527656	CROSSROADS 7	345	6.56
524365	RANDALL 6	230	10.87	525413	LAMTON 2	69	5.17	527896	HOBBS_INT 7	345	7.43
524377	FARMERS 3	115	13.09	525414	LAMTON 3	115	7.62	560021	TUCO_2	230	21.95
524397	ARROWHEAD 3	115	11.84	525425	CORNER 2	69	3.62	560022	TUCO_2	345	20.05
524404	OWENSCORN 3	115	12.86	525432	SP-HALFWAY 2	69	5.84	560027	G14-074-TAP	345	8.01
524414	AMA_SOUTH 3	115	14.18	525440	LC-S_OLTON 3	115	7.21	560034	CHISHOLM2	345	14.94
524415	AMA_SOUTH 6	230	10.54	525446	SPGLAKE_TP3	115	9.87	560035	GRAPEVINE	345	9.45
524530	PALO_DURO 3	115	6.61	525453	HALE_CNTY 2	69	6.88	560050	G15-031-TAP	230	8.78
524544	SPRING_DRW 3	115	5.97	525454	HALE_CNTY 3	115	10.04	560051	G15-039-TAP	230	7.24
524622	DEAFSMITH 3	115	11.66	525460	NEWHART 3	115	14.83	560100	CRAWFISH765	765	7.77
524623	DEAFSMITH 6	230	7.45	525461	NEWHART 6	230	10.54	560101	SEMINOLE765	765	10.18
524694	DS-#22 3	115	4.92	525480	PLANT_X 3	115	17.91	562004	G11-025-TAP	115	4.55
524714	CASTRO_TP 2	69	3.65	525481	PLANT_X 6	230	22.53	562480	G13-027-TAP	230	9.29
524721	DS-#15&#19 2	69	3.67	525524	TOLK_EAST 6	230	28.04	583090	G1149&G1504	345	9.50
524728	DS-CASTRO 2	69	4.44	525531	TOLK_WEST 6	230	28.04	583340	GEN-2012-020	230	9.51
524734	DS-#21 3	115	10.62	525543	TOLK_TAP 6	230	28.04	584220	GEN-2014-040	115	10.22
524745	CASTRO_CNTY2	69	9.51	525549	TOLK 7	345	12.49	584640	GEN-2015-022	115	10.36
524746	CASTRO_CNTY3	115	11.43	525635	LAMB_CNTY 2	69	5.90	584750	GEN-2015-031	230	8.78
524909	ROSEVELT_N 6	230	8.86	525636	LAMB_CNTY 3	115	8.43	584800	GEN-2015-039	230	6.16
524911	ROSEVELT_S 6	230	8.86	525637	LAMB_CNTY 6	230	5.36	585060	GEN-2015-068	345	14.23
525018	EMULESH&VLY3	115	4.70	525731	SP-ABERNTHY2	69	3.02	587010	GEN-2016-002	115	5.99
525019	EMU&VLY_TP 3	115	5.07	525738	HALECENTER 2	69	2.46	587250	GEN-2016-039	115	10.36
525028	BAILEYCO 3	115	4.87	525745	LH-HALECTR 2	69	2.43	587370	GEN-2016-056	230	11.30
525050	BC-KELLEY 3	115	8.12	525779	FLOYD_CNTY 2	69	5.29	587390	GEN-2016-058	345	8.66
525056	BC-EARTH 3	115	8.43	525780	FLOYD_CNTY 3	115	5.98	587570	ASGI1604	115	6.61
525124	HART_INDUST3	115	7.49	525816	TUCO_INT2 2	69	4.67				

Table 4-13
Short Circuit Analysis for Study Project GEN-2016-56 (17SP)

Study Generator GEN-2016-056											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
511456	O.K.U.-7	345	5.85	525724	COUNTYLINE 2	69	2.21	526491	LG-CLAUENE 3	115	9.09
511468	L.E.S.-7	345	12.73	525731	SP-ABERNTHY2	69	3.02	526506	LG-DOCWEBR 2	69	5.00
515458	BORDER 7	345	11.96	525738	HALECENTER 2	69	2.46	526524	WOLFFORTH 3	115	11.29
522810	LP-ERSKINE 2	69	9.03	525745	LH-HALECTR 2	69	2.43	526525	WOLFFORTH 6	230	12.11
522819	LP-NORTHEST2	69	9.81	525769	BARWISE 2	69	3.75	526562	SLATON 2	69	2.45
522822	LP-NORTHWST2	69	4.30	525779	FLOYD_CNTY 2	69	5.29	526602	SP-WOODROW 3	115	8.46
522823	LP-MILWAKEE6	230	11.02	525780	FLOYD_CNTY 3	115	5.98	526656	LYNN_CNTY 3	115	5.23
522828	LP-MILWAKEE2	69	7.36	525790	FLOYDADA_TP2	69	2.49	526676	GRASSLAND 3	115	5.63
522832	LP-VICKSBRG2	69	11.07	525811	LH-HARMONY 2	69	4.23	526677	GRASSLAND 6	230	5.35
522836	LP-THOMPSON2	69	10.50	525816	TUCO_INT2 2	69	4.67	526679	CIRRUS_WND 6	230	4.34
522840	LP-MCCULLGH2	69	10.37	525826	TUCO_INT 2	69	7.91	526694	GRAHAM 3	115	2.58
522844	LP-COOP 2	69	15.29	525828	TUCO_INT 3	115	19.98	526735	TERRY_CNTY 2	69	7.07
522849	LP-CHALKER 2	69	11.62	525830	TUCO_INT 6	230	25.48	526736	TERRY_CNTY 3	115	10.81
522853	LP-SLATON 2	69	15.06	525832	TUCO_INT 7	345	19.73	526747	LG-BROWNFLD2	69	3.59
522857	LP-SOUTHEST2	69	20.07	525840	ANTELOPE_1 6	230	25.23	526792	PRENTICE 3	115	5.93
522861	LP-SOUTHEST6	230	10.13	525853	LH-WIL&ELLN2	69	2.58	526934	YOAKUM 3	115	16.71
522866	LP-COOK 2	69	28.40	525860	SP-BECTON 2	69	2.29	526935	YOAKUM 6	230	17.40
522870	LP-HOLLY 6	230	10.07	525885	SP-NEWDEAL 2	69	3.39	526936	YOAKUM_345	345	8.72
522875	LP-BRANDON 2	69	8.44	525892	WHITE&MONRO2	69	2.56	527010	OXYBRU_TP 6	230	13.85
522879	LP-WADSWRTH2	69	18.41	525925	CROSBY 2	69	4.72	527080	EL PASO 3	115	15.56
522884	LP-OLIVER 2	69	11.39	525926	CROSBY 3	115	4.41	527125	DENVER_CTY 2	69	8.62
522888	LP-WADSWRTH6	230	8.95	526020	HOCKLEY 3	115	5.48	527130	DENVER_N 3	115	20.73
523959	POTTER_CO 6	230	16.56	526036	LC-OPDYKE 3	115	5.79	527136	DENVER_S 3	115	20.73
523961	POTTER_CO 7	345	11.06	526076	STANTON_W 3	115	9.31	527146	MUSTANG 3	115	22.30
524415	AMA_SOUTH 6	230	10.54	526109	SP-ERSKINE 3	115	11.24	527149	MUSTANG 6	230	15.55
524623	DEAFSMITH 6	230	7.45	526130	SP-CARLISLE2	69	2.11	527202	SEAGRAVES 3	115	8.53
524770	PLSNT_HILL 6	230	6.11	526146	INDIANA 3	115	9.64	527212	DIAMONDBACK3	115	3.11
524875	OASIS 6	230	7.35	526159	CARLISLE 2	69	2.56	527261	SULPHUR 2	69	3.36
524908	ROOSEVELT 3	115	10.30	526160	CARLISLE 3	115	13.00	527262	SULPHUR 3	115	5.69
524909	ROSEVELT_N 6	230	8.86	526161	CARLISLE 6	230	11.82	527286	XTO_RUSSEL 3	115	10.03
524911	ROSEVELT_S 6	230	8.86	526162	LP-DOUD_TP 3	115	11.48	527656	CROSSROADS 7	345	6.56
524915	SW_4K33 6	230	8.86	526176	LP-DOUD 3	115	8.95	527896	HOBBS_INT 7	345	7.43
525019	EMU&VLY_TP 3	115	5.07	526184	SW_6878 2	69	2.16	560021	TUCO_2	230	21.95
525056	BC-EARTH 3	115	8.43	526192	MURPHY 3	115	10.35	560022	TUCO_2	345	20.05
525124	HART_INDUST3	115	7.49	526199	SP-FRANKFRD3	115	9.25	560027	G14-074-TAP	345	8.01
525179	TULIA_TP 3	115	6.70	526205	IVORY 2	69	3.84	560034	CHISHOLM2	345	14.94
525191	KRESS_INT 2	69	4.44	526213	ALLEN 3	115	9.92	560050	G15-031-TAP	230	8.78
525192	KRESS_INT 3	115	11.29	526221	BATTON_N 2	69	1.77	560051	G15-039-TAP	230	7.24
525212	SWISHER 3	115	10.36	526228	BATTON_S 2	69	2.67	560058	G15-077-TAP	115	8.20
525213	SWISHER 6	230	10.27	526236	LP-WHEELOCK3	115	8.07	560059	G1579&G1580T	230	9.23
525225	KRESS_RURAL3	115	6.26	526243	SP-QUAKER 3	115	9.21	560100	CRAWFISH765	765	7.77
525272	KISER 3	115	5.08	526256	IVORY_TP 2	69	3.83	560101	SEMINOLE765	765	10.18
525291	PLAINVW_TP 2	69	6.46	526267	LUBBCK_STH 2	69	4.24	562004	G11-025-TAP	115	4.55
525298	S_PLAINVEW 2	69	2.58	526268	LUBBCK_STH 3	115	15.73	562480	G13-027-TAP	230	9.29
525325	COX 2	69	3.36	526269	LUBBCK_STH 6	230	11.90	581137	GEN-2011-025	115	4.55
525326	COX 3	115	5.87	526284	PLANTERS 2	69	6.10	583090	G1149&G1504	345	9.50
525413	LAMTON 2	69	5.17	526297	LUBBCK_EST 2	69	7.70	583340	GEN-2012-020	230	9.51
525414	LAMTON 3	115	7.62	526298	LUBBCK_EST 3	115	13.37	583810	ASGI2013-006	115	8.58
525432	SP-HALFWAY 2	69	5.84	526299	LUBBCK_EST 6	230	9.38	583819	ASGI2014-001	115	11.24
525440	LC-S_OLTON 3	115	7.21	526310	CLUTTER 2	69	5.29	584440	GEN-2014-074	345	7.52
525446	SPGLAKE_TP3	115	9.87	526337	JONES 6	230	11.96	584640	GEN-2015-022	115	10.36
525453	HALE_CNTY 2	69	6.88	526361	COCHRAN 3	115	6.96	584720	ASGI15021602	69	2.15
525454	HALE_CNTY 3	115	10.04	526424	PACIFIC 3	115	9.67	584750	GEN-2015-031	230	8.78
525460	NEWHART 3	115	14.83	526434	SUNDOWN 3	115	11.42	584760	GEN-2015-033	345	7.01
525461	NEWHART 6	230	10.54	526435	SUNDOWN 6	230	10.75	584800	GEN-2015-039	230	6.16
525480	PLANT_X 3	115	17.91	526445	AMOCO_TP 3	115	10.76	585060	GEN-2015-068	345	14.23
525481	PLANT_X 6	230	22.53	526452	AMOCO_CRYO 3	115	6.58	585120	GEN-2015-075	69	1.54
525524	TOLK_EAST 6	230	28.04	526460	AMOCO_SS 6	230	9.51	587370	GEN-2016-056	230	11.30
525531	TOLK_WEST 6	230	28.04	526469	SP-YUMA 2	69	3.06	587390	GEN-2016-058	345	8.66
525543	TOLK_TAP 6	230	28.04	526475	YUMA_INT 3	115	10.83	599891	OKLAUN 7	345	4.04
525549	TOLK 7	345	12.49	526481	SP-WOLF_TP 3	115	11.00	599955	PNM-DC6	230	8.86
525636	LAMB_CNTY 3	115	8.43	526483	SP-WOLFORTH3	115	8.58				
525637	LAMB_CNTY 6	230	5.36	526484	LG-LEVELAND3	115	9.83				

Table 4-14
Short Circuit Analysis for Study Project GEN-2016-058 (17SP)

Study Generator GEN-2016-058											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
510907	PITTSB-7	345	13.43	526299	LUBBCK_EST 6	230	9.38	528095	7-RIVERS 6	230	5.66
511456	O.K.U.-7	345	5.85	526337	JONES 6	230	11.96	528179	PECOS 6	230	5.85
511468	L.E.S.-7	345	12.73	526352	LEHMAN 3	115	6.07	528333	LE-WEST_SUB3	115	8.66
511553	CHISHOLM7	345	14.94	526424	PACIFIC 3	115	9.67	528334	LE-LOVINTON3	115	8.56
511557	CHISHOLM6	230	12.34	526434	SUNDOWN 3	115	11.42	528348	BUCKEYE_TP 3	115	8.39
514908	ARCADIA7	345	25.37	526435	SUNDOWN 6	230	10.75	528355	MADDOX 3	115	27.76
514934	DRAPER 7	345	21.50	526445	AMOCO_TP 3	115	10.76	528392	PEARLE 3	115	6.28
515044	SEMINOL4	138	40.49	526460	AMOCO_SS 6	230	9.51	528394	QUAHADA 3	115	7.41
515045	SEMINOL7	345	29.78	526491	LG-CLAUENE 3	115	9.09	528433	NEW_NHOBBS 3	115	8.04
515224	MUSKOGE7	345	28.91	526524	WOLFFORTH 3	115	11.29	528435	MILLEN 3	115	11.67
515375	WWRDEHV7	345	19.72	526525	WOLFFORTH 6	230	12.11	528442	NE_HOBBS 3	115	11.97
515376	WWRDEHV4	138	23.61	526677	GRASSLAND 6	230	5.35	528463	SANGER_SW 3	115	16.22
515458	BORDER 7	345	11.96	526735	TERRY_CNTY 2	69	7.07	528491	MONUMENT 3	115	15.75
515554	BVRCNTY7	345	18.58	526736	TERRY_CNTY 3	115	10.81	528568	MONUMNT_TP 3	115	10.05
515599	G07621119-20	345	13.17	526784	AMOCOWASSON6	230	13.79	528602	ANDREWS 3	115	10.99
522823	LP-MILWAKEE6	230	11.02	526792	PRENTICE 3	115	5.93	528603	NA_ENRICH 3	115	10.45
522870	LP-HOLLY 6	230	10.07	526928	PLAINS_INT 3	115	9.85	528604	ANDREWS 6	230	8.30
523095	HITCHLAND 6	230	15.49	526934	YOAKUM 3	115	16.71	528626	LE-PLNSINT 2	69	4.36
523097	HITCHLAND 7	345	17.58	526935	YOAKUM 6	230	17.40	528740	LE-PLANS_TP2	69	3.61
523101	NOBLE_WND 7	345	17.49	526936	YOAKUM_345	345	8.72	531512	WALKTAP7	345	8.02
523112	NOVUS1 7	345	17.20	526944	LG-PLAINS 3	115	7.93	539801	THISTLE7	345	16.57
523309	MOORE_CNTY 6	230	6.44	527010	OXYBRU_TP 6	230	13.85	560010	G14-037-TAP	345	17.55
523869	CHAN/TASCOS6	230	3.70	527018	BENNETT 3	115	13.09	560021	TUCO_2	230	21.95
523959	POTTER_CO 6	230	16.56	527036	SHELL_C2 3	115	12.76	560022	TUCO_2	345	20.05
523961	POTTER_CO 7	345	11.06	527041	ARCO_TP 3	115	13.00	560027	G14-074-TAP	345	8.01
523979	HARRNG_EST 6	230	15.66	527046	OXY_WILRD2 3	115	10.43	560034	CHISHOLM2	345	14.94
524010	ROLLHILLS 6	230	14.09	527047	OXY_WILRD1 3	115	10.46	560035	GRAPEVINE	345	9.45
524267	BUSHLAND 6	230	8.87	527051	ODC_TP 3	115	13.10	560050	G15-031-TAP	230	8.78
524296	SPNSPUR_WND7	345	5.45	527062	SHELL_CO2 3	115	15.79	560051	G15-039-TAP	230	7.24
524415	AMA_SOUTH 6	230	10.54	527080	EL_PASO 3	115	15.56	560058	G15-077-TAP	115	8.20
524770	PLSNT_HILL 6	230	6.11	527105	SAN_ANDS_TP3	115	16.40	560059	G1579&G1580T	230	9.23
524908	ROOSEVELT 3	115	10.30	527125	DENVER_CTY 2	69	8.62	560071	G16-003-TAP	345	15.67
524909	ROSEVELT_N 6	230	8.86	527130	DENVER_N 3	115	20.73	560078	G16-037-TAP	345	9.42
524911	ROSEVELT_S 6	230	8.86	527136	DENVER_S 3	115	20.73	560100	CRAWFISH765	765	7.77
524915	SW_4K33 6	230	8.86	527146	MUSTANG 3	115	22.30	560101	SEMINOLE765	765	10.18
525192	KRESS_INT 3	115	11.29	527149	MUSTANG 6	230	15.55	562075	G11-051-TAP	345	12.48
525212	SWISHER 3	115	10.36	527151	GS-MUSTANG 6	230	15.55	562480	G13-027-TAP	230	9.29
525213	SWISHER 6	230	10.27	527194	LG-PLSHILL 3	115	7.53	576395	GEN-2010-014	345	12.40
525454	HALE_CNTY 3	115	10.04	527201	SEAGRAVES 2	69	5.40	577103	GEN-2008-022	345	6.09
525460	NEWHART 3	115	14.83	527202	SEAGRAVES 3	115	8.53	577104	G08-022-WEST	345	5.61
525461	NEWHART 6	230	10.54	527238	ROZ 3	115	9.27	581148	GEN-2011-022	345	15.80
525480	PLANT_X 3	115	17.91	527242	AMERADA 3	115	9.37	583090	G1149&G1504	345	9.50
525481	PLANT_X 6	230	22.53	527262	SULPHUR 3	115	5.69	583340	GEN-2012-020	230	9.51
525524	TOLK_EAST 6	230	28.04	527275	SEMINOLE 3	115	11.43	583840	GEN-2013-027	230	8.25
525531	TOLK_WEST 6	230	28.04	527276	SEMINOLE 6	230	7.25	584260	GEN-2014-047	345	5.09
525543	TOLK_TAP 6	230	28.04	527286	XTO_RUSSEL 3	115	10.03	584440	GEN-2014-074	345	7.52
525549	TOLK 7	345	12.49	527322	GAINES 3	115	8.55	584640	GEN-2015-022	115	10.36
525636	LAMB_CNTY 3	115	8.43	527340	DOSS 3	115	7.15	584750	GEN-2015-031	230	8.78
525637	LAMB_CNTY 6	230	5.36	527363	HIGG 3	115	10.21	584760	GEN-2015-033	345	7.01
525780	FLOYD_CNTY 3	115	5.98	527656	CROSSROADS 7	345	6.56	584810	GEN-2015-040	230	14.22
525816	TUCO_INT2 2	69	4.67	527798	EDDY_NTH 3	115	10.46	584940	GEN-2015-056	345	5.65
525826	TUCO_INT 2	69	7.91	527799	EDDY_NORTH 6	230	7.58	585060	GEN-2015-068	345	14.23
525828	TUCO_INT 3	115	19.98	527800	EDDY_SOUTH 6	230	7.58	585080	GEN-2015-071	345	11.98
525830	TUCO_INT 6	230	25.48	527802	EDDY_CNTY 7	345	4.33	585150	GEN-2015-078	115	16.40
525832	TUCO_INT 7	345	19.73	527864	CUNNINHAM 3	115	29.59	585160	G1579&G1580	230	8.75
525840	ANTELOPE_1 6	230	25.23	527865	CUNNINHAM 6	230	17.37	587110	GEN-2016-015	230	7.98
526036	LC-OPDYKE 3	115	5.79	527891	HOBBS_INT 3	115	32.93	587370	GEN-2016-056	230	11.30
526076	STANTON_W 3	115	9.31	527894	HOBBS_INT 6	230	19.06	587390	GEN-2016-058	345	8.66
526160	CARLISLE 3	115	13.00	527896	HOBBS_INT 7	345	7.43	587420	GEN-2016-062	230	7.36
526161	CARLISLE 6	230	11.82	527962	POTASH_JCT 3	115	8.89	599891	OKLAUN 7	345	4.04
526269	LUBBCK_STH 6	230	11.90	527963	POTASH_JCT 6	230	6.51				
526298	LUBBCK_EST 3	115	13.37	528027	RDRUNNER 6	230	3.66				

Table 4-15
Short Circuit Analysis for Study Project GEN-2016-069 (17SP)

Study Generator GEN-2016-069											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
527528	RIAC_TP 2	69	3.38	527597	TWEEDY 3	115	4.89	524875	OASIS 6	230	7.35
527540	CAPITAN 2	69	2.21	527711	EAGLE_CREEK3	115	6.96	524885	SN_JUAN_TAP6	230	4.68
527552	RIAC 2	69	3.00	527786	ATOKA 3	115	6.70	524889	SN_JUAN_WND6	230	4.49
527563	ROSWLL_INT 2	69	3.53	527793	EDDY_STH 3	115	10.46	524909	ROSEVELT_N 6	230	8.86
527575	SW_4702 2	69	3.21	527798	EDDY_NTH 3	115	10.46	524911	ROSEVELT_S 6	230	8.86
527589	CV-ORCHARD 2	69	2.01	527809	CV-8_MILE 3	115	5.14	524915	SW_4K33 6	230	8.86
524768	PLSNT_HILL 3	115	9.81	527821	CV-DAYTON 3	115	6.62	527483	CHAVES_CNTY6	230	4.05
524797	PERIMETER 3	115	6.33	527864	CUNNINHAM 3	115	29.59	527799	EDDY_NORTH 6	230	7.58
524863	FE-CHZPLT 3	115	7.68	528070	CV-AZMESA 3	115	6.76	527800	EDDY_SOUTH 6	230	7.58
524874	OASIS 3	115	9.56	528094	7-RIVERS 3	115	7.63	527865	CUNNINHAM 6	230	17.37
524924	PORTALES 3	115	7.23	528132	OCOTILLO 3	115	5.42	527894	HOBBS_INT 6	230	19.06
527482	CHAVES_CNTY3	115	6.27	528137	N_CANAL 3	115	7.25	527963	POTASH_JCT 6	230	6.51
527501	URTON 3	115	5.30	528160	CARLSBAD 3	115	8.86	528095	7-RIVERS 6	230	5.66
527508	PRICE 3	115	4.93	528178	PECOS 3	115	9.34	528179	PECOS 6	230	5.85
527515	CV-PINE 3	115	4.58	528226	HOPI_SUB 3	115	3.94	525549	TOLK 7	345	12.49
527522	ROSWELL_CTY3	115	5.03	583950	GEN-2014-033	115	6.27	527656	CROSSROADS 7	345	6.56
527534	BRASHER_TP 3	115	5.22	583960	GEN-2014-034	115	5.83	527802	EDDY_CNTY 7	345	4.33
527536	BRASHER 3	115	4.79	583970	GEN-2014-035	115	5.97	577103	GEN-2008-022	345	6.09
527541	CAPITAN 3	115	4.42	584620	GEN-2015-020	115	9.32	584260	GEN-2014-047	345	5.09
527546	SAMSON 3	115	5.04	587470	GEN-2016-069	115	6.08	584940	GEN-2015-056	345	5.65
527564	ROSWLL_INT 3	115	5.26	524770	PLSNT_HILL 6	230	6.11				

4.3 Short Circuit Results: 2025 Summer Peak

The maximum fault current for each bus is provided for the 2025 Summer Peak conditions. The following tables show the short circuit results for the study generators for the 2025 Summer Peak conditions:

- Table 4-16: Short Circuit Analysis for GEN-2015-018 (25SP)
- Table 4-17: Short Circuit Analysis for GEN-2015-033 (25SP)
- Table 4-18: Short Circuit Analysis for GEN-2015-039 (25SP)
- Table 4-19: Short Circuit Analysis for GEN-2015-040 (25SP)
- Table 4-20: Short Circuit Analysis for GEN-2015-041 (25SP)
- Table 4-21: Short Circuit Analysis for GEN-2015-078 (25SP)
- Table 4-22: Short Circuit Analysis for ASGI-2016-001 (25SP)
- Table 4-23: Short Circuit Analysis for ASGI-2016-002 (25SP)
- Table 4-24: Short Circuit Analysis for GEN-2016-002 (25SP)
- Table 4-25: Short Circuit Analysis for ASGI-2016-004 (25SP)
- Table 4-26: Short Circuit Analysis for GEN-2016-015 and GEN-2016-062 (25SP)
- Table 4-27: Short Circuit Analysis for GEN-2016-039 (25SP)
- Table 4-28: Short Circuit Analysis for GEN-2016-056 (25SP)
- Table 4-29: Short Circuit Analysis for GEN-2016-058 (25SP)
- Table 4-30: Short Circuit Analysis for GEN-2016-069 (25SP)

Table 4-16
Short Circuit Analysis for Study Project GEN-2015-018 (25SP)

Study Generator GEN-2015-018											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
524486	CAPROCK 3	115	3.22	524911	ROSEVELT_S 6	230	8.94	525393	SPRINGLAKE 3	115	9.08
524502	NORTON 3	115	3.31	524915	SW_4K33 6	230	8.94	525414	LAMTON 3	115	7.71
524509	FE-TUCMCARI3	115	2.60	524923	PORTALES 2	69	7.15	525440	LC-S_OLTON 3	115	7.30
524648	CARGILL 3	115	3.92	524924	PORTALES 3	115	7.29	525446	SPGLAKE_TP3	115	10.17
524662	PARMER_CO 3	115	4.11	524929	RO-PORT_MTR2	69	7.15	525453	HALE_CNTY 2	69	6.93
524664	DS-#24 3	115	4.05	524934	ZODIAC 2	69	5.32	525454	HALE_CNTY 3	115	10.21
524669	DS-#20 3	115	4.84	524935	KILGORE 3	115	5.97	525461	NEWHART 6	230	10.97
524764	NORRIS_TP 3	115	10.75	524941	PORTALES#1 2	69	5.51	525480	PLANT_X 3	115	19.28
524768	PLSNT_HILL 3	115	10.00	524963	S_PORTALES 3	115	5.61	525481	PLANT_X 6	230	22.92
524770	PLSNT_HILL 6	230	6.17	524977	MARKET_ST 3	115	5.53	525524	TOLK_EAST 6	230	28.45
524773	E_CLOVIS 3	115	8.57	524987	LARIAT 2	69	2.21	525531	TOLK_WEST 6	230	28.45
524776	N_CLOVIS_TP3	115	7.23	524996	BC-PROGRESS2	69	2.88	525543	TOLK_TAP 6	230	28.45
524777	N_CLOVIS 3	115	6.54	525001	W_MULESHOE 2	69	4.20	525594	SUDANRURAL 3	115	4.70
524783	W_CLOVIS 2	69	2.42	525008	MULESH_CTY 2	69	4.38	525607	NEW_AMHERST2	69	3.20
524797	PERIMETER 3	115	6.38	525017	EMULESH&VLY2	69	4.39	525608	NEW_AMHERST3	115	5.22
524801	NORRIS 3	115	9.85	525018	EMULESH&VLY3	115	5.70	525614	W_LITLFLDTP3	115	7.90
524808	FE-CLVS_INT3	115	6.74	525019	EMU&VLY_TP 3	115	6.24	525615	W_LITTLFLD 3	115	7.40
524821	CURRY 2	69	4.37	525023	BC-BAIL_MTR2	69	5.49	525636	LAMB_CNTY 3	115	9.42
524822	CURRY 3	115	10.78	525027	BAILEYCO 2	69	5.49	525637	LAMB_CNTY 6	230	5.52
524831	FE-HOLLAND 3	115	8.83	525028	BAILEYCO 3	115	6.23	525828	TUCO_INT 3	115	21.41
524838	FE-CLOVIS2 3	115	10.20	525038	BAILEY_PMP 2	69	2.88	526435	SUNDOWN 6	230	11.30
524846	FARWELL 2	69	2.09	525040	BAILEY_PMP 3	115	4.80	560032	G15-018T	115	5.87
524853	DS-#10 2	69	1.77	525045	LC-BECK 2	69	2.04	560051	G15-039-TAP	230	7.52
524863	FE-CHZPLT 3	115	7.76	525050	BC-KELLEY 3	115	8.20	562480	G13-027-TAP	230	9.34
524874	OASIS 3	115	9.66	525056	BC-EARTH 3	115	8.56	584600	GEN-2015-018	115	4.37
524875	OASIS 6	230	7.42	525192	KRESS_INT 3	115	11.55	584620	GEN-2015-020	115	9.41
524908	ROOSEVELT 3	115	10.41	525326	COX 3	115	5.94	599955	PNM-DC6	230	8.94
524909	ROSEVELT_N 6	230	8.94								

Table 4-17
Short Circuit Analysis for Study Project GEN-2015-033 (25SP)

Study Generator GEN-2015-033											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
511422	FLETCHR4	138	7.84	524911	ROSEVELT_S 6	230	8.94	526676	GRASSLAND 3	115	6.23
511423	FLE TAP4	138	8.57	524915	SW_4K33 6	230	8.94	526677	GRASSLAND 6	230	6.66
511431	LWS S4	138	10.78	525192	KRESS_INT 3	115	11.55	526679	CIRRUS_WND 6	230	5.15
511436	COMANC-2	69	9.70	525212	SWISHER 3	115	10.59	526934	YOAKUM 3	115	16.92
511437	COMANC-4	138	17.87	525213	SWISHER 6	230	10.82	526935	YOAKUM 6	230	17.94
511439	LWSTAP 4	138	11.23	525326	COX 3	115	5.94	526936	YOAKUM_345	345	9.22
511456	O.K.U.-7	345	5.89	525414	LAMTON 3	115	7.71	527010	OXYBRU_TP 6	230	14.15
511466	L.E.S.-2	69	16.52	525453	HALE_CNTY 2	69	6.93	527149	MUSTANG 6	230	15.87
511467	L.E.S.-4	138	24.18	525454	HALE_CNTY 3	115	10.21	527656	CROSSROADS 7	345	6.64
511468	L.E.S.-7	345	12.96	525461	NEWHART 6	230	10.97	527802	EDDY_CNTY 7	345	4.47
511469	LGORE-N2	69	7.99	525480	PLANT_X 3	115	19.28	527894	HOBBS_INT 6	230	20.35
511470	LGORE-S2	69	6.93	525481	PLANT_X 6	230	22.92	527896	HOBBS_INT 7	345	8.69
511474	SHERID4	138	12.06	525524	TOLK_EAST 6	230	28.45	527965	KIOWA 7	345	5.72
511477	S.W.S.-4	138	33.99	525531	TOLK_WEST 6	230	28.45	529304	OMDUNCN4	138	6.67
511486	ELGINJT4	138	9.98	525543	TOLK_TAP 6	230	28.45	560013	G14-057T	345	9.79
511487	ELGINJT2	69	8.49	525549	TOLK 7	345	12.80	560021	TUCO_2	230	24.32
511488	112GORE4	138	12.22	525731	SP-ABERNTHY2	69	3.04	560022	TUCO_2	345	21.63
511494	COMMTAP4	138	21.19	525738	HALECENTER 2	69	2.47	560027	G14-074-TAP	345	8.15
511512	RPPAPER4	138	11.58	525779	FLOYD_CNTY 2	69	5.34	560034	CHISHOLM2	345	15.30
511537	ARTVLTP4	138	11.43	525780	FLOYD_CNTY 3	115	6.10	560035	GRAPEVINE	345	9.73
511553	CHISHOLM7	345	15.30	525816	TUCO_INT2 2	69	4.72	560050	G15-031-TAP	230	9.26
511563	ELSWORTH 4	138	9.91	525826	TUCO_INT 2	69	8.04	560051	G15-039-TAP	230	7.52
514801	MINCO 7	345	17.29	525828	TUCO_INT 3	115	21.41	560059	G1579&G1580T	230	9.42
514809	JOHNCO 7	345	9.38	525830	TUCO_INT 6	230	29.38	560078	G16-037-TAP	345	9.52
514901	CIMARON7	345	33.33	525832	TUCO_INT 7	345	21.30	560088	G16-063-TAP	345	6.63
515045	SEMINOL7	345	30.02	525840	ANTELOPE_1 6	230	29.06	560100	CRAWFISH765	765	8.22
515135	SUNNYSD4	138	17.27	525853	LH-WIL&ELLN2	69	2.59	560101	SEMINOLE765	765	10.26
515136	SUNNYSD7	345	10.23	525885	SP-NEWDEAL 2	69	3.41	562004	G11-025-TAP	115	4.64
515375	WWRDEHV7	345	22.12	525926	CROSBY 3	115	4.53	562480	G13-027-TAP	230	9.34
515444	MCNOWND7	345	17.24	526076	STANTON_W 3	115	9.77	577103	GEN-2008-022	345	6.16
515458	BORDER 7	345	12.18	526109	SP-ERSKINE 3	115	12.03	583090	G1149&G1504	345	9.63
515549	MNCWND37	345	11.78	526146	INDIANA 3	115	10.17	583340	GEN-2012-020	230	9.91
515800	GRACMNT7	345	16.65	526159	CARLISLE 2	69	2.59	584070	G1457&G1642	345	6.36
515802	GRACMNT4	138	28.50	526160	CARLISLE 3	115	14.13	584260	GEN-2014-047	345	5.14
520814	ANADARK4	138	31.25	526161	CARLISLE 6	230	15.85	584440	GEN-2014-074	345	7.64
521089	WASHITA4	138	27.87	526162	LP-DOUD_TP 3	115	12.32	584760	GEN-2015-033	345	7.11
522823	LP-MILWAKEE6	230	15.17	526192	MURPHY 3	115	11.14	584940	GEN-2015-056	345	5.71
522828	LP-MILWAKEE2	69	8.34	526268	LUBBCK_STH 3	115	20.10	585060	GEN-2015-068	345	15.01
522861	LP-SOUTHEST6	230	18.31	526269	LUBBCK_STH 6	230	20.38	585270	GEN-2015-093	345	9.68
522866	LP-COOK 2	69	35.26	526297	LUBBCK_EST 2	69	8.14	585280	GEN-2015-092	345	6.16
522870	LP-HOLLY 6	230	17.84	526298	LUBBCK_EST 3	115	15.86	587230	GEN-2016-037	345	8.02
522888	LP-WADSWRTH6	230	13.05	526299	LUBBCK_EST 6	230	14.03	587370	GEN-2016-056	230	14.84
523097	HITCHLAND 7	345	18.14	526337	JONES 6	230	22.44	587390	GEN-2016-058	345	9.15
523959	POTTER_CO 6	230	23.35	526435	SUNDOWN 6	230	11.30	590001	OKLEHV24	138	4.79
523961	POTTER_CO 7	345	12.17	526460	AMOCO_SS 6	230	9.88	590003	OKLEHV14	138	4.80
524296	SPNSPUR_WND7	345	5.69	526524	WOLFFORTH 3	115	11.99	599891	OKLAUN 7	345	4.04
524909	ROSEVELT_N 6	230	8.94	526525	WOLFFORTH 6	230	14.65	599955	PNM-DC6	230	8.94

Table 4-18
Short Circuit Analysis for Study Project GEN-2015-039 (25SP)

Study Generator GEN-2015-039											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
522823	LP-MILWAKEE6	230	15.17	524909	ROSEVELT_N 6	230	8.94	525832	TUCO_INT 7	345	21.30
522861	LP-SOUTHEST6	230	18.31	524911	ROSEVELT_S 6	230	8.94	525840	ANTELOPE_1 6	230	29.06
522870	LP-HOLLY 6	230	17.84	524915	SW_4K33 6	230	8.94	526020	HOCKLEY 3	115	5.61
523095	HITCHLAND 6	230	15.97	524924	PORTALES 3	115	7.29	526036	LC-OPDYKE 3	115	5.90
523097	HITCHLAND 7	345	18.14	525018	EMULESH&VLY3	115	5.70	526076	STANTON_W 3	115	9.77
523221	XIT_INTG 6	230	2.63	525019	EMU&VLY_TP 3	115	6.24	526160	CARLISLE 3	115	14.13
523267	PRINGLE 6	230	4.31	525027	BAILEYCO 2	69	5.49	526161	CARLISLE 6	230	15.85
523308	MOORE_E 3	115	11.14	525028	BAILEYCO 3	115	6.23	526268	LUBBCK_STH 3	115	20.10
523309	MOORE_CNTY 6	230	6.85	525040	BAILEY_PMP 3	115	4.80	526269	LUBBCK_STH 6	230	20.38
523869	CHAN/TASCOS6	230	3.93	525050	BC-KELLEY 3	115	8.20	526298	LUBBCK_EST 3	115	15.86
523959	POTTER_CO 6	230	23.35	525056	BC-EARTH 3	115	8.56	526299	LUBBCK_EST 6	230	14.03
523961	POTTER_CO 7	345	12.17	525124	HART_INDUST3	115	7.55	526337	JONES 6	230	22.44
523977	HARRNG_WST 6	230	29.33	525179	TULIA_TP 3	115	6.82	526361	COCHRAN 3	115	7.02
523978	HARRNG_MID 6	230	29.33	525191	KRESS_INT 2	69	4.47	526424	PACIFIC 3	115	9.81
523979	HARRNG_EST 6	230	29.33	525192	KRESS_INT 3	115	11.55	526434	SUNDOWN 3	115	11.64
524007	ROLLHILLS 3	115	19.99	525212	SWISHER 3	115	10.59	526435	SUNDOWN 6	230	11.30
524010	ROLLHILLS 6	230	21.32	525213	SWISHER 6	230	10.82	526445	AMOCO_TP 3	115	10.96
524266	BUSHLAND 3	115	9.48	525225	KRESS_RURAL3	115	6.34	526452	AMOCO_CRYO 3	115	6.65
524267	BUSHLAND 6	230	9.98	525272	KISER 3	115	5.13	526460	AMOCO_SS 6	230	9.88
524276	WILDOR_WND 6	230	5.03	525291	PLAINVW_TP 2	69	6.50	526475	YUMA_INT 3	115	11.53
524290	WILDOR2_JUS6	230	6.75	525298	S_PLAINVEW 2	69	2.59	526484	LG-LEVELAND3	115	9.99
524296	SPNSPUR_WND7	345	5.69	525325	COX 2	69	3.37	526524	WOLFFORTH 3	115	11.99
524300	HILLSIDE 3	115	12.78	525326	COX 3	115	5.94	526525	WOLFFORTH 6	230	14.65
524306	COULTER 3	115	15.59	525393	SPRINGLAKE 3	115	9.08	526677	GRASSLAND 6	230	6.66
524415	AMA_SOUTH 6	230	14.09	525413	LAMTON 2	69	5.20	526736	TERRY_CNTY 3	115	11.01
524516	CANYON_WEST3	115	5.35	525414	LAMTON 3	115	7.71	526934	YOAKUM 3	115	16.92
524554	CENTRE_ST 2	69	3.82	525432	SP-HALFWAY 2	69	5.88	526935	YOAKUM 6	230	17.94
524556	CENTRE_ST 3	115	6.12	525440	LC-S_OLTON 3	115	7.30	526936	YOAKUM_345	345	9.22
524561	DS-MTR 2	69	6.07	525446	SPGLAKE_TP3	115	10.17	527010	OXYBRU_TP 6	230	14.15
524567	NE_HEREFORD3	115	9.70	525453	HALE_CNTY 2	69	6.93	527149	MUSTANG 6	230	15.87
524573	NE_HEREFORD2	69	6.77	525454	HALE_CNTY 3	115	10.21	527656	CROSSROADS 7	345	6.64
524580	DS-#9 2	69	3.21	525460	NEWHART 3	115	15.15	560021	TUCO_2	230	24.32
524590	DAWN 3	115	6.16	525461	NEWHART 6	230	10.97	560022	TUCO_2	345	21.63
524597	PANDAHFD 3	115	9.08	525480	PLANT_X 3	115	19.28	560027	G14-074-TAP	345	8.15
524605	HEREFORD 2	69	4.44	525481	PLANT_X 6	230	22.92	560032	G15-018T	115	5.87
524606	HEREFORD 3	115	10.89	525524	TOLK_EAST 6	230	28.45	560035	GRAPEVINE	345	9.73
524622	DEAFSMITH 3	115	12.18	525531	TOLK_WEST 6	230	28.45	560050	G15-031-TAP	230	9.26
524623	DEAFSMITH 6	230	7.80	525543	TOLK_TAP 6	230	28.45	560051	G15-039-TAP	230	7.52
524629	DS-#6 3	115	6.21	525549	TOLK 7	345	12.80	560059	G1579&G1580T	230	9.42
524633	DS-#4 2	69	3.26	525608	NEW_AMHERST3	115	5.22	562480	G13-027-TAP	230	9.34
524655	FRIONA 3	115	3.93	525614	W_LITLFLDTP3	115	7.90	583340	GEN-2012-020	230	9.91
524694	DS-#22 3	115	4.94	525615	W_LITTLFLD 3	115	7.40	583840	GEN-2013-027	230	8.29
524734	DS-#21 3	115	10.72	525635	LAMB_CNTY 2	69	6.17	584220	GEN-2014-040	115	10.28
524745	CASTRO_CNTY2	69	9.55	525636	LAMB_CNTY 3	115	9.42	584640	GEN-2015-022	115	10.59
524746	CASTRO_CNTY3	115	11.54	525637	LAMB_CNTY 6	230	5.52	584750	GEN-2015-031	230	9.26
524768	PLSNT_HILL 3	115	10.00	525780	FLOYD_CNTY 3	115	6.10	584800	GEN-2015-039	230	6.37
524770	PLSNT_HILL 6	230	6.17	525816	TUCO_INT2 2	69	4.72	585060	GEN-2015-068	345	15.01
524822	CURRY 3	115	10.78	525826	TUCO_INT 2	69	8.04	587370	GEN-2016-056	230	14.84
524875	OASIS 6	230	7.42	525828	TUCO_INT 3	115	21.41	599955	PNM-DC6	230	8.94
524908	ROOSEVELT 3	115	10.41	525830	TUCO_INT 6	230	29.38				

Table 4-19
Short Circuit Analysis for Study Project GEN-2015-040 (25SP)

Study Generator GEN-2015-040											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
515458	BORDER 7	345	12.18	527047	OXY_WILRD1 3	115	10.58	527276	SEMINOLE 6	230	7.75
524909	ROSEVELT_N 6	230	8.94	527051	ODC_TP 3	115	13.30	527286	XTO_RUSSEL 3	115	10.08
525481	PLANT_X 6	230	22.92	527056	ODC 3	115	10.00	527313	MIDAMERI_TP2	69	2.16
525531	TOLK_WEST 6	230	28.45	527062	SHELL_CO2 3	115	16.13	527321	GAINES 2	69	4.25
525543	TOLK_TAP 6	230	28.45	527068	SHELLC3_TP 3	115	10.62	527322	GAINES 3	115	9.42
525549	TOLK 7	345	12.80	527080	EL_PASO 3	115	15.88	527325	OXY_WSEM_TP3	115	9.26
525637	LAMB_CNTY 6	230	5.52	527099	DC_EAST 2	69	6.11	527339	DOSS 2	69	4.23
525832	TUCO_INT 7	345	21.30	527105	SAN_ANDS_TP3	115	16.56	527340	DOSS 3	115	8.04
526434	SUNDOWN 3	115	11.64	527106	SAN_ANDRES 3	115	11.77	527346	LEGACY 3	115	7.75
526435	SUNDOWN 6	230	11.30	527111	WASSON 2	69	5.98	527363	HIGG 3	115	10.26
526460	AMOCO_SS 6	230	9.88	527125	DENVER_CTY 2	69	8.67	527865	CUNNINHAM 6	230	18.13
526491	LG-CLAUENE 3	115	9.23	527130	DENVER_N 3	115	21.22	527891	HOBBS_INT 3	115	33.75
526524	WOLFFORTH 3	115	11.99	527136	DENVER_S 3	115	21.22	527894	HOBBS_INT 6	230	20.35
526525	WOLFFORTH 6	230	14.65	527146	MUSTANG 3	115	23.55	527896	HOBBS_INT 7	345	8.69
526735	TERRY_CNTY 2	69	7.12	527149	MUSTANG 6	230	15.87	527965	KIOWA 7	345	5.72
526736	TERRY_CNTY 3	115	11.01	527151	GS-MUSTANG 6	230	15.87	528611	GAINESGENTP6	230	11.65
526784	AMOCOWASSON6	230	14.05	527183	JAYBEE 2	69	4.37	528626	LE-PLNSINT 2	69	4.38
526792	PRENTICE 3	115	5.98	527194	LG-PLSHILL 3	115	7.59	560021	TUCO_2	230	24.32
526928	PLAINS_INT 3	115	9.92	527201	SEAGRAVES 2	69	5.42	560022	TUCO_2	345	21.63
526934	YOAKUM 3	115	16.92	527202	SEAGRAVES 3	115	8.63	560058	G15-077-TAP	115	8.31
526935	YOAKUM 6	230	17.94	527212	DIAMONDBACK3	115	3.12	560059	G1579&G1580T	230	9.42
526936	YOAKUM_345	345	9.22	527217	MOSS 2	69	5.32	560100	CRAWFISH765	765	8.22
526944	LG-PLAINS 3	115	7.97	527223	LG-MC&SEMNL2	69	2.59	562480	G13-027-TAP	230	9.34
526993	LG-WELLMAN 2	69	3.07	527238	ROZ 3	115	11.27	583840	GEN-2013-027	230	8.29
527010	OXYBRU_TP 6	230	14.15	527242	AMERADA 3	115	11.43	584810	GEN-2015-040	230	14.48
527018	BENNETT 3	115	13.28	527261	SULPHUR 2	69	3.37	585150	GEN-2015-078	115	17.06
527036	SHELL_C2 3	115	12.93	527262	SULPHUR 3	115	5.73	585160	G1579&G1580	230	8.93
527041	ARCO_TP 3	115	13.18	527275	SEMINOLE 3	115	14.62	587390	GEN-2016-058	345	9.15

Table 4-20
Short Circuit Analysis for Study Project GEN-2015-041 (25SP)

Study Generator GEN-2015-041											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
510907	PITTSB-7	345	13.47	525432	SP-HALFWAY 2	69	5.88	526784	AMOCOWASSON6	230	14.05
511423	FLE TAP4	138	8.57	525440	LC-S_OLTON 3	115	7.30	526792	PRENTICE 3	115	5.98
511437	COMANC-4	138	17.87	525446	SPGLAKE_TP3	115	10.17	526928	PLAINS_INT 3	115	9.92
511439	LWSTAP 4	138	11.23	525453	HALE_CNTY 2	69	6.93	526934	YOAKUM 3	115	16.92
511456	O.K.U.-7	345	5.89	525454	HALE_CNTY 3	115	10.21	526935	YOAKUM 6	230	17.94
511466	L.E.S.-2	69	16.52	525460	NEWHART 3	115	15.15	526936	YOAKUM_345	345	9.22
511467	L.E.S.-4	138	24.18	525461	NEWHART 6	230	10.97	527010	OXYBRU_TP 6	230	14.15
511468	L.E.S.-7	345	12.96	525480	PLANT_X 3	115	19.28	527041	ARCO_TP 3	115	13.18
511474	SHERID4	138	12.06	525481	PLANT_X 6	230	22.92	527146	MUSTANG 3	115	23.55
511486	ELGINJT4	138	9.98	525524	TOLK_EAST 6	230	28.45	527149	MUSTANG 6	230	15.87
511494	COMMTAP4	138	21.19	525531	TOLK_WEST 6	230	28.45	527151	GS-MUSTANG 6	230	15.87
511553	CHISHOLM7	345	15.30	525543	TOLK_TAP 6	230	28.45	527194	LG-PLSHILL 3	115	7.59
511557	CHISHOLM6	230	12.57	525549	TOLK 7	345	12.80	527276	SEMINOLE 6	230	7.75
514801	MINCO 7	345	17.29	525614	W_LITLFLDTP3	115	7.90	527656	CROSSROADS 7	345	6.64
514908	ARCADIA7	345	26.54	525637	LAMB_CNTY 6	230	5.52	527799	EDDY_NORTH 6	230	8.02
514934	DRAPER 7	345	21.65	525724	COUNTYLINE 2	69	2.22	527802	EDDY_CNTY 7	345	4.47
515044	SEMINOL4	138	40.63	525731	SP-ABERNTHY2	69	3.04	527865	CUNNINHAM 6	230	18.13
515045	SEMINOL7	345	30.02	525738	HALECENTER 2	69	2.47	527891	HOBBS_INT 3	115	33.75
515136	SUNNYSD7	345	10.23	525745	LH-HALECTR 2	69	2.45	527894	HOBBS_INT 6	230	20.35
515224	MUSKOGE7	345	29.02	525769	BARWISE 2	69	3.78	527896	HOBBS_INT 7	345	8.69
515375	WWRDEHV7	345	22.12	525779	FLOYD_CNTY 2	69	5.34	527962	POTASH_JCT 3	115	14.56
515376	WWRDEHV4	138	24.49	525780	FLOYD_CNTY 3	115	6.10	527965	KIOWA 7	345	5.72
515458	BORDER 7	345	12.18	525790	FLOYDADA_TP2	69	2.50	528027	RDRUNNER 7	345	3.86
515554	BVRCNTY7	345	19.16	525811	LH-HARMONY 2	69	4.27	528185	N_LOVING 7	345	4.52
515599	G07621119-20	345	14.07	525816	TUCO_INT2 2	69	4.72	528611	GAINESGENTP6	230	11.65
515800	GRACMNT7	345	16.65	525826	TUCO_INT 2	69	8.04	531512	WALKTAP7	345	8.06
515802	GRACMNT4	138	28.50	525828	TUCO_INT 3	115	21.41	539801	THISTLE7	345	16.90
522819	LP-NORTHEST2	69	13.15	525830	TUCO_INT 6	230	29.38	560010	G14-037-TAP	345	18.10
522822	LP-NORTHWST2	69	4.62	525832	TUCO_INT 7	345	21.30	560013	G14-057T	345	9.79
522823	LP-MILWAKEE6	230	15.17	525840	ANTELOPE_1 6	230	29.06	560021	TUCO_2	230	24.32
522828	LP-MILWAKEE2	69	8.34	525853	LH-WIL&ELLN2	69	2.59	560022	TUCO_2	345	21.63
522832	LP-VICKSBRG2	69	14.16	525860	SP-BECTON 2	69	2.30	560027	G14-074-TAP	345	8.15
522857	LP-SOUTHEST2	69	24.77	525885	SP-NEWDEAL 2	69	3.41	560034	CHISHOLM2	345	15.30
522861	LP-SOUTHEST6	230	18.31	525892	WHITE&MONRO2	69	2.57	560035	GRAPEVINE	345	9.73
522866	LP-COOK 2	69	35.26	525925	CROSBY 2	69	4.80	560050	G15-031-TAP	230	9.26
522870	LP-HOLLY 6	230	17.84	525926	CROSBY 3	115	4.53	560051	G15-039-TAP	230	7.52
522879	LP-WADSWRTH2	69	22.95	526076	STANTON_W 3	115	9.77	560059	G1579&G1580T	230	9.42
522888	LP-WADSWRTH6	230	13.05	526109	SP-ERSKINE 3	115	12.03	560071	G16-003-TAP	345	16.67
523095	HITCHLAND 6	230	15.97	526130	SP-CARLISLE2	69	2.12	560078	G16-037-TAP	345	9.52
523097	HITCHLAND 7	345	18.14	526146	INDIANA 3	115	10.17	560100	CRAWFISH765	765	8.22
523101	NOBLE_WND 7	345	18.05	526159	CARLISLE 2	69	2.59	560101	SEMINOLE765	765	10.26
523112	NOVUS1 7	345	17.74	526160	CARLISLE 3	115	14.13	562004	G11-025-TAP	115	4.64
523309	MOORE_CNTY 6	230	6.85	526161	CARLISLE 6	230	15.85	562075	G11-051-TAP	345	17.92
523869	CHAN/TASCOS6	230	3.93	526162	LP-DOUD_TP 3	115	12.32	562480	G13-027-TAP	230	9.34
523959	POTTER_CO 6	230	23.35	526176	LP-DOUD 3	115	9.45	576395	GEN-2010-014	345	12.67
523961	POTTER_CO 7	345	12.17	526184	SW_6878 2	69	2.17	577103	GEN-2008-022	345	6.16
523979	HARRNG_EST 6	230	29.33	526192	MURPHY 3	115	11.14	577104	G08-022-WEST	345	5.67
524010	ROLLHILLS 6	230	21.32	526199	SP-FRANKFRD3	115	10.00	581137	GEN-2011-025	115	4.64
524267	BUSHLAND 6	230	9.98	526213	ALLEN 3	115	11.07	581148	GEN-2011-022	345	16.25
524296	SPNSPUR_WND7	345	5.69	526267	LUBBCK_STH 2	69	4.39	583090	G1149&G1504	345	9.63
524415	AMA_SOUTH 6	230	14.09	526268	LUBBCK_STH 3	115	20.10	583340	GEN-2012-020	230	9.91
524623	DEAFSMITH 6	230	7.80	526269	LUBBCK_STH 6	230	20.38	583819	ASGI2014-001	115	12.03
524770	PLSNT_HILL 6	230	6.17	526284	PLANTERS 2	69	6.38	583840	GEN-2013-027	230	8.29
524875	OASIS 6	230	7.42	526297	LUBBCK_EST 2	69	8.14	584070	G1457&G1642	345	6.36
524908	ROOSEVELT 3	115	10.41	526298	LUBBCK_EST 3	115	15.86	584260	GEN-2014-047	345	5.14
524909	ROSEVELT_N 6	230	8.94	526299	LUBBCK_EST 6	230	14.03	584440	GEN-2014-074	345	7.64
524911	ROSEVELT_S 6	230	8.94	526310	CLUTTER 2	69	5.49	584640	GEN-2015-022	115	10.59
524915	SW_4K33 6	230	8.94	526337	JONES 6	230	22.44	584750	GEN-2015-031	230	9.26
525019	EMU&VLY_TP 3	115	6.24	526434	SUNDOWN 3	115	11.64	584760	GEN-2015-033	345	7.11
525056	BC-EARTH 3	115	8.56	526435	SUNDOWN 6	230	11.30	584800	GEN-2015-039	230	6.37
525124	HART_INDUST3	115	7.55	526460	AMOCO_SS 6	230	9.88	584940	GEN-2015-056	345	5.71
525179	TULIA_TP 3	115	6.82	526475	YUMA_INT 3	115	11.53	585060	GEN-2015-068	345	15.01
525191	KRESS_INT 2	69	4.47	526481	SP-WOLF_TP 3	115	11.74	585080	GEN-2015-071	345	12.21
525192	KRESS_INT 3	115	11.55	526524	WOLFFORTH 3	115	11.99	585120	GEN-2015-075	69	1.55
525212	SWISHER 3	115	10.59	526525	WOLFFORTH 6	230	14.65	585160	G1579&G1580	230	8.93
525213	SWISHER 6	230	10.82	526562	SLATON 2	69	2.49	585270	GEN-2015-093	345	9.68
525225	KRESS_RURAL3	115	6.34	526602	SP-WOODROW 3	115	9.64	587370	GEN-2016-056	230	14.84
525272	KISER 3	115	5.13	526656	LYNN_CNTY 3	115	5.71	587390	GEN-2016-058	345	9.15
525291	PLAINVW_TP 2	69	6.50	526676	GRASSLAND 3	115	6.23	590001	OKLEHV24	138	4.79
525298	S_PLAINVEW 2	69	2.59	526677	GRASSLAND 6	230	6.66	590003	OKLEHV14	138	4.80
525325	COX 2	69	3.37	526679	CIRRUS_WND 6	230	5.15	599891	OKLAUN 7	345	4.04
525326	COX 3	115	5.94	526694	GRAHAM 3	115	2.70	599955	PNM-DC6	230	8.94
525413	LAMTON 2	69	5.20	526736	TERRY_CNTY 3	115	11.01				
525414	LAMTON 3	115	7.71								

Table 4-21
Short Circuit Analysis for Study Project GEN-2015-078 (25SP)

Study Generator GEN-2015-078											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
515458	BORDER 7	345	12.18	527030	ALRDCRTZ_TP3	115	8.65	527276	SEMINOLE 6	230	7.75
524909	ROSEVELT_N 6	230	8.94	527036	SHELL_C2 3	115	12.93	527284	RUSSELL 3	115	9.13
525481	PLANT_X 6	230	22.92	527041	ARCO_TP 3	115	13.18	527286	XTO_RUSSEL 3	115	10.08
525531	TOLK_WEST 6	230	28.45	527047	OXY_WILRD1 3	115	10.58	527291	LE-KCM 2	69	2.63
525543	TOLK_TAP 6	230	28.45	527051	ODC_TP 3	115	13.30	527305	LG-SAWYERFL2	69	1.80
525549	TOLK 7	345	12.80	527056	ODC 3	115	10.00	527313	MIDAMERI_TP2	69	2.16
525637	LAMB_CNTY 6	230	5.52	527062	SHELL_CO2 3	115	16.13	527321	GAINES 2	69	4.25
525832	TUCO_INT 7	345	21.30	527068	SHELLC3_TP 3	115	10.62	527322	GAINES 3	115	9.42
526161	CARLISLE 6	230	15.85	527074	SHELLC3 3	115	9.56	527323	OXY_WSTSEM 3	115	6.87
526269	LUBBCK_STH 6	230	20.38	527080	EL_PASO 3	115	15.88	527325	OXY_WSEM_TP3	115	9.26
526434	SUNDOWN 3	115	11.64	527093	SW_7848 2	69	4.23	527331	RILEY 2	69	3.94
526435	SUNDOWN 6	230	11.30	527096	OXY_DC_WST 2	69	4.51	527339	DOSS 2	69	4.23
526445	AMOCO_TP 3	115	10.96	527099	DC_EAST 2	69	6.11	527340	DOSS 3	115	8.04
526460	AMOCO_SS 6	230	9.88	527105	SAN_ANDS_TP3	115	16.56	527345	LEGACY 2	69	3.98
526469	SP-YUMA 2	69	3.09	527106	SAN_ANDRES 3	115	11.77	527346	LEGACY 3	115	7.75
526475	YUMA_INT 3	115	11.53	527111	WASSON 2	69	5.98	527355	BOARDMAN 2	69	2.42
526481	SP-WOLF_TP 3	115	11.74	527117	SW_7814 2	69	3.13	527360	MAPCO 3	115	10.58
526484	LG-LEVELAND3	115	9.99	527125	DENVER_CTY 2	69	8.67	527362	JOHNSON_DRW3	115	10.82
526491	LG-CLAUENE 3	115	9.23	527130	DENVER_N 3	115	21.22	527363	HIGG 3	115	10.26
526499	LG-MEADOW 2	69	3.75	527136	DENVER_S 3	115	21.22	527371	TENNECO 2	69	3.41
526506	LG-DOCWEBR 2	69	5.02	527146	MUSTANG 3	115	23.55	527865	CUNNINHAM 6	230	18.13
526524	WOLFFORTH 3	115	11.99	527149	MUSTANG 6	230	15.87	527891	HOBBS_INT 3	115	33.75
526525	WOLFFORTH 6	230	14.65	527151	GS-MUSTANG 6	230	15.87	527894	HOBBS_INT 6	230	20.35
526735	TERRY_CNTY 2	69	7.12	527183	JAYBEE 2	69	4.37	527896	HOBBS_INT 7	345	8.69
526736	TERRY_CNTY 3	115	11.01	527189	LG-SEAGRAVE2	69	3.74	527965	KIOWA 7	345	5.72
526747	LG-BROWNFLD2	69	3.60	527194	LG-PLSHILL 3	115	7.59	528325	LE-WAITS 3	115	6.78
526754	BROWNFIELD 2	69	3.08	527201	SEAGRAVES 2	69	5.42	528413	TAYLOR 3	115	14.83
526784	AMOCOWASSON6	230	14.05	527202	SEAGRAVES 3	115	8.63	528433	NEW_NHOBBS 3	115	8.08
526792	PRENTICE 3	115	5.98	527211	DIAMONDBACK2	69	3.27	528611	GAINESGENTP6	230	11.65
526928	PLAINS_INT 3	115	9.92	527212	DIAMONDBACK3	115	3.12	528626	LE-PLNSINT 2	69	4.38
526934	YOAKUM 3	115	16.92	527217	MOSS 2	69	5.32	528775	LE-ERF 3	115	10.82
526935	YOAKUM 6	230	17.94	527223	LG-MC&SEMNL2	69	2.59	528778	LE-ROZ 2	69	3.22
526936	YOAKUM_345	345	9.22	527228	RILEY_TP 2	69	4.09	560021	TUCO_2	230	24.32
526944	LG-PLAINS 3	115	7.97	527229	OZRK_MAH02 2	69	1.53	560022	TUCO_2	345	21.63
526965	KINNEY 2	69	2.42	527235	LG-ASHMORE 2	69	2.47	560058	G15-077-TAP	115	8.31
526971	TOKIO_TP 2	69	3.65	527238	ROZ 3	115	11.27	560059	G1579&G1580T	230	9.42
526979	LG-JS_SMITH2	69	2.11	527242	AMERADA 3	115	11.43	560100	CRAWFISH765	765	8.22
526985	WELLMAN 2	69	2.86	527247	CEDARLAKE 2	69	2.83	562480	G13-027-TAP	230	9.34
526993	LG-WELLMAN 2	69	3.07	527253	ADAIR 2	69	2.62	583840	GEN-2013-027	230	8.29
526999	UNION_TX 2	69	2.39	527261	SULPHUR 2	69	3.37	584810	GEN-2015-040	230	14.48
527010	OXYBRU_TP 6	230	14.15	527262	SULPHUR 3	115	5.73	585150	GEN-2015-078	115	17.06
527018	BENNETT 3	115	13.28	527271	LG-FOSTER 2	69	2.72	585160	G1579&G1580	230	8.93
527024	ALLRED_SUB 3	115	7.87	527275	SEMINOLE 3	115	14.62	587390	GEN-2016-058	345	9.15

Table 4-22
Short Circuit Analysis for Study Project ASGI-2016-001 (25SP)

Study Generator ASGI-2016-001											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
522822	LP-NORTHWST2	69	4.62	526268	LUBBCK_STH 3	115	20.10	527106	SAN_ANDRES 3	115	11.77
522823	LP-MILWAKEE6	230	15.17	526269	LUBBCK_STH 6	230	20.38	527111	WASSON 2	69	5.98
522828	LP-MILWAKEE2	69	8.34	526297	LUBBCK_EST 2	69	8.14	527117	SW_7814 2	69	3.13
522832	LP-VICKSBRG2	69	14.16	526298	LUBBCK_EST 3	115	15.86	527125	DENVER_CTY 2	69	8.67
522853	LP-SLATON 2	69	18.54	526299	LUBBCK_EST 6	230	14.03	527130	DENVER_N 3	115	21.22
522857	LP-SOUTHEST2	69	24.77	526337	JONES 6	230	22.44	527136	DENVER_S 3	115	21.22
522861	LP-SOUTHEST6	230	18.31	526361	COCHRAN 3	115	7.02	527146	MUSTANG 3	115	23.55
522866	LP-COOK 2	69	35.26	526416	SLAUGTER_TP2	69	3.17	527149	MUSTANG 6	230	15.87
522870	LP-HOLLY 6	230	17.84	526424	PACIFIC 3	115	9.81	527151	GS-MUSTANG 6	230	15.87
522884	LP-OLIVER 2	69	13.12	526434	SUNDOWN 3	115	11.64	527183	JAYBEE 2	69	4.37
522888	LP-WADSWRTH6	230	13.05	526435	SUNDOWN 6	230	11.30	527189	LG-SEAGRAVE2	69	3.74
523959	POTTER_CO 6	230	23.35	526445	AMOCO_TP 3	115	10.96	527194	LG-PLSHILL 3	115	7.59
524623	DEAFSMITH 6	230	7.80	526452	AMOCO_CRYO 3	115	6.65	527201	SEAGRAVES 2	69	5.42
524909	ROSEVELT_N 6	230	8.94	526460	AMOCO_SS 6	230	9.88	527202	SEAGRAVES 3	115	8.63
524911	ROSEVELT_S 6	230	8.94	526469	SP-YUMA 2	69	3.09	527211	DIAMONDBACK2	69	3.27
525019	EMU&VLY_TP 3	115	6.24	526475	YUMA_INT 3	115	11.53	527212	DIAMONDBACK3	115	3.12
525056	BC-EARTH 3	115	8.56	526481	SP-WOLF_TP 3	115	11.74	527217	MOSS 2	69	5.32
525213	SWISHER 6	230	10.82	526483	SP-WOLFORTH3	115	9.02	527223	LG-MC&SEMNL2	69	2.59
525446	SPGLAKE_TP3	115	10.17	526484	LG-LEVELAND3	115	9.99	527228	RILEY_TP 2	69	4.09
525454	HALE_CNTY 3	115	10.21	526491	LG-CLAUENE 3	115	9.23	527229	OZRK_MAH02 2	69	1.53
525460	NEWHART 3	115	15.15	526499	LG-MEADOW 2	69	3.75	527235	LG-ASHMORE 2	69	2.47
525461	NEWHART 6	230	10.97	526506	LG-DOCWEBR 2	69	5.02	527238	ROZ 3	115	11.27
525480	PLANT_X 3	115	19.28	526524	WOLFFORTH 3	115	11.99	527242	AMERADA 3	115	11.43
525481	PLANT_X 6	230	22.92	526525	WOLFFORTH 6	230	14.65	527247	CEDARLAKE 2	69	2.83
525524	TOLK_EAST 6	230	28.45	526602	SP-WOODROW 3	115	9.64	527253	ADAIR 2	69	2.62
525531	TOLK_WEST 6	230	28.45	526656	LYNN_CNTY 3	115	5.71	527261	SULPHUR 2	69	3.37
525543	TOLK_TAP 6	230	28.45	526676	GRASSLAND 3	115	6.23	527262	SULPHUR 3	115	5.73
525614	W_LITLFLDTP3	115	7.90	526677	GRASSLAND 6	230	6.66	527271	LG-FOSTER 2	69	2.72
525637	LAMB_CNTY 6	230	5.52	526679	CIRRUS_WND 6	230	5.15	527275	SEMINOLE 3	115	14.62
525780	FLOYD_CNTY 3	115	6.10	526711	LG-DIXON 2	69	2.52	527276	SEMINOLE 6	230	7.75
525816	TUCO_INT2 2	69	4.72	526735	TERRY_CNTY 2	69	7.12	527284	RUSSELL 3	115	9.13
525826	TUCO_INT 2	69	8.04	526736	TERRY_CNTY 3	115	11.01	527286	XTO_RUSSEL 3	115	10.08
525828	TUCO_INT 3	115	21.41	526747	LG-BROWNFLD2	69	3.60	527291	LE-KCM 2	69	2.63
525830	TUCO_INT 6	230	29.38	526754	BROWNFIELD 2	69	3.08	527313	MIDAMERI_TP2	69	2.16
525832	TUCO_INT 7	345	21.30	526761	BROWNFLD_TP2	69	2.85	527322	GAINES 3	115	9.42
525840	ANTELOPE_1 6	230	29.06	526784	AMOCOWASSON6	230	14.05	527340	DOSS 3	115	8.04
525926	CROSBY 3	115	4.53	526792	PRENTICE 3	115	5.98	527362	JOHNSON_DRW3	115	10.82
526020	HOCKLEY 3	115	5.61	526928	PLAINS_INT 3	115	9.92	527363	HIGG 3	115	10.26
526036	LC-OPDYKE 3	115	5.90	526934	YOAKUM 3	115	16.92	528433	NEW_NHOBBS 3	115	8.08
526076	STANTON_W 3	115	9.77	526935	YOAKUM 6	230	17.94	528626	LE-PLNSINT 2	69	4.38
526109	SP-ERSKINE 3	115	12.03	526936	YOAKUM_345	345	9.22	560021	TUCO_2	230	24.32
526130	SP-CARLISLE2	69	2.12	526944	LG-PLAINS 3	115	7.97	560022	TUCO_2	345	21.63
526146	INDIANA 3	115	10.17	526993	LG-WELLMAN 2	69	3.07	560027	G14-074-TAP	345	8.15
526159	CARLISLE 2	69	2.59	526999	UNION_TX 2	69	2.39	560051	G15-039-TAP	230	7.52
526160	CARLISLE 3	115	14.13	527010	OXYBRU_TP 6	230	14.15	560058	G15-077-TAP	115	8.31
526161	CARLISLE 6	230	15.85	527018	BENNETT 3	115	13.28	560059	G1579&G1580T	230	9.42
526162	LP-DOUD_TP 3	115	12.32	527036	SHELL_C2 3	115	12.93	562480	G13-027-TAP	230	9.34
526176	LP-DOUD 3	115	9.45	527041	ARCO_TP 3	115	13.18	583340	GEN-2012-020	230	9.91
526184	SW_6878 2	69	2.17	527047	OXY_WILRD1 3	115	10.58	583810	ASGI2013-006	115	9.02
526192	MURPHY 3	115	11.14	527051	ODC_TP 3	115	13.30	583819	ASGI2014-001	115	12.03
526199	SP-FRANKFRD3	115	10.00	527062	SHELL_CO2 3	115	16.13	584720	ASGI15021602	69	2.16
526205	IVORY 2	69	3.96	527068	SHELLC3_TP 3	115	10.62	584800	GEN-2015-039	230	6.37
526213	ALLEN 3	115	11.07	527080	EL_PASO 3	115	15.88	585060	GEN-2015-068	345	15.01
526236	LP-WHEELOCK3	115	8.81	527096	OXY_DC_WST 2	69	4.51	585120	GEN-2015-075	69	1.55
526243	SP-QUAKER 3	115	10.03	527099	DC_EAST 2	69	6.11	585150	GEN-2015-078	115	17.06
526256	IVORY_TP 2	69	3.96	527105	SAN_ANDS_TP3	115	16.56				
526267	LUBBCK_STH 2	69	4.39								

Table 4-23
Short Circuit Analysis for Study Project ASGI-2016-002 (25SP)

Study Generator ASGI-2016-002											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
522823	LP-MILWAKEE6	230	15.17	526435	SUNDOWN 6	230	11.30	526934	YOAKUM 3	115	16.92
522861	LP-SOUTHEST6	230	18.31	526460	AMOCO_SS 6	230	9.88	527080	EL_PASO 3	115	15.88
525481	PLANT_X 6	230	22.92	526469	SP-YUMA 2	69	3.09	527125	DENVER_CTY 2	69	8.67
525830	TUCO_INT 6	230	29.38	526475	YUMA_INT 3	115	11.53	527130	DENVER_N 3	115	21.22
526109	SP-ERSKINE 3	115	12.03	526481	SP-WOLF_TP 3	115	11.74	527136	DENVER_S 3	115	21.22
526159	CARLISLE 2	69	2.59	526483	SP-WOLFORTH3	115	9.02	527146	MUSTANG 3	115	23.55
526160	CARLISLE 3	115	14.13	526484	LG-LEVELAND3	115	9.99	527202	SEAGRAVES 3	115	8.63
526161	CARLISLE 6	230	15.85	526491	LG-CLAUENE 3	115	9.23	527212	DIAMONDBACK3	115	3.12
526162	LP-DOUD_TP 3	115	12.32	526506	LG-DOCWEBR 2	69	5.02	527261	SULPHUR 2	69	3.37
526176	LP-DOUD 3	115	9.45	526524	WOLFFORTH 3	115	11.99	527262	SULPHUR 3	115	5.73
526192	MURPHY 3	115	11.14	526525	WOLFFORTH 6	230	14.65	527286	XTO_RUSSEL 3	115	10.08
526268	LUBBCK_STH 3	115	20.10	526735	TERRY_CNTY 2	69	7.12	560058	G15-077-TAP	115	8.31
526269	LUBBCK_STH 6	230	20.38	526736	TERRY_CNTY 3	115	11.01	583810	ASGI2013-006	115	9.02
526337	JONES 6	230	22.44	526747	LG-BROWNFLD2	69	3.60	584720	ASGI15021602	69	2.16
526434	SUNDOWN 3	115	11.64	526792	PRENTICE 3	115	5.98	587370	GEN-2016-056	230	14.84

Table 4-24
Short Circuit Analysis for Study Project GEN-2016-002 (25SP)

Study Generator GEN-2016-002											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
522800	MU-TULIA 3	115	5.43	524530	PALO_DURO 3	115	6.97	525326	COX 3	115	5.94
523959	POTTER_CO 6	230	23.35	524590	DAWN 3	115	6.16	525413	LAMTON 2	69	5.20
523977	HARRNG_WST 6	230	29.33	524694	DS-#22 3	115	4.94	525414	LAMTON 3	115	7.71
523978	HARRNG_MID 6	230	29.33	524734	DS-#21 3	115	10.72	525432	SP-HALFWAY 2	69	5.88
523979	HARRNG_EST 6	230	29.33	524745	CASTRO_CNTY2	69	9.55	525440	LC-S_OLTON 3	115	7.30
524044	NICHOLS 6	230	28.23	524746	CASTRO_CNTY3	115	11.54	525446	SPGLAKE_TP3	115	10.17
524058	WHITAKER 3	115	22.64	525019	EMU&VLY_TP 3	115	6.24	525453	HALE_CNTY 2	69	6.93
524136	HASTINGS 3	115	14.04	525050	BC-KELLEY 3	115	8.20	525454	HALE_CNTY 3	115	10.21
524161	EAST_PLANT 2	69	8.93	525056	BC-EARTH 3	115	8.56	525460	NEWHART 3	115	15.15
524162	EAST_PLANT 3	115	23.84	525124	HART_INDUST3	115	7.55	525461	NEWHART 6	230	10.97
524163	EAST_PLANT 6	230	14.48	525136	HAPPY_CTY 2	69	2.21	525480	PLANT_X 3	115	19.28
524185	PIERCE_TP 3	115	19.65	525143	HAPPY_CTYTP2	69	3.40	525481	PLANT_X 6	230	22.92
524209	LAWRENPRK1 2	69	6.56	525153	HAPPY_INT 2	69	3.71	525614	W_LITLFLDTP3	115	7.90
524224	MANHATTAN 3	115	19.06	525154	HAPPY_INT 3	115	6.11	525780	FLOYD_CNTY 3	115	6.10
524282	34TH_ST 3	115	15.35	525164	SHAMRCK_PMP2	69	2.66	525816	TUCO_INT2 2	69	4.72
524306	COULTER 3	115	15.59	525179	TULIA_TP 3	115	6.82	525826	TUCO_INT 2	69	8.04
524321	GEORGIA 2	69	6.70	525191	KRESS_INT 2	69	4.47	525828	TUCO_INT 3	115	21.41
524322	GEORGIA 3	115	16.88	525192	KRESS_INT 3	115	11.55	525830	TUCO_INT 6	230	29.38
524331	PULLMAN 3	115	7.23	525203	SW-KRESS 2	69	4.47	526076	STANTON_W 3	115	9.77
524338	SOUTHEAST 3	115	11.27	525212	SWISHER 3	115	10.59	526298	LUBBCK_EST 3	115	15.86
524364	RANDALL 3	115	21.91	525213	SWISHER 6	230	10.82	560021	TUCO_2	230	24.32
524365	RANDALL 6	230	15.06	525224	KRESS_RURL 2	69	2.52	560050	G15-031-TAP	230	9.26
524377	FARMERS 3	115	15.51	525225	KRESS_RURAL3	115	6.34	584220	GEN-2014-040	115	10.28
524388	CROUSE_HIND3	115	15.51	525249	LH-PLW&FNY 2	69	1.60	584640	GEN-2015-022	115	10.59
524414	AMA_SOUTH 3	115	17.10	525257	N_PLAINVEW 3	115	5.13	587010	GEN-2016-002	115	6.11
524415	AMA_SOUTH 6	230	14.09	525272	KISER 3	115	5.13	587240	GEN-2016-038	230	4.01
524516	CANYON_WEST3	115	5.35	525291	PLAINVW_TP 2	69	6.50	587250	GEN-2016-039	115	10.59
524522	CANYON E_TP3	115	5.51	525298	S_PLAINVEW 2	69	2.59	587400	GEN-2016-059	230	4.06
524523	CANYON_EAST3	115	5.10	525325	COX 2	69	3.37	587570	ASGI1604	115	6.97

Table 4-25
Short Circuit Analysis for Study Project ASGI-2016-004 (25SP)

Study Generator ASGI-2016-004											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
522800	MU-TULIA 3	115	5.43	524306	COULTER 3	115	15.59	525164	SHAMRCK_PMP2	69	2.66
523267	PRINGLE 6	230	4.31	524321	GEORGIA 2	69	6.70	525179	TULIA_TP 3	115	6.82
523551	HUTCHISON 6	230	7.34	524322	GEORGIA 3	115	16.88	525191	KRESS_INT 2	69	4.47
523771	GRAPEVINE 6	230	5.80	524331	PULLMAN 3	115	7.23	525192	KRESS_INT 3	115	11.55
523959	POTTER_CO 6	230	23.35	524338	SOUTHEAST 3	115	11.27	525203	SW-KRESS 2	69	4.47
523977	HARRNG_WST 6	230	29.33	524345	OSAGE 3	115	14.08	525212	SWISHER 3	115	10.59
523978	HARRNG_MID 6	230	29.33	524364	RANDALL 3	115	21.91	525213	SWISHER 6	230	10.82
523979	HARRNG_EST 6	230	29.33	524365	RANDALL 6	230	15.06	525224	KRESS_RURL 2	69	2.52
524007	ROLLHILLS 3	115	19.99	524377	FARMERS 3	115	15.51	525225	KRESS_RURAL3	115	6.34
524010	ROLLHILLS 6	230	21.32	524388	CROUSE_HIND3	115	15.51	525257	N_PLAINVEW 3	115	5.13
524043	NICHOLS 3	115	31.88	524397	ARROWHEAD 3	115	13.90	525326	COX 3	115	5.94
524044	NICHOLS 6	230	28.23	524404	OWENSCORN 3	115	15.19	525414	LAMTON 3	115	7.71
524058	WHITAKER 3	115	22.64	524414	AMA_SOUTH 3	115	17.10	525453	HALE_CNTY 2	69	6.93
524136	HASTINGS 3	115	14.04	524415	AMA_SOUTH 6	230	14.09	525454	HALE_CNTY 3	115	10.21
524149	VANBUREN#2 2	69	6.64	524425	ESTACADO_TP3	115	13.51	525460	NEWHART 3	115	15.15
524161	EAST_PLANT 2	69	8.93	524516	CANYON_WEST3	115	5.35	525461	NEWHART 6	230	10.97
524162	EAST_PLANT 3	115	23.84	524522	CANYON E_TP3	115	5.51	525480	PLANT_X 3	115	19.28
524163	EAST_PLANT 6	230	14.48	524523	CANYON_EAST3	115	5.10	525828	TUCO_INT 3	115	21.41
524177	VNBUREN_TP 2	69	8.48	524530	PALO_DURO 3	115	6.97	560050	G15-031-TAP	230	9.26
524185	PIERCE_TP 3	115	19.65	524544	SPRING_DRW 3	115	6.43	584640	GEN-2015-022	115	10.59
524192	PIERCE 3	115	13.24	524590	DAWN 3	115	6.16	584750	GEN-2015-031	230	9.26
524209	LAWRENPRK1 2	69	6.56	524597	PANDAHFD 3	115	9.08	587010	GEN-2016-002	115	6.11
524216	LAWRENPRK2 2	69	6.56	524746	CASTRO_CNTY3	115	11.54	587240	GEN-2016-038	230	4.01
524224	MANHATTAN 3	115	19.06	525124	HART_INDUST3	115	7.55	587244	GEN2-016-038	230	3.73
524256	PUCKETT 3	115	12.90	525136	HAPPY_CTY 2	69	2.21	587400	GEN-2016-059	230	4.06
524282	34TH_ST 3	115	15.35	525143	HAPPY_CTYTP2	69	3.40	587404	GEN-2016-059	230	3.96
524300	HILLSIDE 3	115	12.78	525153	HAPPY_INT 2	69	3.71	587570	ASGI1604	115	6.97
524305	COULTER 2	69	4.28	525154	HAPPY_INT 3	115	6.11				

Table 4-26
Short Circuit Analysis for Study Project GEN-2016-015 and GEN-2016-062 (25SP)

Study Generator GEN-2016-015 and GEN-2016-062											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
526460	AMOCO_SS 6	230	9.88	527965	KIOWA 7	345	5.72	528526	TEAGUE 3	115	6.46
526934	YOAKUM 3	115	16.92	528027	RDRUNNER 7	345	3.86	528533	DRINKARD_TP3	115	8.23
526935	YOAKUM 6	230	17.94	528095	7-RIVERS 6	230	6.11	528568	MONUMNT_TP 3	115	10.20
526936	YOAKUM_345	345	9.22	528179	PECOS 6	230	6.47	528589	DRINKARD 3	115	8.47
527010	OXYBRU_TP 6	230	14.15	528185	N_LOVING 7	345	4.52	528596	CARDINAL 3	115	8.39
527149	MUSTANG 6	230	15.87	528333	LE-WEST_SUB3	115	8.83	528602	ANDREWS 3	115	12.16
527363	HIGG 3	115	10.26	528334	LE-LOVINTON3	115	8.74	528603	NA_ENRICH 3	115	11.66
527798	EDDY_NTH 3	115	11.17	528348	BUCKEYE_TP 3	115	8.48	528604	ANDREWS 6	230	9.24
527799	EDDY_NORTH 6	230	8.02	528355	MADDOX 3	115	28.39	528605	TARGA 3	115	9.15
527800	EDDY_SOUTH 6	230	8.02	528392	PEARLE 3	115	6.45	528610	GAINES_GEN 6	230	9.73
527864	CUNNINHAM 3	115	30.33	528394	QUAHADA 3	115	8.48	528611	GAINESGENTP6	230	11.65
527865	CUNNINHAM 6	230	18.13	528433	NEW_NHOBBS 3	115	8.08	560022	TUCO_2	345	21.63
527891	HOBBS_INT 3	115	33.75	528435	MILLEN 3	115	11.79	560059	G1579&G1580T	230	9.42
527894	HOBBS_INT 6	230	20.35	528442	NE_HOBBS 3	115	12.10	562480	G13-027-TAP	230	9.34
527896	HOBBS_INT 7	345	8.69	528463	SANGER_SW 3	115	16.45	585160	G1579&G1580	230	8.93
527955	SAGE_BRUSH 3	115	5.40	528491	MONUMENT 3	115	16.00	587110	GEN-2016-015	230	8.86
527962	POTASH_JCT 3	115	14.56	528498	W_HOBBS 3	115	12.12	587390	GEN-2016-058	345	9.15
527963	POTASH_JCT 6	230	7.03	528512	EUNICE 3	115	6.35	587420	GEN-2016-062	230	7.99

Table 4-27
Short Circuit Analysis for Study Project GEN-2016-039 (25SP)

Study Generator GEN-2016-039											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
515458	BORDER 7	345	12.18	525132	LC-N_OLTON 2	69	3.09	525816	TUCO_INT2 2	69	4.72
522800	MU-TULIA 3	115	5.43	525143	HAPPY_CTYTP2	69	3.40	525826	TUCO_INT 2	69	8.04
522823	LP-MILWAKEE6	230	15.17	525153	HAPPY_INT 2	69	3.71	525828	TUCO_INT 3	115	21.41
522870	LP-HOLLY 6	230	17.84	525154	HAPPY_INT 3	115	6.11	525830	TUCO_INT 6	230	29.38
523095	HITCHLAND 6	230	15.97	525179	TULIA_TP 3	115	6.82	525832	TUCO_INT 7	345	21.30
523097	HITCHLAND 7	345	18.14	525191	KRESS_INT 2	69	4.47	525840	ANTELOPE_1 6	230	29.06
523221	XIT_INTG 6	230	2.63	525192	KRESS_INT 3	115	11.55	525853	LH-WIL&ELLN2	69	2.59
523267	PRINGLE 6	230	4.31	525203	SW-KRESS 2	69	4.47	525885	SP-NEWDEAL 2	69	3.41
523308	MOORE_E 3	115	11.14	525212	SWISHER 3	115	10.59	525926	CROSBY 3	115	4.53
523309	MOORE_CNTY 6	230	6.85	525213	SWISHER 6	230	10.82	526076	STANTON_W 3	115	9.77
523551	HUTCHISON 6	230	7.34	525224	KRESS_RURL 2	69	2.52	526146	INDIANA 3	115	10.17
523771	GRAPEVINE 6	230	5.80	525225	KRESS_RURAL3	115	6.34	526160	CARLISLE 3	115	14.13
523869	CHAN/TASCOS6	230	3.93	525249	LH-PLW&FNY 2	69	1.60	526161	CARLISLE 6	230	15.85
523959	POTTER_CO 6	230	23.35	525256	SW_9848 2	69	3.09	526268	LUBBCK_STH 3	115	20.10
523961	POTTER_CO 7	345	12.17	525257	N_PLAINVEW 3	115	5.13	526269	LUBBCK_STH 6	230	20.38
523977	HARRNG_WST 6	230	29.33	525271	KISER 2	69	3.47	526297	LUBBCK_EST 2	69	8.14
523978	HARRNG_MID 6	230	29.33	525272	KISER 3	115	5.13	526298	LUBBCK_EST 3	115	15.86
523979	HARRNG_EST 6	230	29.33	525284	WESTRIDGE 2	69	4.27	526299	LUBBCK_EST 6	230	14.03
524007	ROLLHILLS 3	115	19.99	525291	PLAINVW_TP 2	69	6.50	526337	JONES 6	230	22.44
524010	ROLLHILLS 6	230	21.32	525298	S_PLAINVEW 2	69	2.59	526434	SUNDOWN 3	115	11.64
524043	NICHOLS 3	115	31.88	525307	E_PLAINVEW 2	69	2.45	526435	SUNDOWN 6	230	11.30
524044	NICHOLS 6	230	28.23	525316	LH-PROVDNCE2	69	3.37	526460	AMOCO_SS 6	230	9.88
524266	BUSHLAND 3	115	9.48	525325	COX 2	69	3.37	526525	WOLFFORTH 6	230	14.65
524267	BUSHLAND 6	230	9.98	525326	COX 3	115	5.94	526677	GRASSLAND 6	230	6.66
524290	WILDOR2_JUS6	230	6.75	525339	AIKEN_RURL 2	69	2.45	526935	YOAKUM 6	230	17.94
524296	SPNSPUR_WND7	345	5.69	525393	SPRINGLAKE 3	115	9.08	526936	YOAKUM_345	345	9.22
524364	RANDALL 3	115	21.91	525404	LC-OLTON 2	69	4.50	527656	CROSSROADS 7	345	6.64
524365	RANDALL 6	230	15.06	525413	LAMTON 2	69	5.20	527896	HOBBS_INT 7	345	8.69
524377	FARMERS 3	115	15.51	525414	LAMTON 3	115	7.71	560021	TUCO_2	230	24.32
524397	ARROWHEAD 3	115	13.90	525425	CORNER 2	69	3.64	560022	TUCO_2	345	21.63
524404	OWENSCORN 3	115	15.19	525432	SP-HALFWAY 2	69	5.88	560027	G14-074-TAP	345	8.15
524414	AMA_SOUTH 3	115	17.10	525440	LC-S_OLTON 3	115	7.30	560034	CHISHOLM2	345	15.30
524415	AMA_SOUTH 6	230	14.09	525446	SPGLAKE_TP3	115	10.17	560035	GRAPEVINE	345	9.73
524530	PALO_DURO 3	115	6.97	525453	HALE_CNTY 2	69	6.93	560050	G15-031-TAP	230	9.26
524544	SPRING_DRW 3	115	6.43	525454	HALE_CNTY 3	115	10.21	560051	G15-039-TAP	230	7.52
524622	DEAFSMITH 3	115	12.18	525460	NEWHART 3	115	15.15	560100	CRAWFISH765	765	8.22
524623	DEAFSMITH 6	230	7.80	525461	NEWHART 6	230	10.97	560101	SEMINOLE765	765	10.26
524694	DS-#22 3	115	4.94	525480	PLANT_X 3	115	19.28	562004	G11-025-TAP	115	4.64
524714	CASTRO_TP 2	69	3.65	525481	PLANT_X 6	230	22.92	562480	G13-027-TAP	230	9.34
524721	DS-#15&#19 2	69	3.67	525524	TOLK_EAST 6	230	28.45	583090	G1149&G1504	345	9.63
524728	DS-CASTRO 2	69	4.45	525531	TOLK_WEST 6	230	28.45	583340	GEN-2012-020	230	9.91
524734	DS-#21 3	115	10.72	525543	TOLK_TAP 6	230	28.45	584220	GEN-2014-040	115	10.28
524745	CASTRO_CNTY2	69	9.55	525549	TOLK 7	345	12.80	584640	GEN-2015-022	115	10.59
524746	CASTRO_CNTY3	115	11.54	525614	W_LITLFLDTP3	115	7.90	584750	GEN-2015-031	230	9.26
524909	ROSEVELT_N 6	230	8.94	525615	W_LITTLFLD 3	115	7.40	584800	GEN-2015-039	230	6.37
524911	ROSEVELT_S 6	230	8.94	525636	LAMB_CNTY 3	115	9.42	585060	GEN-2015-068	345	15.01
525018	EMULESH&VLY3	115	5.70	525637	LAMB_CNTY 6	230	5.52	587010	GEN-2016-002	115	6.11
525019	EMU&VLY_TP 3	115	6.24	525731	SP-ABERNTHY2	69	3.04	587250	GEN-2016-039	115	10.59
525028	BAILEYCO 3	115	6.23	525738	HALECENTER 2	69	2.47	587370	GEN-2016-056	230	14.84
525050	BC-KELLEY 3	115	8.20	525745	LH-HALECTR 2	69	2.45	587390	GEN-2016-058	345	9.15
525056	BC-EARTH 3	115	8.56	525779	FLOYD_CNTY 2	69	5.34	587570	ASGI1604	115	6.97
525124	HART_INDUST3	115	7.55	525780	FLOYD_CNTY 3	115	6.10				

Table 4-28
Short Circuit Analysis for Study Project GEN-2016-56 (25SP)

Study Generator GEN-2016-056											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
511456	O.K.U.-7	345	5.89	525724	COUNTYLINE 2	69	2.22	526491	LG-CLAUENE 3	115	9.23
511468	L.E.S.-7	345	12.96	525731	SP-ABERNTHY2	69	3.04	526506	LG-DOCWEBR 2	69	5.02
515458	BORDER 7	345	12.18	525738	HALECENTER 2	69	2.47	526524	WOLFFORTH 3	115	11.99
522810	LP-ERSKINE 2	69	13.76	525745	LH-HALECTR 2	69	2.45	526525	WOLFFORTH 6	230	14.65
522819	LP-NORTHEST2	69	13.15	525769	BARWISE 2	69	3.78	526562	SLATON 2	69	2.49
522822	LP-NORTHWST2	69	4.62	525779	FLOYD_CNTY 2	69	5.34	526602	SP-WOODROW 3	115	9.64
522823	LP-MILWAKEE6	230	15.17	525780	FLOYD_CNTY 3	115	6.10	526656	LYNN_CNTY 3	115	5.71
522828	LP-MILWAKEE2	69	8.34	525790	FLOYDADA_TP2	69	2.50	526676	GRASSLAND 3	115	6.23
522832	LP-VICKSBRG2	69	14.16	525811	LH-HARMONY 2	69	4.27	526677	GRASSLAND 6	230	6.66
522836	LP-THOMPSON2	69	12.79	525816	TUCO_INT2 2	69	4.72	526679	CIRRUS_WND 6	230	5.15
522840	LP-MCCULLGH2	69	12.93	525826	TUCO_INT 2	69	8.04	526694	GRAHAM 3	115	2.70
522844	LP-COOP 2	69	21.35	525828	TUCO_INT 3	115	21.41	526735	TERRY_CNTY 2	69	7.12
522849	LP-CHALKER 2	69	13.88	525830	TUCO_INT 6	230	29.38	526736	TERRY_CNTY 3	115	11.01
522853	LP-SLATON 2	69	18.54	525832	TUCO_INT 7	345	21.30	526747	LG-BROWNFLD2	69	3.60
522857	LP-SOUTHEST2	69	24.77	525840	ANTELOPE_1 6	230	29.06	526792	PRENTICE 3	115	5.98
522861	LP-SOUTHEST6	230	18.31	525853	LH-WIL&ELLN2	69	2.59	526934	YOAKUM 3	115	16.92
522866	LP-COOK 2	69	35.26	525860	SP-BECTON 2	69	2.30	526935	YOAKUM 6	230	17.94
522870	LP-HOLLY 6	230	17.84	525885	SP-NEWDEAL 2	69	3.41	526936	YOAKUM_345	345	9.22
522875	LP-BRANDON 2	69	12.55	525892	WHITE&MONRO2	69	2.57	527010	OXYBRU_TP 6	230	14.15
522879	LP-WADSWRTH2	69	22.95	525925	CROSBY 2	69	4.80	527080	EL PASO 3	115	15.88
522884	LP-OLIVER 2	69	13.12	525926	CROSBY 3	115	4.53	527125	DENVER_CTY 2	69	8.67
522888	LP-WADSWRTH6	230	13.05	526020	HOCKLEY 3	115	5.61	527130	DENVER_N 3	115	21.22
523959	POTTER_CO 6	230	23.35	526036	LC-OPDYKE 3	115	5.90	527136	DENVER_S 3	115	21.22
523961	POTTER_CO 7	345	12.17	526076	STANTON_W 3	115	9.77	527146	MUSTANG 3	115	23.55
524415	AMA_SOUTH 6	230	14.09	526109	SP-ERSKINE 3	115	12.03	527149	MUSTANG 6	230	15.87
524623	DEAFSMITH 6	230	7.80	526130	SP-CARLISLE2	69	2.12	527202	SEAGRAVES 3	115	8.63
524770	PLSNT_HILL 6	230	6.17	526146	INDIANA 3	115	10.17	527212	DIAMONDBACK3	115	3.12
524875	OASIS 6	230	7.42	526159	CARLISLE 2	69	2.59	527261	SULPHUR 2	69	3.37
524908	ROOSEVELT 3	115	10.41	526160	CARLISLE 3	115	14.13	527262	SULPHUR 3	115	5.73
524909	ROSEVELT_N 6	230	8.94	526161	CARLISLE 6	230	15.85	527286	XTO_RUSSEL 3	115	10.08
524911	ROSEVELT_S 6	230	8.94	526162	LP-DOUD_TP 3	115	12.32	527656	CROSSROADS 7	345	6.64
524915	SW_4K33 6	230	8.94	526176	LP-DOUD 3	115	9.45	527896	HOBBS_INT 7	345	8.69
525019	EMU&VLY_TP 3	115	6.24	526184	SW_6878 2	69	2.17	560021	TUCO_2	230	24.32
525056	BC-EARTH 3	115	8.56	526192	MURPHY 3	115	11.14	560022	TUCO_2	345	21.63
525124	HART_INDUST3	115	7.55	526199	SP-FRANKFRD3	115	10.00	560027	G14-074-TAP	345	8.15
525179	TULIA_TP 3	115	6.82	526205	IVORY 2	69	3.96	560034	CHISHOLM2	345	15.30
525191	KRESS_INT 2	69	4.47	526213	ALLEN 3	115	11.07	560050	G15-031-TAP	230	9.26
525192	KRESS_INT 3	115	11.55	526221	BATTON_N 2	69	1.79	560051	G15-039-TAP	230	7.52
525212	SWISHER 3	115	10.59	526228	BATTON_S 2	69	2.73	560058	G15-077-TAP	115	8.31
525213	SWISHER 6	230	10.82	526236	LP-WHEELOCK3	115	8.81	560059	G1579&G1580T	230	9.42
525225	KRESS_RURAL3	115	6.34	526243	SP-QUAKER 3	115	10.03	560100	CRAWFISH765	765	8.22
525272	KISER 3	115	5.13	526256	IVORY_TP 2	69	3.96	560101	SEMINOLE765	765	10.26
525291	PLAINVW_TP 2	69	6.50	526267	LUBBCK_STH 2	69	4.39	562004	G11-025-TAP	115	4.64
525298	S_PLAINVEW 2	69	2.59	526268	LUBBCK_STH 3	115	20.10	562480	G13-027-TAP	230	9.34
525325	COX 2	69	3.37	526269	LUBBCK_STH 6	230	20.38	581137	GEN-2011-025	115	4.64
525326	COX 3	115	5.94	526284	PLANTERS 2	69	6.38	583090	G1149&G1504	345	9.63
525413	LAMTON 2	69	5.20	526297	LUBBCK_EST 2	69	8.14	583340	GEN-2012-020	230	9.91
525414	LAMTON 3	115	7.71	526298	LUBBCK_EST 3	115	15.86	583810	ASGI2013-006	115	9.02
525432	SP-HALFWAY 2	69	5.88	526299	LUBBCK_EST 6	230	14.03	583819	ASGI2014-001	115	12.03
525440	LC-S_OLTON 3	115	7.30	526310	CLUTTER 2	69	5.49	584440	GEN-2014-074	345	7.64
525446	SPGLAKE_TP3	115	10.17	526337	JONES 6	230	22.44	584640	GEN-2015-022	115	10.59
525453	HALE_CNTY 2	69	6.93	526361	COCHRAN 3	115	7.02	584720	ASGI15021602	69	2.16
525454	HALE_CNTY 3	115	10.21	526424	PACIFIC 3	115	9.81	584750	GEN-2015-031	230	9.26
525460	NEWHART 3	115	15.15	526434	SUNDOWN 3	115	11.64	584760	GEN-2015-033	345	7.11
525461	NEWHART 6	230	10.97	526435	SUNDOWN 6	230	11.30	584800	GEN-2015-039	230	6.37
525480	PLANT_X 3	115	19.28	526445	AMOCO_TP 3	115	10.96	585060	GEN-2015-068	345	15.01
525481	PLANT_X 6	230	22.92	526452	AMOCO_CRYO 3	115	6.65	585120	GEN-2015-075	69	1.55
525524	TOLK_EAST 6	230	28.45	526460	AMOCO_SS 6	230	9.88	587370	GEN-2016-056	230	14.84
525531	TOLK_WEST 6	230	28.45	526469	SP-YUMA 2	69	3.09	587390	GEN-2016-058	345	9.15
525543	TOLK_TAP 6	230	28.45	526475	YUMA_INT 3	115	11.53	599891	OKLAUN 7	345	4.04
525549	TOLK 7	345	12.80	526481	SP-WOLF_TP 3	115	11.74	599955	PNM-DC6	230	8.94
525614	W_LITLFLDTP3	115	7.90	526483	SP-WOLFORTH3	115	9.02				
525637	LAMB_CNTY 6	230	5.52	526484	LG-LEVELAND3	115	9.99				

Table 4-29
Short Circuit Analysis for Study Project GEN-2016-058 (25SP)

Study Generator GEN-2016-058											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
510907	PITTSB-7	345	13.47	526524	WOLFFORTH 3	115	11.99	528159	CARLSBAD 2	69	4.87
511456	O.K.U.-7	345	5.89	526525	WOLFFORTH 6	230	14.65	528160	CARLSBAD 3	115	11.24
511468	L.E.S.-7	345	12.96	526677	GRASSLAND 6	230	6.66	528178	PECOS 3	115	11.85
511553	CHISHOLM7	345	15.30	526735	TERRY_CNTY 2	69	7.12	528179	PECOS 6	230	6.47
511557	CHISHOLM6	230	12.57	526736	TERRY_CNTY 3	115	11.01	528182	NORTH_LOVNG3	115	8.50
514908	ARCADIA7	345	26.54	526784	AMOCOWASSON6	230	14.05	528185	N_LOVING 7	345	4.52
514934	DRAPER 7	345	21.65	526792	PRENTICE 3	115	5.98	528192	SOUTH_LOVNG3	115	6.54
515044	SEMINOL4	138	40.63	526928	PLAINS_INT 3	115	9.92	528222	CHINA_DRAW 3	115	7.46
515045	SEMINOL7	345	30.02	526934	YOAKUM 3	115	16.92	528223	CHINA_DRAW 7	345	3.68
515224	MUSKOGE7	345	29.02	526935	YOAKUM 6	230	17.94	528226	HOPI_SUB 3	115	6.69
515375	WWRDEHV7	345	22.12	526936	YOAKUM_345	345	9.22	528230	AGAVE_RHILL3	115	6.36
515376	WWRDEHV4	138	24.49	526944	LG-PLAINS 3	115	7.97	528333	LE-WEST_SUB3	115	8.83
515458	BORDER 7	345	12.18	527010	OXYBRU_TP 6	230	14.15	528334	LE-LOVINTON3	115	8.74
515554	BVRCNTY7	345	19.16	527018	BENNETT 3	115	13.28	528348	BUCKEYE_TP 3	115	8.48
515599	G07621119-20	345	14.07	527036	SHELL_C2 3	115	12.93	528355	MADDOX 3	115	28.39
522823	LP-MILWAKEE6	230	15.17	527041	ARCO_TP 3	115	13.18	528392	PEARLE 3	115	6.45
522870	LP-HOLLY 6	230	17.84	527046	OXY_WILRD2 3	115	10.55	528394	QUAHADA 3	115	8.48
523095	HITCHLAND 6	230	15.97	527047	OXY_WILRD1 3	115	10.58	528433	NEW_NHOBBS 3	115	8.08
523097	HITCHLAND 7	345	18.14	527051	ODC_TP 3	115	13.30	528435	MILLEN 3	115	11.79
523101	NOBLE_WND 7	345	18.05	527062	SHELL_CO2 3	115	16.13	528442	NE_HOBBS 3	115	12.10
523112	NOVUS1 7	345	17.74	527080	EL_PASO 3	115	15.88	528463	SANGER_SW 3	115	16.45
523309	MOORE_CNTY 6	230	6.85	527105	SAN_ANDS_TP3	115	16.56	528491	MONUMENT 3	115	16.00
523869	CHAN/TASCOS6	230	3.93	527125	DENVER_CTY 2	69	8.67	528568	MONUMNT_TP 3	115	10.20
523959	POTTER_CO 6	230	23.35	527130	DENVER_N 3	115	21.22	528602	ANDREWS 3	115	12.16
523961	POTTER_CO 7	345	12.17	527136	DENVER_S 3	115	21.22	528604	ANDREWS 6	230	9.24
523979	HARRNG_EST 6	230	29.33	527146	MUSTANG 3	115	23.55	528610	GAINES_GEN 6	230	9.73
524010	ROLLHILLS 6	230	21.32	527149	MUSTANG 6	230	15.87	528611	GAINESGENTP6	230	11.65
524267	BUSHLAND 6	230	9.98	527151	GS-MUSTANG 6	230	15.87	528626	LE-PLNSINT 2	69	4.38
524296	SPNSPUR_WND7	345	5.69	527194	LG-PLSHILL 3	115	7.59	528740	LE-PLANS_TP2	69	3.63
524415	AMA_SOUTH 6	230	14.09	527201	SEAGRAVES 2	69	5.42	531512	WALKTAP7	345	8.06
524770	PLSNT_HILL 6	230	6.17	527202	SEAGRAVES 3	115	8.63	539801	THISTLE7	345	16.90
524908	ROOSEVELT 3	115	10.41	527238	ROZ 3	115	11.27	560010	G14-037-TAP	345	18.10
524909	ROSEVELT_N 6	230	8.94	527242	AMERADA 3	115	11.43	560021	TUCO_2	230	24.32
524911	ROSEVELT_S 6	230	8.94	527262	SULPHUR 3	115	5.73	560022	TUCO_2	345	21.63
524915	SW_4K33 6	230	8.94	527275	SEMINOLE 3	115	14.62	560027	G14-074-TAP	345	8.15
525192	KRESS_INT 3	115	11.55	527276	SEMINOLE 6	230	7.75	560034	CHISHOLM2	345	15.30
525212	SWISHER 3	115	10.59	527286	XTO_RUSSEL 3	115	10.08	560035	GRAPEVINE	345	9.73
525213	SWISHER 6	230	10.82	527322	GAINES 3	115	9.42	560050	G15-031-TAP	230	9.26
525454	HALE_CNTY 3	115	10.21	527340	DOSS 3	115	8.04	560051	G15-039-TAP	230	7.52
525460	NEWHART 3	115	15.15	527363	HIGG 3	115	10.26	560058	G15-077-TAP	115	8.31
525461	NEWHART 6	230	10.97	527656	CROSSROADS 7	345	6.64	560059	G1579&G1580T	230	9.42
525480	PLANT_X 3	115	19.28	527798	EDDY_NTH 3	115	11.17	560071	G16-003-TAP	345	16.67
525481	PLANT_X 6	230	22.92	527799	EDDY_NORTH 6	230	8.02	560078	G16-037-TAP	345	9.52
525524	TOLK_EAST 6	230	28.45	527800	EDDY_SOUTH 6	230	8.02	560100	CRAWFISH765	765	8.22
525531	TOLK_WEST 6	230	28.45	527802	EDDY_CNTY 7	345	4.47	560101	SEMINOLE765	765	10.26
525543	TOLK_TAP 6	230	28.45	527864	CUNNINHAM 3	115	30.33	562075	G11-051-TAP	345	17.92
525549	TOLK 7	345	12.80	527865	CUNNINHAM 6	230	18.13	562480	G13-027-TAP	230	9.34
525636	LAMB_CNTY 3	115	9.42	527891	HOBBS_INT 3	115	33.75	576395	GEN-2010-014	345	12.67
525637	LAMB_CNTY 6	230	5.52	527894	HOBBS_INT 6	230	20.35	577103	GEN-2008-022	345	6.16
525780	FLOYD_CNTY 3	115	6.10	527896	HOBBS_INT 7	345	8.69	577104	G08-022-WEST	345	5.67
525816	TUCO_INT2 2	69	4.72	527929	PCA 2	69	6.13	581148	GEN-2011-022	345	16.25
525826	TUCO_INT 2	69	8.04	527930	PCA 3	115	11.24	583090	G1149&G1504	345	9.63
525828	TUCO_INT 3	115	21.41	527948	CV-LUSK_TP 3	115	4.19	583340	GEN-2012-020	230	9.91
525830	TUCO_INT 6	230	29.38	527961	POTASH_JCT 2	69	8.47	583840	GEN-2013-027	230	8.29
525832	TUCO_INT 7	345	21.30	527962	POTASH_JCT 3	115	14.56	584260	GEN-2014-047	345	5.14
525840	ANTELOPE_1 6	230	29.06	527963	POTASH_JCT 6	230	7.03	584440	GEN-2014-074	345	7.64
526036	LC-OPDYKE 3	115	5.90	527965	KIOWA 7	345	5.72	584640	GEN-2015-022	115	10.59
526076	STANTON_W 3	115	9.77	527980	DUVAL_#1 2	69	5.63	584750	GEN-2015-031	230	9.26
526160	CARLISLE 3	115	14.13	527996	KERMAC 2	69	2.92	584760	GEN-2015-033	345	7.11
526161	CARLISLE 6	230	15.85	527999	INTREPDW_TP3	115	12.63	584810	GEN-2015-040	230	14.48
526269	LUBBCK_STH 6	230	20.38	528000	INTREPIDWST3	115	10.80	584940	GEN-2015-056	345	5.71
526298	LUBBCK_EST 3	115	15.86	528018	RED_BLUFF 3	115	8.26	585060	GEN-2015-068	345	15.01
526299	LUBBCK_EST 6	230	14.03	528022	MISSCHEM#2 2	69	6.54	585080	GEN-2015-071	345	12.21
526337	JONES 6	230	22.44	528025	RDRUNNER 3	115	9.03	585150	GEN-2015-078	115	17.06
526352	LEHMAN 3	115	6.09	528027	RDRUNNER 7	345	3.86	585160	G1579&G1580	230	8.93
526424	PACIFIC 3	115	9.81	528035	IMC_#1_TP 3	115	9.95	587110	GEN-2016-015	230	8.86
526434	SUNDOWN 3	115	11.64	528040	BATTLE_AXE 3	115	3.47	587370	GEN-2016-056	230	14.84
526435	SUNDOWN 6	230	11.30	528095	7-RIVERS 6	230	6.11	587390	GEN-2016-058	345	9.15
526445	AMOCO_TP 3	115	10.96	528145	NATPOT_TP 2	69	8.43	587420	GEN-2016-062	230	7.99
526460	AMOCO_SS 6	230	9.88	528151	FIESTA 3	115	9.77	599891	OKLAUN 7	345	4.04
526491	LG-CLAUENE 3	115	9.23								

Table 4-30
Short Circuit Analysis for Study Project GEN-2016-069 (25SP)

Study Generator GEN-2016-069											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
524768	PLSNT_HILL 3	115	10.00	527541	CAPITAN 3	115	4.47	527894	HOBBS_INT 6	230	20.35
524770	PLSNT_HILL 6	230	6.17	527546	SAMSON 3	115	5.10	527963	POTASH_JCT 6	230	7.03
524797	PERIMETER 3	115	6.38	527552	RIAC 2	115	4.56	528070	CV-AZMESA 3	115	7.42
524863	FE-CHZPLT 3	115	7.76	527563	ROSWLL_INT 2	69	3.55	528094	7-RIVERS 3	115	8.26
524874	OASIS 3	115	9.66	527564	ROSWLL_INT 3	115	5.34	528095	7-RIVERS 6	230	6.11
524875	OASIS 6	230	7.42	527575	SW_4702 2	69	3.23	528132	OCOTILLO 3	115	6.17
524885	SN_JUAN_TAP6	230	4.71	527589	CV-ORCHARD 2	69	2.01	528137	N_CANAL 3	115	8.68
524889	SN_JUAN_WND6	230	4.51	527596	RIACTWTY_TP3	115	5.10	528160	CARLSBAD 3	115	11.24
524909	ROSEVELT_N 6	230	8.94	527597	TWEEDY 3	115	4.96	528178	PECOS 3	115	11.85
524911	ROSEVELT_S 6	230	8.94	527656	CROSSROADS 7	345	6.64	528179	PECOS 6	230	6.47
524915	SW_4K33 6	230	8.94	527711	EAGLE_CREEK3	115	7.32	528226	HOPI_SUB 3	115	6.69
524924	PORTALES 3	115	7.29	527786	ATOKA 3	115	7.05	577103	GEN-2008-022	345	6.16
525549	TOLK 7	345	12.80	527793	EDDY_STH 3	115	11.17	583950	GEN-2014-033	115	6.36
527482	CHAVES_CNTY3	115	6.36	527798	EDDY_NTH 3	115	11.17	583960	GEN-2014-034	115	5.91
527483	CHAVES_CNTY6	230	4.12	527799	EDDY_NORTH 6	230	8.02	583970	GEN-2014-035	115	6.05
527501	URTON 3	115	5.38	527800	EDDY_SOUTH 6	230	8.02	584260	GEN-2014-047	345	5.14
527508	PRICE 3	115	4.99	527802	EDDY_CNTY 7	345	4.47	584620	GEN-2015-020	115	9.41
527515	CV-PINE 3	115	4.63	527809	CV-8_MILE 3	115	5.30	584940	GEN-2015-056	345	5.71
527522	ROSWELL_CTY3	115	5.11	527821	CV-DAYTON 3	115	6.96	587470	GEN-2016-069	115	6.16
527529	RIACBRSH_TP3	115	4.97	527864	CUNNINHAM 3	115	30.33	599960	EPTNP-D6	230	8.02
527536	BRASHER 3	115	4.81	527865	CUNNINHAM 6	230	18.13				

SECTION 5: POWER FACTOR ANALYSIS

The objective of this task is to quantify the power factor at the point of interconnection for the wind farms during base case and system contingencies. SPP transmission planning practice requires interconnecting generation projects to maintain the power factor (pf) at the Point of Interconnection (POI) within +/- 0.95 pf for system intact conditions and for post-contingency conditions. This is analyzed by having the wind farm maintain a prescribed voltage schedule at the point of interconnection of 1.0 p.u. voltage.

The 2016 Winter Peak, 2017 Summer Peak, 2020 Summer Peak, 2020 Winter Peak, and 2025 Summer Peak power flows provided by SPP were examined prior to the Power Factor Analysis to ensure they contained the proposed study project modeled at 100% of the nameplate rating and any previously queued projects listed in Table 2-2. There was no suspect power flow data in the study area. The proposed study project and any previously queued projects at the same point of interconnection were turned off during the power factor analysis. The wind farm(s) were then replaced by a generator modeled at the high side bus with the same real power (MW) capability as the wind farm(s) and open limits for the reactive power set points (Mvar). The generator was set to hold the POI scheduled bus voltage. All N-1, three-phase fault contingencies from Table 2-3 were then applied and the reactive power required to maintain the bus voltage was recorded.

5.1 Approach

The upgrades that were identified in the Stability Analysis were implemented to each power case for the power factor analysis. Refer to Section 3 for the necessary upgrades and Table 5-1 for the scheduled voltage each study generator was set to hold at the point of interconnection for each season.

GEN-2015-018 was disabled and a generator was placed at the study project's high side bus. The generator was modeled with PGEN = 80.0 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the study project's high side bus to GEN-2015-018 were disabled.

GEN-2015-033 and GEN-2014-074 were disabled in the power flow case. A generator was placed at the high side bus of GEN-2015-033 and modeled with PGEN = 152 MW, Qmin = -9999 Mvar, Qmax = 9999 Mvar. A second generator was placed at the high side bus of GEN-2014-074 and modeled with PGEN = 152 MW, Qmin = -9999 Mvar, Qmax = 9999 Mvar. All buses and transformers connected from the high side bus of each project to the corresponding generator were disabled.

GEN-2015-039 was disabled and a generator was placed at the study project's high side bus. The generator was modeled with PGEN = 50 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All

buses and transformers connected from the study project's high side bus to the generator was disabled.

GEN-2015-040 and the Mustang generation was disabled and a generator was placed at the study project's high side bus and the high side bus of the Mustang generation (GS-MUSTANG – Bus 527151). The GEN-2015-040 generator was modeled with PGEN = 50 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. The Mustang generator was modeled with PGEN = 496 MW, Qmin = -9999 Mvar, and Qmax = 9999 Mvar. All buses and transformers connected from the study project's high side bus to GEN-2015-040 were disabled.

GEN-2015-041 (ELK_4), ELK_1, and GEN-2015-068 were disabled and a generator was placed at the GEN-2015-068 high side bus and two generators placed at the ELK generation high side bus (TUCO Bus 525832). The GEN-2015-068 generator was modeled with PGEN = 300.0 MW, Qmin = -9999 Mvar, Qmax = 9999 Mvar. The GEN-2015-041 generator was modeled with PGEN = 208.0 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. The remaining generator for ELK_1 was modeled with PGEN = 203.0 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the study project's high side bus to both projects were disabled.

GEN-2015-078 and Mustang generation was disabled and a generator was placed at the study project's high side bus and the Mustang generation high side bus (Mustang Bus 527146). The GEN-2015-078 generator was modeled with PGEN = 50.0 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. The Mustang generator was modeled with PGEN = 318 MW, Qmin = -9999 Mvar, and Qmax = 9999 Mvar. All buses and transformers connected from the study project's high side bus to GEN-2015-078 were disabled.

ASGI-2016-001 and ASGI-2013-006 were disabled and two generators were placed at the study project's high side bus. The ASGI-2016-001 generator was modeled with PGEN = 2.5 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. The ASGI-2013-006 generator was modeled with PGEN = 2.0 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the study project's high side bus to the generator was disabled.

ASGI-2016-002 was disabled and a generator was placed at the study project's high side bus. The generator was modeled with PGEN = 2.53 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the study project's high side bus to the generator was disabled.

GEN-2016-002 was disabled and a generator was placed at the study project's high side bus. The generator was modeled with PGEN = 74 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the study project's high side bus to the generator was disabled.

ASGI-2016-004 was disabled and a generator was placed at the study project's high side bus. The generator was modeled with PGEN = 10 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the study project's high side bus to the generator was disabled.

GEN-2016-015 and GEN-2016-062 were disabled in the power flow case. A generator was placed at the high side bus of GEN-2016-015 and modeled with PGEN = 100 MW, Qmin = -9999 Mvar, and Qmax = 9999 Mvar. A second generator was placed at the high side bus of GEN-2016-062 and modeled with PGEN = 250.7 MW, Qmin = -9999 Mvar, and Qmax = 9999 Mvar All buses and transformers connected from the study project's high side bus to the generator was disabled. Separate power factor analysis was performed for both study generators.

GEN-2016-039 and GEN-2015-022 were disabled in the power flow case. A generator was placed at the high side bus of GEN-2016-039 and modeled with PGEN = 112 MW, Qmin = -9999 Mvar, Qmax = 9999 Mvar. A second generator was placed at the high side bus of GEN-2015-022 and modeled with PGEN = 112 MW, Qmin = -9999 Mvar, Qmax = 9999 Mvar. All buses and transformers connected from the high side bus of each project to the corresponding generator were disabled.

GEN-2016-056 was disabled and a generator was placed at the study project's high side bus. The generator was modeled with PGEN = 200 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the study project's high side bus to the generator was disabled.

GEN-2016-058 was disabled and a generator was placed at the study project's high side bus. The generator was modeled with PGEN = 200 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the study project's high side bus to the generator was disabled.

GEN-2016-069, GEN-2014-033, GEN-2014-035, and GEN-2014-034 were all disabled in the power flow case. A generator was placed at the high side bus of GEN-2016-069 and was modeled with PGEN = 31.35 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. A second generator was placed at the high side bus of GEN-2014-033 and modeled with PGEN = 70 MW, Qmin = -9999 Mvar, Qmax = 9999 Mvar. A third generator was placed at the high side bus of GEN-2014-035 and modeled with PGEN = 30 MW, Qmin = -9999 Mvar, Qmax = 9999 Mvar. A fourth generator was placed at the high side bus of GEN-2014-034 and modeled with PGEN = 70 MW, Qmin = -9999 Mvar, Qmax = 9999 Mvar. All buses and transformers connected from the study project's high side bus to the generator was disabled.

Table 5-1
Voltage Schedule of All Study Generators for All Seasons

Point of Interconnection Voltage (p.u.)					
Request	**16WP**	**17SP**	**20SP**	**20WP**	**25SP**
GEN-2015-018	1.022	1.014	1.009	1.026	1.009
GEN-2015-033	1.042	1.018	1.017	1.026	1.030
GEN-2015-039	0.984	1.000	1.000	1.000	1.000
GEN-2015-040	0.996	1.000	1.000	1.000	1.000
GEN-2015-041	1.011	1.024	1.021	1.010	1.037
GEN-2015-078	1.008	1.007	1.005	1.003	1.003
ASGI-2016-001	1.035	1.011	1.016	1.036	1.016
ASGI-2016-002	1.024	1.030	1.041	1.036	1.031
GEN-2016-002	1.015	1.000	1.000	1.018	1.003
ASGI-2016-004	1.017	1.005	1.008	1.020	1.015
GEN-2016-015	1.014	1.006	1.012	1.011	1.015
GEN-2016-039	1.027	1.027	1.025	1.031	1.027
GEN-2016-056	1.028	1.000	1.000	1.005	1.000
GEN-2016-058	1.010	1.000	1.000	1.006	1.004
GEN-2016-062	1.014	1.006	1.012	1.011	1.015
GEN-2016-069	1.005	1.012	1.017	1.033	1.014

5.2 Power Factor Analysis Results

The power factor was calculated for the 2016 Winter Peak, 2017 Summer Peak, 2020 Summer Peak, 2020 Winter Peak, and 2025 Summer Peak condition. The following tables show the power factor results for the study generators:

- Table 5-2: Power Factor Analysis for GEN-2015-018
- Table 5-3: Power Factor Analysis for GEN-2015-033
- Table 5-4: Power Factor Analysis for GEN-2015-039
- Table 5-5: Power Factor Analysis for GEN-2015-040
- Table 5-6: Power Factor Analysis for GEN-2015-041

- Table 5-7: Power Factor Analysis for GEN-2015-078
- Table 5-8: Power Factor Analysis for ASGI-2016-001
- Table 5-9: Power Factor Analysis for ASGI-2015-002
- Table 5-10: Power Factor Analysis for GEN-2016-002
- Table 5-11: Power Factor Analysis for ASGI-2016-004
- Table 5-12: Power Factor Analysis for GEN-2016-015
- Table 5-13: Power Factor Analysis for GEN-2016-039
- Table 5-14: Power Factor Analysis for GEN-2016-056
- Table 5-15: Power Factor Analysis for GEN-2016-058
- Table 5-16: Power Factor Analysis for GEN-2016-062
- Table 5-17: Power Factor Analysis for GEN-2016-069

Note that a positive Q (Mvar) output illustrates that the generator is absorbing reactive power from the system, implying a leading power factor; a negative Q (Mvar) illustrates that the generator is supplying reactive power to the system, implying a lagging power factor.

Table 5-2
Power Factor Analysis: GEN-2015-018

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.995	Leading	7.624	0.999	Leading	3.505	1.000	Leading	1.266	0.993	Leading	9.642	1.000	Leading	1.406
1	FLT01-3PH	0.998	Leading	4.968	0.998	Lagging	-4.826	1.000	Lagging	-2.385	0.996	Leading	6.843	0.994	Lagging	-8.499
2	FLT02-3PH	0.990	Leading	11.186	0.973	Leading	19.040	0.984	Leading	14.648	0.990	Leading	11.414	0.968	Leading	20.727
3	FLT03-3PH	0.996	Leading	7.526	1.000	Leading	1.975	1.000	Leading	0.125	0.993	Leading	9.571	1.000	Lagging	-0.085
4	FLT04-3PH	0.998	Leading	4.828	0.988	Lagging	-12.422	0.999	Lagging	-4.279	0.995	Leading	7.684	0.997	Lagging	-6.444
5	FLT05-3PH	0.999	Leading	3.610	1.000	Leading	2.360	0.999	Lagging	-4.128	1.000	Leading	2.530	0.999	Lagging	-3.813
6	FLT06-3PH	0.996	Leading	6.982	1.000	Leading	1.693	1.000	Lagging	-0.367	0.993	Leading	9.608	1.000	Lagging	-0.132
7	FLT07-3PH	0.993	Leading	9.570	0.998	Leading	5.056	0.999	Leading	3.712	0.989	Leading	12.138	0.999	Leading	3.660
8	FLT08-3PH	0.993	Leading	9.677	0.997	Leading	5.818	0.998	Leading	4.593	0.989	Leading	12.226	0.998	Leading	4.426
9	FLT09-3PH	1.000	Leading	2.294	0.996	Lagging	-6.787	0.995	Lagging	-8.041	0.999	Leading	2.589	0.994	Lagging	-8.894
10	FLT10-3PH	0.996	Leading	7.502	0.999	Leading	3.162	1.000	Leading	1.111	0.993	Leading	9.503	1.000	Leading	1.240
11	FLT11-3PH	0.999	Leading	3.577	0.973	Lagging	-19.054	0.995	Lagging	-7.921	0.996	Leading	6.759	0.992	Lagging	-10.450
20	FLT20-3PH	0.996	Leading	7.533	0.999	Leading	3.436	1.000	Leading	1.226	0.993	Leading	9.701	1.000	Leading	1.381
21	FLT21-3PH	0.996	Leading	7.184	0.999	Leading	3.016	1.000	Leading	0.794	0.994	Leading	9.087	1.000	Leading	1.121
22	FLT22-3PH	0.996	Leading	7.448	0.999	Leading	3.162	1.000	Leading	0.928	0.993	Leading	9.394	1.000	Leading	1.260
23	FLT23-3PH	0.996	Leading	7.518	0.999	Leading	3.526	1.000	Leading	1.289	0.993	Leading	9.567	1.000	Leading	1.349
24	FLT24-3PH	0.995	Leading	7.624	0.999	Leading	3.505	1.000	Leading	1.266	0.993	Leading	9.642	1.000	Leading	1.406
26	FLT26-3PH	0.996	Leading	6.858	0.999	Leading	2.679	1.000	Leading	0.381	0.994	Leading	8.671	1.000	Leading	0.902
35	FLT35-3PH	0.998	Leading	5.450	1.000	Lagging	-1.845	0.999	Lagging	-4.145	0.996	Leading	7.205	1.000	Lagging	-1.468
36	FLT36-3PH	0.997	Leading	6.289	1.000	Lagging	-0.086	1.000	Lagging	-2.400	0.995	Leading	8.082	1.000	Lagging	-0.302
37	FLT37-3PH	0.997	Leading	6.627	0.999	Leading	3.330	1.000	Leading	1.048	0.995	Leading	8.224	1.000	Lagging	-0.588
38	FLT38-3PH	0.996	Leading	6.831	1.000	Leading	2.175	1.000	Leading	0.058	0.994	Leading	8.719	1.000	Lagging	-0.054
39	FLT39-3PH	0.995	Leading	7.819	0.999	Leading	3.090	1.000	Leading	0.968	0.993	Leading	9.848	1.000	Leading	0.996
40	FLT40-3PH	0.995	Leading	7.656	0.999	Leading	3.089	1.000	Leading	0.799	0.993	Leading	9.600	1.000	Leading	1.295
41	FLT41-3PH	0.995	Leading	7.832	0.999	Leading	3.058	1.000	Leading	0.944	0.992	Leading	9.861	1.000	Leading	0.930
42	FLT42-3PH	0.996	Leading	7.303	0.999	Leading	3.584	1.000	Leading	0.838	0.994	Leading	9.019	1.000	Leading	0.971
43	FLT43-3PH	0.996	Leading	6.883	1.000	Leading	2.084	1.000	Leading	0.175	0.993	Leading	9.673	1.000	Lagging	-0.067
53	FLT53-3PH	0.995	Leading	7.624	0.999	Leading	3.474	1.000	Leading	1.209	0.993	Leading	9.644	1.000	Leading	1.359
54	FLT54-3PH	0.995	Leading	7.624	0.999	Leading	3.523	1.000	Leading	1.292	0.993	Leading	9.652	1.000	Leading	1.446
55	FLT55-3PH	0.995	Leading	7.622	0.999	Leading	3.483	1.000	Leading	1.228	0.993	Leading	9.636	1.000	Leading	1.378
56	FLT56-3PH	0.996	Leading	7.604	0.999	Leading	3.549	1.000	Leading	1.259	0.993	Leading	9.666	1.000	Leading	1.343
57	FLT57-3PH	0.995	Leading	7.619	0.999	Leading	3.509	1.000	Leading	1.270	0.993	Leading	9.647	1.000	Leading	1.393
58	FLT58-3PH	0.995	Leading	7.622	0.999	Leading	3.484	1.000	Leading	1.232	0.993	Leading	9.641	1.000	Leading	1.384
59	FLT59-3PH	0.996	Leading	7.518	0.999	Leading	3.442	1.000	Leading	1.190	0.993	Leading	9.673	1.000	Leading	1.396
60	FLT60-3PH	0.995	Leading	7.627	0.999	Leading	3.484	1.000	Leading	1.158	0.993	Leading	9.576	1.000	Leading	1.248
61	FLT61-3PH	0.995	Leading	7.621	0.999	Leading	3.512	1.000	Leading	1.256	0.993	Leading	9.636	1.000	Leading	1.391
62	FLT62-3PH	0.995	Leading	7.633	0.999	Leading	3.439	1.000	Leading	1.099	0.993	Leading	9.643	1.000	Leading	1.264
63	FLT63-3PH	0.995	Leading	7.621	0.999	Leading	3.511	1.000	Leading	1.257	0.993	Leading	9.637	1.000	Leading	1.392
64	FLT64-3PH	0.995	Leading	7.624	0.999	Leading	3.498	1.000	Leading	1.244	0.993	Leading	9.630	1.000	Leading	1.387
65	FLT65-3PH	0.995	Leading	7.692	0.999	Leading	2.770	1.000	Lagging	-0.294	0.994	Leading	9.158	1.000	Leading	0.264
66	FLT66-3PH	0.995	Leading	7.622	0.999	Leading	3.485	1.000	Leading	1.235	0.993	Leading	9.641	1.000	Leading	1.387
67	FLT67-3PH	0.995	Leading	7.662	0.999	Leading	2.998	1.000	Leading	0.645	0.994	Leading	9.001	1.000	Leading	1.054
73	FLT73-3PH	0.995	Leading	7.624	0.999	Leading	3.505	1.000	Leading	1.266	0.993	Leading	9.642	1.000	Leading	1.406
74	FLT74-3PH	0.996	Leading	7.448	0.999	Leading	3.162	1.000	Leading	0.928	0.993	Leading	9.394	1.000	Leading	1.260
75	FLT75-3PH	0.995	Leading	7.712	0.999	Leading	3.635	1.000	Leading	1.566	0.993	Leading	9.757	1.000	Leading	1.526
76	FLT76-3PH	0.996	Leading	7.592	0.999	Leading	3.487	1.000	Leading	1.088	0.993	Leading	9.587	1.000	Leading	1.373
84	FLT84-3PH	0.995	Leading	7.623	0.999	Leading	3.455	1.000	Leading	1.314	0.993	Leading	9.654	1.000	Leading	1.557
85	FLT85-3PH	0.995	Leading	7.630	0.999	Leading	3.391	1.000	Leading	1.105	0.993	Leading	9.573	1.000	Leading	1.268
86	FLT86-3PH	0.995	Leading	7.624	0.999	Leading	3.501	1.000	Leading	1.190	0.993	Leading	9.597	1.000	Leading	1.233
87	FLT87-3PH	0.995	Leading	7.631	0.999	Leading	3.396	1.000	Leading	1.111	0.993	Leading	9.620	1.000	Leading	1.339
88	FLT88-3PH	0.995	Leading	7.620	0.999	Leading	3.503	1.000	Leading	1.283	0.993	Leading	9.674	1.000	Leading	1.429
89	FLT89-3PH	0.995	Leading	7.621	0.999	Leading	3.482	1.000	Leading	1.269	0.993	Leading	9.677	1.000	Leading	1.456
90	FLT90-3PH	0.995	Leading	7.620	0.999	Leading	3.503	1.000	Leading	1.286	0.993	Leading	9.677	1.000	Leading	1.432
91	FLT91-3PH	0.995	Leading	7.624	0.999	Leading	3.503	1.000	Leading	1.251	0.993	Leading	9.640	1.000	Leading	1.383
92	FLT92-3PH	0.995	Leading	7.626	0.999	Leading	3.477	1.000	Leading	1.226	0.993	Leading	9.623	1.000	Leading	1.384
93	FLT93-3PH	0.996	Leading	7.572	0.999	Leading	3.282	1.000	Leading	1.209	0.993	Leading	9.631	1.000	Leading	1.296
94	FLT94-3PH	0.996	Leading	7.604	0.999	Leading	3.400	1.000	Leading	1.255	0.993	Leading	9.649	1.000	Leading	1.308
95	FLT95-3PH	0.995	Leading	7.624	0.999	Leading	3.478	1.000	Leading	1.137	0.993	Leading	9.566	1.000	Leading	1.314
100	FLT100-3PH	0.995	Leading	7.626	0.999	Leading	3.482	1.000	Leading	1.206	0.993	Leading	9.613	1.000	Leading	1.351
101	FLT101-3PH	0.995	Leading	7.616	0.999	Leading	3.487	1.000	Leading	1.269	0.993	Leading	9.641	1.000	Leading	1.422
104	FLT104-3PH	0.996	Leading	7.558	0.999	Leading	3.457	1.000	Leading	1.178	0.993	Leading	9.560	1.000	Leading	1.486
105	FLT105-3PH	0.996	Leading	7.447	0.999	Leading	3.427	1.000	Leading	1.105	0.993	Leading	9.420	1.000	Leading	1.226
106	FLT106-3PH	0.995	Leading	7.623	0.999	Leading	3.501	1.000	Leading	1.261	0.993	Leading	9.640	1.000	Leading	1.394
107	FLT107-3PH	0.996	Leading	7.549	0.999	Leading	3.438	1.000	Leading	1.166	0.993	Leading	9.554	1.000	Leading	1.511
108	FLT108-3PH	0.995	Leading	7.617	0.999	Leading	3.518	1.000	Leading	1.271	0.993	Leading	9.638	1.000	Leading	1.441
109	FLT109-3PH	0.996	Leading	7.417	0.999	Leading	3.416	1.000	Leading	1.099	0.993	Leading	9.390	1.000	Leading	1.233
110	FLT110-3PH	0.996	Leading	7.447	0.999	Leading	3.427	1.000	Leading	1.105	0.993	Leading	9.420	1.000	Leading	1.226
111	FLT111-3PH	0.995	Leading	7.619	0.999	Leading	3.510	1.000	Leading	1.270	0.993	Leading	9.637	1.000	Leading	1.418
117	FLT117-3PH	0.996	Leading	7.513	0.999	Leading	3.410	1.000	Leading	1.196	0.993	Leading	9.550	1.000	Leading	1.449
118	FLT118-3PH	0.995	Leading	7.634	0.999	Leading	3.561	1.000	Leading	1.342	0.993	Leading	9.660	1.000	Leading	1.434
119	FLT119-3PH	0.996	Leading	7.578	0.999	Leading	3.450	1.000	Leading	1.224	0.993	Leading	9.588	1.000	Leading	1.425
120	FLT120-3PH	0.996	Leading	6.963	0.999	Leading	2.868	1.000	Leading	1.155	0.993	Leading	9.481	1.000	Leading	1.199
121	FLT121-3PH	0.995	Leading	7.647	0.999	Leading	3.506	1.000	Leading	1.258	0.993	Leading	9.693	1.000	Leading	1.282
126	FLT126-3PH	0.995	Leading	7.742	0.999	Leading	3.573	1.000	Leading	1.266	0.993	Leading	9.642	1.000	Leading	1.406
127	FLT127-3PH	0.996	Leading	7.606	0.999	Leading	3.506	1.000	Leading	1.244	0.993	Leading	9.575	1.000	Leading	1.395

Table 5-2 (continued)
Power Factor Analysis: GEN-2015-018

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
128	FLT128-3PH	0.996	Leading	7.605	0.999	Leading	3.520	1.000	Leading	1.252	0.993	Leading	9.584	1.000	Leading	1.426
129	FLT129-3PH	0.996	Leading	7.199	0.999	Leading	4.016	1.000	Leading	1.352	0.993	Leading	9.568	1.000	Leading	1.467
130	FLT130-3PH	0.995	Leading	7.619	0.999	Leading	3.505	1.000	Leading	1.261	0.993	Leading	9.638	1.000	Leading	1.406
131	FLT131-3PH	0.996	Leading	7.508	0.999	Leading	3.576	1.000	Leading	1.267	0.993	Leading	9.639	1.000	Leading	1.437
132	FLT132-3PH	0.995	Leading	7.662	0.999	Leading	2.998	1.000	Leading	0.645	0.994	Leading	9.001	1.000	Leading	1.054
133	FLT133-3PH	0.996	Leading	7.261	0.999	Leading	4.126	1.000	Leading	1.625	0.992	Leading	10.344	1.000	Leading	1.605
140	FLT140-3PH	0.995	Leading	7.681	0.999	Leading	3.176	1.000	Leading	1.016	0.993	Leading	9.670	1.000	Leading	0.063
141	FLT141-3PH	0.996	Leading	7.454	0.999	Leading	3.509	1.000	Leading	1.236	0.993	Leading	9.499	1.000	Leading	0.425
142	FLT142-3PH	0.996	Leading	7.600	0.999	Leading	3.508	1.000	Leading	1.281	0.993	Leading	9.616	1.000	Leading	1.036
143	FLT143-3PH	0.995	Leading	7.636	0.999	Leading	3.517	1.000	Leading	1.297	0.993	Leading	9.633	1.000	Leading	1.417
144	FLT144-3PH	0.996	Leading	7.549	0.999	Leading	3.438	1.000	Leading	1.166	0.993	Leading	9.554	1.000	Leading	1.511
145	FLT145-3PH	0.995	Leading	7.633	0.999	Leading	3.487	1.000	Leading	1.275	0.993	Leading	9.647	1.000	Leading	0.825
146	FLT146-3PH	0.996	Leading	7.577	0.999	Leading	3.560	1.000	Leading	1.303	0.993	Leading	9.589	1.000	Leading	1.688
147	FLT147-3PH	0.996	Leading	7.304	0.999	Leading	3.292	1.000	Leading	1.003	0.993	Leading	9.419	1.000	Leading	1.116
148	FLT148-3PH	0.996	Leading	7.435	0.999	Leading	3.406	1.000	Leading	1.134	0.993	Leading	9.490	1.000	Leading	1.159
157	FLT157-3PH	0.995	Leading	7.637	0.999	Leading	3.498	1.000	Leading	1.214	0.993	Leading	9.612	1.000	Leading	1.297
158	FLT158-3PH	0.996	Leading	7.592	0.999	Leading	3.487	1.000	Leading	1.088	0.993	Leading	9.587	1.000	Leading	1.373
159	FLT159-3PH	0.995	Leading	7.635	0.999	Leading	3.498	1.000	Leading	1.230	0.993	Leading	9.622	1.000	Leading	1.479
168	FLT168-3PH	0.995	Leading	7.624	0.999	Leading	3.505	1.000	Leading	1.266	0.993	Leading	9.642	1.000	Leading	1.406
169	FLT169-3PH	0.995	Leading	7.644	0.999	Leading	2.903	1.000	Leading	0.743	0.994	Leading	9.041	1.000	Leading	1.256
170	FLT170-3PH	0.995	Leading	7.674	0.999	Leading	3.502	1.000	Leading	1.144	0.993	Leading	9.437	1.000	Leading	1.233
171	FLT171-3PH	0.995	Leading	7.662	0.999	Leading	2.998	1.000	Leading	0.645	0.994	Leading	9.001	1.000	Leading	1.054
172	FLT172-3PH	0.996	Leading	7.518	0.999	Leading	3.442	1.000	Leading	1.190	0.993	Leading	9.673	1.000	Leading	1.396
173	FLT173-3PH	0.995	Leading	7.622	0.999	Leading	3.485	1.000	Leading	1.235	0.993	Leading	9.641	1.000	Leading	1.387
174	FLT174-3PH	0.995	Leading	7.692	0.999	Leading	2.770	1.000	Lagging	-0.294	0.994	Leading	9.158	1.000	Leading	0.264
175	FLT175-3PH	0.995	Leading	7.627	0.999	Leading	3.484	1.000	Leading	1.158	0.993	Leading	9.576	1.000	Leading	1.248
176	FLT176-3PH	0.995	Leading	7.624	0.999	Leading	3.505	1.000	Leading	1.900	0.993	Leading	9.312	1.000	Leading	1.827
184	FLT184-3PH	0.996	Leading	7.302	0.999	Leading	3.197	1.000	Leading	1.014	0.993	Leading	9.284	1.000	Leading	1.133
185	FLT185-3PH	0.996	Leading	7.609	0.999	Leading	3.508	1.000	Leading	1.479	0.993	Leading	9.816	1.000	Leading	1.430
186	FLT186-3PH	0.996	Leading	7.432	0.999	Leading	3.297	1.000	Leading	1.099	0.993	Leading	9.418	1.000	Leading	1.242
187	FLT187-3PH	0.996	Leading	7.349	0.999	Leading	3.257	1.000	Leading	1.053	0.993	Leading	9.328	1.000	Leading	1.143
188	FLT188-3PH	0.997	Leading	6.702	1.000	Leading	0.471	1.000	Leading	0.395	0.996	Leading	6.815	0.999	Lagging	-3.961
189	FLT189-3PH	0.996	Leading	6.917	1.000	Leading	1.802	1.000	Lagging	-1.464	0.996	Leading	6.803	1.000	Lagging	-0.817
190	FLT190-3PH	0.996	Leading	7.532	0.999	Leading	3.419	1.000	Leading	1.204	0.993	Leading	9.532	1.000	Leading	1.349

Study Generator GEN-2015-018

The Power Factor Analysis shows that GEN-2015-018 has a power factor range of 0.990 leading (absorbing) to 1.0 unity for the 2016 Winter Peak conditions, a power factor range of 0.973 leading (absorbing) to 0.973 lagging (supplying) for the 2017 Summer Peak conditions, a power factor range of 0.984 leading (absorbing) to 0.995 lagging (supplying) for the 2020 Summer Peak conditions, a power factor range of 0.989 leading (absorbing) to 1.0 unity for the 2020 Winter Peak conditions, and a power factor range of 0.968 leading (absorbing) to 0.992 lagging (supplying) for the 2025 Summer Peak conditions.

Table 5-3
Power Factor Analysis: GEN-2015-033

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.997	Lagging	-11.864	1.000	Leading	0.891	1.000	Leading	1.399	0.993	Leading	18.471	1.000	Leading	0.653
1	FLT01-3PH	0.997	Lagging	-11.745	1.000	Leading	0.943	1.000	Leading	1.414	0.993	Leading	18.519	1.000	Leading	0.664
2	FLT02-3PH	0.997	Lagging	-11.831	1.000	Leading	0.832	1.000	Leading	1.334	0.993	Leading	18.489	1.000	Leading	0.570
3	FLT03-3PH	0.997	Lagging	-11.868	1.000	Leading	0.862	1.000	Leading	1.375	0.993	Leading	18.467	1.000	Leading	0.606
4	FLT04-3PH	0.997	Lagging	-11.881	1.000	Leading	0.837	1.000	Leading	1.381	0.993	Leading	18.443	1.000	Leading	0.634
5	FLT05-3PH	0.997	Lagging	-12.243	1.000	Leading	0.365	1.000	Leading	0.937	0.993	Leading	18.028	1.000	Leading	0.092
6	FLT06-3PH	0.997	Lagging	-11.864	1.000	Leading	0.880	1.000	Leading	1.389	0.993	Leading	18.467	1.000	Leading	0.644
7	FLT07-3PH	0.997	Lagging	-11.877	1.000	Leading	0.879	1.000	Leading	1.393	0.993	Leading	18.459	1.000	Leading	0.644
8	FLT08-3PH	0.997	Lagging	-11.876	1.000	Leading	0.879	1.000	Leading	1.391	0.993	Leading	18.461	1.000	Leading	0.644
9	FLT09-3PH	0.997	Lagging	-11.887	1.000	Leading	0.798	1.000	Leading	1.332	0.993	Leading	18.395	1.000	Leading	0.529
10	FLT10-3PH	0.997	Lagging	-11.862	1.000	Leading	0.886	1.000	Leading	1.397	0.993	Leading	18.469	1.000	Leading	0.650
11	FLT11-3PH	0.997	Lagging	-11.894	1.000	Leading	0.836	1.000	Leading	1.379	0.993	Leading	18.433	1.000	Leading	0.619
20	FLT20-3PH	0.999	Lagging	-6.189	1.000	Lagging	-2.865	1.000	Leading	0.281	1.000	Lagging	-0.511	1.000	Lagging	-4.201
21	FLT21-3PH	0.998	Lagging	-8.919	0.999	Leading	6.546	1.000	Leading	3.269	0.995	Leading	14.656	1.000	Leading	4.804
22	FLT22-3PH	0.996	Lagging	-14.325	1.000	Lagging	-3.099	1.000	Lagging	-2.516	0.995	Leading	15.098	1.000	Lagging	-2.550
23	FLT23-3PH	0.998	Lagging	-8.988	0.999	Leading	6.003	1.000	Leading	4.202	0.990	Leading	21.250	0.999	Leading	4.853
24	FLT24-3PH	0.997	Lagging	-11.864	1.000	Leading	0.891	1.000	Leading	1.399	0.993	Leading	18.471	1.000	Leading	0.653
26	FLT26-3PH	0.970	Lagging	-37.793	0.995	Lagging	-15.572	0.993	Lagging	-17.646	0.998	Lagging	-8.825	0.991	Lagging	-20.612
35	FLT35-3PH	0.994	Lagging	-16.064	1.000	Lagging	-2.525	1.000	Lagging	-2.076	0.996	Leading	13.360	1.000	Lagging	-2.667
36	FLT36-3PH	0.995	Lagging	-15.039	1.000	Lagging	-1.831	1.000	Lagging	-1.372	0.995	Leading	14.528	1.000	Lagging	-1.978
37	FLT37-3PH	0.994	Lagging	-16.654	1.000	Lagging	-1.229	1.000	Lagging	-0.580	0.996	Leading	13.605	1.000	Lagging	-1.358
38	FLT38-3PH	0.997	Lagging	-11.925	1.000	Leading	0.853	1.000	Leading	1.364	0.993	Leading	18.412	1.000	Leading	0.547
39	FLT39-3PH	0.997	Lagging	-12.074	1.000	Leading	0.507	1.000	Leading	1.056	0.993	Leading	18.220	1.000	Leading	0.259
40	FLT40-3PH	0.996	Lagging	-13.872	1.000	Lagging	-0.809	1.000	Lagging	-0.352	0.995	Leading	15.968	1.000	Lagging	-0.953
41	FLT41-3PH	0.997	Lagging	-12.091	1.000	Leading	0.479	1.000	Leading	1.031	0.993	Leading	18.200	1.000	Leading	0.222
42	FLT42-3PH	0.996	Lagging	-13.473	1.000	Leading	0.733	1.000	Leading	1.193	0.994	Leading	16.582	1.000	Leading	0.274
43	FLT43-3PH	0.997	Lagging	-11.940	1.000	Leading	0.775	1.000	Leading	1.254	0.993	Leading	18.482	1.000	Leading	0.516
53	FLT53-3PH	0.997	Lagging	-11.806	1.000	Leading	0.769	1.000	Leading	1.336	0.993	Leading	18.517	1.000	Leading	0.554
54	FLT54-3PH	0.997	Lagging	-11.842	1.000	Leading	0.689	1.000	Leading	1.254	0.993	Leading	18.389	1.000	Leading	0.451
55	FLT55-3PH	0.997	Lagging	-11.885	1.000	Leading	0.825	1.000	Leading	1.383	0.993	Leading	18.421	1.000	Leading	0.635
56	FLT56-3PH	0.997	Lagging	-11.688	1.000	Leading	0.560	1.000	Leading	1.049	0.993	Leading	18.527	1.000	Leading	0.151
57	FLT57-3PH	0.997	Lagging	-11.902	1.000	Leading	0.754	1.000	Leading	1.317	0.993	Leading	18.444	1.000	Leading	0.501
58	FLT58-3PH	0.997	Lagging	-11.827	1.000	Leading	0.854	1.000	Leading	1.415	0.993	Leading	18.474	1.000	Leading	0.686
59	FLT59-3PH	0.997	Lagging	-12.089	1.000	Leading	0.336	1.000	Leading	1.038	0.993	Leading	18.245	1.000	Leading	0.518
60	FLT60-3PH	0.997	Lagging	-11.988	1.000	Leading	0.771	1.000	Leading	1.285	0.993	Leading	18.332	1.000	Leading	0.478
61	FLT61-3PH	0.997	Lagging	-11.955	1.000	Leading	0.852	1.000	Leading	1.352	0.993	Leading	18.414	1.000	Leading	0.587
62	FLT62-3PH	0.997	Lagging	-11.818	1.000	Leading	0.685	1.000	Leading	1.209	0.993	Leading	18.538	1.000	Leading	0.437
63	FLT63-3PH	0.997	Lagging	-11.948	1.000	Leading	0.855	1.000	Leading	1.355	0.993	Leading	18.418	1.000	Leading	0.592
64	FLT64-3PH	0.997	Lagging	-11.864	1.000	Leading	0.833	1.000	Leading	1.345	0.993	Leading	18.401	1.000	Leading	0.585
65	FLT65-3PH	0.997	Lagging	-12.638	1.000	Lagging	-1.446	1.000	Lagging	-0.626	0.994	Leading	16.993	1.000	Lagging	-0.972
66	FLT66-3PH	0.997	Lagging	-11.837	1.000	Leading	0.859	1.000	Leading	1.419	0.993	Leading	18.463	1.000	Leading	0.693
67	FLT67-3PH	0.997	Lagging	-12.056	1.000	Leading	0.753	1.000	Leading	1.360	0.993	Leading	18.236	1.000	Leading	0.510
73	FLT73-3PH	0.997	Lagging	-11.864	1.000	Leading	0.891	1.000	Leading	1.399	0.993	Leading	18.471	1.000	Leading	0.653
74	FLT74-3PH	0.996	Lagging	-14.325	1.000	Lagging	-3.099	1.000	Lagging	-2.516	0.995	Leading	15.098	1.000	Lagging	-2.550
75	FLT75-3PH	0.998	Lagging	-8.353	1.000	Leading	3.486	0.999	Leading	5.761	0.990	Leading	21.917	0.999	Leading	6.318
76	FLT76-3PH	0.997	Lagging	-12.535	1.000	Leading	0.714	1.000	Leading	1.146	0.992	Leading	19.770	1.000	Leading	2.887
84	FLT84-3PH	0.997	Lagging	-12.029	1.000	Leading	0.650	1.000	Leading	1.222	0.993	Leading	18.254	1.000	Leading	0.141
85	FLT85-3PH	0.997	Lagging	-11.651	1.000	Leading	0.373	1.000	Leading	0.981	0.993	Leading	18.615	1.000	Leading	0.569
86	FLT86-3PH	0.997	Lagging	-11.826	1.000	Leading	0.739	1.000	Leading	1.283	0.993	Leading	18.595	1.000	Leading	0.095
87	FLT87-3PH	0.997	Lagging	-11.730	1.000	Leading	0.579	1.000	Leading	1.147	0.993	Leading	18.644	1.000	Leading	0.482
88	FLT88-3PH	0.997	Lagging	-11.898	1.000	Leading	0.871	1.000	Leading	1.391	0.993	Leading	18.440	1.000	Leading	0.641
89	FLT89-3PH	0.997	Lagging	-11.844	1.000	Leading	0.789	1.000	Leading	1.329	0.993	Leading	18.520	1.000	Leading	0.620
90	FLT90-3PH	0.997	Lagging	-11.889	1.000	Leading	0.874	1.000	Leading	1.394	0.993	Leading	18.449	1.000	Leading	0.645
91	FLT91-3PH	0.997	Lagging	-11.870	1.000	Leading	0.861	1.000	Leading	1.378	0.993	Leading	18.459	1.000	Leading	0.614
92	FLT92-3PH	0.997	Lagging	-11.722	1.000	Leading	0.747	1.000	Leading	1.283	0.993	Leading	18.570	1.000	Leading	0.705
93	FLT93-3PH	0.997	Lagging	-12.683	1.000	Lagging	-0.118	1.000	Leading	0.627	0.993	Leading	18.105	1.000	Leading	0.360
94	FLT94-3PH	0.997	Lagging	-11.640	1.000	Leading	0.524	1.000	Leading	1.202	0.993	Leading	17.872	1.000	Lagging	-0.030
95	FLT95-3PH	0.997	Lagging	-11.864	1.000	Leading	0.667	1.000	Leading	1.224	0.993	Leading	18.688	1.000	Leading	1.318
100	FLT100-3PH	0.997	Lagging	-11.642	1.000	Leading	0.752	1.000	Leading	1.284	0.993	Leading	18.648	1.000	Leading	0.787
101	FLT101-3PH	0.997	Lagging	-12.033	1.000	Leading	0.539	1.000	Leading	1.082	0.993	Leading	18.263	1.000	Leading	0.181
104	FLT104-3PH	0.997	Lagging	-12.387	1.000	Leading	0.513	1.000	Leading	1.055	0.993	Leading	18.048	1.000	Leading	0.540
105	FLT105-3PH	0.996	Lagging	-13.557	1.000	Leading	0.232	1.000	Leading	0.757	0.994	Leading	16.707	1.000	Lagging	-0.057
106	FLT106-3PH	0.997	Lagging	-11.878	1.000	Leading	0.870	1.000	Leading	1.378	0.993	Leading	18.454	1.000	Leading	0.617
107	FLT107-3PH	0.997	Lagging	-12.457	1.000	Leading	0.440	1.000	Leading	1.021	0.993	Leading	18.004	1.000	Leading	0.511
108	FLT108-3PH	0.997	Lagging	-12.018	1.000	Leading	0.755	1.000	Leading	1.347	0.993	Leading	18.388	1.000	Leading	0.499
109	FLT109-3PH	0.996	Lagging	-13.701	1.000	Leading	0.197	1.000	Leading	0.733	0.994	Leading	16.563	1.000	Lagging	-0.078
110	FLT110-3PH	0.996	Lagging	-13.557	1.000	Leading	0.232	1.000	Leading	0.757	0.994	Leading	16.707	1.000	Lagging	-0.057
111	FLT111-3PH	0.997	Lagging	-11.963	1.000	Leading	0.824	1.000	Leading	1.337	0.993	Leading	18.358	1.000	Leading	0.546
117	FLT117-3PH	0.997	Lagging	-12.116	1.000	Leading	0.810	1.000	Leading	1.305	0.993	Leading	18.309	1.000	Leading	0.598
118	FLT118-3PH	0.997	Lagging	-12.183	1.000	Leading	0.685	1.000	Leading	1.237	0.993	Leading	18.133	1.000	Leading	0.278
119	FLT119-3PH	0.997	Lagging	-11.963	1.000	Leading	0.826	1.000	Leading	1.322	0.993	Leading	18.331	1.000	Leading	0.560
120	FLT120-3PH	0.997	Lagging	-12.361	1.000	Leading	0.743	1.000	Leading	1.217	0.993	Leading	17.750	1.000	Leading	0.600
121	FLT121-3PH	0.997	Lagging	-11.857	1.000	Leading	0.899	1.000	Leading	1.405	0.993	Leading	18.499	1.000	Leading	0.622
126	FLT126-3PH	0.997	Lagging	-10.914	1.000	Leading	1.423	1.000	Leading	1.399	0.993	Leading	18.471	1.000	Leading	0.653
127	FLT127-3PH	0.997	Lagging	-11.992	1.000	Leading	0.842	1.000	Leading	1.266	0.993	Leading	18.173	1.000	Leading	0.498

Table 5-3 (continued)
Power Factor Analysis: GEN-2015-033

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
128	FLT128-3PH	0.997	Lagging	-11.832	1.000	Leading	0.791	1.000	Leading	1.368	0.993	Leading	18.685	1.000	Leading	0.466
129	FLT129-3PH	0.997	Lagging	-11.970	1.000	Leading	0.764	1.000	Leading	1.363	0.993	Leading	18.489	1.000	Leading	0.596
130	FLT130-3PH	0.997	Lagging	-11.883	1.000	Leading	0.880	1.000	Leading	1.387	0.993	Leading	18.447	1.000	Leading	0.626
131	FLT131-3PH	0.997	Lagging	-11.788	1.000	Leading	1.031	1.000	Leading	1.400	0.993	Leading	18.471	1.000	Leading	0.851
132	FLT132-3PH	0.997	Lagging	-12.056	1.000	Leading	0.753	1.000	Leading	1.360	0.993	Leading	18.236	1.000	Leading	0.510
133	FLT133-3PH	0.997	Lagging	-11.751	1.000	Leading	1.121	1.000	Leading	1.453	0.992	Leading	18.924	1.000	Leading	0.692
140	FLT140-3PH	0.996	Lagging	-12.894	1.000	Leading	0.715	1.000	Leading	1.281	0.993	Leading	17.478	1.000	Lagging	-0.070
141	FLT141-3PH	0.997	Lagging	-12.158	1.000	Leading	0.968	1.000	Leading	1.472	0.993	Leading	18.206	1.000	Leading	1.039
142	FLT142-3PH	0.997	Lagging	-11.892	1.000	Leading	1.034	1.000	Leading	1.548	0.993	Leading	18.398	1.000	Leading	0.333
143	FLT143-3PH	0.997	Lagging	-11.988	1.000	Leading	0.857	1.000	Leading	1.348	0.993	Leading	18.415	1.000	Leading	0.543
144	FLT144-3PH	0.997	Lagging	-12.457	1.000	Leading	0.440	1.000	Leading	1.021	0.993	Leading	18.004	1.000	Leading	0.511
145	FLT145-3PH	0.997	Lagging	-11.818	1.000	Leading	0.973	1.000	Leading	1.503	0.993	Leading	18.526	1.000	Leading	0.604
146	FLT146-3PH	0.997	Lagging	-12.343	1.000	Lagging	-0.432	1.000	Leading	0.295	0.993	Leading	17.982	1.000	Lagging	-0.945
147	FLT147-3PH	0.998	Lagging	-10.011	1.000	Leading	0.935	1.000	Leading	1.329	0.992	Leading	19.650	1.000	Leading	2.515
148	FLT148-3PH	0.998	Lagging	-9.896	1.000	Leading	0.942	1.000	Leading	1.510	0.991	Leading	20.188	1.000	Leading	1.333
157	FLT157-3PH	0.997	Lagging	-11.860	1.000	Leading	0.821	1.000	Leading	1.278	0.993	Leading	18.450	1.000	Leading	0.351
158	FLT158-3PH	0.997	Lagging	-12.535	1.000	Leading	0.714	1.000	Leading	1.146	0.992	Leading	19.770	1.000	Leading	2.887
159	FLT159-3PH	0.997	Lagging	-11.537	1.000	Leading	0.817	1.000	Leading	1.208	0.993	Leading	17.787	1.000	Leading	1.466
168	FLT168-3PH	0.997	Lagging	-11.864	1.000	Leading	0.891	1.000	Leading	1.399	0.993	Leading	18.471	1.000	Leading	0.653
169	FLT169-3PH	0.997	Lagging	-12.739	1.000	Leading	0.816	1.000	Leading	0.846	0.994	Leading	17.088	1.000	Lagging	-0.362
170	FLT170-3PH	0.998	Lagging	-9.104	1.000	Leading	2.853	1.000	Leading	3.954	0.991	Leading	20.775	1.000	Leading	4.634
171	FLT171-3PH	0.997	Lagging	-12.056	1.000	Leading	0.753	1.000	Leading	1.360	0.993	Leading	18.236	1.000	Leading	0.510
172	FLT172-3PH	0.997	Lagging	-12.089	1.000	Leading	0.336	1.000	Leading	1.038	0.993	Leading	18.245	1.000	Leading	0.518
173	FLT173-3PH	0.997	Lagging	-11.837	1.000	Leading	0.859	1.000	Leading	1.419	0.993	Leading	18.463	1.000	Leading	0.693
174	FLT174-3PH	0.997	Lagging	-12.638	1.000	Lagging	-1.446	1.000	Lagging	-0.626	0.994	Leading	16.993	1.000	Lagging	-0.972
175	FLT175-3PH	0.997	Lagging	-11.988	1.000	Leading	0.771	1.000	Leading	1.285	0.993	Leading	18.332	1.000	Leading	0.478
176	FLT176-3PH	0.997	Lagging	-11.864	1.000	Leading	0.891	1.000	Leading	1.455	0.993	Leading	18.625	1.000	Leading	1.157
184	FLT184-3PH	0.997	Lagging	-11.927	1.000	Leading	0.893	1.000	Leading	1.409	0.993	Leading	18.395	1.000	Leading	0.653
185	FLT185-3PH	0.997	Lagging	-11.861	1.000	Leading	0.891	1.000	Leading	1.365	0.993	Leading	18.370	1.000	Leading	0.640
186	FLT186-3PH	0.997	Lagging	-11.901	1.000	Leading	0.897	1.000	Leading	1.407	0.993	Leading	18.428	1.000	Leading	0.656
187	FLT187-3PH	0.997	Lagging	-11.941	1.000	Leading	0.877	1.000	Leading	1.394	0.993	Leading	18.379	1.000	Leading	0.627
188	FLT188-3PH	0.997	Lagging	-11.453	1.000	Leading	1.195	1.000	Leading	1.589	0.992	Leading	18.774	1.000	Leading	0.986
189	FLT189-3PH	0.997	Lagging	-11.526	1.000	Leading	1.157	1.000	Leading	1.554	0.993	Leading	18.604	1.000	Leading	0.809
190	FLT190-3PH	0.997	Lagging	-11.897	1.000	Leading	0.891	1.000	Leading	1.403	0.993	Leading	18.438	1.000	Leading	0.654

Study Generator GEN-2015-033

The Power Factor Analysis shows that GEN-2015-033 has a power factor range of 0.970 lagging to 0.999 lagging for the 2016 Winter Peak conditions, a power factor range of 0.999 leading to 0.995 lagging for the 2017 Summer Peak conditions, a power factor range of 0.998 leading to 0.993 lagging for the 2020 Summer Peak conditions, a power factor range of 0.990 leading to 0.998 lagging for the 2020 Winter Peak conditions, and a power factor range of 0.999 leading to 0.991 lagging for the 2025 Summer Peak conditions.

Table 5-4
Power Factor Analysis: GEN-2015-039

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.771	Lagging	-41.254	0.324	Lagging	-145.966	0.367	Lagging	-126.838	0.856	Lagging	-30.186	0.509	Lagging	-84.498
1	FLT01-3PH	0.779	Lagging	-40.310	0.325	Lagging	-145.402	0.368	Lagging	-126.421	0.861	Lagging	-29.518	0.512	Lagging	-83.803
2	FLT02-3PH	0.768	Lagging	-41.694	0.323	Lagging	-146.455	0.364	Lagging	-127.822	0.847	Lagging	-31.430	0.506	Lagging	-85.322
3	FLT03-3PH	0.771	Lagging	-41.267	0.324	Lagging	-146.130	0.366	Lagging	-126.969	0.856	Lagging	-30.197	0.508	Lagging	-84.695
4	FLT04-3PH	0.768	Lagging	-41.675	0.322	Lagging	-146.904	0.366	Lagging	-127.129	0.855	Lagging	-30.344	0.509	Lagging	-84.607
5	FLT05-3PH	0.867	Lagging	-28.716	0.333	Lagging	-141.598	0.395	Lagging	-116.168	0.970	Lagging	-12.636	0.534	Lagging	-79.221
6	FLT06-3PH	0.771	Lagging	-41.340	0.324	Lagging	-146.093	0.366	Lagging	-126.948	0.857	Lagging	-30.093	0.508	Lagging	-84.694
7	FLT07-3PH	0.775	Lagging	-40.792	0.325	Lagging	-145.496	0.368	Lagging	-126.166	0.860	Lagging	-29.610	0.512	Lagging	-83.958
8	FLT08-3PH	0.775	Lagging	-40.758	0.325	Lagging	-145.359	0.369	Lagging	-125.997	0.861	Lagging	-29.567	0.512	Lagging	-83.802
9	FLT09-3PH	0.761	Lagging	-42.573	0.321	Lagging	-147.493	0.364	Lagging	-128.139	0.845	Lagging	-31.597	0.502	Lagging	-86.199
10	FLT10-3PH	0.771	Lagging	-41.273	0.324	Lagging	-146.024	0.367	Lagging	-126.853	0.856	Lagging	-30.216	0.509	Lagging	-84.534
11	FLT11-3PH	0.768	Lagging	-41.682	0.322	Lagging	-147.165	0.366	Lagging	-127.301	0.855	Lagging	-30.387	0.508	Lagging	-84.732
20	FLT20-3PH	0.752	Lagging	-43.828	0.320	Lagging	-147.911	0.364	Lagging	-127.913	0.858	Lagging	-29.991	0.506	Lagging	-85.277
21	FLT21-3PH	0.665	Lagging	-56.212	0.298	Lagging	-160.391	0.334	Lagging	-140.985	0.734	Lagging	-46.206	0.480	Lagging	-91.456
22	FLT22-3PH	0.713	Lagging	-49.156	0.306	Lagging	-155.737	0.344	Lagging	-136.695	0.784	Lagging	-39.580	0.488	Lagging	-89.428
23	FLT23-3PH	0.751	Lagging	-43.938	0.323	Lagging	-146.301	0.366	Lagging	-127.308	0.836	Lagging	-32.837	0.506	Lagging	-85.192
24	FLT24-3PH	0.771	Lagging	-41.254	0.324	Lagging	-145.966	0.367	Lagging	-126.838	0.856	Lagging	-30.186	0.509	Lagging	-84.498
26	FLT26-3PH	0.602	Lagging	-66.283	0.281	Lagging	-170.473	0.312	Lagging	-152.203	0.653	Lagging	-57.939	0.461	Lagging	-96.311
35	FLT35-3PH	0.860	Leading	29.645	0.981	Leading	9.907	0.932	Leading	19.388	0.782	Leading	39.889	0.981	Leading	9.907
36	FLT36-3PH	0.660	Lagging	-56.945	0.351	Lagging	-133.414	0.383	Lagging	-120.548	0.692	Lagging	-52.228	0.536	Lagging	-78.829
37	FLT37-3PH	0.980	Lagging	-10.180	0.395	Lagging	-116.289	0.450	Lagging	-99.304	0.935	Lagging	-18.914	0.435	Lagging	-103.377
38	FLT38-3PH	0.855	Lagging	-30.313	0.366	Lagging	-127.306	0.409	Lagging	-111.433	0.937	Lagging	-18.704	0.587	Lagging	-68.998
39	FLT39-3PH	0.784	Lagging	-39.532	0.331	Lagging	-142.331	0.377	Lagging	-122.703	0.874	Lagging	-27.834	0.519	Lagging	-82.257
40	FLT40-3PH	0.709	Lagging	-49.682	0.295	Lagging	-161.705	0.324	Lagging	-146.014	0.776	Lagging	-40.705	0.473	Lagging	-93.195
41	FLT41-3PH	0.785	Lagging	-39.407	0.332	Lagging	-142.071	0.378	Lagging	-122.408	0.875	Lagging	-27.665	0.520	Lagging	-82.101
42	FLT42-3PH	0.718	Lagging	-48.408	0.316	Lagging	-150.259	0.354	Lagging	-131.994	0.803	Lagging	-37.153	0.496	Lagging	-87.637
43	FLT43-3PH	0.757	Lagging	-43.176	0.324	Lagging	-146.038	0.366	Lagging	-127.125	0.857	Lagging	-30.073	0.506	Lagging	-85.190
53	FLT53-3PH	0.771	Lagging	-41.241	0.324	Lagging	-146.006	0.367	Lagging	-126.855	0.856	Lagging	-30.187	0.509	Lagging	-84.519
54	FLT54-3PH	0.772	Lagging	-41.184	0.324	Lagging	-145.851	0.367	Lagging	-126.709	0.857	Lagging	-30.108	0.510	Lagging	-84.415
55	FLT55-3PH	0.771	Lagging	-41.282	0.324	Lagging	-145.991	0.367	Lagging	-126.855	0.856	Lagging	-30.249	0.509	Lagging	-84.515
56	FLT56-3PH	0.771	Lagging	-41.309	0.323	Lagging	-146.453	0.365	Lagging	-127.397	0.853	Lagging	-30.645	0.508	Lagging	-84.830
57	FLT57-3PH	0.771	Lagging	-41.330	0.324	Lagging	-146.170	0.367	Lagging	-126.933	0.855	Lagging	-30.313	0.509	Lagging	-84.600
58	FLT58-3PH	0.771	Lagging	-41.264	0.324	Lagging	-145.983	0.367	Lagging	-126.846	0.856	Lagging	-30.233	0.509	Lagging	-84.508
59	FLT59-3PH	0.751	Lagging	-43.900	0.325	Lagging	-145.438	0.367	Lagging	-126.627	0.841	Lagging	-32.192	0.508	Lagging	-84.786
60	FLT60-3PH	0.771	Lagging	-41.300	0.324	Lagging	-146.096	0.366	Lagging	-126.988	0.855	Lagging	-30.283	0.509	Lagging	-84.640
61	FLT61-3PH	0.771	Lagging	-41.316	0.324	Lagging	-145.988	0.367	Lagging	-126.887	0.856	Lagging	-30.231	0.509	Lagging	-84.524
62	FLT62-3PH	0.772	Lagging	-41.191	0.324	Lagging	-145.955	0.367	Lagging	-126.834	0.857	Lagging	-30.097	0.509	Lagging	-84.506
63	FLT63-3PH	0.771	Lagging	-41.311	0.324	Lagging	-145.986	0.367	Lagging	-126.884	0.856	Lagging	-30.228	0.509	Lagging	-84.522
64	FLT64-3PH	0.771	Lagging	-41.254	0.324	Lagging	-145.998	0.367	Lagging	-126.875	0.856	Lagging	-30.222	0.509	Lagging	-84.514
65	FLT65-3PH	0.775	Lagging	-40.761	0.328	Lagging	-143.786	0.372	Lagging	-124.948	0.860	Lagging	-29.636	0.513	Lagging	-83.716
66	FLT66-3PH	0.771	Lagging	-41.266	0.324	Lagging	-145.982	0.367	Lagging	-126.848	0.856	Lagging	-30.237	0.509	Lagging	-84.509
67	FLT67-3PH	0.770	Lagging	-41.391	0.323	Lagging	-146.274	0.366	Lagging	-127.062	0.853	Lagging	-30.539	0.509	Lagging	-84.629
73	FLT73-3PH	0.771	Lagging	-41.254	0.324	Lagging	-145.966	0.367	Lagging	-126.838	0.856	Lagging	-30.186	0.509	Lagging	-84.498
74	FLT74-3PH	0.713	Lagging	-49.156	0.306	Lagging	-155.737	0.344	Lagging	-136.695	0.784	Lagging	-39.580	0.488	Lagging	-89.428
75	FLT75-3PH	0.792	Lagging	-38.588	0.333	Lagging	-141.787	0.389	Lagging	-118.341	0.877	Lagging	-27.330	0.555	Lagging	-74.994
76	FLT76-3PH	0.764	Lagging	-42.187	0.324	Lagging	-145.935	0.367	Lagging	-126.594	0.856	Lagging	-30.209	0.511	Lagging	-84.044
84	FLT84-3PH	0.770	Lagging	-41.496	0.323	Lagging	-146.596	0.365	Lagging	-127.476	0.853	Lagging	-30.532	0.508	Lagging	-84.884
85	FLT85-3PH	0.771	Lagging	-41.363	0.322	Lagging	-146.879	0.365	Lagging	-127.731	0.853	Lagging	-30.586	0.508	Lagging	-84.795
86	FLT86-3PH	0.771	Lagging	-41.295	0.323	Lagging	-146.253	0.366	Lagging	-127.116	0.856	Lagging	-30.236	0.508	Lagging	-84.792
87	FLT87-3PH	0.772	Lagging	-41.203	0.324	Lagging	-145.966	0.367	Lagging	-126.816	0.856	Lagging	-30.133	0.509	Lagging	-84.486
88	FLT88-3PH	0.771	Lagging	-41.322	0.324	Lagging	-145.955	0.367	Lagging	-126.825	0.856	Lagging	-30.239	0.509	Lagging	-84.492
89	FLT89-3PH	0.771	Lagging	-41.272	0.324	Lagging	-146.000	0.367	Lagging	-126.874	0.856	Lagging	-30.185	0.509	Lagging	-84.513
90	FLT90-3PH	0.771	Lagging	-41.317	0.324	Lagging	-145.952	0.367	Lagging	-126.821	0.856	Lagging	-30.233	0.509	Lagging	-84.489
91	FLT91-3PH	0.771	Lagging	-41.253	0.324	Lagging	-146.010	0.367	Lagging	-126.873	0.856	Lagging	-30.194	0.509	Lagging	-84.519
92	FLT92-3PH	0.772	Lagging	-41.219	0.323	Lagging	-146.264	0.366	Lagging	-127.138	0.856	Lagging	-30.262	0.509	Lagging	-84.574
93	FLT93-3PH	0.749	Lagging	-44.269	0.314	Lagging	-151.195	0.355	Lagging	-131.790	0.829	Lagging	-33.733	0.502	Lagging	-86.069
94	FLT94-3PH	0.757	Lagging	-43.158	0.320	Lagging	-148.085	0.364	Lagging	-128.024	0.849	Lagging	-31.160	0.507	Lagging	-84.904
95	FLT95-3PH	0.771	Lagging	-41.254	0.324	Lagging	-145.783	0.366	Lagging	-127.011	0.856	Lagging	-30.237	0.510	Lagging	-84.382
100	FLT100-3PH	0.772	Lagging	-41.180	0.324	Lagging	-146.207	0.366	Lagging	-127.068	0.856	Lagging	-30.198	0.509	Lagging	-84.519
101	FLT101-3PH	0.769	Lagging	-41.567	0.323	Lagging	-146.572	0.365	Lagging	-127.518	0.853	Lagging	-30.621	0.507	Lagging	-84.908
104	FLT104-3PH	0.754	Lagging	-43.506	0.317	Lagging	-149.501	0.357	Lagging	-130.768	0.835	Lagging	-32.894	0.504	Lagging	-85.675
105	FLT105-3PH	0.730	Lagging	-46.805	0.313	Lagging	-151.485	0.352	Lagging	-133.137	0.804	Lagging	-36.926	0.497	Lagging	-87.382
106	FLT106-3PH	0.771	Lagging	-41.297	0.324	Lagging	-146.120	0.366	Lagging	-126.993	0.856	Lagging	-30.238	0.509	Lagging	-84.564
107	FLT107-3PH	0.752	Lagging	-43.790	0.315	Lagging	-150.421	0.356	Lagging	-131.210	0.834	Lagging	-33.081	0.502	Lagging	-86.079
108	FLT108-3PH	0.771	Lagging	-41.359	0.324	Lagging	-145.853	0.367	Lagging	-126.852	0.856	Lagging	-30.237	0.510	Lagging	-84.412
109	FLT109-3PH	0.724	Lagging	-47.671	0.313	Lagging	-151.831	0.351	Lagging	-133.271	0.798	Lagging	-37.777	0.497	Lagging	-87.403
110	FLT110-3PH	0.730	Lagging	-46.805	0.313	Lagging	-151.485	0.352	Lagging	-133.137	0.804	Lagging	-36.926	0.497	Lagging	-87.382
111	FLT111-3PH	0.771	Lagging	-41.317	0.324	Lagging	-145.942	0.367	Lagging	-126.795	0.856	Lagging	-30.257	0.509	Lagging	-84.451
117	FLT117-3PH	0.758	Lagging	-42.982	0.322	Lagging	-147.093	0.365	Lagging	-127.520	0.850	Lagging	-30.947	0.514	Lagging	-83.440
118	FLT118-3PH	0.777	Lagging	-40.535	0.327	Lagging	-144.499	0.371	Lagging	-125.027	0.863	Lagging	-29.264	0.513	Lagging	-83.656
119	FLT119-3PH	0.750	Lagging	-44.082	0.320	Lagging	-148.044	0.362	Lagging	-128.801	0.839	Lagging	-32.437	0.502	Lagging	-86.135
120	FLT120-3PH	0.724	Lagging	-47.595	0.312	Lagging	-152.274	0.372	Lagging	-124.907	0.874	Lagging	-27.741	0.499	Lagging	-86.811
121	FLT121-3PH	0.775	Lagging	-40.819	0.324	Lagging	-146.088	0.366	Lagging	-127.137	0.860	Lagging	-29.607	0.498	Lagging	-87.089
126	FLT126-3PH	0.778	Lagging	-40.311	0.326	Lagging	-145.199	0.367	Lagging	-126.838	0.856	Lagging	-30.186	0.509	Lagging	-84.498
127	FLT127-3PH	0.770	Lagging	-41.371	0.324	Lagging	-146.024	0.366	Lagging	-127.069	0.854	Lagging	-30.496	0.509	Lagging	-84.600

Table 5-4 (continued)
Power Factor Analysis: GEN-2015-039

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
128	FLT128-3PH	0.772	Lagging	-41.194	0.324	Lagging	-145.991	0.367	Lagging	-126.862	0.856	Lagging	-30.182	0.509	Lagging	-84.507
129	FLT129-3PH	0.776	Lagging	-40.691	0.325	Lagging	-145.271	0.367	Lagging	-126.750	0.855	Lagging	-30.267	0.509	Lagging	-84.445
130	FLT130-3PH	0.771	Lagging	-41.263	0.324	Lagging	-145.974	0.367	Lagging	-126.853	0.856	Lagging	-30.206	0.509	Lagging	-84.514
131	FLT131-3PH	0.773	Lagging	-41.079	0.325	Lagging	-145.555	0.367	Lagging	-126.832	0.856	Lagging	-30.184	0.510	Lagging	-84.257
132	FLT132-3PH	0.770	Lagging	-41.391	0.323	Lagging	-146.274	0.366	Lagging	-127.062	0.853	Lagging	-30.539	0.509	Lagging	-84.629
133	FLT133-3PH	0.775	Lagging	-40.776	0.328	Lagging	-144.248	0.368	Lagging	-126.200	0.863	Lagging	-29.249	0.511	Lagging	-84.189
140	FLT140-3PH	0.764	Lagging	-42.249	0.317	Lagging	-149.348	0.359	Lagging	-130.153	0.848	Lagging	-31.256	0.500	Lagging	-86.611
141	FLT141-3PH	0.755	Lagging	-43.462	0.323	Lagging	-146.679	0.364	Lagging	-127.832	0.841	Lagging	-32.129	0.501	Lagging	-86.304
142	FLT142-3PH	0.770	Lagging	-41.440	0.325	Lagging	-145.393	0.369	Lagging	-126.087	0.855	Lagging	-30.295	0.512	Lagging	-83.979
143	FLT143-3PH	0.773	Lagging	-40.977	0.324	Lagging	-145.912	0.367	Lagging	-126.886	0.856	Lagging	-30.216	0.511	Lagging	-84.115
144	FLT144-3PH	0.752	Lagging	-43.790	0.315	Lagging	-150.421	0.356	Lagging	-131.210	0.834	Lagging	-33.081	0.502	Lagging	-86.079
145	FLT145-3PH	0.772	Lagging	-41.184	0.326	Lagging	-145.230	0.369	Lagging	-125.889	0.857	Lagging	-30.073	0.512	Lagging	-83.946
146	FLT146-3PH	0.763	Lagging	-42.400	0.322	Lagging	-147.025	0.365	Lagging	-127.692	0.847	Lagging	-31.384	0.508	Lagging	-84.711
147	FLT147-3PH	0.746	Lagging	-44.673	0.315	Lagging	-150.445	0.354	Lagging	-132.194	0.834	Lagging	-33.014	0.502	Lagging	-86.121
148	FLT148-3PH	0.742	Lagging	-45.185	0.319	Lagging	-148.638	0.360	Lagging	-129.442	0.828	Lagging	-33.820	0.501	Lagging	-86.292
157	FLT157-3PH	0.774	Lagging	-40.934	0.324	Lagging	-146.017	0.366	Lagging	-127.056	0.855	Lagging	-30.301	0.509	Lagging	-84.660
158	FLT158-3PH	0.764	Lagging	-42.187	0.324	Lagging	-145.935	0.367	Lagging	-126.594	0.856	Lagging	-30.209	0.511	Lagging	-84.044
159	FLT159-3PH	0.773	Lagging	-40.993	0.324	Lagging	-146.104	0.366	Lagging	-127.225	0.854	Lagging	-30.476	0.510	Lagging	-84.351
168	FLT168-3PH	0.771	Lagging	-41.254	0.324	Lagging	-145.966	0.367	Lagging	-126.838	0.856	Lagging	-30.186	0.509	Lagging	-84.498
169	FLT169-3PH	0.766	Lagging	-42.006	0.323	Lagging	-146.751	0.365	Lagging	-127.607	0.846	Lagging	-31.484	0.508	Lagging	-84.765
170	FLT170-3PH	0.779	Lagging	-40.269	0.322	Lagging	-146.952	0.363	Lagging	-128.279	0.860	Lagging	-29.696	0.505	Lagging	-85.349
171	FLT171-3PH	0.770	Lagging	-41.391	0.323	Lagging	-146.274	0.366	Lagging	-127.062	0.853	Lagging	-30.539	0.509	Lagging	-84.629
172	FLT172-3PH	0.751	Lagging	-43.900	0.325	Lagging	-145.438	0.367	Lagging	-126.627	0.841	Lagging	-32.192	0.508	Lagging	-84.786
173	FLT173-3PH	0.771	Lagging	-41.266	0.324	Lagging	-145.982	0.367	Lagging	-126.848	0.856	Lagging	-30.237	0.509	Lagging	-84.509
174	FLT174-3PH	0.775	Lagging	-40.761	0.328	Lagging	-143.786	0.372	Lagging	-124.948	0.860	Lagging	-29.636	0.513	Lagging	-83.716
175	FLT175-3PH	0.771	Lagging	-41.300	0.324	Lagging	-146.096	0.366	Lagging	-126.988	0.855	Lagging	-30.283	0.509	Lagging	-84.640
176	FLT176-3PH	0.771	Lagging	-41.254	0.324	Lagging	-145.966	0.370	Lagging	-125.414	0.863	Lagging	-29.297	0.514	Lagging	-83.401
184	FLT184-3PH	0.770	Lagging	-41.454	0.324	Lagging	-146.109	0.366	Lagging	-126.951	0.854	Lagging	-30.415	0.509	Lagging	-84.612
185	FLT185-3PH	0.771	Lagging	-41.243	0.324	Lagging	-145.956	0.367	Lagging	-126.875	0.855	Lagging	-30.279	0.509	Lagging	-84.509
186	FLT186-3PH	0.770	Lagging	-41.384	0.324	Lagging	-146.061	0.367	Lagging	-126.916	0.855	Lagging	-30.332	0.509	Lagging	-84.571
187	FLT187-3PH	0.770	Lagging	-41.437	0.324	Lagging	-146.101	0.366	Lagging	-126.947	0.854	Lagging	-30.401	0.509	Lagging	-84.615
188	FLT188-3PH	0.744	Lagging	-44.892	0.321	Lagging	-147.643	0.364	Lagging	-127.882	0.834	Lagging	-33.073	0.499	Lagging	-86.922
189	FLT189-3PH	0.752	Lagging	-43.801	0.319	Lagging	-148.547	0.363	Lagging	-128.283	0.837	Lagging	-32.629	0.504	Lagging	-85.666
190	FLT190-3PH	0.771	Lagging	-41.338	0.324	Lagging	-146.018	0.367	Lagging	-126.875	0.855	Lagging	-30.275	0.509	Lagging	-84.531

Study Generator GEN-2015-039

The Power Factor Analysis shows that GEN-2015-039 has a power factor range of 0.860 leading to 0.602 lagging for the 2016 Winter Peak conditions, a power factor range of 0.981 leading to 0.281 lagging for the 2017 Summer Peak conditions, a power factor range of 0.932 leading to 0.312 lagging for the 2020 Summer Peak conditions, a power factor range of 0.782 leading to 0.653 lagging for the 2020 Winter Peak conditions, and a power factor range of 0.981 leading to 0.435 lagging for the 2025 Summer Peak conditions.

Table 5-5
Power Factor Analysis: GEN-2015-040

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.822	Lagging	-34.652	0.675	Lagging	-54.727	0.917	Lagging	-21.766	0.658	Lagging	-57.146	0.990	Lagging	-7.119
1	FLT01-3PH	0.823	Lagging	-34.530	0.675	Lagging	-54.609	0.917	Lagging	-21.712	0.659	Lagging	-57.092	0.990	Lagging	-7.123
2	FLT02-3PH	0.822	Lagging	-34.633	0.672	Lagging	-55.134	0.913	Lagging	-22.352	0.657	Lagging	-57.362	0.988	Lagging	-7.666
3	FLT03-3PH	0.822	Lagging	-34.657	0.674	Lagging	-54.744	0.917	Lagging	-21.796	0.658	Lagging	-57.153	0.990	Lagging	-7.168
4	FLT04-3PH	0.822	Lagging	-34.672	0.675	Lagging	-54.724	0.916	Lagging	-21.850	0.658	Lagging	-57.275	0.990	Lagging	-7.231
5	FLT05-3PH	0.817	Lagging	-35.257	0.669	Lagging	-55.499	0.912	Lagging	-22.458	0.653	Lagging	-58.040	0.989	Lagging	-7.588
6	FLT06-3PH	0.822	Lagging	-34.654	0.674	Lagging	-54.752	0.917	Lagging	-21.793	0.658	Lagging	-57.158	0.990	Lagging	-7.134
7	FLT07-3PH	0.822	Lagging	-34.666	0.674	Lagging	-54.740	0.917	Lagging	-21.775	0.658	Lagging	-57.157	0.990	Lagging	-7.123
8	FLT08-3PH	0.822	Lagging	-34.665	0.674	Lagging	-54.738	0.917	Lagging	-21.772	0.658	Lagging	-57.156	0.990	Lagging	-7.114
9	FLT09-3PH	0.822	Lagging	-34.674	0.674	Lagging	-54.812	0.916	Lagging	-21.858	0.658	Lagging	-57.247	0.990	Lagging	-7.218
10	FLT10-3PH	0.822	Lagging	-34.651	0.674	Lagging	-54.728	0.917	Lagging	-21.768	0.658	Lagging	-57.150	0.990	Lagging	-7.121
11	FLT11-3PH	0.822	Lagging	-34.683	0.675	Lagging	-54.670	0.916	Lagging	-21.898	0.657	Lagging	-57.300	0.990	Lagging	-7.300
20	FLT20-3PH	0.802	Lagging	-37.209	0.674	Lagging	-54.831	0.916	Lagging	-21.896	0.681	Lagging	-53.828	0.990	Lagging	-7.152
21	FLT21-3PH	0.771	Lagging	-41.321	0.665	Lagging	-56.167	0.909	Lagging	-22.973	0.616	Lagging	-63.971	0.984	Lagging	-9.190
22	FLT22-3PH	0.827	Lagging	-33.949	0.676	Lagging	-54.575	0.917	Lagging	-21.777	0.660	Lagging	-56.948	0.990	Lagging	-6.975
23	FLT23-3PH	0.818	Lagging	-35.151	0.683	Lagging	-53.529	0.922	Lagging	-21.049	0.654	Lagging	-57.803	0.992	Lagging	-6.372
24	FLT24-3PH	0.822	Lagging	-34.652	0.675	Lagging	-54.727	0.917	Lagging	-21.766	0.658	Lagging	-57.146	0.990	Lagging	-7.119
26	FLT26-3PH	0.732	Lagging	-46.512	0.657	Lagging	-57.387	0.895	Lagging	-24.912	0.583	Lagging	-69.594	0.977	Lagging	-10.922
35	FLT35-3PH	0.783	Lagging	-39.784	0.661	Lagging	-56.779	0.903	Lagging	-23.804	0.622	Lagging	-63.009	0.985	Lagging	-8.760
36	FLT36-3PH	0.792	Lagging	-38.585	0.664	Lagging	-56.361	0.906	Lagging	-23.393	0.630	Lagging	-61.693	0.986	Lagging	-8.412
37	FLT37-3PH	0.777	Lagging	-40.554	0.665	Lagging	-56.229	0.908	Lagging	-23.083	0.621	Lagging	-63.075	0.987	Lagging	-8.096
38	FLT38-3PH	0.821	Lagging	-34.708	0.675	Lagging	-54.693	0.917	Lagging	-21.740	0.658	Lagging	-57.208	0.990	Lagging	-7.169
39	FLT39-3PH	0.820	Lagging	-34.926	0.666	Lagging	-55.939	0.910	Lagging	-22.821	0.655	Lagging	-57.671	0.988	Lagging	-7.696
40	FLT40-3PH	0.790	Lagging	-38.818	0.661	Lagging	-56.704	0.904	Lagging	-23.627	0.630	Lagging	-61.656	0.986	Lagging	-8.388
41	FLT41-3PH	0.820	Lagging	-34.949	0.666	Lagging	-56.023	0.909	Lagging	-22.895	0.655	Lagging	-57.715	0.988	Lagging	-7.761
42	FLT42-3PH	0.689	Lagging	-52.594	0.614	Lagging	-64.314	0.841	Lagging	-32.211	0.560	Lagging	-74.000	0.957	Lagging	-15.092
43	FLT43-3PH	0.821	Lagging	-34.816	0.674	Lagging	-54.861	0.913	Lagging	-22.275	0.659	Lagging	-57.137	0.989	Lagging	-7.338
53	FLT53-3PH	0.743	Lagging	-45.086	0.733	Lagging	-46.384	0.925	Lagging	-20.509	0.622	Lagging	-62.938	0.982	Lagging	-9.545
54	FLT54-3PH	0.892	Lagging	-25.374	0.624	Lagging	-62.630	0.881	Lagging	-26.785	0.630	Lagging	-61.646	0.930	Lagging	-19.693
55	FLT55-3PH	0.679	Lagging	-54.100	0.712	Lagging	-49.346	0.907	Lagging	-23.263	0.568	Lagging	-72.503	0.971	Lagging	-12.356
56	FLT56-3PH	0.997	Leading	3.995	0.940	Lagging	-18.079	1.000	Leading	1.360	0.996	Leading	4.620	0.940	Leading	18.211
57	FLT57-3PH	0.870	Lagging	-28.317	0.721	Lagging	-48.065	0.938	Lagging	-18.468	0.741	Lagging	-45.279	1.000	Lagging	-1.216
58	FLT58-3PH	0.671	Lagging	-55.300	0.715	Lagging	-48.952	0.906	Lagging	-23.298	0.562	Lagging	-73.649	0.969	Lagging	-12.656
59	FLT59-3PH	0.800	Lagging	-37.533	0.613	Lagging	-64.493	0.858	Lagging	-29.961	0.611	Lagging	-64.794	0.973	Lagging	-11.794
60	FLT60-3PH	0.813	Lagging	-35.861	0.679	Lagging	-54.131	0.918	Lagging	-21.632	0.657	Lagging	-57.337	0.991	Lagging	-6.728
61	FLT61-3PH	0.828	Lagging	-33.875	0.670	Lagging	-55.407	0.913	Lagging	-22.404	0.661	Lagging	-56.713	0.989	Lagging	-7.328
62	FLT62-3PH	0.817	Lagging	-35.284	0.654	Lagging	-57.904	0.896	Lagging	-24.778	0.650	Lagging	-58.453	0.983	Lagging	-9.200
63	FLT63-3PH	0.827	Lagging	-33.948	0.670	Lagging	-55.358	0.913	Lagging	-22.359	0.661	Lagging	-56.759	0.989	Lagging	-7.317
64	FLT64-3PH	0.822	Lagging	-34.652	0.668	Lagging	-55.712	0.910	Lagging	-22.714	0.656	Lagging	-57.603	0.988	Lagging	-7.794
65	FLT65-3PH	0.921	Lagging	-21.210	0.670	Lagging	-55.438	0.930	Lagging	-19.732	0.686	Lagging	-53.018	0.999	Lagging	-2.502
66	FLT66-3PH	0.667	Lagging	-55.832	0.719	Lagging	-48.362	0.910	Lagging	-22.724	0.559	Lagging	-74.101	0.972	Lagging	-12.115
67	FLT67-3PH	0.803	Lagging	-37.068	0.635	Lagging	-60.810	0.902	Lagging	-23.874	0.659	Lagging	-57.010	0.977	Lagging	-10.976
73	FLT73-3PH	0.822	Lagging	-34.652	0.675	Lagging	-54.727	0.917	Lagging	-21.766	0.658	Lagging	-57.146	0.990	Lagging	-7.119
74	FLT74-3PH	0.827	Lagging	-33.949	0.676	Lagging	-54.575	0.917	Lagging	-21.777	0.660	Lagging	-56.948	0.990	Lagging	-6.975
75	FLT75-3PH	0.837	Lagging	-32.715	0.676	Lagging	-54.509	0.919	Lagging	-21.486	0.672	Lagging	-55.169	0.992	Lagging	-6.441
76	FLT76-3PH	0.823	Lagging	-34.481	0.660	Lagging	-56.901	0.890	Lagging	-25.593	0.637	Lagging	-60.528	0.987	Lagging	-8.049
84	FLT84-3PH	0.835	Lagging	-32.906	0.685	Lagging	-53.211	0.929	Lagging	-19.994	0.664	Lagging	-56.310	0.995	Lagging	-4.834
85	FLT85-3PH	0.802	Lagging	-37.226	0.659	Lagging	-57.140	0.901	Lagging	-24.086	0.639	Lagging	-60.151	0.982	Lagging	-9.724
86	FLT86-3PH	0.818	Lagging	-35.115	0.664	Lagging	-56.292	0.906	Lagging	-23.362	0.643	Lagging	-59.546	0.981	Lagging	-9.818
87	FLT87-3PH	0.797	Lagging	-37.912	0.658	Lagging	-57.210	0.901	Lagging	-24.033	0.633	Lagging	-61.160	0.986	Lagging	-8.486
88	FLT88-3PH	0.817	Lagging	-35.308	0.673	Lagging	-54.899	0.916	Lagging	-21.929	0.655	Lagging	-57.712	0.990	Lagging	-7.246
89	FLT89-3PH	0.806	Lagging	-36.781	0.671	Lagging	-55.227	0.912	Lagging	-22.437	0.644	Lagging	-59.338	0.987	Lagging	-8.062
90	FLT90-3PH	0.818	Lagging	-35.214	0.674	Lagging	-54.860	0.916	Lagging	-21.891	0.655	Lagging	-57.622	0.990	Lagging	-7.203
91	FLT91-3PH	0.820	Lagging	-34.837	0.672	Lagging	-55.140	0.915	Lagging	-22.090	0.658	Lagging	-57.265	0.989	Lagging	-7.546
92	FLT92-3PH	0.810	Lagging	-36.194	0.670	Lagging	-55.364	0.912	Lagging	-22.444	0.652	Lagging	-58.110	0.988	Lagging	-7.901
93	FLT93-3PH	0.798	Lagging	-37.820	0.652	Lagging	-58.158	0.900	Lagging	-24.204	0.631	Lagging	-61.513	0.970	Lagging	-12.623
94	FLT94-3PH	0.782	Lagging	-39.854	0.683	Lagging	-53.437	0.914	Lagging	-22.130	0.657	Lagging	-57.327	0.983	Lagging	-9.355
95	FLT95-3PH	0.822	Lagging	-34.652	0.640	Lagging	-59.960	0.896	Lagging	-24.786	0.631	Lagging	-61.502	0.983	Lagging	-9.243
100	FLT100-3PH	0.802	Lagging	-37.177	0.667	Lagging	-55.851	0.908	Lagging	-23.001	0.649	Lagging	-58.651	0.985	Lagging	-8.609
101	FLT101-3PH	0.826	Lagging	-34.168	0.677	Lagging	-54.366	0.920	Lagging	-21.309	0.661	Lagging	-56.801	0.991	Lagging	-6.720
104	FLT104-3PH	0.819	Lagging	-34.967	0.674	Lagging	-54.742	0.917	Lagging	-21.780	0.657	Lagging	-57.391	0.990	Lagging	-7.108
105	FLT105-3PH	0.812	Lagging	-35.905	0.674	Lagging	-54.829	0.916	Lagging	-21.866	0.650	Lagging	-58.396	0.990	Lagging	-7.266
106	FLT106-3PH	0.822	Lagging	-34.664	0.674	Lagging	-54.735	0.917	Lagging	-21.775	0.658	Lagging	-57.160	0.990	Lagging	-7.130
107	FLT107-3PH	0.819	Lagging	-35.016	0.674	Lagging	-54.749	0.917	Lagging	-21.786	0.657	Lagging	-57.422	0.990	Lagging	-7.104
108	FLT108-3PH	0.821	Lagging	-34.766	0.674	Lagging	-54.757	0.917	Lagging	-21.780	0.658	Lagging	-57.207	0.990	Lagging	-7.156
109	FLT109-3PH	0.812	Lagging	-35.998	0.674	Lagging	-54.835	0.916	Lagging	-21.867	0.650	Lagging	-58.497	0.990	Lagging	-7.267
110	FLT110-3PH	0.812	Lagging	-35.905	0.674	Lagging	-54.829	0.916	Lagging	-21.866	0.650	Lagging	-58.396	0.990	Lagging	-7.266
111	FLT111-3PH	0.821	Lagging	-34.727	0.674	Lagging	-54.744	0.917	Lagging	-21.780	0.658	Lagging	-57.230	0.990	Lagging	-7.147
117	FLT117-3PH	0.820	Lagging	-34.866	0.674	Lagging	-54.758	0.917	Lagging	-21.801	0.657	Lagging	-57.299	0.990	Lagging	-7.134
118	FLT118-3PH	0.820	Lagging	-34.898	0.674	Lagging	-54.788	0.917	Lagging	-21.810	0.657	Lagging	-57.410	0.990	Lagging	-7.232
119	FLT119-3PH	0.821	Lagging	-34.724	0.674	Lagging	-54.752	0.917	Lagging	-21.794	0.658	Lagging	-57.251	0.990	Lagging	-7.141
120	FLT120-3PH	0.817	Lagging	-35.290	0.674	Lagging	-54.855	0.916	Lagging	-21.892	0.653	Lagging	-58.010	0.990	Lagging	-7.143
121	FLT121-3PH	0.822	Lagging	-34.644	0.675	Lagging	-54.723	0.917	Lagging	-21.764	0.659	Lagging	-57.116	0.990	Lagging	-7.128
126	FLT126-3PH	0.833	Lagging	-33.191	0.683	Lagging	-53.458	0.917	Lagging	-21.766	0.658	Lagging	-57.146	0.990	Lagging	-7.119
127	FLT127-3PH	0.816	Lagging	-35.441	0.673	Lagging	-54.960	0.911	Lagging	-22.666	0.647	Lagging	-58.949	0.988	Lagging	-7.851

Table 5-5 (continued)
Power Factor Analysis: GEN-2015-040

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
128	FLT128-3PH	0.826	Lagging	-34.072	0.661	Lagging	-56.718	0.917	Lagging	-21.780	0.718	Lagging	-48.488	0.974	Lagging	-11.547
129	FLT129-3PH	0.792	Lagging	-38.510	0.655	Lagging	-57.674	0.913	Lagging	-22.395	0.663	Lagging	-56.436	0.988	Lagging	-7.768
130	FLT130-3PH	0.820	Lagging	-34.921	0.674	Lagging	-54.781	0.916	Lagging	-21.839	0.657	Lagging	-57.330	0.989	Lagging	-7.333
131	FLT131-3PH	0.806	Lagging	-36.709	0.672	Lagging	-55.144	0.917	Lagging	-21.815	0.658	Lagging	-57.245	0.981	Lagging	-9.820
132	FLT132-3PH	0.803	Lagging	-37.068	0.635	Lagging	-60.810	0.902	Lagging	-23.874	0.659	Lagging	-57.010	0.977	Lagging	-10.976
133	FLT133-3PH	0.811	Lagging	-36.099	0.651	Lagging	-58.371	0.902	Lagging	-23.936	0.647	Lagging	-58.913	0.984	Lagging	-9.136
140	FLT140-3PH	0.820	Lagging	-34.918	0.674	Lagging	-54.872	0.916	Lagging	-21.937	0.656	Lagging	-57.473	0.989	Lagging	-7.389
141	FLT141-3PH	0.816	Lagging	-35.402	0.674	Lagging	-54.840	0.916	Lagging	-21.887	0.654	Lagging	-57.764	0.990	Lagging	-7.167
142	FLT142-3PH	0.820	Lagging	-34.928	0.673	Lagging	-54.966	0.915	Lagging	-22.035	0.656	Lagging	-57.489	0.989	Lagging	-7.477
143	FLT143-3PH	0.821	Lagging	-34.807	0.674	Lagging	-54.776	0.916	Lagging	-21.825	0.658	Lagging	-57.243	0.990	Lagging	-7.191
144	FLT144-3PH	0.819	Lagging	-35.016	0.674	Lagging	-54.749	0.917	Lagging	-21.786	0.657	Lagging	-57.422	0.990	Lagging	-7.104
145	FLT145-3PH	0.822	Lagging	-34.614	0.674	Lagging	-54.746	0.917	Lagging	-21.796	0.659	Lagging	-57.113	0.990	Lagging	-7.232
146	FLT146-3PH	0.819	Lagging	-35.074	0.672	Lagging	-55.036	0.915	Lagging	-22.004	0.656	Lagging	-57.572	0.989	Lagging	-7.490
147	FLT147-3PH	0.811	Lagging	-36.040	0.675	Lagging	-54.710	0.918	Lagging	-21.655	0.651	Lagging	-58.230	0.991	Lagging	-6.673
148	FLT148-3PH	0.824	Lagging	-34.369	0.672	Lagging	-55.125	0.915	Lagging	-22.094	0.661	Lagging	-56.816	0.990	Lagging	-6.991
157	FLT157-3PH	0.782	Lagging	-39.828	0.668	Lagging	-55.665	0.910	Lagging	-22.828	0.648	Lagging	-58.768	0.986	Lagging	-8.491
158	FLT158-3PH	0.823	Lagging	-34.481	0.660	Lagging	-56.901	0.890	Lagging	-25.593	0.637	Lagging	-60.528	0.987	Lagging	-8.049
159	FLT159-3PH	0.817	Lagging	-35.243	0.675	Lagging	-54.700	0.913	Lagging	-22.356	0.651	Lagging	-58.273	0.993	Lagging	-6.082
168	FLT168-3PH	0.822	Lagging	-34.652	0.675	Lagging	-54.727	0.917	Lagging	-21.766	0.658	Lagging	-57.146	0.990	Lagging	-7.119
169	FLT169-3PH	0.673	Lagging	-55.013	0.591	Lagging	-68.165	0.795	Lagging	-38.115	0.510	Lagging	-84.329	0.916	Lagging	-21.943
170	FLT170-3PH	0.372	Lagging	-124.610	0.561	Lagging	-73.876	0.641	Lagging	-59.828	0.334	Lagging	-141.032	0.653	Lagging	-57.914
171	FLT171-3PH	0.803	Lagging	-37.068	0.635	Lagging	-60.810	0.902	Lagging	-23.874	0.659	Lagging	-57.010	0.977	Lagging	-10.976
172	FLT172-3PH	0.800	Lagging	-37.533	0.613	Lagging	-64.493	0.858	Lagging	-29.961	0.611	Lagging	-64.794	0.973	Lagging	-11.794
173	FLT173-3PH	0.667	Lagging	-55.832	0.719	Lagging	-48.362	0.910	Lagging	-22.724	0.559	Lagging	-74.101	0.972	Lagging	-12.115
174	FLT174-3PH	0.921	Lagging	-21.210	0.670	Lagging	-55.438	0.930	Lagging	-19.732	0.686	Lagging	-53.018	0.999	Lagging	-2.502
175	FLT175-3PH	0.813	Lagging	-35.861	0.679	Lagging	-54.131	0.918	Lagging	-21.632	0.657	Lagging	-57.337	0.991	Lagging	-6.728
176	FLT176-3PH	0.822	Lagging	-34.652	0.675	Lagging	-54.727	0.900	Lagging	-24.163	0.650	Lagging	-58.477	0.987	Lagging	-8.000
184	FLT184-3PH	0.822	Lagging	-34.675	0.675	Lagging	-54.656	0.917	Lagging	-21.703	0.658	Lagging	-57.204	0.990	Lagging	-7.085
185	FLT185-3PH	0.822	Lagging	-34.653	0.674	Lagging	-54.735	0.917	Lagging	-21.817	0.657	Lagging	-57.300	0.990	Lagging	-7.127
186	FLT186-3PH	0.822	Lagging	-34.662	0.675	Lagging	-54.669	0.917	Lagging	-21.718	0.658	Lagging	-57.169	0.990	Lagging	-7.091
187	FLT187-3PH	0.822	Lagging	-34.702	0.675	Lagging	-54.701	0.917	Lagging	-21.740	0.658	Lagging	-57.249	0.990	Lagging	-7.116
188	FLT188-3PH	0.830	Lagging	-33.586	0.685	Lagging	-53.192	0.923	Lagging	-20.824	0.673	Lagging	-54.977	0.993	Lagging	-6.010
189	FLT189-3PH	0.829	Lagging	-33.758	0.683	Lagging	-53.458	0.922	Lagging	-20.948	0.668	Lagging	-55.755	0.992	Lagging	-6.554
190	FLT190-3PH	0.822	Lagging	-34.670	0.675	Lagging	-54.700	0.917	Lagging	-21.742	0.658	Lagging	-57.174	0.990	Lagging	-7.106

Study Generator GEN-2015-040

The Power Factor Analysis shows that GEN-2015-040 has a power factor range of 0.997 leading to 0.372 lagging for the 2016 Winter Peak conditions, a power factor range of 0.940 leading to 0.560 lagging for the 2017 Summer Peak conditions, a power factor range of 0.641 lagging to 1.0 unity for the 2020 Summer Peak conditions, a power factor range of 0.996 leading to 0.334 lagging for the 2020 Winter Peak conditions, and a power factor range of 0.940 leading to 0.653 lagging for the 2025 Summer Peak conditions.

Table 5-6
Power Factor Analysis: GEN-2015-041

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	1.000	Lagging	-4.861	0.997	Leading	16.673	1.000	Leading	3.970	1.000	Leading	3.991	0.995	Leading	19.940
1	FLT01-3PH	1.000	Lagging	-4.367	0.997	Leading	16.880	1.000	Leading	4.039	1.000	Leading	4.150	0.995	Leading	19.965
2	FLT02-3PH	1.000	Lagging	-4.849	0.997	Leading	16.338	1.000	Leading	3.628	1.000	Leading	3.976	0.996	Leading	19.643
3	FLT03-3PH	1.000	Lagging	-4.875	0.997	Leading	16.570	1.000	Leading	3.887	1.000	Leading	3.979	0.995	Leading	19.807
4	FLT04-3PH	1.000	Lagging	-4.944	0.997	Leading	16.493	1.000	Leading	3.916	1.000	Leading	3.852	0.995	Leading	19.899
5	FLT05-3PH	1.000	Lagging	-6.436	0.998	Leading	14.686	1.000	Leading	2.213	1.000	Leading	2.320	0.996	Leading	18.339
6	FLT06-3PH	1.000	Lagging	-4.878	0.997	Leading	16.627	1.000	Leading	3.930	1.000	Leading	3.965	0.995	Leading	19.913
7	FLT07-3PH	1.000	Lagging	-4.887	0.997	Leading	16.630	1.000	Leading	3.948	1.000	Leading	3.970	0.995	Leading	19.916
8	FLT08-3PH	1.000	Lagging	-4.885	0.997	Leading	16.630	1.000	Leading	3.941	1.000	Leading	3.973	0.995	Leading	19.917
9	FLT09-3PH	1.000	Lagging	-4.986	0.997	Leading	16.332	1.000	Leading	3.717	1.000	Leading	3.715	0.996	Leading	19.590
10	FLT10-3PH	1.000	Lagging	-4.854	0.997	Leading	16.654	1.000	Leading	3.964	1.000	Leading	3.995	0.995	Leading	19.932
11	FLT11-3PH	1.000	Lagging	-4.971	0.997	Leading	16.509	1.000	Leading	3.919	1.000	Leading	3.835	0.995	Leading	19.862
20	FLT20-3PH	0.982	Lagging	-40.164	0.998	Leading	13.878	1.000	Leading	0.601	0.981	Lagging	-40.654	0.996	Leading	18.731
21	FLT21-3PH	0.926	Lagging	-84.610	0.994	Lagging	-22.288	0.990	Lagging	-29.680	0.960	Lagging	-60.982	0.997	Lagging	-15.011
22	FLT22-3PH	0.993	Lagging	-23.931	0.999	Leading	7.987	1.000	Lagging	-5.285	0.999	Lagging	-11.180	0.997	Leading	15.873
23	FLT23-3PH	0.999	Lagging	-9.440	0.985	Leading	36.449	0.997	Leading	14.954	1.000	Leading	0.928	0.988	Leading	33.178
24	FLT24-3PH	1.000	Lagging	-4.861	0.997	Leading	16.673	1.000	Leading	3.970	1.000	Leading	3.991	0.995	Leading	19.940
26	FLT26-3PH	0.861	Lagging	-122.897	0.970	Lagging	-52.091	0.963	Lagging	-57.811	0.903	Lagging	-98.717	0.980	Lagging	-42.530
35	FLT35-3PH	0.993	Lagging	-24.501	1.000	Leading	3.974	0.999	Lagging	-9.182	0.997	Lagging	-15.127	0.999	Leading	10.491
36	FLT36-3PH	0.995	Lagging	-20.242	0.999	Leading	6.607	1.000	Lagging	-6.462	0.998	Lagging	-11.863	0.998	Leading	12.473
37	FLT37-3PH	0.991	Lagging	-27.454	0.999	Leading	9.202	1.000	Lagging	-3.073	0.997	Lagging	-17.185	0.998	Leading	14.349
38	FLT38-3PH	1.000	Lagging	-4.972	0.997	Leading	16.550	1.000	Leading	3.852	1.000	Leading	3.913	0.996	Leading	19.635
39	FLT39-3PH	1.000	Lagging	-6.466	0.997	Leading	15.085	1.000	Leading	2.526	1.000	Leading	2.489	0.996	Leading	18.743
40	FLT40-3PH	0.997	Lagging	-17.190	0.999	Leading	9.657	1.000	Lagging	-3.336	0.999	Lagging	-7.931	0.997	Leading	15.032
41	FLT41-3PH	1.000	Lagging	-6.577	0.997	Leading	14.969	1.000	Leading	2.420	1.000	Leading	2.383	0.996	Leading	18.629
42	FLT42-3PH	0.999	Lagging	-8.456	0.997	Leading	15.660	1.000	Leading	2.771	1.000	Leading	0.156	0.996	Leading	18.332
43	FLT43-3PH	1.000	Lagging	-5.038	0.997	Leading	16.138	1.000	Leading	3.293	1.000	Leading	3.526	0.996	Leading	19.509
53	FLT53-3PH	1.000	Lagging	-5.452	0.997	Leading	16.017	1.000	Leading	3.608	1.000	Leading	3.283	0.996	Leading	19.567
54	FLT54-3PH	1.000	Lagging	-5.207	0.997	Leading	15.662	1.000	Leading	3.200	1.000	Leading	3.745	0.996	Leading	19.214
55	FLT55-3PH	1.000	Lagging	-5.222	0.997	Leading	16.301	1.000	Leading	3.861	1.000	Leading	3.527	0.995	Leading	19.862
56	FLT56-3PH	1.000	Lagging	-5.818	0.997	Leading	15.565	1.000	Leading	2.701	1.000	Leading	2.209	0.996	Leading	18.569
57	FLT57-3PH	1.000	Lagging	-5.281	0.997	Leading	16.186	1.000	Leading	3.643	1.000	Leading	3.488	0.996	Leading	19.525
58	FLT58-3PH	1.000	Lagging	-5.069	0.997	Leading	16.442	1.000	Leading	4.017	1.000	Leading	3.680	0.995	Leading	20.037
59	FLT59-3PH	0.999	Lagging	-6.669	0.998	Leading	14.179	1.000	Leading	2.325	1.000	Leading	0.948	0.996	Leading	19.453
60	FLT60-3PH	1.000	Lagging	-5.171	0.997	Leading	16.243	1.000	Leading	3.554	1.000	Leading	3.720	0.996	Leading	19.495
61	FLT61-3PH	1.000	Lagging	-5.367	0.997	Leading	16.504	1.000	Leading	3.774	1.000	Leading	3.691	0.996	Leading	19.739
62	FLT62-3PH	1.000	Lagging	-5.113	0.997	Leading	15.618	1.000	Leading	2.998	1.000	Leading	3.734	0.996	Leading	19.174
63	FLT63-3PH	1.000	Lagging	-5.326	0.997	Leading	16.517	1.000	Leading	3.788	1.000	Leading	3.713	0.996	Leading	19.754
64	FLT64-3PH	1.000	Lagging	-4.861	0.997	Leading	16.410	1.000	Leading	3.723	1.000	Leading	3.697	0.996	Leading	19.718
65	FLT65-3PH	0.998	Lagging	-13.323	1.000	Leading	5.327	1.000	Lagging	-5.790	1.000	Lagging	-6.069	0.998	Leading	14.525
66	FLT66-3PH	1.000	Lagging	-5.034	0.997	Leading	16.471	1.000	Leading	4.041	1.000	Leading	3.720	0.995	Leading	20.063
67	FLT67-3PH	1.000	Lagging	-5.276	0.997	Leading	15.683	1.000	Leading	3.466	1.000	Leading	4.055	0.996	Leading	19.278
73	FLT73-3PH	1.000	Lagging	-4.861	0.997	Leading	16.673	1.000	Leading	3.970	1.000	Leading	3.991	0.995	Leading	19.940
74	FLT74-3PH	0.993	Lagging	-23.931	0.999	Leading	7.987	1.000	Lagging	-5.285	0.999	Lagging	-11.180	0.997	Leading	15.873
75	FLT75-3PH	1.000	Leading	2.897	0.993	Leading	24.775	0.996	Leading	17.678	0.999	Leading	11.277	0.988	Leading	33.119
76	FLT76-3PH	0.999	Lagging	-8.168	0.997	Leading	16.140	1.000	Leading	3.403	0.999	Leading	7.121	0.991	Leading	27.547
84	FLT84-3PH	1.000	Lagging	-6.094	0.997	Leading	15.532	1.000	Leading	3.084	1.000	Leading	2.643	0.996	Leading	18.220
85	FLT85-3PH	1.000	Lagging	-5.566	0.998	Leading	14.050	1.000	Leading	1.822	1.000	Leading	2.589	0.996	Leading	19.669
86	FLT86-3PH	1.000	Lagging	-5.425	0.997	Leading	16.173	1.000	Leading	3.600	1.000	Leading	3.981	0.996	Leading	18.279
87	FLT87-3PH	1.000	Lagging	-5.121	0.997	Leading	15.093	1.000	Leading	2.674	1.000	Leading	3.486	0.996	Leading	19.332
88	FLT88-3PH	1.000	Lagging	-4.921	0.997	Leading	16.598	1.000	Leading	3.939	1.000	Leading	3.922	0.995	Leading	19.903
89	FLT89-3PH	1.000	Lagging	-5.072	0.997	Leading	16.208	1.000	Leading	3.643	1.000	Leading	3.786	0.995	Leading	19.851
90	FLT90-3PH	1.000	Lagging	-4.901	0.997	Leading	16.608	1.000	Leading	3.948	1.000	Leading	3.942	0.995	Leading	19.916
91	FLT91-3PH	1.000	Lagging	-4.901	0.997	Leading	16.553	1.000	Leading	3.889	1.000	Leading	3.993	0.995	Leading	19.820
92	FLT92-3PH	1.000	Lagging	-4.413	0.997	Leading	15.963	1.000	Leading	3.386	1.000	Leading	3.994	0.995	Leading	20.114
93	FLT93-3PH	0.999	Lagging	-10.160	0.999	Leading	10.717	1.000	Lagging	-0.741	1.000	Lagging	-0.822	0.996	Leading	18.752
94	FLT94-3PH	0.999	Lagging	-8.572	0.998	Leading	14.339	1.000	Leading	2.757	1.000	Leading	1.489	0.996	Leading	17.655
95	FLT95-3PH	1.000	Lagging	-4.861	0.997	Leading	15.971	1.000	Leading	3.307	1.000	Leading	4.882	0.994	Leading	22.278
100	FLT100-3PH	1.000	Lagging	-4.056	0.997	Leading	16.023	1.000	Leading	3.436	1.000	Leading	4.262	0.995	Leading	20.434
101	FLT101-3PH	1.000	Lagging	-5.651	0.997	Leading	15.531	1.000	Leading	2.946	1.000	Leading	3.177	0.996	Leading	18.792
104	FLT104-3PH	0.999	Lagging	-7.360	0.997	Leading	15.465	1.000	Leading	2.929	1.000	Leading	1.972	0.996	Leading	19.750
105	FLT105-3PH	0.998	Lagging	-11.454	0.998	Leading	14.531	1.000	Leading	1.851	1.000	Lagging	-1.925	0.996	Leading	17.994
106	FLT106-3PH	1.000	Lagging	-4.896	0.997	Leading	16.596	1.000	Leading	3.895	1.000	Leading	3.946	0.995	Leading	19.835
107	FLT107-3PH	0.999	Lagging	-7.599	0.997	Leading	15.224	1.000	Leading	2.814	1.000	Leading	1.843	0.996	Leading	19.707
108	FLT108-3PH	1.000	Lagging	-5.347	0.997	Leading	16.238	1.000	Leading	3.762	1.000	Leading	3.777	0.996	Leading	19.561
109	FLT109-3PH	0.998	Lagging	-12.006	0.998	Leading	14.414	1.000	Leading	1.774	1.000	Lagging	-2.445	0.996	Leading	17.945
110	FLT110-3PH	0.998	Lagging	-11.454	0.998	Leading	14.531	1.000	Leading	1.851	1.000	Lagging	-1.925	0.996	Leading	17.994
111	FLT111-3PH	1.000	Lagging	-5.171	0.997	Leading	16.456	1.000	Leading	3.771	1.000	Leading	3.701	0.996	Leading	19.666
117	FLT117-3PH	1.000	Lagging	-5.920	0.997	Leading	16.424	1.000	Leading	3.664	1.000	Leading	2.958	0.995	Leading	19.810
118	FLT118-3PH	1.000	Lagging	-5.799	0.997	Leading	16.027	1.000	Leading	3.505	1.000	Leading	3.170	0.996	Leading	18.948
119	FLT119-3PH	1.000	Lagging	-5.253	0.997	Leading	16.435	1.000	Leading	3.679	1.000	Leading	3.663	0.996	Leading	19.694
120	FLT120-3PH	0.999	Lagging	-7.378	0.997	Leading	16.203	1.000	Leading	3.321	1.000	Leading	0.979	0.996	Leading	19.792
121	FLT121-3PH	1.000	Lagging	-4.868	0.997	Leading	16.693	1.000	Leading	3.988	1.000	Leading	4.111	0.995	Leading	19.853
126	FLT126-3PH	1.000	Lagging	-1.634	0.996	Leading	18.665	1.000	Leading	3.970	1.000	Leading	3.991	0.995	Leading	19.940
127	FLT127-3PH	1.000	Lagging	-5.247	0.997	Leading	16.483	1.000	Leading	3.461	1.000	Leading	3.221	0.996	Leading	19.499

Table 5-6 (continued)
Power Factor Analysis: GEN-2015-041

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
128	FLT128-3PH	1.000	Lagging	-5.504	0.997	Leading	16.211	1.000	Leading	3.825	1.000	Leading	3.954	0.996	Leading	19.328
129	FLT129-3PH	1.000	Lagging	-6.056	0.997	Leading	16.118	1.000	Leading	3.828	1.000	Leading	3.715	0.996	Leading	19.779
130	FLT130-3PH	1.000	Lagging	-4.887	0.997	Leading	16.624	1.000	Leading	3.916	1.000	Leading	3.952	0.995	Leading	19.863
131	FLT131-3PH	1.000	Lagging	-4.336	0.997	Leading	17.140	1.000	Leading	3.972	1.000	Leading	3.997	0.995	Leading	20.420
132	FLT132-3PH	1.000	Lagging	-5.276	0.997	Leading	15.683	1.000	Leading	3.466	1.000	Leading	4.055	0.996	Leading	19.278
133	FLT133-3PH	1.000	Lagging	-4.190	0.997	Leading	17.353	1.000	Leading	4.135	1.000	Leading	4.329	0.995	Leading	20.024
140	FLT140-3PH	0.999	Lagging	-7.541	0.997	Leading	16.127	1.000	Leading	3.633	1.000	Leading	1.097	0.996	Leading	17.619
141	FLT141-3PH	1.000	Lagging	-5.603	0.997	Leading	17.189	1.000	Leading	4.446	1.000	Leading	3.110	0.995	Leading	21.418
142	FLT142-3PH	1.000	Lagging	-4.834	0.997	Leading	17.070	1.000	Leading	4.455	1.000	Leading	3.959	0.996	Leading	18.660
143	FLT143-3PH	1.000	Lagging	-5.124	0.997	Leading	16.520	1.000	Leading	3.759	1.000	Leading	3.541	0.996	Leading	19.572
144	FLT144-3PH	0.999	Lagging	-7.599	0.997	Leading	15.224	1.000	Leading	2.814	1.000	Leading	1.843	0.996	Leading	19.707
145	FLT145-3PH	1.000	Lagging	-4.849	0.997	Leading	16.955	1.000	Leading	4.387	1.000	Leading	4.036	0.996	Leading	19.676
146	FLT146-3PH	1.000	Lagging	-6.237	0.998	Leading	12.409	1.000	Leading	0.543	1.000	Leading	2.512	0.997	Leading	15.979
147	FLT147-3PH	1.000	Lagging	-0.981	0.997	Leading	17.405	1.000	Leading	4.621	0.999	Leading	6.665	0.992	Leading	26.183
148	FLT148-3PH	1.000	Lagging	-1.423	0.997	Leading	16.837	1.000	Leading	4.505	0.999	Leading	7.028	0.994	Leading	22.270
157	FLT157-3PH	1.000	Lagging	-3.842	0.997	Leading	16.504	1.000	Leading	3.612	1.000	Leading	3.793	0.996	Leading	19.116
158	FLT158-3PH	0.999	Lagging	-8.168	0.997	Leading	16.140	1.000	Leading	3.403	0.999	Leading	7.121	0.991	Leading	27.547
159	FLT159-3PH	1.000	Lagging	-3.434	0.997	Leading	16.424	1.000	Leading	3.312	1.000	Leading	3.318	0.994	Leading	22.680
168	FLT168-3PH	1.000	Lagging	-4.861	0.997	Leading	16.673	1.000	Leading	3.970	1.000	Leading	3.991	0.995	Leading	19.940
169	FLT169-3PH	0.999	Lagging	-7.619	0.997	Leading	15.868	1.000	Leading	1.131	1.000	Leading	0.784	0.997	Leading	16.521
170	FLT170-3PH	1.000	Leading	4.756	0.992	Leading	26.270	0.997	Leading	16.743	0.998	Leading	14.358	0.987	Leading	33.628
171	FLT171-3PH	1.000	Lagging	-5.276	0.997	Leading	15.683	1.000	Leading	3.466	1.000	Leading	4.055	0.996	Leading	19.278
172	FLT172-3PH	0.999	Lagging	-6.669	0.998	Leading	14.179	1.000	Leading	2.325	1.000	Leading	0.948	0.996	Leading	19.453
173	FLT173-3PH	1.000	Lagging	-5.034	0.997	Leading	16.471	1.000	Leading	4.041	1.000	Leading	3.720	0.995	Leading	20.063
174	FLT174-3PH	0.998	Lagging	-13.323	1.000	Leading	5.327	1.000	Lagging	-5.790	1.000	Lagging	-6.069	0.998	Leading	14.525
175	FLT175-3PH	1.000	Lagging	-5.171	0.997	Leading	16.243	1.000	Leading	3.554	1.000	Leading	3.720	0.996	Leading	19.495
176	FLT176-3PH	1.000	Lagging	-4.861	0.997	Leading	16.673	1.000	Leading	4.002	1.000	Leading	4.827	0.995	Leading	21.309
184	FLT184-3PH	1.000	Lagging	-4.864	0.997	Leading	16.690	1.000	Leading	4.017	1.000	Leading	4.004	0.995	Leading	19.943
185	FLT185-3PH	1.000	Lagging	-4.990	0.997	Leading	16.669	1.000	Leading	3.844	1.000	Leading	3.752	0.995	Leading	19.904
186	FLT186-3PH	1.000	Lagging	-4.864	0.997	Leading	16.700	1.000	Leading	4.007	1.000	Leading	3.995	0.995	Leading	19.952
187	FLT187-3PH	1.000	Lagging	-4.953	0.997	Leading	16.627	1.000	Leading	3.960	1.000	Leading	3.933	0.995	Leading	19.870
188	FLT188-3PH	1.000	Lagging	-3.376	0.996	Leading	18.031	1.000	Leading	4.825	1.000	Leading	4.813	0.995	Leading	20.959
189	FLT189-3PH	1.000	Lagging	-2.848	0.996	Leading	17.828	1.000	Leading	4.691	1.000	Leading	5.145	0.995	Leading	20.427
190	FLT190-3PH	1.000	Lagging	-4.880	0.997	Leading	16.676	1.000	Leading	3.988	1.000	Leading	3.974	0.995	Leading	19.943

Study Generator GEN-2015-041

The Power Factor Analysis shows that GEN-2015-041 has a power factor range of 0.861 lagging to unity for the 2016 Winter Peak conditions, a power factor range of 0.985 leading to 0.970 lagging for the 2017 Summer Peak conditions, a power factor range of 0.996 leading to 0.963 lagging for the 2020 Summer Peak conditions, a power factor range of 0.998 leading to 0.903 lagging for the 2020 Winter Peak conditions, and a power factor range of 0.987 leading to 0.980 lagging for the 2025 Summer Peak conditions.

Table 5-7
Power Factor Analysis: GEN-2015-078

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.938	Lagging	-18.449	0.878	Lagging	-27.235	0.857	Lagging	-30.129	0.935	Lagging	-18.963	0.837	Lagging	-32.711
1	FLT01-3PH	0.938	Lagging	-18.477	0.879	Lagging	-27.174	0.857	Lagging	-30.108	0.935	Lagging	-19.016	0.837	Lagging	-32.745
2	FLT02-3PH	0.938	Lagging	-18.400	0.876	Lagging	-27.464	0.853	Lagging	-30.540	0.935	Lagging	-18.964	0.833	Lagging	-33.149
3	FLT03-3PH	0.938	Lagging	-18.450	0.878	Lagging	-27.243	0.856	Lagging	-30.152	0.935	Lagging	-18.966	0.837	Lagging	-32.753
4	FLT04-3PH	0.938	Lagging	-18.439	0.878	Lagging	-27.232	0.856	Lagging	-30.224	0.935	Lagging	-19.024	0.836	Lagging	-32.828
5	FLT05-3PH	0.937	Lagging	-18.618	0.875	Lagging	-27.656	0.854	Lagging	-30.510	0.933	Lagging	-19.252	0.835	Lagging	-32.964
6	FLT06-3PH	0.938	Lagging	-18.449	0.878	Lagging	-27.250	0.856	Lagging	-30.145	0.935	Lagging	-18.966	0.837	Lagging	-32.722
7	FLT07-3PH	0.938	Lagging	-18.452	0.878	Lagging	-27.244	0.857	Lagging	-30.131	0.935	Lagging	-18.963	0.837	Lagging	-32.709
8	FLT08-3PH	0.938	Lagging	-18.452	0.878	Lagging	-27.243	0.857	Lagging	-30.128	0.935	Lagging	-18.962	0.837	Lagging	-32.707
9	FLT09-3PH	0.938	Lagging	-18.457	0.878	Lagging	-27.279	0.856	Lagging	-30.184	0.935	Lagging	-19.001	0.836	Lagging	-32.773
10	FLT10-3PH	0.938	Lagging	-18.448	0.878	Lagging	-27.237	0.857	Lagging	-30.130	0.935	Lagging	-18.965	0.837	Lagging	-32.712
11	FLT11-3PH	0.938	Lagging	-18.447	0.878	Lagging	-27.202	0.855	Lagging	-30.285	0.935	Lagging	-19.037	0.835	Lagging	-32.901
20	FLT20-3PH	0.934	Lagging	-19.145	0.878	Lagging	-27.253	0.856	Lagging	-30.172	0.941	Lagging	-17.998	0.837	Lagging	-32.727
21	FLT21-3PH	0.927	Lagging	-20.168	0.875	Lagging	-27.641	0.854	Lagging	-30.467	0.923	Lagging	-20.898	0.831	Lagging	-33.462
22	FLT22-3PH	0.940	Lagging	-18.206	0.879	Lagging	-27.148	0.857	Lagging	-30.084	0.936	Lagging	-18.865	0.838	Lagging	-32.615
23	FLT23-3PH	0.936	Lagging	-18.797	0.883	Lagging	-26.629	0.859	Lagging	-29.749	0.932	Lagging	-19.368	0.839	Lagging	-32.439
24	FLT24-3PH	0.938	Lagging	-18.449	0.878	Lagging	-27.235	0.857	Lagging	-30.129	0.935	Lagging	-18.963	0.837	Lagging	-32.711
26	FLT26-3PH	0.918	Lagging	-21.535	0.872	Lagging	-28.007	0.847	Lagging	-31.362	0.913	Lagging	-22.311	0.826	Lagging	-34.104
35	FLT35-3PH	0.929	Lagging	-19.867	0.872	Lagging	-28.034	0.850	Lagging	-30.935	0.924	Lagging	-20.701	0.832	Lagging	-33.398
36	FLT36-3PH	0.931	Lagging	-19.530	0.874	Lagging	-27.860	0.852	Lagging	-30.763	0.926	Lagging	-20.308	0.833	Lagging	-33.246
37	FLT37-3PH	0.927	Lagging	-20.177	0.873	Lagging	-27.880	0.852	Lagging	-30.697	0.923	Lagging	-20.794	0.833	Lagging	-33.150
38	FLT38-3PH	0.938	Lagging	-18.468	0.878	Lagging	-27.213	0.857	Lagging	-30.111	0.935	Lagging	-18.985	0.837	Lagging	-32.738
39	FLT39-3PH	0.938	Lagging	-18.465	0.873	Lagging	-27.946	0.852	Lagging	-30.727	0.934	Lagging	-19.065	0.834	Lagging	-33.019
40	FLT40-3PH	0.931	Lagging	-19.587	0.872	Lagging	-28.123	0.850	Lagging	-30.974	0.927	Lagging	-20.293	0.832	Lagging	-33.282
41	FLT41-3PH	0.938	Lagging	-18.467	0.873	Lagging	-27.996	0.852	Lagging	-30.769	0.934	Lagging	-19.074	0.834	Lagging	-33.054
42	FLT42-3PH	0.897	Lagging	-24.684	0.832	Lagging	-33.370	0.807	Lagging	-36.639	0.892	Lagging	-25.332	0.799	Lagging	-37.650
43	FLT43-3PH	0.937	Lagging	-18.698	0.878	Lagging	-27.199	0.855	Lagging	-30.336	0.935	Lagging	-18.947	0.836	Lagging	-32.814
53	FLT53-3PH	0.916	Lagging	-21.888	0.871	Lagging	-28.225	0.846	Lagging	-31.545	0.914	Lagging	-22.258	0.826	Lagging	-34.057
54	FLT54-3PH	0.896	Lagging	-24.721	0.942	Lagging	-17.774	0.885	Lagging	-26.269	0.956	Lagging	-15.388	0.894	Lagging	-25.002
55	FLT55-3PH	0.902	Lagging	-23.950	0.871	Lagging	-28.254	0.846	Lagging	-31.567	0.898	Lagging	-24.520	0.825	Lagging	-34.266
56	FLT56-3PH	0.840	Lagging	-32.347	0.664	Lagging	-56.318	0.669	Lagging	-55.551	0.818	Lagging	-35.222	0.584	Lagging	-69.418
57	FLT57-3PH	0.925	Lagging	-20.565	0.839	Lagging	-32.380	0.834	Lagging	-33.091	0.918	Lagging	-21.651	0.773	Lagging	-41.071
58	FLT58-3PH	0.899	Lagging	-24.310	0.872	Lagging	-28.098	0.847	Lagging	-31.445	0.895	Lagging	-24.944	0.826	Lagging	-34.172
59	FLT59-3PH	0.926	Lagging	-20.309	0.848	Lagging	-31.228	0.833	Lagging	-33.243	0.917	Lagging	-21.799	0.823	Lagging	-34.506
60	FLT60-3PH	0.918	Lagging	-21.535	0.822	Lagging	-34.696	0.801	Lagging	-37.338	0.906	Lagging	-23.405	0.764	Lagging	-42.246
61	FLT61-3PH	0.956	Lagging	-15.312	0.878	Lagging	-27.201	0.865	Lagging	-29.001	0.947	Lagging	-16.996	0.840	Lagging	-32.358
62	FLT62-3PH	0.913	Lagging	-22.336	0.866	Lagging	-28.909	0.841	Lagging	-32.160	0.899	Lagging	-24.411	0.818	Lagging	-35.111
63	FLT63-3PH	0.955	Lagging	-15.568	0.878	Lagging	-27.227	0.864	Lagging	-29.108	0.946	Lagging	-17.159	0.839	Lagging	-32.409
64	FLT64-3PH	0.938	Lagging	-18.449	0.877	Lagging	-27.437	0.854	Lagging	-30.439	0.936	Lagging	-18.883	0.830	Lagging	-33.547
65	FLT65-3PH	0.949	Lagging	-16.639	0.819	Lagging	-35.087	0.806	Lagging	-36.775	0.934	Lagging	-19.085	0.813	Lagging	-35.814
66	FLT66-3PH	0.898	Lagging	-24.569	0.873	Lagging	-27.919	0.848	Lagging	-31.281	0.893	Lagging	-25.196	0.827	Lagging	-34.019
67	FLT67-3PH	0.912	Lagging	-22.441	0.827	Lagging	-33.985	0.818	Lagging	-35.099	0.896	Lagging	-24.763	0.803	Lagging	-37.051
73	FLT73-3PH	0.938	Lagging	-18.449	0.878	Lagging	-27.235	0.857	Lagging	-30.129	0.935	Lagging	-18.963	0.837	Lagging	-32.711
74	FLT74-3PH	0.940	Lagging	-18.206	0.879	Lagging	-27.148	0.857	Lagging	-30.084	0.936	Lagging	-18.865	0.838	Lagging	-32.615
75	FLT75-3PH	0.942	Lagging	-17.875	0.878	Lagging	-27.291	0.855	Lagging	-30.282	0.939	Lagging	-18.366	0.838	Lagging	-32.603
76	FLT76-3PH	0.938	Lagging	-18.485	0.864	Lagging	-29.104	0.831	Lagging	-33.458	0.924	Lagging	-20.625	0.829	Lagging	-33.781
84	FLT84-3PH	0.942	Lagging	-17.804	0.895	Lagging	-24.899	0.876	Lagging	-27.570	0.936	Lagging	-18.826	0.859	Lagging	-29.792
85	FLT85-3PH	0.920	Lagging	-21.329	0.858	Lagging	-29.911	0.832	Lagging	-33.294	0.914	Lagging	-22.141	0.802	Lagging	-37.300
86	FLT86-3PH	0.930	Lagging	-19.794	0.848	Lagging	-31.240	0.824	Lagging	-34.433	0.918	Lagging	-21.545	0.796	Lagging	-38.060
87	FLT87-3PH	0.907	Lagging	-23.223	0.858	Lagging	-29.882	0.830	Lagging	-33.626	0.891	Lagging	-25.493	0.809	Lagging	-36.294
88	FLT88-3PH	0.935	Lagging	-18.961	0.875	Lagging	-27.704	0.853	Lagging	-30.563	0.931	Lagging	-19.527	0.834	Lagging	-33.116
89	FLT89-3PH	0.926	Lagging	-20.449	0.871	Lagging	-28.233	0.843	Lagging	-31.949	0.919	Lagging	-21.454	0.817	Lagging	-35.291
90	FLT90-3PH	0.935	Lagging	-18.907	0.875	Lagging	-27.656	0.854	Lagging	-30.515	0.932	Lagging	-19.472	0.834	Lagging	-33.069
91	FLT91-3PH	0.938	Lagging	-18.554	0.874	Lagging	-27.851	0.853	Lagging	-30.607	0.935	Lagging	-19.045	0.832	Lagging	-33.353
92	FLT92-3PH	0.932	Lagging	-19.433	0.872	Lagging	-28.032	0.849	Lagging	-31.072	0.929	Lagging	-19.852	0.827	Lagging	-33.926
93	FLT93-3PH	0.933	Lagging	-19.363	0.859	Lagging	-29.774	0.842	Lagging	-32.004	0.926	Lagging	-20.425	0.814	Lagging	-35.686
94	FLT94-3PH	0.926	Lagging	-20.338	0.889	Lagging	-25.810	0.856	Lagging	-30.188	0.935	Lagging	-18.969	0.824	Lagging	-34.332
95	FLT95-3PH	0.938	Lagging	-18.449	0.851	Lagging	-30.912	0.840	Lagging	-32.238	0.924	Lagging	-20.749	0.825	Lagging	-34.241
100	FLT100-3PH	0.929	Lagging	-19.941	0.867	Lagging	-28.762	0.843	Lagging	-31.878	0.927	Lagging	-20.222	0.820	Lagging	-34.868
101	FLT101-3PH	0.940	Lagging	-18.196	0.882	Lagging	-26.763	0.861	Lagging	-29.578	0.937	Lagging	-18.653	0.841	Lagging	-32.220
104	FLT104-3PH	0.938	Lagging	-18.554	0.878	Lagging	-27.208	0.857	Lagging	-30.107	0.934	Lagging	-19.050	0.837	Lagging	-32.691
105	FLT105-3PH	0.936	Lagging	-18.846	0.878	Lagging	-27.245	0.856	Lagging	-30.143	0.932	Lagging	-19.395	0.836	Lagging	-32.774
106	FLT106-3PH	0.938	Lagging	-18.452	0.878	Lagging	-27.240	0.856	Lagging	-30.133	0.935	Lagging	-18.968	0.837	Lagging	-32.717
107	FLT107-3PH	0.937	Lagging	-18.571	0.878	Lagging	-27.204	0.857	Lagging	-30.108	0.934	Lagging	-19.060	0.837	Lagging	-32.684
108	FLT108-3PH	0.938	Lagging	-18.483	0.878	Lagging	-27.241	0.856	Lagging	-30.132	0.935	Lagging	-18.982	0.837	Lagging	-32.722
109	FLT109-3PH	0.936	Lagging	-18.876	0.878	Lagging	-27.245	0.856	Lagging	-30.140	0.932	Lagging	-19.430	0.836	Lagging	-32.773
110	FLT110-3PH	0.936	Lagging	-18.846	0.878	Lagging	-27.245	0.856	Lagging	-30.143	0.932	Lagging	-19.395	0.836	Lagging	-32.774
111	FLT111-3PH	0.938	Lagging	-18.471	0.878	Lagging	-27.240	0.856	Lagging	-30.132	0.935	Lagging	-18.990	0.837	Lagging	-32.721
117	FLT117-3PH	0.938	Lagging	-18.517	0.878	Lagging	-27.248	0.856	Lagging	-30.142	0.935	Lagging	-19.015	0.837	Lagging	-32.716
118	FLT118-3PH	0.938	Lagging	-18.521	0.878	Lagging	-27.256	0.856	Lagging	-30.143	0.935	Lagging	-19.043	0.836	Lagging	-32.757
119	FLT119-3PH	0.938	Lagging	-18.470	0.878	Lagging	-27.245	0.856	Lagging	-30.140	0.935	Lagging	-18.996	0.837	Lagging	-32.718
120	FLT120-3PH	0.937	Lagging	-18.642	0.878	Lagging	-27.296	0.856	Lagging	-30.184	0.933	Lagging	-19.236	0.837	Lagging	-32.723
121	FLT121-3PH	0.938	Lagging	-18.446	0.878	Lagging	-27.234	0.857	Lagging	-30.128	0.935	Lagging	-18.954	0.837	Lagging	-32.717
126	FLT126-3PH	0.932	Lagging	-19.455	0.872	Lagging	-28.088	0.857	Lagging	-30.129	0.935	Lagging	-18.963	0.837	Lagging	-32.711
127	FLT127-3PH	0.937	Lagging	-18.655	0.878	Lagging	-27.201	0.853	Lagging	-30.572	0.932	Lagging	-19.463	0.833	Lagging	-33.167

Table 5-7 (continued)
Power Factor Analysis: GEN-2015-078

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
128	FLT128-3PH	0.940	Lagging	-18.101	0.870	Lagging	-28.300	0.854	Lagging	-30.523	0.941	Lagging	-17.949	0.826	Lagging	-34.109
129	FLT129-3PH	0.937	Lagging	-18.601	0.873	Lagging	-27.986	0.855	Lagging	-30.325	0.936	Lagging	-18.857	0.835	Lagging	-32.919
130	FLT130-3PH	0.939	Lagging	-18.243	0.880	Lagging	-27.032	0.859	Lagging	-29.856	0.937	Lagging	-18.679	0.839	Lagging	-32.415
131	FLT131-3PH	0.940	Lagging	-18.201	0.887	Lagging	-26.045	0.857	Lagging	-30.124	0.935	Lagging	-18.965	0.832	Lagging	-33.285
132	FLT132-3PH	0.912	Lagging	-22.441	0.827	Lagging	-33.985	0.818	Lagging	-35.099	0.896	Lagging	-24.763	0.803	Lagging	-37.051
133	FLT133-3PH	0.937	Lagging	-18.664	0.867	Lagging	-28.757	0.847	Lagging	-31.349	0.931	Lagging	-19.647	0.828	Lagging	-33.810
140	FLT140-3PH	0.938	Lagging	-18.465	0.877	Lagging	-27.394	0.855	Lagging	-30.298	0.935	Lagging	-19.015	0.835	Lagging	-32.935
141	FLT141-3PH	0.936	Lagging	-18.727	0.877	Lagging	-27.349	0.856	Lagging	-30.246	0.933	Lagging	-19.218	0.836	Lagging	-32.821
142	FLT142-3PH	0.938	Lagging	-18.529	0.877	Lagging	-27.446	0.855	Lagging	-30.363	0.934	Lagging	-19.079	0.835	Lagging	-32.969
143	FLT143-3PH	0.938	Lagging	-18.502	0.878	Lagging	-27.269	0.856	Lagging	-30.174	0.935	Lagging	-19.001	0.837	Lagging	-32.752
144	FLT144-3PH	0.937	Lagging	-18.571	0.878	Lagging	-27.204	0.857	Lagging	-30.108	0.934	Lagging	-19.060	0.837	Lagging	-32.684
145	FLT145-3PH	0.938	Lagging	-18.424	0.878	Lagging	-27.267	0.856	Lagging	-30.171	0.935	Lagging	-18.942	0.836	Lagging	-32.809
146	FLT146-3PH	0.937	Lagging	-18.587	0.878	Lagging	-27.307	0.856	Lagging	-30.181	0.934	Lagging	-19.108	0.836	Lagging	-32.827
147	FLT147-3PH	0.935	Lagging	-18.935	0.878	Lagging	-27.271	0.857	Lagging	-30.087	0.933	Lagging	-19.359	0.838	Lagging	-32.530
148	FLT148-3PH	0.939	Lagging	-18.352	0.877	Lagging	-27.458	0.855	Lagging	-30.320	0.936	Lagging	-18.851	0.837	Lagging	-32.663
157	FLT157-3PH	0.922	Lagging	-21.050	0.867	Lagging	-28.791	0.843	Lagging	-31.934	0.927	Lagging	-20.265	0.821	Lagging	-34.793
158	FLT158-3PH	0.938	Lagging	-18.485	0.864	Lagging	-29.104	0.831	Lagging	-33.458	0.924	Lagging	-20.625	0.829	Lagging	-33.781
159	FLT159-3PH	0.937	Lagging	-18.627	0.878	Lagging	-27.195	0.854	Lagging	-30.475	0.933	Lagging	-19.294	0.843	Lagging	-31.921
168	FLT168-3PH	0.938	Lagging	-18.449	0.878	Lagging	-27.235	0.857	Lagging	-30.129	0.935	Lagging	-18.963	0.837	Lagging	-32.711
169	FLT169-3PH	0.884	Lagging	-26.491	0.805	Lagging	-36.909	0.792	Lagging	-38.508	0.850	Lagging	-30.981	0.790	Lagging	-38.833
170	FLT170-3PH	0.729	Lagging	-46.981	0.803	Lagging	-37.127	0.738	Lagging	-45.687	0.721	Lagging	-48.027	0.689	Lagging	-52.668
171	FLT171-3PH	0.912	Lagging	-22.441	0.827	Lagging	-33.985	0.818	Lagging	-35.099	0.896	Lagging	-24.763	0.803	Lagging	-37.051
172	FLT172-3PH	0.926	Lagging	-20.309	0.848	Lagging	-31.228	0.833	Lagging	-33.243	0.917	Lagging	-21.799	0.823	Lagging	-34.506
173	FLT173-3PH	0.898	Lagging	-24.569	0.873	Lagging	-27.919	0.848	Lagging	-31.281	0.893	Lagging	-25.196	0.827	Lagging	-34.019
174	FLT174-3PH	0.949	Lagging	-16.639	0.819	Lagging	-35.087	0.806	Lagging	-36.775	0.934	Lagging	-19.085	0.813	Lagging	-35.814
175	FLT175-3PH	0.918	Lagging	-21.535	0.822	Lagging	-34.696	0.801	Lagging	-37.338	0.906	Lagging	-23.405	0.764	Lagging	-42.246
176	FLT176-3PH	0.938	Lagging	-18.449	0.878	Lagging	-27.235	0.860	Lagging	-29.691	0.941	Lagging	-17.942	0.844	Lagging	-31.799
184	FLT184-3PH	0.938	Lagging	-18.449	0.879	Lagging	-27.189	0.857	Lagging	-30.087	0.935	Lagging	-18.973	0.837	Lagging	-32.684
185	FLT185-3PH	0.938	Lagging	-18.449	0.878	Lagging	-27.241	0.856	Lagging	-30.155	0.935	Lagging	-19.011	0.837	Lagging	-32.715
186	FLT186-3PH	0.938	Lagging	-18.446	0.878	Lagging	-27.198	0.857	Lagging	-30.097	0.935	Lagging	-18.965	0.837	Lagging	-32.690
187	FLT187-3PH	0.938	Lagging	-18.459	0.878	Lagging	-27.216	0.857	Lagging	-30.109	0.935	Lagging	-18.990	0.837	Lagging	-32.704
188	FLT188-3PH	0.941	Lagging	-17.917	0.885	Lagging	-26.278	0.861	Lagging	-29.533	0.940	Lagging	-18.138	0.843	Lagging	-31.960
189	FLT189-3PH	0.941	Lagging	-18.030	0.884	Lagging	-26.444	0.861	Lagging	-29.602	0.938	Lagging	-18.398	0.840	Lagging	-32.335
190	FLT190-3PH	0.938	Lagging	-18.451	0.878	Lagging	-27.218	0.857	Lagging	-30.112	0.935	Lagging	-18.969	0.837	Lagging	-32.701

Study Generator GEN-2015-078

The Power Factor Analysis shows that GEN-2015-078 has a power factor range of 0.729 to 0.956 lagging for the 2016 Winter Peak conditions, a power factor range of 0.664 to 0.942 lagging for the 2017 Summer Peak conditions, a power factor range of 0.669 to 0.885 lagging for the 2020 Summer Peak conditions, a power factor range of 0.721 to 0.956 lagging for the 2020 Winter Peak conditions, and a power factor range of 0.584 to 0.584 lagging for the 2025 Summer Peak conditions.

Table 5-8
Power Factor Analysis: ASGI-2016-001

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.989	Leading	0.376	0.998	Leading	0.157	0.998	Leading	0.169	0.990	Leading	0.358	0.998	Leading	0.166
1	FLT01-3PH	0.996	Leading	0.222	0.998	Leading	0.160	0.998	Leading	0.162	0.994	Leading	0.264	0.999	Leading	0.126
2	FLT02-3PH	0.979	Leading	0.518	0.997	Leading	0.181	1.000	Leading	0.052	0.981	Leading	0.494	1.000	Leading	0.014
3	FLT03-3PH	0.989	Leading	0.374	0.998	Leading	0.152	0.998	Leading	0.155	0.990	Leading	0.356	0.998	Leading	0.138
4	FLT04-3PH	0.986	Leading	0.418	0.998	Leading	0.139	0.999	Leading	0.104	0.991	Leading	0.342	0.999	Leading	0.110
5	FLT05-3PH	0.994	Leading	0.272	1.000	Lagging	-0.022	1.000	Leading	0.009	0.997	Leading	0.202	1.000	Leading	0.050
6	FLT06-3PH	0.989	Leading	0.377	0.998	Leading	0.154	0.998	Leading	0.164	0.990	Leading	0.358	0.998	Leading	0.162
7	FLT07-3PH	0.989	Leading	0.374	0.998	Leading	0.156	0.998	Leading	0.172	0.990	Leading	0.359	0.998	Leading	0.169
8	FLT08-3PH	0.989	Leading	0.375	0.998	Leading	0.156	0.998	Leading	0.174	0.990	Leading	0.361	0.998	Leading	0.171
9	FLT09-3PH	0.990	Leading	0.361	0.998	Leading	0.140	0.998	Leading	0.144	0.992	Leading	0.322	0.999	Leading	0.131
10	FLT10-3PH	0.989	Leading	0.377	0.998	Leading	0.156	0.998	Leading	0.169	0.990	Leading	0.357	0.998	Leading	0.165
11	FLT11-3PH	0.988	Leading	0.397	0.999	Leading	0.131	1.000	Leading	0.058	0.992	Leading	0.322	1.000	Leading	0.070
20	FLT20-3PH	0.961	Lagging	-0.724	0.998	Leading	0.177	0.998	Leading	0.170	0.806	Leading	1.837	0.998	Leading	0.145
21	FLT21-3PH	0.717	Lagging	-2.432	0.996	Leading	0.219	0.997	Leading	0.206	0.658	Lagging	-2.860	0.955	Lagging	-0.777
22	FLT22-3PH	0.978	Leading	0.534	0.994	Leading	0.284	0.994	Leading	0.269	0.994	Leading	0.265	0.997	Leading	0.205
23	FLT23-3PH	0.868	Lagging	-1.429	0.977	Leading	0.550	0.984	Leading	0.452	0.836	Lagging	-1.641	0.972	Lagging	-0.600
24	FLT24-3PH	0.989	Leading	0.376	0.998	Leading	0.157	0.998	Leading	0.169	0.990	Leading	0.358	0.998	Leading	0.166
26	FLT26-3PH	0.476	Lagging	-4.614	0.996	Leading	0.225	0.864	Lagging	-1.455	0.435	Lagging	-5.182	0.846	Lagging	-1.573
35	FLT35-3PH	0.905	Lagging	-1.173	0.983	Lagging	-0.473	0.980	Lagging	-0.502	0.817	Lagging	-1.763	0.982	Lagging	-0.485
36	FLT36-3PH	0.953	Lagging	-0.794	0.992	Lagging	-0.318	0.991	Lagging	-0.336	0.893	Lagging	-1.263	0.991	Lagging	-0.334
37	FLT37-3PH	0.833	Lagging	-1.658	0.987	Lagging	-0.400	0.991	Lagging	-0.343	0.789	Lagging	-1.947	0.993	Lagging	-0.287
38	FLT38-3PH	0.991	Leading	0.336	0.998	Leading	0.176	0.997	Leading	0.187	0.992	Leading	0.320	0.999	Leading	0.135
39	FLT39-3PH	0.981	Leading	0.501	0.998	Lagging	-0.160	1.000	Lagging	-0.069	0.983	Leading	0.461	0.999	Leading	0.107
40	FLT40-3PH	0.986	Lagging	-0.418	0.986	Lagging	-0.427	0.984	Lagging	-0.459	0.957	Lagging	-0.757	0.996	Lagging	-0.225
41	FLT41-3PH	0.980	Leading	0.509	0.997	Lagging	-0.179	0.999	Lagging	-0.084	0.983	Leading	0.467	0.999	Leading	0.093
42	FLT42-3PH	0.473	Lagging	-4.663	0.487	Lagging	-4.486	0.431	Lagging	-5.237	0.462	Lagging	-4.796	0.643	Lagging	-2.979
43	FLT43-3PH	0.998	Lagging	-0.145	0.980	Leading	0.514	0.995	Leading	0.255	0.988	Leading	0.394	0.997	Leading	0.183
53	FLT53-3PH	0.989	Leading	0.382	0.951	Lagging	-0.809	0.967	Lagging	-0.661	0.990	Leading	0.358	0.989	Lagging	-0.380
54	FLT54-3PH	0.988	Leading	0.388	0.892	Leading	1.269	0.922	Leading	1.050	0.967	Leading	0.653	0.940	Leading	0.909
55	FLT55-3PH	0.994	Leading	0.278	0.977	Lagging	-0.542	0.987	Lagging	-0.400	0.995	Leading	0.251	0.997	Lagging	-0.186
56	FLT56-3PH	0.996	Leading	0.218	0.989	Lagging	-0.371	0.990	Lagging	-0.363	0.994	Leading	0.267	0.979	Lagging	-0.519
57	FLT57-3PH	0.990	Leading	0.347	1.000	Leading	0.060	0.999	Leading	0.132	0.990	Leading	0.349	1.000	Leading	0.025
58	FLT58-3PH	0.991	Leading	0.339	0.980	Lagging	-0.508	0.990	Lagging	-0.353	0.993	Leading	0.307	0.998	Lagging	-0.140
59	FLT59-3PH	0.999	Lagging	-0.123	0.960	Lagging	-0.726	0.984	Lagging	-0.449	1.000	Lagging	-0.033	1.000	Leading	0.011
60	FLT60-3PH	0.999	Lagging	-0.092	0.989	Lagging	-0.368	0.989	Lagging	-0.372	0.997	Lagging	-0.188	0.963	Lagging	-0.701
61	FLT61-3PH	0.998	Leading	0.153	1.000	Lagging	-0.009	1.000	Lagging	-0.052	0.996	Leading	0.211	1.000	Lagging	-0.012
62	FLT62-3PH	0.964	Leading	0.685	0.968	Lagging	-0.649	0.964	Lagging	-0.694	0.938	Leading	0.921	0.971	Lagging	-0.616
63	FLT63-3PH	0.998	Leading	0.170	1.000	Leading	0.004	1.000	Lagging	-0.035	0.996	Leading	0.222	1.000	Leading	0.002
64	FLT64-3PH	0.989	Leading	0.376	1.000	Lagging	-0.045	1.000	Lagging	-0.035	0.996	Leading	0.238	1.000	Leading	0.027
65	FLT65-3PH	0.570	Lagging	-3.600	0.334	Lagging	-7.064	0.305	Lagging	-7.796	0.596	Lagging	-3.366	0.441	Lagging	-5.087
66	FLT66-3PH	0.991	Leading	0.333	0.984	Lagging	-0.458	0.993	Lagging	-0.306	0.993	Leading	0.307	0.999	Lagging	-0.106
67	FLT67-3PH	0.999	Lagging	-0.099	0.993	Lagging	-0.301	1.000	Lagging	-0.064	0.999	Lagging	-0.105	0.998	Lagging	-0.151
73	FLT73-3PH	0.989	Leading	0.376	0.998	Leading	0.157	0.998	Leading	0.169	0.990	Leading	0.358	0.998	Leading	0.166
74	FLT74-3PH	0.978	Leading	0.534	0.994	Leading	0.284	0.994	Leading	0.269	0.994	Leading	0.265	0.997	Leading	0.205
75	FLT75-3PH	0.849	Leading	1.558	1.000	Lagging	-0.051	0.995	Lagging	-0.247	0.851	Leading	1.541	0.995	Leading	0.259
76	FLT76-3PH	0.986	Leading	0.419	0.351	Lagging	-6.663	0.232	Lagging	-10.504	0.417	Lagging	-5.456	0.515	Lagging	-4.159
84	FLT84-3PH	0.497	Lagging	-4.368	0.299	Lagging	-7.992	0.257	Lagging	-9.383	0.397	Lagging	-5.776	0.188	Lagging	-13.071
85	FLT85-3PH	0.485	Leading	4.508	0.248	Leading	9.778	0.251	Leading	9.655	0.700	Leading	2.548	0.315	Leading	7.530
86	FLT86-3PH	0.312	Lagging	-7.605	0.147	Lagging	-16.769	0.140	Lagging	-17.744	0.228	Lagging	-10.696	0.117	Lagging	-21.307
87	FLT87-3PH	0.804	Leading	1.846	0.890	Leading	1.278	0.853	Leading	1.529	0.737	Leading	2.295	0.921	Leading	1.058
88	FLT88-3PH	0.998	Leading	0.147	0.998	Lagging	-0.142	0.999	Lagging	-0.114	0.999	Leading	0.107	1.000	Lagging	-0.061
89	FLT89-3PH	0.949	Leading	0.828	0.947	Leading	0.844	0.909	Leading	1.148	0.918	Leading	1.080	0.918	Leading	1.078
90	FLT90-3PH	0.997	Leading	0.178	0.999	Lagging	-0.117	0.999	Lagging	-0.088	0.998	Leading	0.137	1.000	Lagging	-0.039
91	FLT91-3PH	0.992	Leading	0.318	0.998	Lagging	-0.173	0.999	Lagging	-0.096	0.992	Leading	0.313	0.998	Lagging	-0.150
92	FLT92-3PH	0.519	Leading	4.117	0.398	Leading	5.764	0.379	Leading	6.107	0.522	Leading	4.088	0.376	Leading	6.169
93	FLT93-3PH	0.832	Lagging	-1.669	0.926	Lagging	-1.019	0.935	Lagging	-0.945	0.995	Lagging	-0.261	0.927	Leading	1.011
94	FLT94-3PH	0.902	Lagging	-1.197	0.986	Leading	0.415	0.936	Lagging	-0.937	1.000	Leading	0.032	0.571	Lagging	-3.597
95	FLT95-3PH	0.989	Leading	0.376	0.732	Lagging	-2.324	0.756	Lagging	-2.166	0.893	Lagging	-1.263	0.976	Lagging	-0.557
100	FLT100-3PH	0.396	Lagging	-5.801	0.269	Lagging	-8.945	0.249	Lagging	-9.724	0.389	Lagging	-5.927	0.229	Lagging	-10.631
101	FLT101-3PH	0.989	Leading	0.376	0.998	Leading	0.157	0.998	Leading	0.169	0.990	Leading	0.358	0.998	Leading	0.166
104	FLT104-3PH	0.999	Leading	0.137	0.997	Leading	0.201	0.999	Leading	0.114	0.999	Leading	0.113	0.996	Leading	0.212
105	FLT105-3PH	0.963	Lagging	-0.704	1.000	Lagging	-0.068	1.000	Lagging	-0.076	0.954	Lagging	-0.782	0.999	Lagging	-0.118
106	FLT106-3PH	0.989	Leading	0.368	0.998	Leading	0.148	0.998	Leading	0.159	0.990	Leading	0.348	0.998	Leading	0.152
107	FLT107-3PH	0.999	Leading	0.097	0.996	Leading	0.213	0.999	Leading	0.109	0.999	Leading	0.087	0.996	Leading	0.228
108	FLT108-3PH	0.992	Leading	0.322	0.998	Leading	0.168	0.998	Leading	0.142	0.991	Leading	0.331	0.998	Leading	0.165
109	FLT109-3PH	0.955	Lagging	-0.781	1.000	Lagging	-0.073	0.999	Lagging	-0.080	0.945	Lagging	-0.868	0.999	Lagging	-0.122
110	FLT110-3PH	0.963	Lagging	-0.704	1.000	Lagging	-0.068	1.000	Lagging	-0.076	0.954	Lagging	-0.782	0.999	Lagging	-0.118
111	FLT111-3PH	0.991	Leading	0.340	0.998	Leading	0.156	0.998	Leading	0.169	0.992	Leading	0.317	0.998	Leading	0.156
117	FLT117-3PH	0.996	Leading	0.238	0.999	Leading	0.123	0.999	Leading	0.137	0.995	Leading	0.250	0.998	Leading	0.163
118	FLT118-3PH	0.994	Leading	0.277	0.998	Leading	0.151	0.998	Leading	0.141	0.995	Leading	0.252	0.999	Leading	0.117
119	FLT119-3PH	0.990	Leading	0.349	0.998	Leading	0.145	0.998	Leading	0.154	0.993	Leading	0.302	0.998	Leading	0.161
120	FLT120-3PH	0.998	Leading	0.167	0.999	Leading	0.118	0.999	Leading	0.126	1.000	Leading	0.027	0.998	Leading	0.155
121	FLT121-3PH	0.988	Leading	0.383	0.998	Leading	0.160	0.998	Leading	0.171	0.989	Leading	0.377	0.998	Leading	0.153
126	FLT126-3PH	0.975	Leading	0.564	0.997	Leading	0.192	0.998	Leading	0.169	0.990	Leading	0.358	0.998	Leading	0.166
127	FLT127-3PH	0.992	Leading	0.326	0.998	Leading	0.156	0.999	Leading	0.110	0.996	Leading	0.218	0.999	Leading	0.121

Table 5-8 (continued)
Power Factor Analysis: ASGI-2016-001

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
128	FLT128-3PH	0.987	Leading	0.412	1.000	Lagging	-0.023	0.999	Leading	0.113	0.970	Leading	0.624	1.000	Lagging	-0.028
129	FLT129-3PH	0.995	Leading	0.261	0.996	Lagging	-0.233	0.999	Leading	0.087	0.988	Leading	0.396	0.999	Leading	0.105
130	FLT130-3PH	0.988	Leading	0.398	0.997	Leading	0.188	0.996	Leading	0.211	0.988	Leading	0.386	0.996	Leading	0.224
131	FLT131-3PH	0.984	Leading	0.457	0.988	Leading	0.390	0.998	Leading	0.172	0.990	Leading	0.358	0.994	Leading	0.266
132	FLT132-3PH	0.999	Lagging	-0.099	0.993	Lagging	-0.301	1.000	Lagging	-0.064	0.999	Lagging	-0.105	0.998	Lagging	-0.151
133	FLT133-3PH	0.991	Leading	0.345	0.986	Lagging	-0.417	0.998	Lagging	-0.160	0.991	Leading	0.344	1.000	Lagging	-0.040
140	FLT140-3PH	0.977	Leading	0.550	0.994	Lagging	-0.267	0.992	Lagging	-0.310	0.982	Leading	0.483	0.980	Lagging	-0.505
141	FLT141-3PH	0.982	Lagging	-0.478	0.966	Lagging	-0.665	0.968	Lagging	-0.647	0.985	Lagging	-0.432	0.979	Lagging	-0.523
142	FLT142-3PH	0.991	Leading	0.342	0.989	Lagging	-0.378	0.976	Lagging	-0.556	0.996	Leading	0.222	0.974	Lagging	-0.582
143	FLT143-3PH	0.996	Leading	0.232	0.999	Leading	0.099	1.000	Leading	0.029	0.996	Leading	0.232	1.000	Leading	0.068
144	FLT144-3PH	0.999	Leading	0.097	0.996	Leading	0.213	0.999	Leading	0.109	0.999	Leading	0.087	0.996	Leading	0.228
145	FLT145-3PH	0.983	Leading	0.472	1.000	Leading	0.045	1.000	Lagging	-0.051	0.984	Leading	0.457	0.999	Lagging	-0.098
146	FLT146-3PH	1.000	Leading	0.027	0.997	Leading	0.187	0.999	Leading	0.095	1.000	Leading	0.003	0.999	Leading	0.108
147	FLT147-3PH	0.999	Leading	0.088	1.000	Leading	0.029	1.000	Leading	0.079	1.000	Leading	0.066	0.976	Leading	0.554
148	FLT148-3PH	0.900	Leading	1.211	1.000	Lagging	-0.066	0.999	Lagging	-0.085	0.918	Leading	1.081	0.991	Leading	0.337
157	FLT157-3PH	0.153	Lagging	-16.094	0.209	Lagging	-11.695	0.158	Lagging	-15.621	0.186	Lagging	-13.233	0.129	Lagging	-19.192
158	FLT158-3PH	0.986	Leading	0.419	0.351	Lagging	-6.663	0.232	Lagging	-10.504	0.417	Lagging	-5.456	0.515	Lagging	-4.159
159	FLT159-3PH	0.858	Leading	1.495	0.965	Leading	0.680	1.000	Lagging	-0.066	0.986	Leading	0.417	0.549	Leading	3.811
168	FLT168-3PH	0.989	Leading	0.376	0.998	Leading	0.157	0.998	Leading	0.169	0.990	Leading	0.358	0.998	Leading	0.166
169	FLT169-3PH	0.928	Lagging	-1.003	0.936	Lagging	-0.941	0.932	Lagging	-0.976	0.837	Lagging	-1.634	0.970	Lagging	-0.625
170	FLT170-3PH	0.622	Lagging	-3.148	0.770	Lagging	-2.072	0.617	Lagging	-3.185	0.593	Lagging	-3.399	0.754	Lagging	-2.178
171	FLT171-3PH	0.999	Lagging	-0.099	0.993	Lagging	-0.301	1.000	Lagging	-0.064	0.999	Lagging	-0.105	0.998	Lagging	-0.151
172	FLT172-3PH	0.999	Lagging	-0.123	0.960	Lagging	-0.726	0.984	Lagging	-0.449	1.000	Lagging	-0.033	1.000	Leading	0.011
173	FLT173-3PH	0.991	Leading	0.333	0.984	Lagging	-0.458	0.993	Lagging	-0.306	0.993	Leading	0.307	0.999	Lagging	-0.106
174	FLT174-3PH	0.570	Lagging	-3.600	0.334	Lagging	-7.064	0.305	Lagging	-7.796	0.596	Lagging	-3.366	0.441	Lagging	-5.087
175	FLT175-3PH	0.999	Lagging	-0.092	0.989	Lagging	-0.368	0.989	Lagging	-0.372	0.997	Lagging	-0.188	0.963	Lagging	-0.701
176	FLT176-3PH	0.989	Leading	0.376	0.998	Leading	0.157	1.000	Leading	0.039	0.983	Leading	0.466	0.993	Leading	0.292
184	FLT184-3PH	0.990	Leading	0.355	0.998	Leading	0.170	0.997	Leading	0.182	0.991	Leading	0.332	0.998	Leading	0.172
185	FLT185-3PH	0.989	Leading	0.378	0.998	Leading	0.156	0.998	Leading	0.159	0.992	Leading	0.320	0.998	Leading	0.164
186	FLT186-3PH	0.990	Leading	0.363	0.998	Leading	0.168	0.997	Leading	0.179	0.991	Leading	0.344	0.998	Leading	0.171
187	FLT187-3PH	0.990	Leading	0.350	0.998	Leading	0.161	0.998	Leading	0.175	0.992	Leading	0.326	0.998	Leading	0.165
188	FLT188-3PH	0.991	Leading	0.339	0.986	Leading	0.426	0.990	Leading	0.348	0.982	Leading	0.484	0.989	Leading	0.368
189	FLT189-3PH	0.989	Leading	0.371	0.988	Leading	0.387	0.992	Leading	0.323	0.987	Leading	0.414	0.994	Leading	0.274
190	FLT190-3PH	0.990	Leading	0.365	0.998	Leading	0.162	0.998	Leading	0.174	0.991	Leading	0.347	0.998	Leading	0.169

Study Generator ASGI-2016-001

The Power Factor Analysis shows that ASGI-2016-001 has a power factor range of 0.485 leading to 0.154 lagging for the 2016 Winter Peak conditions, a power factor range of 0.248 leading to 0.147 lagging for the 2017 Summer Peak conditions, a power factor range of 0.251 lagging to 0.140 lagging for the 2020 Summer Peak conditions, a power factor range of 0.552 leading to 0.186 lagging for the 2020 Winter Peak conditions, and a power factor range of 0.315 leading to 0.117 lagging for the 2025 Summer Peak conditions.

Table 5-9
Power Factor Analysis: ASGI-2016-002

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.984	Leading	0.464	0.980	Leading	0.508	0.973	Leading	0.598	0.976	Leading	0.561	0.980	Leading	0.518
1	FLT01-3PH	0.985	Leading	0.437	0.980	Leading	0.509	0.973	Leading	0.597	0.978	Leading	0.545	0.980	Leading	0.512
2	FLT02-3PH	0.982	Leading	0.489	0.980	Leading	0.511	0.975	Leading	0.577	0.974	Leading	0.585	0.982	Leading	0.493
3	FLT03-3PH	0.984	Leading	0.463	0.980	Leading	0.507	0.973	Leading	0.596	0.976	Leading	0.561	0.980	Leading	0.514
4	FLT04-3PH	0.983	Leading	0.471	0.981	Leading	0.505	0.974	Leading	0.587	0.977	Leading	0.558	0.980	Leading	0.509
5	FLT05-3PH	0.985	Leading	0.445	0.983	Leading	0.476	0.976	Leading	0.570	0.979	Leading	0.533	0.981	Leading	0.499
6	FLT06-3PH	0.984	Leading	0.464	0.980	Leading	0.507	0.973	Leading	0.597	0.976	Leading	0.561	0.980	Leading	0.518
7	FLT07-3PH	0.984	Leading	0.463	0.980	Leading	0.508	0.973	Leading	0.599	0.976	Leading	0.562	0.980	Leading	0.519
8	FLT08-3PH	0.984	Leading	0.464	0.980	Leading	0.508	0.973	Leading	0.599	0.976	Leading	0.562	0.980	Leading	0.519
9	FLT09-3PH	0.984	Leading	0.461	0.981	Leading	0.505	0.974	Leading	0.594	0.977	Leading	0.555	0.980	Leading	0.513
10	FLT10-3PH	0.984	Leading	0.464	0.980	Leading	0.508	0.973	Leading	0.598	0.976	Leading	0.561	0.980	Leading	0.518
11	FLT11-3PH	0.983	Leading	0.467	0.981	Leading	0.504	0.975	Leading	0.579	0.977	Leading	0.555	0.981	Leading	0.502
20	FLT20-3PH	0.994	Leading	0.276	0.980	Leading	0.511	0.973	Leading	0.598	0.951	Leading	0.822	0.980	Leading	0.515
21	FLT21-3PH	1.000	Lagging	-0.013	0.980	Leading	0.518	0.973	Leading	0.604	1.000	Lagging	-0.002	0.989	Leading	0.372
22	FLT22-3PH	0.982	Leading	0.492	0.979	Leading	0.530	0.972	Leading	0.615	0.978	Leading	0.546	0.979	Leading	0.525
23	FLT23-3PH	0.998	Leading	0.160	0.975	Leading	0.576	0.969	Leading	0.648	0.996	Leading	0.215	0.988	Leading	0.403
24	FLT24-3PH	0.984	Leading	0.464	0.980	Leading	0.508	0.973	Leading	0.598	0.976	Leading	0.561	0.980	Leading	0.518
26	FLT26-3PH	0.989	Lagging	-0.384	0.980	Leading	0.519	0.992	Leading	0.319	0.989	Lagging	-0.371	0.995	Leading	0.249
35	FLT35-3PH	0.997	Leading	0.197	0.988	Leading	0.399	0.982	Leading	0.482	0.997	Leading	0.187	0.987	Leading	0.414
36	FLT36-3PH	0.995	Leading	0.262	0.986	Leading	0.426	0.980	Leading	0.510	0.994	Leading	0.275	0.985	Leading	0.438
37	FLT37-3PH	0.999	Leading	0.114	0.987	Leading	0.413	0.980	Leading	0.510	0.998	Leading	0.159	0.985	Leading	0.447
38	FLT38-3PH	0.984	Leading	0.457	0.980	Leading	0.511	0.973	Leading	0.601	0.977	Leading	0.555	0.980	Leading	0.513
39	FLT39-3PH	0.982	Leading	0.486	0.984	Leading	0.452	0.977	Leading	0.555	0.975	Leading	0.579	0.980	Leading	0.508
40	FLT40-3PH	0.992	Leading	0.324	0.987	Leading	0.405	0.982	Leading	0.487	0.990	Leading	0.361	0.984	Leading	0.454
41	FLT41-3PH	0.982	Leading	0.487	0.985	Leading	0.448	0.977	Leading	0.553	0.975	Leading	0.580	0.981	Leading	0.505
42	FLT42-3PH	0.984	Lagging	-0.452	0.993	Lagging	-0.299	0.991	Lagging	-0.349	0.989	Lagging	-0.379	1.000	Lagging	-0.004
43	FLT43-3PH	0.989	Leading	0.372	0.976	Leading	0.566	0.972	Leading	0.610	0.976	Leading	0.568	0.980	Leading	0.520
53	FLT53-3PH	0.984	Leading	0.464	0.991	Leading	0.337	0.985	Leading	0.450	0.976	Leading	0.561	0.986	Leading	0.426
54	FLT54-3PH	0.983	Leading	0.466	0.963	Leading	0.707	0.958	Leading	0.757	0.972	Leading	0.617	0.969	Leading	0.646
55	FLT55-3PH	0.985	Leading	0.445	0.989	Leading	0.384	0.981	Leading	0.497	0.978	Leading	0.541	0.984	Leading	0.459
56	FLT56-3PH	0.986	Leading	0.432	0.987	Leading	0.414	0.981	Leading	0.504	0.978	Leading	0.542	0.988	Leading	0.403
57	FLT57-3PH	0.984	Leading	0.458	0.982	Leading	0.491	0.974	Leading	0.592	0.976	Leading	0.559	0.981	Leading	0.495
58	FLT58-3PH	0.984	Leading	0.456	0.988	Leading	0.390	0.981	Leading	0.505	0.977	Leading	0.551	0.983	Leading	0.466
59	FLT59-3PH	0.989	Leading	0.378	0.990	Leading	0.353	0.982	Leading	0.489	0.982	Leading	0.493	0.982	Leading	0.493
60	FLT60-3PH	0.989	Leading	0.376	0.987	Leading	0.415	0.981	Leading	0.502	0.984	Leading	0.460	0.989	Leading	0.371
61	FLT61-3PH	0.986	Leading	0.422	0.983	Leading	0.479	0.976	Leading	0.559	0.978	Leading	0.534	0.982	Leading	0.488
62	FLT62-3PH	0.979	Leading	0.522	0.990	Leading	0.366	0.985	Leading	0.446	0.967	Leading	0.667	0.989	Leading	0.386
63	FLT63-3PH	0.986	Leading	0.425	0.982	Leading	0.481	0.976	Leading	0.562	0.978	Leading	0.536	0.982	Leading	0.491
64	FLT64-3PH	0.984	Leading	0.464	0.983	Leading	0.472	0.976	Leading	0.562	0.978	Leading	0.539	0.981	Leading	0.495
65	FLT65-3PH	0.995	Lagging	-0.262	0.957	Lagging	-0.769	0.951	Lagging	-0.818	0.999	Lagging	-0.122	0.990	Lagging	-0.366
66	FLT66-3PH	0.984	Leading	0.455	0.988	Leading	0.399	0.980	Leading	0.513	0.977	Leading	0.551	0.983	Leading	0.472
67	FLT67-3PH	0.989	Leading	0.375	0.986	Leading	0.427	0.977	Leading	0.557	0.983	Leading	0.476	0.984	Leading	0.465
73	FLT73-3PH	0.984	Leading	0.464	0.980	Leading	0.508	0.973	Leading	0.598	0.976	Leading	0.561	0.980	Leading	0.518
74	FLT74-3PH	0.982	Leading	0.492	0.979	Leading	0.530	0.972	Leading	0.615	0.978	Leading	0.546	0.979	Leading	0.525
75	FLT75-3PH	0.967	Leading	0.670	0.983	Leading	0.472	0.979	Leading	0.526	0.957	Leading	0.768	0.979	Leading	0.530
76	FLT76-3PH	0.984	Leading	0.463	0.965	Lagging	-0.683	0.893	Lagging	-1.275	0.982	Lagging	-0.487	0.998	Lagging	-0.174
84	FLT84-3PH	0.964	Lagging	-0.702	0.873	Lagging	-1.413	0.836	Lagging	-1.661	0.936	Lagging	-0.951	0.713	Lagging	-2.489
85	FLT85-3PH	0.932	Leading	0.984	0.732	Leading	2.354	0.720	Leading	2.438	0.988	Leading	0.400	0.806	Leading	1.859
86	FLT86-3PH	0.900	Lagging	-1.225	0.653	Lagging	-2.932	0.636	Lagging	-3.066	0.817	Lagging	-1.789	0.565	Lagging	-3.698
87	FLT87-3PH	0.960	Leading	0.742	0.963	Leading	0.711	0.948	Leading	0.846	0.967	Leading	0.669	0.966	Leading	0.672
88	FLT88-3PH	0.986	Leading	0.420	0.984	Leading	0.454	0.977	Leading	0.547	0.980	Leading	0.514	0.983	Leading	0.479
89	FLT89-3PH	0.977	Leading	0.549	0.970	Leading	0.631	0.956	Leading	0.774	0.964	Leading	0.697	0.966	Leading	0.674
90	FLT90-3PH	0.986	Leading	0.426	0.984	Leading	0.459	0.977	Leading	0.552	0.980	Leading	0.519	0.982	Leading	0.483
91	FLT91-3PH	0.984	Leading	0.453	0.985	Leading	0.449	0.977	Leading	0.551	0.977	Leading	0.553	0.984	Leading	0.465
92	FLT92-3PH	0.959	Lagging	-0.747	0.899	Lagging	-1.233	0.893	Lagging	-1.273	0.971	Lagging	-0.626	0.887	Lagging	-1.320
93	FLT93-3PH	1.000	Leading	0.065	0.994	Leading	0.281	0.989	Leading	0.385	0.986	Leading	0.434	0.968	Leading	0.652
94	FLT94-3PH	0.998	Leading	0.144	0.975	Leading	0.581	0.987	Leading	0.406	0.980	Leading	0.513	0.999	Lagging	-0.124
95	FLT95-3PH	0.984	Leading	0.464	1.000	Lagging	-0.038	0.999	Leading	0.137	0.996	Leading	0.223	0.991	Leading	0.341
100	FLT100-3PH	0.883	Lagging	-1.346	0.773	Lagging	-2.076	0.753	Lagging	-2.212	0.898	Lagging	-1.241	0.718	Lagging	-2.455
101	FLT101-3PH	0.956	Leading	0.778	0.932	Leading	0.983	0.911	Leading	1.149	0.939	Leading	0.930	0.918	Leading	1.095
104	FLT104-3PH	0.986	Leading	0.422	0.980	Leading	0.516	0.974	Leading	0.590	0.980	Leading	0.519	0.979	Leading	0.525
105	FLT105-3PH	0.994	Leading	0.281	0.983	Leading	0.473	0.976	Leading	0.559	0.990	Leading	0.364	0.983	Leading	0.475
106	FLT106-3PH	0.984	Leading	0.462	0.981	Leading	0.507	0.973	Leading	0.596	0.976	Leading	0.560	0.980	Leading	0.516
107	FLT107-3PH	0.987	Leading	0.415	0.980	Leading	0.518	0.974	Leading	0.589	0.980	Leading	0.515	0.979	Leading	0.528
108	FLT108-3PH	0.984	Leading	0.454	0.980	Leading	0.510	0.974	Leading	0.594	0.977	Leading	0.557	0.980	Leading	0.518
109	FLT109-3PH	0.994	Leading	0.268	0.983	Leading	0.472	0.976	Leading	0.558	0.991	Leading	0.349	0.983	Leading	0.475
110	FLT110-3PH	0.994	Leading	0.281	0.983	Leading	0.473	0.976	Leading	0.559	0.990	Leading	0.364	0.983	Leading	0.475
111	FLT111-3PH	0.984	Leading	0.457	0.980	Leading	0.508	0.973	Leading	0.598	0.977	Leading	0.554	0.980	Leading	0.517
117	FLT117-3PH	0.985	Leading	0.440	0.981	Leading	0.503	0.974	Leading	0.593	0.978	Leading	0.543	0.980	Leading	0.518
118	FLT118-3PH	0.985	Leading	0.446	0.981	Leading	0.507	0.974	Leading	0.594	0.978	Leading	0.543	0.980	Leading	0.511
119	FLT119-3PH	0.984	Leading	0.459	0.981	Leading	0.506	0.973	Leading	0.596	0.977	Leading	0.552	0.980	Leading	0.518
120	FLT120-3PH	0.986	Leading	0.427	0.981	Leading	0.501	0.974	Leading	0.591	0.981	Leading	0.503	0.980	Leading	0.517
121	FLT121-3PH	0.984	Leading	0.465	0.980	Leading	0.509	0.973	Leading	0.598	0.976	Leading	0.565	0.980	Leading	0.516
126	FLT126-3PH	0.981	Leading	0.496	0.980	Leading	0.514	0.973	Leading	0.598	0.976	Leading	0.561	0.980	Leading	0.518
127	FLT127-3PH	0.984	Leading	0.455	0.980	Leading	0.508	0.974	Leading	0.588	0.978	Leading	0.536	0.980	Leading	0.511

Table 5-9 (continued)
Power Factor Analysis: ASGI-2016-002

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
128	FLT128-3PH	0.983	Leading	0.470	0.983	Leading	0.477	0.974	Leading	0.588	0.972	Leading	0.610	0.982	Leading	0.486
129	FLT129-3PH	0.985	Leading	0.442	0.985	Leading	0.439	0.974	Leading	0.584	0.976	Leading	0.568	0.980	Leading	0.508
130	FLT130-3PH	0.983	Leading	0.468	0.980	Leading	0.514	0.973	Leading	0.606	0.976	Leading	0.567	0.979	Leading	0.528
131	FLT131-3PH	0.983	Leading	0.479	0.977	Leading	0.548	0.973	Leading	0.599	0.976	Leading	0.561	0.978	Leading	0.535
132	FLT132-3PH	0.989	Leading	0.375	0.986	Leading	0.427	0.977	Leading	0.557	0.983	Leading	0.476	0.984	Leading	0.465
133	FLT133-3PH	0.984	Leading	0.457	0.987	Leading	0.407	0.978	Leading	0.540	0.977	Leading	0.557	0.982	Leading	0.483
140	FLT140-3PH	0.982	Leading	0.493	0.985	Leading	0.437	0.980	Leading	0.518	0.975	Leading	0.581	0.987	Leading	0.415
141	FLT141-3PH	0.992	Leading	0.320	0.989	Leading	0.375	0.984	Leading	0.465	0.986	Leading	0.425	0.987	Leading	0.413
142	FLT142-3PH	0.984	Leading	0.457	0.987	Leading	0.419	0.983	Leading	0.477	0.978	Leading	0.537	0.988	Leading	0.402
143	FLT143-3PH	0.985	Leading	0.439	0.981	Leading	0.498	0.975	Leading	0.575	0.978	Leading	0.539	0.981	Leading	0.503
144	FLT144-3PH	0.987	Leading	0.415	0.980	Leading	0.518	0.974	Leading	0.589	0.980	Leading	0.515	0.979	Leading	0.528
145	FLT145-3PH	0.982	Leading	0.480	0.982	Leading	0.490	0.976	Leading	0.562	0.975	Leading	0.578	0.983	Leading	0.477
146	FLT146-3PH	0.988	Leading	0.403	0.980	Leading	0.513	0.974	Leading	0.586	0.981	Leading	0.500	0.980	Leading	0.509
147	FLT147-3PH	0.987	Leading	0.411	0.982	Leading	0.487	0.974	Leading	0.584	0.980	Leading	0.509	0.975	Leading	0.579
148	FLT148-3PH	0.972	Leading	0.608	0.983	Leading	0.470	0.977	Leading	0.555	0.965	Leading	0.686	0.978	Leading	0.545
157	FLT157-3PH	0.691	Lagging	-2.646	0.844	Lagging	-1.606	0.750	Lagging	-2.231	0.793	Lagging	-1.945	0.672	Lagging	-2.787
158	FLT158-3PH	0.984	Leading	0.463	0.965	Lagging	-0.683	0.893	Lagging	-1.275	0.982	Lagging	-0.487	0.998	Lagging	-0.174
159	FLT159-3PH	0.970	Leading	0.631	0.974	Leading	0.591	0.978	Leading	0.543	0.976	Leading	0.559	0.918	Leading	1.094
168	FLT168-3PH	0.984	Leading	0.464	0.980	Leading	0.508	0.973	Leading	0.598	0.976	Leading	0.561	0.980	Leading	0.518
169	FLT169-3PH	0.996	Leading	0.215	0.992	Leading	0.315	0.988	Leading	0.397	0.997	Leading	0.198	0.989	Leading	0.387
170	FLT170-3PH	0.997	Lagging	-0.191	0.999	Leading	0.117	1.000	Leading	0.005	0.999	Lagging	-0.138	0.999	Leading	0.117
171	FLT171-3PH	0.989	Leading	0.375	0.986	Leading	0.427	0.977	Leading	0.557	0.983	Leading	0.476	0.984	Leading	0.465
172	FLT172-3PH	0.989	Leading	0.378	0.990	Leading	0.353	0.982	Leading	0.489	0.982	Leading	0.493	0.982	Leading	0.493
173	FLT173-3PH	0.984	Leading	0.455	0.988	Leading	0.399	0.980	Leading	0.513	0.977	Leading	0.551	0.983	Leading	0.472
174	FLT174-3PH	0.995	Lagging	-0.262	0.957	Lagging	-0.769	0.951	Lagging	-0.818	0.999	Lagging	-0.122	0.990	Lagging	-0.366
175	FLT175-3PH	0.989	Leading	0.376	0.987	Leading	0.415	0.981	Leading	0.502	0.984	Leading	0.460	0.989	Leading	0.371
176	FLT176-3PH	0.984	Leading	0.464	0.980	Leading	0.508	0.975	Leading	0.575	0.975	Leading	0.580	0.978	Leading	0.538
184	FLT184-3PH	0.984	Leading	0.460	0.980	Leading	0.510	0.973	Leading	0.600	0.977	Leading	0.557	0.980	Leading	0.519
185	FLT185-3PH	0.984	Leading	0.464	0.980	Leading	0.508	0.973	Leading	0.596	0.977	Leading	0.555	0.980	Leading	0.518
186	FLT186-3PH	0.984	Leading	0.462	0.980	Leading	0.510	0.973	Leading	0.600	0.976	Leading	0.559	0.980	Leading	0.519
187	FLT187-3PH	0.984	Leading	0.459	0.980	Leading	0.509	0.973	Leading	0.599	0.977	Leading	0.556	0.980	Leading	0.518
188	FLT188-3PH	0.984	Leading	0.459	0.977	Leading	0.556	0.970	Leading	0.630	0.974	Leading	0.586	0.977	Leading	0.553
189	FLT189-3PH	0.984	Leading	0.464	0.977	Leading	0.549	0.971	Leading	0.626	0.975	Leading	0.573	0.978	Leading	0.537
190	FLT190-3PH	0.984	Leading	0.462	0.980	Leading	0.509	0.973	Leading	0.599	0.976	Leading	0.559	0.980	Leading	0.519

Study Generator ASGI-2016-002

The Power Factor Analysis shows that ASGI-2016-002 has a power factor range of 0.932 leading to 0.691 lagging for the 2016 Winter Peak conditions, a power factor range of 0.732 leading to 0.653 lagging for the 2017 Summer Peak conditions, a power factor range of 0.720 lagging to 0.636 lagging for the 2020 Summer Peak conditions, a power factor range of 0.939 leading to 0.793 lagging for the 2020 Winter Peak conditions, and a power factor range of 0.806 leading to 0.565 lagging for the 2025 Summer Peak conditions.

Table 5-10
Power Factor Analysis: GEN-2016-002

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.988	Leading	11.500	0.995	Leading	7.514	0.994	Leading	8.475	0.987	Leading	12.014	0.992	Leading	9.334
1	FLT01-3PH	0.989	Leading	10.950	0.995	Leading	7.456	0.994	Leading	8.441	0.988	Leading	11.792	0.992	Leading	9.182
2	FLT02-3PH	0.987	Leading	11.926	0.994	Leading	8.110	0.994	Leading	7.862	0.986	Leading	12.438	0.992	Leading	9.214
3	FLT03-3PH	0.988	Leading	11.496	0.995	Leading	7.478	0.994	Leading	8.445	0.987	Leading	12.011	0.992	Leading	9.259
4	FLT04-3PH	0.988	Leading	11.628	0.995	Leading	7.328	0.994	Leading	8.340	0.987	Leading	12.075	0.992	Leading	9.394
5	FLT05-3PH	0.987	Leading	12.204	0.995	Leading	7.372	0.993	Leading	8.489	0.986	Leading	12.568	0.992	Leading	9.228
6	FLT06-3PH	0.988	Leading	11.498	0.995	Leading	7.515	0.994	Leading	8.474	0.987	Leading	12.026	0.992	Leading	9.325
7	FLT07-3PH	0.988	Leading	11.527	0.995	Leading	7.544	0.993	Leading	8.532	0.987	Leading	12.051	0.992	Leading	9.365
8	FLT08-3PH	0.988	Leading	11.530	0.995	Leading	7.550	0.993	Leading	8.542	0.987	Leading	12.056	0.992	Leading	9.373
9	FLT09-3PH	0.988	Leading	11.398	0.995	Leading	7.411	0.994	Leading	8.380	0.987	Leading	11.904	0.992	Leading	9.234
10	FLT10-3PH	0.988	Leading	11.500	0.995	Leading	7.505	0.994	Leading	8.472	0.987	Leading	12.011	0.992	Leading	9.331
11	FLT11-3PH	0.988	Leading	11.567	0.995	Leading	7.199	0.994	Leading	8.232	0.987	Leading	12.022	0.992	Leading	9.369
20	FLT20-3PH	0.991	Leading	10.124	0.996	Leading	6.725	0.994	Leading	8.028	0.986	Leading	12.553	0.992	Leading	9.117
21	FLT21-3PH	0.998	Leading	4.775	1.000	Leading	1.894	0.999	Leading	3.128	0.998	Leading	5.117	0.996	Leading	6.937
22	FLT22-3PH	0.993	Leading	8.566	0.999	Leading	3.724	0.998	Leading	4.760	0.993	Leading	8.595	0.994	Leading	8.052
23	FLT23-3PH	0.992	Leading	9.542	0.995	Leading	7.319	0.994	Leading	8.220	0.991	Leading	10.078	0.994	Leading	8.476
24	FLT24-3PH	0.988	Leading	11.500	0.995	Leading	7.514	0.994	Leading	8.475	0.987	Leading	12.014	0.992	Leading	9.334
26	FLT26-3PH	1.000	Leading	0.111	1.000	Lagging	-1.984	1.000	Lagging	-1.847	1.000	Leading	0.066	0.998	Leading	5.148
35	FLT35-3PH	0.997	Leading	5.451	0.999	Lagging	-3.235	0.998	Lagging	-4.420	0.998	Leading	4.302	0.998	Leading	4.497
36	FLT36-3PH	0.995	Leading	7.383	1.000	Leading	0.071	1.000	Lagging	-0.539	0.996	Leading	6.516	0.997	Leading	5.866
37	FLT37-3PH	0.999	Leading	4.047	0.999	Leading	2.621	0.999	Leading	3.671	0.997	Leading	5.289	0.996	Leading	6.444
38	FLT38-3PH	0.989	Leading	11.148	0.995	Leading	7.261	0.994	Leading	8.105	0.988	Leading	11.635	0.993	Leading	8.778
39	FLT39-3PH	0.987	Leading	12.059	0.995	Leading	7.456	0.993	Leading	8.665	0.986	Leading	12.667	0.992	Leading	9.583
40	FLT40-3PH	0.992	Leading	9.376	0.999	Leading	4.018	0.999	Leading	2.548	0.992	Leading	9.501	0.996	Leading	7.023
41	FLT41-3PH	0.987	Leading	12.100	0.995	Leading	7.462	0.993	Leading	8.687	0.986	Leading	12.714	0.992	Leading	9.575
42	FLT42-3PH	0.992	Leading	9.296	0.996	Leading	6.704	0.995	Leading	7.560	0.991	Leading	9.959	0.993	Leading	8.843
43	FLT43-3PH	0.992	Leading	9.576	0.992	Leading	9.486	0.993	Leading	8.902	0.987	Leading	12.143	0.992	Leading	9.418
53	FLT53-3PH	0.988	Leading	11.514	0.995	Leading	7.460	0.994	Leading	8.435	0.987	Leading	12.022	0.992	Leading	9.299
54	FLT54-3PH	0.988	Leading	11.545	0.995	Leading	7.570	0.993	Leading	8.549	0.987	Leading	12.053	0.992	Leading	9.373
55	FLT55-3PH	0.988	Leading	11.491	0.995	Leading	7.477	0.994	Leading	8.448	0.987	Leading	11.990	0.992	Leading	9.314
56	FLT56-3PH	0.988	Leading	11.505	0.995	Leading	7.328	0.994	Leading	8.267	0.987	Leading	11.880	0.992	Leading	9.229
57	FLT57-3PH	0.988	Leading	11.472	0.995	Leading	7.438	0.994	Leading	8.439	0.987	Leading	11.973	0.992	Leading	9.302
58	FLT58-3PH	0.988	Leading	11.506	0.995	Leading	7.483	0.994	Leading	8.455	0.987	Leading	12.004	0.992	Leading	9.320
59	FLT59-3PH	0.990	Leading	10.702	0.995	Leading	7.566	0.994	Leading	8.469	0.988	Leading	11.453	0.992	Leading	9.277
60	FLT60-3PH	0.988	Leading	11.477	0.995	Leading	7.468	0.994	Leading	8.423	0.987	Leading	11.971	0.992	Leading	9.293
61	FLT61-3PH	0.988	Leading	11.464	0.995	Leading	7.500	0.994	Leading	8.451	0.987	Leading	11.990	0.992	Leading	9.321
62	FLT62-3PH	0.988	Leading	11.549	0.995	Leading	7.519	0.994	Leading	8.474	0.987	Leading	12.087	0.992	Leading	9.329
63	FLT63-3PH	0.988	Leading	11.467	0.995	Leading	7.501	0.994	Leading	8.453	0.987	Leading	11.992	0.992	Leading	9.322
64	FLT64-3PH	0.988	Leading	11.500	0.995	Leading	7.496	0.994	Leading	8.456	0.987	Leading	11.993	0.992	Leading	9.324
65	FLT65-3PH	0.988	Leading	11.551	0.994	Leading	7.926	0.993	Leading	8.651	0.987	Leading	12.068	0.992	Leading	9.429
66	FLT66-3PH	0.988	Leading	11.505	0.995	Leading	7.485	0.994	Leading	8.456	0.987	Leading	12.002	0.992	Leading	9.322
67	FLT67-3PH	0.988	Leading	11.488	0.995	Leading	7.480	0.993	Leading	8.486	0.987	Leading	11.990	0.992	Leading	9.341
73	FLT73-3PH	0.988	Leading	11.500	0.995	Leading	7.514	0.994	Leading	8.475	0.987	Leading	12.014	0.992	Leading	9.334
74	FLT74-3PH	0.993	Leading	8.566	0.999	Leading	3.724	0.998	Leading	4.760	0.993	Leading	8.595	0.994	Leading	8.052
75	FLT75-3PH	0.985	Leading	12.912	0.992	Leading	9.245	0.990	Leading	10.657	0.984	Leading	13.546	0.990	Leading	10.606
76	FLT76-3PH	0.989	Leading	10.817	0.995	Leading	7.228	0.994	Leading	8.117	0.987	Leading	12.078	0.991	Leading	9.872
84	FLT84-3PH	0.988	Leading	11.409	0.995	Leading	7.443	0.994	Leading	8.402	0.987	Leading	11.939	0.992	Leading	9.147
85	FLT85-3PH	0.988	Leading	11.628	0.995	Leading	7.586	0.993	Leading	8.557	0.987	Leading	12.087	0.992	Leading	9.438
86	FLT86-3PH	0.988	Leading	11.476	0.995	Leading	7.326	0.994	Leading	8.313	0.987	Leading	11.980	0.993	Leading	9.002
87	FLT87-3PH	0.988	Leading	11.587	0.995	Leading	7.590	0.993	Leading	8.563	0.987	Leading	12.138	0.992	Leading	9.392
88	FLT88-3PH	0.988	Leading	11.469	0.995	Leading	7.506	0.994	Leading	8.475	0.987	Leading	11.990	0.992	Leading	9.333
89	FLT89-3PH	0.988	Leading	11.498	0.995	Leading	7.520	0.993	Leading	8.495	0.987	Leading	12.036	0.992	Leading	9.350
90	FLT90-3PH	0.988	Leading	11.472	0.995	Leading	7.508	0.994	Leading	8.478	0.987	Leading	11.994	0.992	Leading	9.334
91	FLT91-3PH	0.988	Leading	11.498	0.995	Leading	7.490	0.994	Leading	8.457	0.987	Leading	12.009	0.992	Leading	9.320
92	FLT92-3PH	0.988	Leading	11.588	0.995	Leading	7.656	0.993	Leading	8.596	0.987	Leading	12.133	0.992	Leading	9.469
93	FLT93-3PH	0.989	Leading	10.839	0.996	Leading	6.639	0.994	Leading	7.816	0.988	Leading	11.495	0.992	Leading	9.270
94	FLT94-3PH	0.988	Leading	11.353	0.995	Leading	7.237	0.994	Leading	8.355	0.988	Leading	11.739	0.992	Leading	9.133
95	FLT95-3PH	0.988	Leading	11.500	0.995	Leading	7.237	0.994	Leading	8.251	0.987	Leading	12.021	0.992	Leading	9.510
100	FLT100-3PH	0.988	Leading	11.580	0.995	Leading	7.670	0.993	Leading	8.610	0.987	Leading	12.129	0.992	Leading	9.513
101	FLT101-3PH	0.988	Leading	11.399	0.995	Leading	7.292	0.994	Leading	8.250	0.987	Leading	11.874	0.992	Leading	9.230
104	FLT104-3PH	0.997	Leading	6.107	1.000	Lagging	-0.311	1.000	Leading	1.598	0.997	Leading	5.658	1.000	Leading	1.568
105	FLT105-3PH	0.985	Leading	12.812	0.994	Leading	8.046	0.995	Leading	7.581	0.983	Leading	13.693	1.000	Leading	1.274
106	FLT106-3PH	0.989	Leading	11.145	0.996	Leading	6.264	0.995	Leading	7.135	0.988	Leading	11.607	0.994	Leading	7.829
107	FLT107-3PH	0.997	Leading	5.708	0.999	Lagging	-3.732	1.000	Leading	1.037	0.997	Leading	5.526	1.000	Lagging	-1.749
108	FLT108-3PH	0.987	Leading	12.242	0.990	Leading	10.439	0.992	Leading	9.313	0.986	Leading	12.548	0.986	Leading	12.295
109	FLT109-3PH	0.981	Leading	14.723	0.992	Leading	9.518	0.993	Leading	8.708	0.980	Leading	15.159	1.000	Leading	1.560
110	FLT110-3PH	0.985	Leading	12.812	0.994	Leading	8.046	0.995	Leading	7.581	0.983	Leading	13.693	1.000	Leading	1.274
111	FLT111-3PH	0.987	Leading	12.050	0.993	Leading	8.729	0.991	Leading	9.838	0.986	Leading	12.717	0.989	Leading	11.035
117	FLT117-3PH	0.992	Leading	9.414	0.998	Leading	4.378	0.997	Leading	6.146	0.992	Leading	9.433	0.990	Leading	10.651
118	FLT118-3PH	0.987	Leading	12.066	0.993	Leading	8.565	0.992	Leading	9.612	0.986	Leading	12.641	0.991	Leading	9.986
119	FLT119-3PH	0.982	Leading	14.178	0.994	Leading	8.189	0.992	Leading	9.241	0.984	Leading	13.276	0.985	Leading	12.878
120	FLT120-3PH	0.986	Leading	12.509	0.992	Leading	9.681	0.993	Leading	8.751	0.989	Leading	11.132	0.992	Leading	9.528
121	FLT121-3PH	0.987	Leading	12.233	0.995	Leading	7.467	0.994	Leading	8.306	0.984	Leading	13.483	0.997	Leading	6.163
126	FLT126-3PH	0.987	Leading	11.904	0.994	Leading	7.813	0.994	Leading	8.475	0.987	Leading	12.014	0.992	Leading	9.334
127	FLT127-3PH	0.988	Leading	11.448	0.995	Leading	7.491	0.994	Leading	8.394	0.987	Leading	11.884	0.992	Leading	9.302

Table 5-10 (continued)
Power Factor Analysis: GEN-2016-002

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
128	FLT128-3PH	0.988	Leading	11.512	0.995	Leading	7.490	0.994	Leading	8.465	0.987	Leading	12.065	0.992	Leading	9.305
129	FLT129-3PH	0.988	Leading	11.593	0.995	Leading	7.626	0.993	Leading	8.483	0.987	Leading	12.007	0.992	Leading	9.325
130	FLT130-3PH	0.988	Leading	11.498	0.995	Leading	7.512	0.994	Leading	8.473	0.987	Leading	12.009	0.992	Leading	9.332
131	FLT131-3PH	0.988	Leading	11.573	0.995	Leading	7.644	0.994	Leading	8.477	0.987	Leading	12.015	0.992	Leading	9.398
132	FLT132-3PH	0.988	Leading	11.488	0.995	Leading	7.480	0.993	Leading	8.486	0.987	Leading	11.990	0.992	Leading	9.341
133	FLT133-3PH	0.988	Leading	11.626	0.994	Leading	7.979	0.993	Leading	8.614	0.987	Leading	12.277	0.992	Leading	9.352
140	FLT140-3PH	0.984	Leading	13.205	0.964	Lagging	-20.519	0.972	Lagging	-17.998	0.986	Leading	12.628	0.934	Lagging	-28.292
141	FLT141-3PH	0.991	Leading	9.909	0.978	Lagging	-15.717	0.984	Lagging	-13.514	0.992	Leading	9.205	0.962	Lagging	-21.052
142	FLT142-3PH	0.990	Leading	10.562	0.993	Leading	8.625	0.994	Leading	7.809	0.989	Leading	11.308	0.985	Leading	13.156
143	FLT143-3PH	0.994	Leading	7.982	0.998	Leading	4.633	0.999	Leading	2.833	0.993	Leading	8.631	0.998	Leading	4.550
144	FLT144-3PH	0.997	Leading	5.708	0.999	Lagging	-3.732	1.000	Leading	1.037	0.997	Leading	5.526	1.000	Lagging	-1.749
145	FLT145-3PH	0.990	Leading	10.676	0.992	Leading	9.373	0.993	Leading	8.973	0.989	Leading	11.030	0.983	Leading	13.821
146	FLT146-3PH	0.995	Leading	7.129	0.982	Leading	14.100	0.992	Leading	9.628	0.995	Leading	7.657	0.971	Leading	18.056
147	FLT147-3PH	0.994	Leading	8.227	1.000	Leading	0.916	1.000	Leading	0.678	0.992	Leading	9.134	0.998	Leading	4.812
148	FLT148-3PH	0.985	Leading	12.742	0.995	Leading	7.718	0.996	Leading	7.018	0.988	Leading	11.810	0.991	Leading	9.976
157	FLT157-3PH	0.988	Leading	11.442	0.995	Leading	7.405	0.994	Leading	8.196	0.988	Leading	11.791	0.993	Leading	8.998
158	FLT158-3PH	0.989	Leading	10.817	0.995	Leading	7.228	0.994	Leading	8.117	0.987	Leading	12.078	0.991	Leading	9.872
159	FLT159-3PH	0.988	Leading	11.665	0.995	Leading	7.389	0.994	Leading	8.173	0.988	Leading	11.739	0.992	Leading	9.616
168	FLT168-3PH	0.988	Leading	11.500	0.995	Leading	7.514	0.994	Leading	8.475	0.987	Leading	12.014	0.992	Leading	9.334
169	FLT169-3PH	0.989	Leading	11.178	0.995	Leading	7.322	0.994	Leading	8.236	0.988	Leading	11.494	0.992	Leading	9.194
170	FLT170-3PH	0.987	Leading	11.984	0.995	Leading	7.132	0.994	Leading	7.928	0.987	Leading	12.221	0.992	Leading	9.354
171	FLT171-3PH	0.988	Leading	11.488	0.995	Leading	7.480	0.993	Leading	8.486	0.987	Leading	11.990	0.992	Leading	9.341
172	FLT172-3PH	0.990	Leading	10.702	0.995	Leading	7.566	0.994	Leading	8.469	0.988	Leading	11.453	0.992	Leading	9.277
173	FLT173-3PH	0.988	Leading	11.505	0.995	Leading	7.485	0.994	Leading	8.456	0.987	Leading	12.002	0.992	Leading	9.322
174	FLT174-3PH	0.988	Leading	11.551	0.994	Leading	7.926	0.993	Leading	8.651	0.987	Leading	12.068	0.992	Leading	9.429
175	FLT175-3PH	0.988	Leading	11.477	0.995	Leading	7.468	0.994	Leading	8.423	0.987	Leading	11.971	0.992	Leading	9.293
176	FLT176-3PH	0.988	Leading	11.500	0.995	Leading	7.514	0.993	Leading	8.827	0.987	Leading	12.266	0.992	Leading	9.507
184	FLT184-3PH	0.988	Leading	11.454	0.995	Leading	7.492	0.994	Leading	8.462	0.987	Leading	11.960	0.992	Leading	9.323
185	FLT185-3PH	0.988	Leading	11.503	0.995	Leading	7.516	0.994	Leading	8.452	0.987	Leading	11.966	0.992	Leading	9.330
186	FLT186-3PH	0.988	Leading	11.470	0.995	Leading	7.500	0.994	Leading	8.466	0.987	Leading	11.981	0.992	Leading	9.327
187	FLT187-3PH	0.988	Leading	11.452	0.995	Leading	7.488	0.994	Leading	8.457	0.987	Leading	11.958	0.992	Leading	9.319
188	FLT188-3PH	0.989	Leading	10.812	0.995	Leading	7.290	0.994	Leading	8.328	0.988	Leading	11.568	0.992	Leading	9.132
189	FLT189-3PH	0.989	Leading	11.039	0.995	Leading	7.350	0.994	Leading	8.288	0.988	Leading	11.624	0.992	Leading	9.230
190	FLT190-3PH	0.988	Leading	11.477	0.995	Leading	7.505	0.994	Leading	8.471	0.987	Leading	11.992	0.992	Leading	9.330

Study Generator GEN-2016-002

The Power Factor Analysis shows that GEN-2016-002 has a power factor range of 0.981 leading to 0.999 lagging for the 2016 Winter Peak conditions, a power factor range of 0.982 leading to 0.964 lagging for the 2017 Summer Peak conditions, a power factor range of 0.990 lagging to 0.972 lagging for the 2020 Summer Peak conditions, a power factor range of 0.980 leading to 1.0 unity for the 2020 Winter Peak conditions, and a power factor range of 0.971 leading to 0.934 lagging for the 2025 Summer Peak conditions.

Table 5-11
Power Factor Analysis: ASGI-2016-004

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.997	Lagging	-0.758	0.978	Lagging	-2.148	0.982	Lagging	-1.899	0.995	Lagging	-0.972	0.991	Lagging	-1.342
1	FLT01-3PH	0.994	Lagging	-1.067	0.978	Lagging	-2.124	0.983	Lagging	-1.886	0.994	Lagging	-1.074	0.990	Lagging	-1.399
2	FLT02-3PH	0.999	Lagging	-0.466	0.985	Lagging	-1.749	0.986	Lagging	-1.697	0.997	Lagging	-0.732	0.991	Lagging	-1.381
3	FLT03-3PH	0.997	Lagging	-0.762	0.977	Lagging	-2.198	0.982	Lagging	-1.942	0.995	Lagging	-0.976	0.991	Lagging	-1.388
4	FLT04-3PH	0.998	Lagging	-0.692	0.973	Lagging	-2.366	0.980	Lagging	-2.035	0.996	Lagging	-0.937	0.991	Lagging	-1.339
5	FLT05-3PH	0.997	Leading	0.801	0.984	Lagging	-1.787	0.992	Lagging	-1.254	0.999	Leading	0.512	0.993	Lagging	-1.172
6	FLT06-3PH	0.997	Lagging	-0.762	0.978	Lagging	-2.148	0.982	Lagging	-1.903	0.995	Lagging	-0.954	0.991	Lagging	-1.350
7	FLT07-3PH	0.997	Lagging	-0.713	0.979	Lagging	-2.098	0.984	Lagging	-1.803	0.996	Lagging	-0.910	0.992	Lagging	-1.306
8	FLT08-3PH	0.998	Lagging	-0.707	0.979	Lagging	-2.087	0.984	Lagging	-1.785	0.996	Lagging	-0.902	0.992	Lagging	-1.297
9	FLT09-3PH	0.996	Lagging	-0.918	0.974	Lagging	-2.316	0.980	Lagging	-2.056	0.993	Lagging	-1.150	0.990	Lagging	-1.440
10	FLT10-3PH	0.997	Lagging	-0.758	0.977	Lagging	-2.161	0.982	Lagging	-1.904	0.995	Lagging	-0.977	0.991	Lagging	-1.345
11	FLT11-3PH	0.997	Lagging	-0.739	0.971	Lagging	-2.478	0.978	Lagging	-2.134	0.995	Lagging	-0.984	0.991	Lagging	-1.368
20	FLT20-3PH	0.970	Lagging	-2.495	0.949	Lagging	-3.338	0.969	Lagging	-2.566	0.998	Lagging	-0.601	0.988	Lagging	-1.558
21	FLT21-3PH	0.701	Lagging	-10.181	0.685	Lagging	-10.640	0.710	Lagging	-9.918	0.685	Lagging	-10.621	0.944	Lagging	-3.511
22	FLT22-3PH	0.884	Lagging	-5.291	0.793	Lagging	-7.680	0.811	Lagging	-7.203	0.852	Lagging	-6.147	0.966	Lagging	-2.692
23	FLT23-3PH	0.960	Lagging	-2.934	0.973	Lagging	-2.392	0.976	Lagging	-2.223	0.956	Lagging	-3.067	0.982	Lagging	-1.939
24	FLT24-3PH	0.997	Lagging	-0.758	0.978	Lagging	-2.148	0.982	Lagging	-1.899	0.995	Lagging	-0.972	0.991	Lagging	-1.342
26	FLT26-3PH	0.514	Lagging	-16.694	0.518	Lagging	-16.508	0.511	Lagging	-16.807	0.490	Lagging	-17.787	0.891	Lagging	-5.089
35	FLT35-3PH	0.791	Lagging	-7.726	0.521	Lagging	-16.373	0.459	Lagging	-19.378	0.690	Lagging	-10.480	0.829	Lagging	-6.739
36	FLT36-3PH	0.887	Lagging	-5.219	0.661	Lagging	-11.364	0.592	Lagging	-13.599	0.801	Lagging	-7.483	0.892	Lagging	-5.062
37	FLT37-3PH	0.795	Lagging	-7.631	0.858	Lagging	-5.996	0.863	Lagging	-5.859	0.813	Lagging	-7.153	0.928	Lagging	-4.027
38	FLT38-3PH	0.993	Lagging	-1.197	0.971	Lagging	-2.472	0.970	Lagging	-2.496	0.989	Lagging	-1.500	0.976	Lagging	-2.211
39	FLT39-3PH	1.000	Lagging	-0.050	0.978	Lagging	-2.117	0.988	Lagging	-1.595	1.000	Lagging	-0.135	0.994	Lagging	-1.086
40	FLT40-3PH	0.986	Lagging	-1.700	0.913	Lagging	-4.471	0.846	Lagging	-6.299	0.976	Lagging	-2.211	0.972	Lagging	-2.409
41	FLT41-3PH	1.000	Leading	0.002	0.979	Lagging	-2.104	0.988	Lagging	-1.563	1.000	Lagging	-0.074	0.994	Lagging	-1.085
42	FLT42-3PH	0.945	Lagging	-3.470	0.950	Lagging	-3.274	0.954	Lagging	-3.159	0.944	Lagging	-3.512	0.986	Lagging	-1.709
43	FLT43-3PH	0.975	Lagging	-2.292	0.999	Lagging	-0.513	0.993	Lagging	-1.152	0.996	Lagging	-0.862	0.993	Lagging	-1.163
53	FLT53-3PH	0.997	Lagging	-0.745	0.977	Lagging	-2.199	0.982	Lagging	-1.933	0.995	Lagging	-0.968	0.991	Lagging	-1.362
54	FLT54-3PH	0.997	Lagging	-0.709	0.979	Lagging	-2.092	0.984	Lagging	-1.817	0.996	Lagging	-0.926	0.992	Lagging	-1.311
55	FLT55-3PH	0.997	Lagging	-0.772	0.977	Lagging	-2.181	0.982	Lagging	-1.922	0.995	Lagging	-1.006	0.991	Lagging	-1.354
56	FLT56-3PH	0.997	Lagging	-0.776	0.972	Lagging	-2.414	0.977	Lagging	-2.196	0.993	Lagging	-1.199	0.990	Lagging	-1.428
57	FLT57-3PH	0.997	Lagging	-0.799	0.975	Lagging	-2.258	0.981	Lagging	-1.951	0.995	Lagging	-1.038	0.991	Lagging	-1.368
58	FLT58-3PH	0.997	Lagging	-0.758	0.977	Lagging	-2.174	0.982	Lagging	-1.914	0.995	Lagging	-0.993	0.991	Lagging	-1.350
59	FLT59-3PH	0.985	Lagging	-1.769	0.980	Lagging	-2.054	0.983	Lagging	-1.891	0.986	Lagging	-1.700	0.991	Lagging	-1.385
60	FLT60-3PH	0.997	Lagging	-0.785	0.976	Lagging	-2.220	0.981	Lagging	-1.980	0.995	Lagging	-1.026	0.991	Lagging	-1.372
61	FLT61-3PH	0.997	Lagging	-0.798	0.977	Lagging	-2.165	0.982	Lagging	-1.930	0.995	Lagging	-1.001	0.991	Lagging	-1.351
62	FLT62-3PH	0.998	Lagging	-0.707	0.978	Lagging	-2.146	0.982	Lagging	-1.905	0.996	Lagging	-0.900	0.991	Lagging	-1.335
63	FLT63-3PH	0.997	Lagging	-0.795	0.977	Lagging	-2.163	0.982	Lagging	-1.927	0.995	Lagging	-0.999	0.991	Lagging	-1.350
64	FLT64-3PH	0.997	Lagging	-0.758	0.977	Lagging	-2.171	0.982	Lagging	-1.924	0.995	Lagging	-0.996	0.991	Lagging	-1.348
65	FLT65-3PH	0.998	Lagging	-0.592	0.988	Lagging	-1.592	0.987	Lagging	-1.638	0.997	Lagging	-0.811	0.993	Lagging	-1.173
66	FLT66-3PH	0.997	Lagging	-0.759	0.977	Lagging	-2.172	0.982	Lagging	-1.914	0.995	Lagging	-0.996	0.991	Lagging	-1.349
67	FLT67-3PH	0.997	Lagging	-0.772	0.976	Lagging	-2.247	0.982	Lagging	-1.947	0.995	Lagging	-1.037	0.991	Lagging	-1.325
73	FLT73-3PH	0.997	Lagging	-0.758	0.978	Lagging	-2.148	0.982	Lagging	-1.899	0.995	Lagging	-0.972	0.991	Lagging	-1.342
74	FLT74-3PH	0.884	Lagging	-5.291	0.793	Lagging	-7.680	0.811	Lagging	-7.203	0.852	Lagging	-6.147	0.966	Lagging	-2.692
75	FLT75-3PH	0.995	Leading	1.030	0.999	Leading	0.443	0.976	Leading	2.210	0.995	Leading	1.014	1.000	Lagging	-0.094
76	FLT76-3PH	0.990	Lagging	-1.405	0.973	Lagging	-2.387	0.978	Lagging	-2.157	0.996	Lagging	-0.900	0.995	Lagging	-1.018
84	FLT84-3PH	0.996	Lagging	-0.847	0.975	Lagging	-2.280	0.980	Lagging	-2.005	0.994	Lagging	-1.063	0.990	Lagging	-1.432
85	FLT85-3PH	0.998	Lagging	-0.694	0.975	Lagging	-2.285	0.980	Lagging	-2.009	0.995	Lagging	-0.983	0.992	Lagging	-1.293
86	FLT86-3PH	0.997	Lagging	-0.777	0.974	Lagging	-2.315	0.980	Lagging	-2.040	0.995	Lagging	-0.998	0.989	Lagging	-1.529
87	FLT87-3PH	0.998	Lagging	-0.689	0.979	Lagging	-2.101	0.984	Lagging	-1.839	0.996	Lagging	-0.882	0.992	Lagging	-1.297
88	FLT88-3PH	0.997	Lagging	-0.791	0.978	Lagging	-2.157	0.982	Lagging	-1.896	0.995	Lagging	-0.999	0.991	Lagging	-1.342
89	FLT89-3PH	0.997	Lagging	-0.768	0.977	Lagging	-2.161	0.982	Lagging	-1.897	0.995	Lagging	-0.963	0.991	Lagging	-1.336
90	FLT90-3PH	0.997	Lagging	-0.788	0.978	Lagging	-2.154	0.983	Lagging	-1.894	0.995	Lagging	-0.995	0.991	Lagging	-1.341
91	FLT91-3PH	0.997	Lagging	-0.758	0.977	Lagging	-2.176	0.982	Lagging	-1.921	0.995	Lagging	-0.977	0.991	Lagging	-1.351
92	FLT92-3PH	0.998	Lagging	-0.704	0.978	Lagging	-2.129	0.983	Lagging	-1.883	0.996	Lagging	-0.910	0.992	Lagging	-1.273
93	FLT93-3PH	0.987	Lagging	-1.628	0.944	Lagging	-3.507	0.958	Lagging	-2.985	0.984	Lagging	-1.818	0.990	Lagging	-1.401
94	FLT94-3PH	0.994	Lagging	-1.114	0.970	Lagging	-2.512	0.978	Lagging	-2.112	0.992	Lagging	-1.293	0.990	Lagging	-1.460
95	FLT95-3PH	0.997	Lagging	-0.758	0.973	Lagging	-2.389	0.978	Lagging	-2.142	0.995	Lagging	-0.979	0.992	Lagging	-1.244
100	FLT100-3PH	0.998	Lagging	-0.704	0.978	Lagging	-2.127	0.983	Lagging	-1.885	0.996	Lagging	-0.909	0.992	Lagging	-1.258
101	FLT101-3PH	0.996	Lagging	-0.930	0.970	Lagging	-2.495	0.975	Lagging	-2.260	0.993	Lagging	-1.210	0.990	Lagging	-1.454
104	FLT104-3PH	0.998	Lagging	-0.679	0.893	Lagging	-5.036	0.959	Lagging	-2.948	0.994	Lagging	-1.094	0.864	Lagging	-5.840
105	FLT105-3PH	0.756	Leading	8.666	0.793	Leading	7.692	0.701	Leading	10.177	0.748	Leading	8.863	0.666	Leading	11.194
106	FLT106-3PH	0.996	Lagging	-0.943	0.963	Lagging	-2.801	0.968	Lagging	-2.603	0.993	Lagging	-1.186	0.979	Lagging	-2.091
107	FLT107-3PH	0.997	Lagging	-0.742	0.802	Lagging	-7.448	0.951	Lagging	-3.256	0.994	Lagging	-1.057	0.775	Lagging	-8.156
108	FLT108-3PH	0.998	Lagging	-0.660	0.994	Lagging	-1.144	0.979	Lagging	-2.064	0.996	Lagging	-0.869	1.000	Lagging	-0.089
109	FLT109-3PH	0.998	Leading	0.573	0.942	Lagging	-3.573	0.877	Lagging	-5.492	1.000	Leading	0.296	0.658	Lagging	-11.439
110	FLT110-3PH	0.756	Leading	8.666	0.793	Leading	7.692	0.701	Leading	10.177	0.748	Leading	8.863	0.666	Leading	11.194
111	FLT111-3PH	0.997	Lagging	-0.709	0.984	Lagging	-1.827	0.988	Lagging	-1.538	0.996	Lagging	-0.895	0.998	Lagging	-0.665
117	FLT117-3PH	0.834	Lagging	-6.605	0.692	Lagging	-10.424	0.765	Lagging	-8.408	0.771	Lagging	-8.265	0.992	Leading	1.295
118	FLT118-3PH	1.000	Leading	0.248	0.999	Lagging	-0.343	1.000	Leading	0.039	1.000	Leading	0.133	1.000	Lagging	-0.056
119	FLT119-3PH	0.796	Leading	7.616	0.988	Lagging	-1.557	0.993	Lagging	-1.221	0.923	Leading	4.173	0.829	Leading	6.750
120	FLT120-3PH	0.943	Leading	3.531	0.939	Leading	3.672	1.000	Leading	0.167	1.000	Lagging	-0.300	0.998	Lagging	-0.659
121	FLT121-3PH	0.994	Leading	1.063	0.983	Lagging	-1.895	0.983	Lagging	-1.895	0.968	Leading	2.588	0.744	Lagging	-8.987
126	FLT126-3PH	1.000	Lagging	-0.220	0.986	Lagging	-1.694	0.982	Lagging	-1.899	0.995	Lagging	-0.972	0.991	Lagging	-1.342
127	FLT127-3PH	0.997	Lagging	-0.826	0.977	Lagging	-2.180	0.980	Lagging	-2.018	0.994	Lagging	-1.145	0.991	Lagging	-1.368

Table 5-11 (continued)
Power Factor Analysis: ASGI-2016-004

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
128	FLT128-3PH	0.997	Lagging	-0.737	0.977	Lagging	-2.175	0.982	Lagging	-1.913	0.996	Lagging	-0.933	0.991	Lagging	-1.361
129	FLT129-3PH	0.998	Lagging	-0.582	0.982	Lagging	-1.919	0.983	Lagging	-1.875	0.995	Lagging	-0.993	0.991	Lagging	-1.348
130	FLT130-3PH	0.997	Lagging	-0.762	0.978	Lagging	-2.152	0.982	Lagging	-1.905	0.995	Lagging	-0.982	0.991	Lagging	-1.344
131	FLT131-3PH	0.998	Lagging	-0.661	0.981	Lagging	-1.956	0.982	Lagging	-1.896	0.995	Lagging	-0.971	0.992	Lagging	-1.285
132	FLT132-3PH	0.997	Lagging	-0.772	0.976	Lagging	-2.247	0.982	Lagging	-1.947	0.995	Lagging	-1.037	0.991	Lagging	-1.325
133	FLT133-3PH	0.998	Lagging	-0.562	0.991	Lagging	-1.351	0.987	Lagging	-1.644	0.998	Lagging	-0.575	0.991	Lagging	-1.322
140	FLT140-3PH	0.990	Leading	1.446	0.593	Lagging	-13.582	0.634	Lagging	-12.208	0.996	Leading	0.894	0.492	Lagging	-17.675
141	FLT141-3PH	0.887	Lagging	-5.201	0.590	Lagging	-13.674	0.604	Lagging	-13.187	0.872	Lagging	-5.625	0.499	Lagging	-17.373
142	FLT142-3PH	0.979	Lagging	-2.063	0.970	Lagging	-2.503	0.962	Lagging	-2.847	0.977	Lagging	-2.199	1.000	Lagging	-0.254
143	FLT143-3PH	0.975	Lagging	-2.281	0.955	Lagging	-3.119	0.921	Lagging	-4.224	0.974	Lagging	-2.325	0.947	Lagging	-3.380
144	FLT144-3PH	0.997	Lagging	-0.742	0.802	Lagging	-7.448	0.951	Lagging	-3.256	0.994	Lagging	-1.057	0.775	Lagging	-8.156
145	FLT145-3PH	0.985	Lagging	-1.727	0.987	Lagging	-1.627	0.986	Lagging	-1.710	0.978	Lagging	-2.108	0.999	Leading	0.365
146	FLT146-3PH	0.951	Lagging	-3.239	0.996	Lagging	-0.872	0.968	Lagging	-2.581	0.945	Lagging	-3.468	0.983	Leading	1.864
147	FLT147-3PH	0.869	Lagging	-5.696	0.780	Lagging	-8.018	0.771	Lagging	-8.252	0.889	Lagging	-5.142	0.922	Lagging	-4.204
148	FLT148-3PH	0.998	Leading	0.641	0.983	Lagging	-1.873	0.979	Lagging	-2.069	1.000	Lagging	-0.194	0.997	Lagging	-0.718
157	FLT157-3PH	0.998	Lagging	-0.669	0.977	Lagging	-2.186	0.979	Lagging	-2.082	0.994	Lagging	-1.098	0.989	Lagging	-1.494
158	FLT158-3PH	0.990	Lagging	-1.405	0.973	Lagging	-2.387	0.978	Lagging	-2.157	0.996	Lagging	-0.900	0.995	Lagging	-1.018
159	FLT159-3PH	0.998	Lagging	-0.589	0.976	Lagging	-2.244	0.978	Lagging	-2.148	0.993	Lagging	-1.187	0.993	Lagging	-1.169
168	FLT168-3PH	0.997	Lagging	-0.758	0.978	Lagging	-2.148	0.982	Lagging	-1.899	0.995	Lagging	-0.972	0.991	Lagging	-1.342
169	FLT169-3PH	0.994	Lagging	-1.120	0.971	Lagging	-2.452	0.976	Lagging	-2.253	0.988	Lagging	-1.588	0.990	Lagging	-1.432
170	FLT170-3PH	1.000	Lagging	-0.212	0.968	Lagging	-2.598	0.969	Lagging	-2.538	0.997	Lagging	-0.714	0.991	Lagging	-1.386
171	FLT171-3PH	0.997	Lagging	-0.772	0.976	Lagging	-2.247	0.982	Lagging	-1.947	0.995	Lagging	-1.037	0.991	Lagging	-1.325
172	FLT172-3PH	0.985	Lagging	-1.769	0.980	Lagging	-2.054	0.983	Lagging	-1.891	0.986	Lagging	-1.700	0.991	Lagging	-1.385
173	FLT173-3PH	0.997	Lagging	-0.759	0.977	Lagging	-2.172	0.982	Lagging	-1.914	0.995	Lagging	-0.996	0.991	Lagging	-1.349
174	FLT174-3PH	0.998	Lagging	-0.592	0.988	Lagging	-1.592	0.987	Lagging	-1.638	0.997	Lagging	-0.811	0.993	Lagging	-1.173
175	FLT175-3PH	0.997	Lagging	-0.785	0.976	Lagging	-2.220	0.981	Lagging	-1.980	0.995	Lagging	-1.026	0.991	Lagging	-1.372
176	FLT176-3PH	0.997	Lagging	-0.758	0.978	Lagging	-2.148	0.992	Lagging	-1.303	0.998	Lagging	-0.588	0.993	Lagging	-1.191
184	FLT184-3PH	0.997	Lagging	-0.821	0.977	Lagging	-2.180	0.982	Lagging	-1.919	0.995	Lagging	-1.048	0.991	Lagging	-1.353
185	FLT185-3PH	0.997	Lagging	-0.753	0.978	Lagging	-2.145	0.982	Lagging	-1.933	0.995	Lagging	-1.037	0.991	Lagging	-1.345
186	FLT186-3PH	0.997	Lagging	-0.799	0.977	Lagging	-2.167	0.982	Lagging	-1.913	0.995	Lagging	-1.019	0.991	Lagging	-1.349
187	FLT187-3PH	0.997	Lagging	-0.823	0.977	Lagging	-2.185	0.982	Lagging	-1.926	0.995	Lagging	-1.051	0.991	Lagging	-1.356
188	FLT188-3PH	0.987	Lagging	-1.651	0.971	Lagging	-2.458	0.979	Lagging	-2.106	0.988	Lagging	-1.593	0.988	Lagging	-1.555
189	FLT189-3PH	0.991	Lagging	-1.359	0.973	Lagging	-2.371	0.977	Lagging	-2.168	0.989	Lagging	-1.517	0.990	Lagging	-1.450
190	FLT190-3PH	0.997	Lagging	-0.788	0.977	Lagging	-2.161	0.982	Lagging	-1.906	0.995	Lagging	-1.004	0.991	Lagging	-1.345

Study Generator ASGI-2016-004

The Power Factor Analysis shows that ASGI-2016-004 has a power factor range of 0.756 leading to 0.514 lagging for the 2016 Winter Peak conditions, a power factor range of 0.793 leading to 0.518 lagging for the 2017 Summer Peak conditions, a power factor range of 0.701 lagging to 0.458 lagging for the 2020 Summer Peak conditions, a power factor range of 0.748 leading to 0.490 lagging for the 2020 Winter Peak conditions, and a power factor range of 0.666 leading to 0.492 lagging for the 2025 Summer Peak conditions.

Table 5-12
Power Factor Analysis: GEN-2016-015

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	1.000	Leading	2.191	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
1	FLT01-3PH	1.000	Leading	2.188	0.999	Lagging	-4.290	1.000	Leading	0.032	1.000	Lagging	-0.472	1.000	Leading	2.451
2	FLT02-3PH	1.000	Leading	2.192	0.999	Lagging	-4.281	1.000	Leading	0.035	1.000	Lagging	-0.478	1.000	Leading	2.453
3	FLT03-3PH	1.000	Leading	2.191	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.451
4	FLT04-3PH	1.000	Leading	2.191	0.999	Lagging	-4.288	1.000	Leading	0.032	1.000	Lagging	-0.475	1.000	Leading	2.450
5	FLT05-3PH	1.000	Leading	2.192	0.999	Lagging	-4.280	1.000	Leading	0.034	1.000	Lagging	-0.489	1.000	Leading	2.453
6	FLT06-3PH	1.000	Leading	2.191	0.999	Lagging	-4.287	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
7	FLT07-3PH	1.000	Leading	2.191	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.475	1.000	Leading	2.452
8	FLT08-3PH	1.000	Leading	2.191	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.475	1.000	Leading	2.452
9	FLT09-3PH	1.000	Leading	2.191	0.999	Lagging	-4.287	1.000	Leading	0.033	1.000	Lagging	-0.472	1.000	Leading	2.452
10	FLT10-3PH	1.000	Leading	2.191	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
11	FLT11-3PH	1.000	Leading	2.191	0.999	Lagging	-4.290	1.000	Leading	0.031	1.000	Lagging	-0.475	1.000	Leading	2.450
20	FLT20-3PH	1.000	Leading	2.185	0.999	Lagging	-4.289	1.000	Leading	0.032	1.000	Lagging	-0.459	1.000	Leading	2.451
21	FLT21-3PH	1.000	Leading	2.176	0.999	Lagging	-4.298	1.000	Leading	0.024	1.000	Lagging	-0.516	1.000	Leading	2.437
22	FLT22-3PH	1.000	Leading	2.190	0.999	Lagging	-4.294	1.000	Leading	0.030	1.000	Lagging	-0.479	1.000	Leading	2.450
23	FLT23-3PH	1.000	Leading	2.188	0.999	Lagging	-4.285	1.000	Leading	0.035	1.000	Lagging	-0.480	1.000	Leading	2.455
24	FLT24-3PH	1.000	Leading	2.191	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
26	FLT26-3PH	1.000	Leading	2.165	0.999	Lagging	-4.305	1.000	Leading	0.011	1.000	Lagging	-0.548	1.000	Leading	2.426
35	FLT35-3PH	1.000	Leading	2.181	0.999	Lagging	-4.292	1.000	Leading	0.020	1.000	Lagging	-0.511	1.000	Leading	2.441
36	FLT36-3PH	1.000	Leading	2.183	0.999	Lagging	-4.291	1.000	Leading	0.023	1.000	Lagging	-0.502	1.000	Leading	2.443
37	FLT37-3PH	1.000	Leading	2.180	0.999	Lagging	-4.288	1.000	Leading	0.026	1.000	Lagging	-0.511	1.000	Leading	2.447
38	FLT38-3PH	1.000	Leading	2.191	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.475	1.000	Leading	2.451
39	FLT39-3PH	1.000	Leading	2.192	0.999	Lagging	-4.284	1.000	Leading	0.032	1.000	Lagging	-0.475	1.000	Leading	2.452
40	FLT40-3PH	1.000	Leading	2.185	0.999	Lagging	-4.286	1.000	Leading	0.025	1.000	Lagging	-0.498	1.000	Leading	2.446
41	FLT41-3PH	1.000	Leading	2.192	0.999	Lagging	-4.284	1.000	Leading	0.032	1.000	Lagging	-0.475	1.000	Leading	2.452
42	FLT42-3PH	1.000	Leading	2.168	0.999	Lagging	-4.294	1.000	Leading	0.002	1.000	Lagging	-0.524	1.000	Leading	2.418
43	FLT43-3PH	1.000	Leading	2.189	0.999	Lagging	-4.287	1.000	Leading	0.031	1.000	Lagging	-0.474	1.000	Leading	2.451
53	FLT53-3PH	1.000	Leading	2.157	0.999	Lagging	-4.273	1.000	Leading	0.039	1.000	Lagging	-0.504	1.000	Leading	2.474
54	FLT54-3PH	1.000	Leading	2.187	0.999	Lagging	-4.253	1.000	Leading	0.043	1.000	Lagging	-0.468	1.000	Leading	2.413
55	FLT55-3PH	1.000	Leading	2.137	0.999	Lagging	-4.278	1.000	Leading	0.038	1.000	Lagging	-0.529	1.000	Leading	2.468
56	FLT56-3PH	1.000	Leading	1.456	0.999	Lagging	-5.362	1.000	Lagging	-1.148	1.000	Lagging	-1.291	1.000	Leading	1.586
57	FLT57-3PH	1.000	Leading	2.071	0.999	Lagging	-4.484	1.000	Lagging	-0.102	1.000	Lagging	-0.624	1.000	Leading	2.262
58	FLT58-3PH	1.000	Leading	2.132	0.999	Lagging	-4.277	1.000	Leading	0.041	1.000	Lagging	-0.533	1.000	Leading	2.472
59	FLT59-3PH	1.000	Leading	2.194	0.999	Lagging	-4.324	1.000	Lagging	-0.007	1.000	Lagging	-0.491	1.000	Leading	2.436
60	FLT60-3PH	1.000	Leading	2.180	0.999	Lagging	-4.309	1.000	Leading	0.019	1.000	Lagging	-0.487	1.000	Leading	2.392
61	FLT61-3PH	1.000	Leading	2.162	0.999	Lagging	-4.314	1.000	Lagging	-0.002	1.000	Lagging	-0.497	1.000	Leading	2.406
62	FLT62-3PH	1.000	Leading	2.178	0.999	Lagging	-4.309	1.000	Leading	0.008	1.000	Lagging	-0.490	1.000	Leading	2.447
63	FLT63-3PH	1.000	Leading	2.164	0.999	Lagging	-4.312	1.000	Leading	0.001	1.000	Lagging	-0.496	1.000	Leading	2.410
64	FLT64-3PH	1.000	Leading	2.191	0.999	Lagging	-4.297	1.000	Leading	0.022	1.000	Lagging	-0.478	1.000	Leading	2.448
65	FLT65-3PH	1.000	Leading	2.200	0.999	Lagging	-4.413	1.000	Lagging	-0.053	1.000	Lagging	-0.493	1.000	Leading	2.387
66	FLT66-3PH	1.000	Leading	2.129	0.999	Lagging	-4.277	1.000	Leading	0.042	1.000	Lagging	-0.537	1.000	Leading	2.471
67	FLT67-3PH	1.000	Leading	2.073	0.999	Lagging	-4.493	1.000	Lagging	-1.035	1.000	Lagging	-1.721	1.000	Leading	1.446
73	FLT73-3PH	1.000	Leading	2.191	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
74	FLT74-3PH	1.000	Leading	2.190	0.999	Lagging	-4.294	1.000	Leading	0.030	1.000	Lagging	-0.479	1.000	Leading	2.450
75	FLT75-3PH	1.000	Leading	2.195	0.999	Lagging	-4.286	1.000	Leading	0.037	1.000	Lagging	-0.462	1.000	Leading	2.458
76	FLT76-3PH	1.000	Leading	2.189	0.999	Lagging	-4.296	1.000	Leading	0.017	1.000	Lagging	-0.486	1.000	Leading	2.448
84	FLT84-3PH	1.000	Leading	2.193	0.999	Lagging	-4.287	1.000	Leading	0.037	1.000	Lagging	-0.475	1.000	Leading	2.467
85	FLT85-3PH	1.000	Leading	2.174	0.999	Lagging	-4.320	1.000	Leading	0.000	1.000	Lagging	-0.497	1.000	Leading	2.419
86	FLT86-3PH	1.000	Leading	2.185	0.999	Lagging	-4.302	1.000	Leading	0.017	1.000	Lagging	-0.487	1.000	Leading	2.417
87	FLT87-3PH	1.000	Leading	2.161	0.999	Lagging	-4.321	1.000	Lagging	-0.002	1.000	Lagging	-0.514	1.000	Leading	2.430
88	FLT88-3PH	1.000	Leading	2.188	0.999	Lagging	-4.290	1.000	Leading	0.031	1.000	Lagging	-0.477	1.000	Leading	2.450
89	FLT89-3PH	1.000	Leading	2.183	0.999	Lagging	-4.294	1.000	Leading	0.026	1.000	Lagging	-0.484	1.000	Leading	2.443
90	FLT90-3PH	1.000	Leading	2.189	0.999	Lagging	-4.290	1.000	Leading	0.031	1.000	Lagging	-0.476	1.000	Leading	2.450
91	FLT91-3PH	1.000	Leading	2.190	0.999	Lagging	-4.290	1.000	Leading	0.030	1.000	Lagging	-0.474	1.000	Leading	2.448
92	FLT92-3PH	1.000	Leading	2.185	0.999	Lagging	-4.296	1.000	Leading	0.024	1.000	Lagging	-0.480	1.000	Leading	2.444
93	FLT93-3PH	1.000	Leading	2.180	0.999	Lagging	-4.325	1.000	Lagging	-0.001	1.000	Lagging	-0.506	1.000	Leading	2.414
94	FLT94-3PH	1.000	Leading	2.173	0.999	Lagging	-4.297	1.000	Leading	0.024	1.000	Lagging	-0.480	1.000	Leading	2.437
95	FLT95-3PH	1.000	Leading	2.191	0.999	Lagging	-4.302	1.000	Leading	0.019	1.000	Lagging	-0.489	1.000	Leading	2.441
100	FLT100-3PH	1.000	Leading	2.183	0.999	Lagging	-4.297	1.000	Leading	0.022	1.000	Lagging	-0.482	1.000	Leading	2.439
101	FLT101-3PH	1.000	Leading	2.192	0.999	Lagging	-4.287	1.000	Leading	0.034	1.000	Lagging	-0.472	1.000	Leading	2.454
104	FLT104-3PH	1.000	Leading	2.190	0.999	Lagging	-4.289	1.000	Leading	0.032	1.000	Lagging	-0.476	1.000	Leading	2.452
105	FLT105-3PH	1.000	Leading	2.188	0.999	Lagging	-4.290	1.000	Leading	0.031	1.000	Lagging	-0.482	1.000	Leading	2.450
106	FLT106-3PH	1.000	Leading	2.191	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
107	FLT107-3PH	1.000	Leading	2.190	0.999	Lagging	-4.289	1.000	Leading	0.032	1.000	Lagging	-0.476	1.000	Leading	2.452
108	FLT108-3PH	1.000	Leading	2.191	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
109	FLT109-3PH	1.000	Leading	2.187	0.999	Lagging	-4.290	1.000	Leading	0.031	1.000	Lagging	-0.483	1.000	Leading	2.450
110	FLT110-3PH	1.000	Leading	2.188	0.999	Lagging	-4.290	1.000	Leading	0.031	1.000	Lagging	-0.482	1.000	Leading	2.450
111	FLT111-3PH	1.000	Leading	2.191	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
117	FLT117-3PH	1.000	Leading	2.190	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
118	FLT118-3PH	1.000	Leading	2.190	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.475	1.000	Leading	2.451
119	FLT119-3PH	1.000	Leading	2.191	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
120	FLT120-3PH	1.000	Leading	2.190	0.999	Lagging	-4.288	1.000	Leading	0.032	1.000	Lagging	-0.479	1.000	Leading	2.452
121	FLT121-3PH	1.000	Leading	2.191	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.473	1.000	Leading	2.452
126	FLT126-3PH	0.999	Lagging	-4.618	0.982	Lagging	-19.190	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
127	FLT127-3PH	0.994	Leading	11.145	0.970	Leading	25.135	0.987	Leading	16.120	0.984	Leading	18.329	0.958	Leading	29.763

Table 5-12 (continued)
Power Factor Analysis: GEN-2016-015

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
128	FLT128-3PH	1.000	Leading	2.202	0.999	Lagging	-4.289	1.000	Leading	0.010	1.000	Lagging	-0.630	1.000	Leading	2.567
129	FLT129-3PH	1.000	Leading	1.671	0.999	Lagging	-4.809	1.000	Lagging	-0.181	1.000	Lagging	-0.345	1.000	Leading	2.138
130	FLT130-3PH	1.000	Leading	2.249	0.999	Lagging	-4.255	1.000	Lagging	-0.003	1.000	Lagging	-0.505	1.000	Leading	2.340
131	FLT131-3PH	1.000	Lagging	-2.621	0.998	Leading	7.081	1.000	Lagging	-0.177	1.000	Lagging	-0.635	0.963	Leading	27.880
132	FLT132-3PH	1.000	Leading	2.073	0.999	Lagging	-4.493	1.000	Lagging	-1.035	1.000	Lagging	-1.721	1.000	Leading	1.446
133	FLT133-3PH	1.000	Leading	1.530	0.998	Lagging	-6.650	1.000	Lagging	-1.190	1.000	Lagging	-1.190	1.000	Leading	0.942
140	FLT140-3PH	1.000	Leading	2.191	0.999	Lagging	-4.289	1.000	Leading	0.032	1.000	Lagging	-0.475	1.000	Leading	2.450
141	FLT141-3PH	1.000	Leading	2.189	0.999	Lagging	-4.288	1.000	Leading	0.032	1.000	Lagging	-0.477	1.000	Leading	2.451
142	FLT142-3PH	1.000	Leading	2.191	0.999	Lagging	-4.287	1.000	Leading	0.032	1.000	Lagging	-0.475	1.000	Leading	2.450
143	FLT143-3PH	1.000	Leading	2.190	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.451
144	FLT144-3PH	1.000	Leading	2.190	0.999	Lagging	-4.289	1.000	Leading	0.032	1.000	Lagging	-0.476	1.000	Leading	2.452
145	FLT145-3PH	1.000	Leading	2.191	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.473	1.000	Leading	2.451
146	FLT146-3PH	1.000	Leading	2.190	0.999	Lagging	-4.288	1.000	Leading	0.031	1.000	Lagging	-0.476	1.000	Leading	2.450
147	FLT147-3PH	1.000	Leading	2.190	0.999	Lagging	-4.289	1.000	Leading	0.033	1.000	Lagging	-0.478	1.000	Leading	2.454
148	FLT148-3PH	1.000	Leading	2.192	0.999	Lagging	-4.288	1.000	Leading	0.032	1.000	Lagging	-0.473	1.000	Leading	2.452
157	FLT157-3PH	1.000	Leading	2.178	0.999	Lagging	-4.292	1.000	Leading	0.026	1.000	Lagging	-0.481	1.000	Leading	2.440
158	FLT158-3PH	1.000	Leading	2.189	0.999	Lagging	-4.296	1.000	Leading	0.017	1.000	Lagging	-0.486	1.000	Leading	2.448
159	FLT159-3PH	1.000	Leading	2.190	0.999	Lagging	-4.288	1.000	Leading	0.029	1.000	Lagging	-0.478	1.000	Leading	2.458
168	FLT168-3PH	1.000	Leading	2.191	0.999	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
169	FLT169-3PH	1.000	Leading	2.053	0.999	Lagging	-4.530	1.000	Leading	0.260	1.000	Lagging	-0.288	1.000	Leading	2.522
170	FLT170-3PH	1.000	Leading	1.957	0.999	Lagging	-4.327	1.000	Lagging	-0.030	1.000	Lagging	-0.427	1.000	Leading	2.389
171	FLT171-3PH	1.000	Leading	2.073	0.999	Lagging	-4.493	1.000	Lagging	-1.035	1.000	Lagging	-1.721	1.000	Leading	1.446
172	FLT172-3PH	1.000	Leading	2.194	0.999	Lagging	-4.324	1.000	Lagging	-0.007	1.000	Lagging	-0.491	1.000	Leading	2.436
173	FLT173-3PH	1.000	Leading	2.129	0.999	Lagging	-4.277	1.000	Leading	0.042	1.000	Lagging	-0.537	1.000	Leading	2.471
174	FLT174-3PH	1.000	Leading	2.200	0.999	Lagging	-4.413	1.000	Lagging	-0.053	1.000	Lagging	-0.493	1.000	Leading	2.387
175	FLT175-3PH	1.000	Leading	2.180	0.999	Lagging	-4.309	1.000	Leading	0.019	1.000	Lagging	-0.487	1.000	Leading	2.392
176	FLT176-3PH	1.000	Leading	2.191	0.999	Lagging	-4.288	0.998	Lagging	-6.699	0.999	Lagging	-5.367	0.998	Lagging	-5.984
184	FLT184-3PH	1.000	Leading	2.189	0.999	Lagging	-4.291	1.000	Leading	0.026	1.000	Lagging	-0.496	1.000	Leading	2.444
185	FLT185-3PH	1.000	Leading	2.191	0.999	Lagging	-4.288	1.000	Leading	0.027	1.000	Lagging	-0.484	1.000	Leading	2.451
186	FLT186-3PH	1.000	Leading	2.189	0.999	Lagging	-4.291	1.000	Leading	0.028	1.000	Lagging	-0.488	1.000	Leading	2.446
187	FLT187-3PH	1.000	Leading	2.190	0.999	Lagging	-4.290	1.000	Leading	0.027	1.000	Lagging	-0.494	1.000	Leading	2.445
188	FLT188-3PH	1.000	Leading	2.150	0.999	Lagging	-4.327	1.000	Leading	0.020	1.000	Lagging	-0.493	1.000	Leading	2.428
189	FLT189-3PH	1.000	Leading	2.166	0.999	Lagging	-4.316	1.000	Leading	0.014	1.000	Lagging	-0.556	1.000	Leading	2.437
190	FLT190-3PH	1.000	Leading	2.190	0.999	Lagging	-4.289	1.000	Leading	0.030	1.000	Lagging	-0.483	1.000	Leading	2.448

Study Generator GEN-2016-015

The Power Factor Analysis shows that GEN-2016-015 has a power factor range of 0.994 leading to 0.999 lagging for the 2016 Winter Peak conditions, a power factor range of 0.970 leading to 0.982 lagging for the 2017 Summer Peak conditions, a power factor range of 0.987 lagging to 0.998 lagging for the 2020 Summer Peak conditions, a power factor range of 0.984 leading to 0.999 lagging for the 2020 Winter Peak conditions, and a power factor range of 0.958 leading to 0.998 lagging for the 2025 Summer Peak conditions.

Table 5-13
Power Factor Analysis: GEN-2016-039

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.993	Leading	13.587	0.993	Leading	13.765	0.993	Leading	13.229	0.991	Leading	14.755	0.992	Leading	13.852
1	FLT01-3PH	0.993	Leading	12.927	0.993	Leading	13.687	0.993	Leading	13.185	0.992	Leading	14.488	0.993	Leading	13.646
2	FLT02-3PH	0.992	Leading	14.078	0.992	Leading	14.362	0.993	Leading	13.634	0.991	Leading	15.247	0.993	Leading	13.623
3	FLT03-3PH	0.993	Leading	13.584	0.993	Leading	13.737	0.993	Leading	13.206	0.991	Leading	14.752	0.993	Leading	13.756
4	FLT04-3PH	0.993	Leading	13.745	0.993	Leading	13.606	0.993	Leading	13.107	0.991	Leading	14.826	0.992	Leading	13.964
5	FLT05-3PH	0.992	Leading	14.033	0.993	Leading	13.495	0.993	Leading	13.172	0.991	Leading	15.043	0.993	Leading	13.749
6	FLT06-3PH	0.993	Leading	13.587	0.993	Leading	13.768	0.993	Leading	13.229	0.991	Leading	14.765	0.992	Leading	13.844
7	FLT07-3PH	0.993	Leading	13.607	0.993	Leading	13.787	0.993	Leading	13.262	0.991	Leading	14.780	0.992	Leading	13.885
8	FLT08-3PH	0.993	Leading	13.610	0.993	Leading	13.791	0.993	Leading	13.275	0.991	Leading	14.784	0.992	Leading	13.893
9	FLT09-3PH	0.993	Leading	13.509	0.993	Leading	13.695	0.993	Leading	13.165	0.992	Leading	14.675	0.993	Leading	13.748
10	FLT10-3PH	0.993	Leading	13.588	0.993	Leading	13.759	0.993	Leading	13.227	0.991	Leading	14.753	0.992	Leading	13.849
11	FLT11-3PH	0.993	Leading	13.677	0.993	Leading	13.484	0.993	Leading	13.007	0.991	Leading	14.770	0.992	Leading	13.947
20	FLT20-3PH	0.994	Leading	12.309	0.993	Leading	13.245	0.993	Leading	12.923	0.990	Leading	15.604	0.993	Leading	13.664
21	FLT21-3PH	0.997	Leading	8.333	0.996	Leading	10.013	0.996	Leading	9.632	0.997	Leading	9.313	0.995	Leading	11.409
22	FLT22-3PH	0.994	Leading	11.849	0.995	Leading	11.266	0.995	Leading	10.733	0.994	Leading	12.584	0.993	Leading	12.863
23	FLT23-3PH	0.995	Leading	11.694	0.993	Leading	13.710	0.993	Leading	13.094	0.994	Leading	12.830	0.994	Leading	12.743
24	FLT24-3PH	0.993	Leading	13.587	0.993	Leading	13.765	0.993	Leading	13.229	0.991	Leading	14.755	0.992	Leading	13.852
26	FLT26-3PH	0.999	Leading	4.582	0.998	Leading	7.405	0.999	Leading	5.946	0.999	Leading	5.319	0.996	Leading	9.529
35	FLT35-3PH	0.997	Leading	8.825	0.999	Leading	5.896	0.999	Leading	4.295	0.997	Leading	8.869	0.996	Leading	9.792
36	FLT36-3PH	0.996	Leading	10.292	0.997	Leading	8.198	0.998	Leading	6.780	0.996	Leading	10.513	0.995	Leading	10.934
37	FLT37-3PH	0.998	Leading	6.942	0.996	Leading	9.585	0.997	Leading	9.132	0.997	Leading	8.592	0.995	Leading	11.108
38	FLT38-3PH	0.993	Leading	13.264	0.993	Leading	13.539	0.993	Leading	12.970	0.992	Leading	14.430	0.993	Leading	13.401
39	FLT39-3PH	0.992	Leading	14.109	0.993	Leading	13.523	0.993	Leading	13.253	0.991	Leading	15.352	0.992	Leading	14.081
40	FLT40-3PH	0.996	Leading	9.717	0.997	Leading	8.005	0.999	Leading	4.937	0.996	Leading	10.268	0.996	Leading	9.930
41	FLT41-3PH	0.992	Leading	14.147	0.993	Leading	13.516	0.993	Leading	13.264	0.991	Leading	15.394	0.992	Leading	14.062
42	FLT42-3PH	0.995	Leading	11.192	0.993	Leading	13.032	0.994	Leading	12.400	0.994	Leading	12.543	0.993	Leading	13.185
43	FLT43-3PH	0.995	Leading	11.438	0.990	Leading	15.659	0.992	Leading	14.526	0.991	Leading	14.889	0.992	Leading	13.795
53	FLT53-3PH	0.993	Leading	13.606	0.993	Leading	13.704	0.993	Leading	13.182	0.991	Leading	14.766	0.992	Leading	13.805
54	FLT54-3PH	0.993	Leading	13.632	0.992	Leading	13.816	0.993	Leading	13.290	0.991	Leading	14.787	0.992	Leading	13.890
55	FLT55-3PH	0.993	Leading	13.582	0.993	Leading	13.724	0.993	Leading	13.198	0.991	Leading	14.735	0.992	Leading	13.826
56	FLT56-3PH	0.993	Leading	13.619	0.993	Leading	13.628	0.993	Leading	13.072	0.992	Leading	14.684	0.993	Leading	13.733
57	FLT57-3PH	0.993	Leading	13.568	0.993	Leading	13.710	0.993	Leading	13.201	0.991	Leading	14.728	0.992	Leading	13.817
58	FLT58-3PH	0.993	Leading	13.600	0.993	Leading	13.729	0.993	Leading	13.205	0.991	Leading	14.751	0.992	Leading	13.836
59	FLT59-3PH	0.994	Leading	12.750	0.992	Leading	13.808	0.993	Leading	13.213	0.992	Leading	14.179	0.993	Leading	13.777
60	FLT60-3PH	0.993	Leading	13.560	0.993	Leading	13.728	0.993	Leading	13.185	0.991	Leading	14.710	0.992	Leading	13.801
61	FLT61-3PH	0.993	Leading	13.551	0.993	Leading	13.752	0.993	Leading	13.207	0.991	Leading	14.730	0.992	Leading	13.836
62	FLT62-3PH	0.993	Leading	13.638	0.993	Leading	13.754	0.993	Leading	13.210	0.991	Leading	14.830	0.992	Leading	13.829
63	FLT63-3PH	0.993	Leading	13.554	0.993	Leading	13.753	0.993	Leading	13.209	0.991	Leading	14.732	0.992	Leading	13.837
64	FLT64-3PH	0.993	Leading	13.587	0.993	Leading	13.748	0.993	Leading	13.210	0.991	Leading	14.731	0.992	Leading	13.838
65	FLT65-3PH	0.993	Leading	13.530	0.992	Leading	13.938	0.993	Leading	13.182	0.992	Leading	14.665	0.992	Leading	13.834
66	FLT66-3PH	0.993	Leading	13.598	0.993	Leading	13.732	0.993	Leading	13.207	0.991	Leading	14.749	0.992	Leading	13.838
67	FLT67-3PH	0.993	Leading	13.531	0.993	Leading	13.725	0.993	Leading	13.231	0.992	Leading	14.690	0.992	Leading	13.831
73	FLT73-3PH	0.993	Leading	13.587	0.993	Leading	13.765	0.993	Leading	13.229	0.991	Leading	14.755	0.992	Leading	13.852
74	FLT74-3PH	0.994	Leading	11.849	0.995	Leading	11.266	0.995	Leading	10.733	0.994	Leading	12.584	0.993	Leading	12.863
75	FLT75-3PH	0.991	Leading	14.871	0.991	Leading	14.902	0.991	Leading	15.453	0.990	Leading	16.123	0.991	Leading	15.014
76	FLT76-3PH	0.994	Leading	12.818	0.993	Leading	13.435	0.994	Leading	12.781	0.991	Leading	14.916	0.992	Leading	14.670
84	FLT84-3PH	0.993	Leading	13.465	0.993	Leading	13.681	0.993	Leading	13.123	0.992	Leading	14.651	0.993	Leading	13.561
85	FLT85-3PH	0.993	Leading	13.763	0.992	Leading	13.895	0.993	Leading	13.363	0.991	Leading	14.867	0.992	Leading	13.986
86	FLT86-3PH	0.993	Leading	13.562	0.993	Leading	13.565	0.993	Leading	13.054	0.991	Leading	14.726	0.993	Leading	13.410
87	FLT87-3PH	0.993	Leading	13.697	0.992	Leading	13.828	0.993	Leading	13.304	0.991	Leading	14.913	0.992	Leading	13.909
88	FLT88-3PH	0.993	Leading	13.554	0.993	Leading	13.759	0.993	Leading	13.228	0.991	Leading	14.728	0.992	Leading	13.851
89	FLT89-3PH	0.993	Leading	13.596	0.993	Leading	13.777	0.993	Leading	13.255	0.991	Leading	14.790	0.992	Leading	13.876
90	FLT90-3PH	0.993	Leading	13.558	0.993	Leading	13.761	0.993	Leading	13.230	0.991	Leading	14.732	0.992	Leading	13.853
91	FLT91-3PH	0.993	Leading	13.584	0.993	Leading	13.744	0.993	Leading	13.212	0.991	Leading	14.749	0.992	Leading	13.834
92	FLT92-3PH	0.993	Leading	13.710	0.992	Leading	13.959	0.993	Leading	13.389	0.991	Leading	14.910	0.992	Leading	14.030
93	FLT93-3PH	0.994	Leading	12.784	0.993	Leading	12.862	0.994	Leading	12.550	0.992	Leading	14.194	0.993	Leading	13.735
94	FLT94-3PH	0.993	Leading	13.435	0.993	Leading	13.365	0.993	Leading	13.082	0.992	Leading	14.409	0.993	Leading	13.557
95	FLT95-3PH	0.993	Leading	13.587	0.993	Leading	13.448	0.993	Leading	13.000	0.991	Leading	14.793	0.992	Leading	14.127
100	FLT100-3PH	0.993	Leading	13.711	0.992	Leading	13.989	0.993	Leading	13.424	0.991	Leading	14.915	0.992	Leading	14.104
101	FLT101-3PH	0.993	Leading	13.537	0.993	Leading	13.631	0.993	Leading	13.101	0.992	Leading	14.679	0.993	Leading	13.766
104	FLT104-3PH	0.988	Leading	17.792	0.984	Leading	20.262	0.985	Leading	19.595	0.985	Leading	19.635	0.987	Leading	18.133
105	FLT105-3PH	0.996	Leading	10.657	0.993	Leading	12.875	0.994	Leading	11.982	0.994	Leading	12.010	0.996	Leading	10.601
106	FLT106-3PH	0.993	Leading	13.493	0.993	Leading	13.449	0.993	Leading	12.892	0.992	Leading	14.647	0.993	Leading	13.486
107	FLT107-3PH	0.987	Leading	17.892	0.982	Leading	21.685	0.985	Leading	19.784	0.985	Leading	19.609	0.985	Leading	19.833
108	FLT108-3PH	0.992	Leading	13.907	0.991	Leading	15.195	0.993	Leading	13.673	0.991	Leading	14.990	0.991	Leading	15.222
109	FLT109-3PH	0.995	Leading	10.698	0.993	Leading	13.180	0.994	Leading	12.228	0.994	Leading	11.944	0.995	Leading	10.803
110	FLT110-3PH	0.996	Leading	10.657	0.993	Leading	12.875	0.994	Leading	11.982	0.994	Leading	12.010	0.996	Leading	10.601
111	FLT111-3PH	0.993	Leading	13.696	0.992	Leading	14.111	0.993	Leading	13.621	0.991	Leading	14.899	0.992	Leading	14.340
117	FLT117-3PH	0.993	Leading	12.887	0.993	Leading	12.955	0.994	Leading	12.622	0.992	Leading	14.113	0.992	Leading	14.264
118	FLT118-3PH	0.993	Leading	13.785	0.992	Leading	14.272	0.993	Leading	13.781	0.991	Leading	14.981	0.992	Leading	14.078
119	FLT119-3PH	0.992	Leading	14.187	0.992	Leading	13.833	0.993	Leading	13.289	0.991	Leading	14.959	0.992	Leading	14.690
120	FLT120-3PH	0.993	Leading	13.349	0.992	Leading	14.201	0.993	Leading	12.960	0.993	Leading	13.696	0.992	Leading	13.822
121	FLT121-3PH	0.993	Leading	13.721	0.993	Leading	13.725	0.993	Leading	13.166	0.991	Leading	15.058	0.993	Leading	13.181
126	FLT126-3PH	0.992	Leading	13.942	0.992	Leading	13.961	0.993	Leading	13.229	0.991	Leading	14.755	0.992	Leading	13.852
127	FLT127-3PH	0.993	Leading	13.541	0.993	Leading	13.749	0.993	Leading	13.169	0.992	Leading	14.637	0.992	Leading	13.816

Table 5-13 (continued)
Power Factor Analysis: GEN-2016-039

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
128	FLT128-3PH	0.993	Leading	13.603	0.993	Leading	13.742	0.993	Leading	13.220	0.991	Leading	14.815	0.992	Leading	13.815
129	FLT129-3PH	0.993	Leading	13.691	0.992	Leading	13.843	0.993	Leading	13.233	0.991	Leading	14.749	0.992	Leading	13.846
130	FLT130-3PH	0.993	Leading	13.586	0.993	Leading	13.764	0.993	Leading	13.227	0.991	Leading	14.750	0.992	Leading	13.850
131	FLT131-3PH	0.993	Leading	13.653	0.992	Leading	13.864	0.993	Leading	13.230	0.991	Leading	14.756	0.992	Leading	13.921
132	FLT132-3PH	0.993	Leading	13.531	0.993	Leading	13.725	0.993	Leading	13.231	0.992	Leading	14.690	0.992	Leading	13.831
133	FLT133-3PH	0.993	Leading	13.713	0.992	Leading	14.095	0.993	Leading	13.323	0.991	Leading	14.984	0.992	Leading	13.879
140	FLT140-3PH	0.999	Lagging	-4.889	0.982	Leading	21.267	0.987	Leading	18.076	1.000	Lagging	-2.679	0.971	Leading	27.756
141	FLT141-3PH	0.987	Leading	18.106	0.993	Lagging	-13.483	0.995	Lagging	-11.313	0.989	Leading	16.912	0.983	Lagging	-20.720
142	FLT142-3PH	0.993	Leading	13.115	0.990	Leading	16.273	0.989	Leading	16.380	0.992	Leading	14.641	0.985	Leading	19.552
143	FLT143-3PH	0.997	Leading	9.287	0.996	Leading	9.815	0.998	Leading	6.473	0.995	Leading	10.666	0.997	Leading	7.992
144	FLT144-3PH	0.987	Leading	17.892	0.982	Leading	21.685	0.985	Leading	19.784	0.985	Leading	19.609	0.985	Leading	19.833
145	FLT145-3PH	0.993	Leading	13.051	0.989	Leading	16.467	0.988	Leading	17.270	0.992	Leading	14.121	0.985	Leading	19.866
146	FLT146-3PH	0.997	Leading	7.981	0.977	Leading	24.509	0.978	Leading	24.089	0.997	Leading	9.185	0.973	Leading	26.459
147	FLT147-3PH	0.995	Leading	11.323	0.999	Leading	4.505	1.000	Leading	2.762	0.994	Leading	12.533	0.998	Leading	6.226
148	FLT148-3PH	0.988	Leading	17.252	0.991	Leading	15.541	0.990	Leading	15.693	0.988	Leading	17.808	0.990	Leading	16.244
157	FLT157-3PH	0.993	Leading	13.458	0.993	Leading	13.582	0.993	Leading	12.861	0.992	Leading	14.466	0.993	Leading	13.384
158	FLT158-3PH	0.994	Leading	12.818	0.993	Leading	13.435	0.994	Leading	12.781	0.991	Leading	14.916	0.992	Leading	14.670
159	FLT159-3PH	0.993	Leading	13.785	0.993	Leading	13.613	0.993	Leading	12.859	0.992	Leading	14.383	0.992	Leading	14.243
168	FLT168-3PH	0.993	Leading	13.587	0.993	Leading	13.765	0.993	Leading	13.229	0.991	Leading	14.755	0.992	Leading	13.852
169	FLT169-3PH	0.993	Leading	13.201	0.993	Leading	13.577	0.993	Leading	13.011	0.992	Leading	14.155	0.993	Leading	13.653
170	FLT170-3PH	0.992	Leading	14.158	0.993	Leading	13.418	0.994	Leading	12.733	0.991	Leading	15.006	0.992	Leading	13.996
171	FLT171-3PH	0.993	Leading	13.531	0.993	Leading	13.725	0.993	Leading	13.231	0.992	Leading	14.690	0.992	Leading	13.831
172	FLT172-3PH	0.994	Leading	12.750	0.992	Leading	13.808	0.993	Leading	13.213	0.992	Leading	14.179	0.993	Leading	13.777
173	FLT173-3PH	0.993	Leading	13.598	0.993	Leading	13.732	0.993	Leading	13.207	0.991	Leading	14.749	0.992	Leading	13.838
174	FLT174-3PH	0.993	Leading	13.530	0.992	Leading	13.938	0.993	Leading	13.182	0.992	Leading	14.665	0.992	Leading	13.834
175	FLT175-3PH	0.993	Leading	13.560	0.993	Leading	13.728	0.993	Leading	13.185	0.991	Leading	14.710	0.992	Leading	13.801
176	FLT176-3PH	0.993	Leading	13.587	0.993	Leading	13.765	0.993	Leading	13.482	0.991	Leading	14.978	0.992	Leading	14.067
184	FLT184-3PH	0.993	Leading	13.546	0.993	Leading	13.748	0.993	Leading	13.218	0.991	Leading	14.707	0.992	Leading	13.840
185	FLT185-3PH	0.993	Leading	13.591	0.993	Leading	13.767	0.993	Leading	13.212	0.991	Leading	14.712	0.992	Leading	13.848
186	FLT186-3PH	0.993	Leading	13.560	0.993	Leading	13.755	0.993	Leading	13.221	0.991	Leading	14.725	0.992	Leading	13.845
187	FLT187-3PH	0.993	Leading	13.545	0.993	Leading	13.746	0.993	Leading	13.215	0.991	Leading	14.705	0.992	Leading	13.836
188	FLT188-3PH	0.993	Leading	12.931	0.993	Leading	13.574	0.993	Leading	13.103	0.992	Leading	14.355	0.993	Leading	13.637
189	FLT189-3PH	0.993	Leading	13.145	0.993	Leading	13.623	0.993	Leading	13.076	0.992	Leading	14.405	0.993	Leading	13.742
190	FLT190-3PH	0.993	Leading	13.567	0.993	Leading	13.758	0.993	Leading	13.225	0.991	Leading	14.735	0.992	Leading	13.848

Study Generator GEN-2016-039

The Power Factor Analysis shows that GEN-2016-039 has a power factor range of 0.987 leading to 0.999 lagging for the 2016 Winter Peak conditions, a power factor range of 0.977 leading to 0.993 lagging for the 2017 Summer Peak conditions, a power factor range of 0.978 lagging to 0.995 lagging for the 2020 Summer Peak conditions, a power factor range of 0.985 leading to 1.0 unity for the 2020 Winter Peak conditions, and a power factor range of 0.971 leading to 0.983 lagging for the 2025 Summer Peak conditions.

Table 5-14
Power Factor Analysis: GEN-2016-056

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	1.000	Leading	4.560	0.919	Lagging	-85.644	0.848	Lagging	-124.974	0.995	Lagging	-20.143	0.951	Lagging	-64.698
1	FLT01-3PH	1.000	Leading	4.334	0.919	Lagging	-85.507	0.848	Lagging	-124.960	0.995	Lagging	-20.389	0.951	Lagging	-64.801
2	FLT02-3PH	1.000	Leading	4.858	0.919	Lagging	-85.749	0.847	Lagging	-125.591	0.995	Lagging	-19.726	0.951	Lagging	-65.379
3	FLT03-3PH	1.000	Leading	4.554	0.919	Lagging	-85.728	0.848	Lagging	-125.023	0.995	Lagging	-20.154	0.951	Lagging	-64.816
4	FLT04-3PH	1.000	Leading	4.629	0.919	Lagging	-85.829	0.848	Lagging	-125.199	0.995	Lagging	-20.206	0.951	Lagging	-64.904
5	FLT05-3PH	1.000	Leading	4.226	0.917	Lagging	-87.163	0.847	Lagging	-125.571	0.995	Lagging	-20.946	0.950	Lagging	-65.399
6	FLT06-3PH	1.000	Leading	4.561	0.919	Lagging	-85.681	0.848	Lagging	-124.998	0.995	Lagging	-20.145	0.951	Lagging	-64.717
7	FLT07-3PH	1.000	Leading	4.550	0.919	Lagging	-85.667	0.848	Lagging	-124.966	0.995	Lagging	-20.146	0.951	Lagging	-64.693
8	FLT08-3PH	1.000	Leading	4.552	0.919	Lagging	-85.664	0.848	Lagging	-124.960	0.995	Lagging	-20.141	0.951	Lagging	-64.688
9	FLT09-3PH	1.000	Leading	4.512	0.919	Lagging	-85.939	0.848	Lagging	-125.091	0.995	Lagging	-20.330	0.951	Lagging	-64.902
10	FLT10-3PH	1.000	Leading	4.562	0.919	Lagging	-85.660	0.848	Lagging	-124.976	0.995	Lagging	-20.149	0.951	Lagging	-64.702
11	FLT11-3PH	1.000	Leading	4.580	0.919	Lagging	-85.857	0.847	Lagging	-125.358	0.995	Lagging	-20.289	0.951	Lagging	-65.052
20	FLT20-3PH	1.000	Lagging	-0.911	0.918	Lagging	-86.505	0.848	Lagging	-124.996	0.998	Lagging	-11.553	0.951	Lagging	-64.878
21	FLT21-3PH	0.999	Lagging	-10.543	0.918	Lagging	-86.597	0.848	Lagging	-125.195	0.980	Lagging	-40.348	0.937	Lagging	-74.247
22	FLT22-3PH	1.000	Leading	4.414	0.918	Lagging	-86.308	0.848	Lagging	-124.865	0.994	Lagging	-21.316	0.951	Lagging	-65.152
23	FLT23-3PH	0.999	Lagging	-7.091	0.920	Lagging	-85.444	0.850	Lagging	-124.139	0.986	Lagging	-34.020	0.938	Lagging	-73.591
24	FLT24-3PH	1.000	Leading	4.560	0.919	Lagging	-85.644	0.848	Lagging	-124.974	0.995	Lagging	-20.143	0.951	Lagging	-64.698
26	FLT26-3PH	0.994	Lagging	-22.050	0.917	Lagging	-86.755	0.847	Lagging	-125.504	0.960	Lagging	-57.964	0.925	Lagging	-82.042
35	FLT35-3PH	1.000	Lagging	-1.222	0.914	Lagging	-89.012	0.842	Lagging	-128.011	0.987	Lagging	-32.349	0.944	Lagging	-69.569
36	FLT36-3PH	1.000	Leading	0.218	0.915	Lagging	-88.447	0.844	Lagging	-127.327	0.989	Lagging	-29.497	0.946	Lagging	-68.488
37	FLT37-3PH	1.000	Lagging	-2.537	0.915	Lagging	-88.370	0.844	Lagging	-126.877	0.987	Lagging	-32.554	0.947	Lagging	-67.610
38	FLT38-3PH	1.000	Leading	4.424	0.919	Lagging	-85.646	0.848	Lagging	-124.877	0.995	Lagging	-20.334	0.951	Lagging	-64.900
39	FLT39-3PH	1.000	Leading	4.551	0.916	Lagging	-87.851	0.846	Lagging	-125.978	0.995	Lagging	-19.638	0.951	Lagging	-64.981
40	FLT40-3PH	1.000	Leading	2.206	0.913	Lagging	-89.080	0.842	Lagging	-127.981	0.991	Lagging	-26.688	0.947	Lagging	-67.570
41	FLT41-3PH	1.000	Leading	4.548	0.915	Lagging	-87.932	0.846	Lagging	-126.036	0.995	Lagging	-19.607	0.951	Lagging	-65.064
42	FLT42-3PH	1.000	Lagging	-5.550	0.882	Lagging	-106.822	0.799	Lagging	-150.744	0.978	Lagging	-42.356	0.927	Lagging	-80.907
43	FLT43-3PH	1.000	Leading	3.485	0.920	Lagging	-85.134	0.847	Lagging	-125.615	0.995	Lagging	-20.035	0.951	Lagging	-65.061
53	FLT53-3PH	1.000	Leading	4.621	0.915	Lagging	-88.198	0.845	Lagging	-126.781	0.995	Lagging	-20.006	0.950	Lagging	-65.695
54	FLT54-3PH	1.000	Leading	4.495	0.920	Lagging	-85.016	0.849	Lagging	-124.575	0.995	Lagging	-20.117	0.951	Lagging	-64.898
55	FLT55-3PH	1.000	Leading	4.435	0.916	Lagging	-87.354	0.846	Lagging	-126.036	0.995	Lagging	-20.446	0.951	Lagging	-65.143
56	FLT56-3PH	1.000	Leading	4.639	0.916	Lagging	-87.737	0.844	Lagging	-126.996	0.995	Lagging	-19.344	0.948	Lagging	-66.887
57	FLT57-3PH	1.000	Leading	4.512	0.918	Lagging	-86.226	0.847	Lagging	-125.315	0.995	Lagging	-20.032	0.951	Lagging	-65.210
58	FLT58-3PH	1.000	Leading	4.555	0.917	Lagging	-87.111	0.846	Lagging	-125.787	0.995	Lagging	-20.194	0.951	Lagging	-64.903
59	FLT59-3PH	1.000	Leading	2.407	0.913	Lagging	-89.361	0.844	Lagging	-127.281	0.994	Lagging	-22.601	0.950	Lagging	-65.575
60	FLT60-3PH	1.000	Leading	3.920	0.916	Lagging	-87.497	0.844	Lagging	-126.990	0.994	Lagging	-21.715	0.948	Lagging	-67.015
61	FLT61-3PH	1.000	Leading	4.260	0.918	Lagging	-86.210	0.847	Lagging	-125.647	0.995	Lagging	-20.550	0.951	Lagging	-65.210
62	FLT62-3PH	1.000	Leading	4.818	0.913	Lagging	-89.158	0.841	Lagging	-128.580	0.995	Lagging	-19.139	0.948	Lagging	-67.492
63	FLT63-3PH	1.000	Leading	4.284	0.918	Lagging	-86.167	0.847	Lagging	-125.596	0.995	Lagging	-20.521	0.951	Lagging	-65.171
64	FLT64-3PH	1.000	Leading	4.560	0.918	Lagging	-86.335	0.847	Lagging	-125.609	0.995	Lagging	-20.550	0.951	Lagging	-65.138
65	FLT65-3PH	1.000	Lagging	-0.550	0.887	Lagging	-103.877	0.800	Lagging	-150.108	0.986	Lagging	-34.108	0.921	Lagging	-84.607
66	FLT66-3PH	1.000	Leading	4.536	0.917	Lagging	-86.996	0.847	Lagging	-125.673	0.995	Lagging	-20.229	0.951	Lagging	-64.829
67	FLT67-3PH	1.000	Leading	3.675	0.917	Lagging	-87.233	0.847	Lagging	-125.299	0.994	Lagging	-21.385	0.950	Lagging	-65.637
73	FLT73-3PH	1.000	Leading	4.560	0.919	Lagging	-85.644	0.848	Lagging	-124.974	0.995	Lagging	-20.143	0.951	Lagging	-64.698
74	FLT74-3PH	1.000	Leading	4.414	0.918	Lagging	-86.308	0.848	Lagging	-124.865	0.994	Lagging	-21.316	0.951	Lagging	-65.152
75	FLT75-3PH	0.999	Leading	10.414	0.923	Lagging	-83.193	0.846	Lagging	-126.037	0.998	Lagging	-12.659	0.956	Lagging	-61.690
76	FLT76-3PH	0.999	Lagging	-6.328	0.871	Lagging	-112.986	0.781	Lagging	-159.938	0.949	Lagging	-66.711	0.869	Lagging	-114.023
84	FLT84-3PH	1.000	Lagging	-0.444	0.906	Lagging	-93.664	0.834	Lagging	-132.088	0.995	Lagging	-20.985	0.939	Lagging	-73.531
85	FLT85-3PH	0.999	Leading	7.169	0.933	Lagging	-77.190	0.872	Lagging	-112.221	0.998	Lagging	-12.356	0.962	Lagging	-57.110
86	FLT86-3PH	1.000	Lagging	-0.672	0.935	Lagging	-75.861	0.878	Lagging	-108.898	0.998	Lagging	-12.149	0.959	Lagging	-59.463
87	FLT87-3PH	1.000	Leading	6.014	0.918	Lagging	-86.619	0.849	Lagging	-124.457	0.997	Lagging	-14.586	0.951	Lagging	-65.095
88	FLT88-3PH	1.000	Leading	4.302	0.919	Lagging	-85.846	0.848	Lagging	-125.194	0.995	Lagging	-20.467	0.951	Lagging	-64.866
89	FLT89-3PH	1.000	Leading	5.056	0.920	Lagging	-84.937	0.852	Lagging	-122.839	0.996	Lagging	-18.594	0.953	Lagging	-63.225
90	FLT90-3PH	1.000	Leading	4.341	0.919	Lagging	-85.774	0.848	Lagging	-125.119	0.995	Lagging	-20.377	0.951	Lagging	-64.810
91	FLT91-3PH	1.000	Leading	4.498	0.918	Lagging	-86.366	0.847	Lagging	-125.564	0.995	Lagging	-20.255	0.951	Lagging	-65.308
92	FLT92-3PH	0.999	Leading	8.294	0.920	Lagging	-85.242	0.849	Lagging	-124.450	0.996	Lagging	-18.931	0.953	Lagging	-63.484
93	FLT93-3PH	1.000	Lagging	-0.203	0.953	Lagging	-63.428	0.896	Lagging	-99.357	0.999	Lagging	-10.926	0.979	Lagging	-41.849
94	FLT94-3PH	0.999	Leading	6.438	0.911	Lagging	-90.266	0.820	Lagging	-139.817	0.990	Lagging	-28.336	0.911	Lagging	-90.361
95	FLT95-3PH	1.000	Leading	4.560	0.998	Leading	11.584	0.945	Lagging	-69.155	0.999	Leading	6.599	1.000	Lagging	-4.102
100	FLT100-3PH	0.999	Leading	10.485	0.923	Lagging	-83.183	0.854	Lagging	-121.990	0.997	Lagging	-15.072	0.956	Lagging	-61.078
101	FLT101-3PH	1.000	Leading	6.128	0.926	Lagging	-81.793	0.860	Lagging	-118.886	0.996	Lagging	-17.263	0.958	Lagging	-59.929
104	FLT104-3PH	1.000	Leading	3.832	0.919	Lagging	-85.599	0.848	Lagging	-124.941	0.995	Lagging	-21.014	0.952	Lagging	-64.444
105	FLT105-3PH	1.000	Leading	1.141	0.917	Lagging	-86.769	0.847	Lagging	-125.389	0.992	Lagging	-25.343	0.950	Lagging	-65.837
106	FLT106-3PH	1.000	Leading	4.531	0.919	Lagging	-85.751	0.848	Lagging	-125.007	0.995	Lagging	-20.193	0.951	Lagging	-64.766
107	FLT107-3PH	1.000	Leading	3.705	0.919	Lagging	-85.581	0.848	Lagging	-124.942	0.994	Lagging	-21.136	0.952	Lagging	-64.354
108	FLT108-3PH	1.000	Leading	4.363	0.919	Lagging	-85.707	0.848	Lagging	-124.957	0.995	Lagging	-20.289	0.951	Lagging	-64.736
109	FLT109-3PH	1.000	Leading	0.882	0.917	Lagging	-86.766	0.847	Lagging	-125.382	0.992	Lagging	-25.744	0.950	Lagging	-65.845
110	FLT110-3PH	1.000	Leading	1.141	0.917	Lagging	-86.769	0.847	Lagging	-125.389	0.992	Lagging	-25.343	0.950	Lagging	-65.837
111	FLT111-3PH	1.000	Leading	4.427	0.919	Lagging	-85.735	0.848	Lagging	-124.959	0.995	Lagging	-20.359	0.951	Lagging	-64.772
117	FLT117-3PH	1.000	Leading	4.085	0.919	Lagging	-86.036	0.848	Lagging	-125.064	0.995	Lagging	-20.651	0.951	Lagging	-64.717
118	FLT118-3PH	1.000	Leading	4.182	0.919	Lagging	-85.907	0.848	Lagging	-124.945	0.995	Lagging	-20.733	0.951	Lagging	-65.057
119	FLT119-3PH	1.000	Leading	4.459	0.919	Lagging	-85.862	0.848	Lagging	-125.015	0.995	Lagging	-20.431	0.951	Lagging	-64.750
120	FLT120-3PH	1.000	Leading	3.879	0.919	Lagging	-86.002	0.848	Lagging	-125.114	0.994	Lagging	-21.922	0.951	Lagging	-64.768
121	FLT121-3PH	1.000	Leading	4.572	0.919	Lagging	-85.637	0.848	Lagging	-124.976	0.995	Lagging	-20.060	0.951	Lagging	-64.757
126	FLT126-3PH	1.000	Leading	5.555	0.922	Lagging	-84.254	0.848	Lagging	-124.974	0.995	Lagging	-20.143	0.951	Lagging	-64.698
127	FLT127-3PH	1.000	Leading	4.399	0.919	Lagging	-85.777	0.848	Lagging	-125.211	0.995	Lagging	-20.847	0.951	Lagging	-64.947

Table 5-14 (continued)
Power Factor Analysis: GEN-2016-056

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
128	FLT128-3PH	1.000	Leading	4.652	0.918	Lagging	-86.543	0.848	Lagging	-125.158	0.996	Lagging	-18.935	0.950	Lagging	-65.604
129	FLT129-3PH	1.000	Leading	4.699	0.917	Lagging	-86.994	0.848	Lagging	-125.249	0.995	Lagging	-20.023	0.951	Lagging	-64.886
130	FLT130-3PH	1.000	Leading	4.555	0.919	Lagging	-85.621	0.848	Lagging	-124.914	0.995	Lagging	-20.135	0.952	Lagging	-64.640
131	FLT131-3PH	1.000	Leading	4.684	0.920	Lagging	-84.931	0.848	Lagging	-124.975	0.995	Lagging	-20.149	0.952	Lagging	-64.629
132	FLT132-3PH	1.000	Leading	3.675	0.917	Lagging	-87.233	0.847	Lagging	-125.299	0.994	Lagging	-21.385	0.950	Lagging	-65.637
133	FLT133-3PH	1.000	Leading	4.840	0.918	Lagging	-86.662	0.846	Lagging	-125.945	0.995	Lagging	-19.698	0.951	Lagging	-65.134
140	FLT140-3PH	1.000	Leading	2.778	0.914	Lagging	-88.491	0.843	Lagging	-127.753	0.994	Lagging	-21.879	0.946	Lagging	-68.547
141	FLT141-3PH	1.000	Leading	3.080	0.919	Lagging	-86.008	0.844	Lagging	-127.260	0.994	Lagging	-22.628	0.951	Lagging	-65.067
142	FLT142-3PH	1.000	Leading	4.155	0.915	Lagging	-88.428	0.842	Lagging	-128.111	0.994	Lagging	-21.169	0.947	Lagging	-67.863
143	FLT143-3PH	1.000	Leading	4.142	0.918	Lagging	-86.176	0.847	Lagging	-125.537	0.995	Lagging	-20.640	0.951	Lagging	-65.156
144	FLT144-3PH	1.000	Leading	3.705	0.919	Lagging	-85.581	0.848	Lagging	-124.942	0.994	Lagging	-21.136	0.952	Lagging	-64.354
145	FLT145-3PH	1.000	Leading	4.633	0.918	Lagging	-86.260	0.847	Lagging	-125.713	0.995	Lagging	-19.990	0.950	Lagging	-65.764
146	FLT146-3PH	1.000	Leading	3.395	0.918	Lagging	-86.227	0.848	Lagging	-124.802	0.994	Lagging	-21.874	0.951	Lagging	-65.360
147	FLT147-3PH	0.999	Leading	7.280	0.929	Lagging	-79.522	0.847	Lagging	-125.602	0.995	Lagging	-19.469	0.958	Lagging	-59.906
148	FLT148-3PH	0.999	Leading	9.579	0.923	Lagging	-83.593	0.846	Lagging	-125.951	0.997	Lagging	-14.997	0.954	Lagging	-62.876
157	FLT157-3PH	0.979	Leading	41.583	0.958	Lagging	-60.004	0.912	Lagging	-90.124	1.000	Leading	4.915	0.995	Lagging	-19.361
158	FLT158-3PH	0.999	Lagging	-6.328	0.871	Lagging	-112.986	0.781	Lagging	-159.938	0.949	Lagging	-66.711	0.869	Lagging	-114.023
159	FLT159-3PH	0.992	Leading	26.106	0.959	Lagging	-59.176	0.934	Lagging	-76.308	1.000	Leading	5.325	0.999	Lagging	-7.384
168	FLT168-3PH	1.000	Leading	4.560	0.919	Lagging	-85.644	0.848	Lagging	-124.974	0.995	Lagging	-20.143	0.951	Lagging	-64.698
169	FLT169-3PH	1.000	Leading	2.125	0.913	Lagging	-89.601	0.840	Lagging	-129.158	0.990	Lagging	-27.885	0.946	Lagging	-68.220
170	FLT170-3PH	1.000	Leading	3.795	0.912	Lagging	-90.245	0.823	Lagging	-137.970	0.987	Lagging	-32.343	0.942	Lagging	-70.975
171	FLT171-3PH	1.000	Leading	3.675	0.917	Lagging	-87.233	0.847	Lagging	-125.299	0.994	Lagging	-21.385	0.950	Lagging	-65.637
172	FLT172-3PH	1.000	Leading	2.407	0.913	Lagging	-89.361	0.844	Lagging	-127.281	0.994	Lagging	-22.601	0.950	Lagging	-65.575
173	FLT173-3PH	1.000	Leading	4.536	0.917	Lagging	-86.996	0.847	Lagging	-125.673	0.995	Lagging	-20.229	0.951	Lagging	-64.829
174	FLT174-3PH	1.000	Lagging	-0.550	0.887	Lagging	-103.877	0.800	Lagging	-150.108	0.986	Lagging	-34.108	0.921	Lagging	-84.607
175	FLT175-3PH	1.000	Leading	3.920	0.916	Lagging	-87.497	0.844	Lagging	-126.990	0.994	Lagging	-21.715	0.948	Lagging	-67.015
176	FLT176-3PH	1.000	Leading	4.560	0.919	Lagging	-85.644	0.847	Lagging	-125.741	0.995	Lagging	-19.762	0.952	Lagging	-64.170
184	FLT184-3PH	1.000	Leading	4.461	0.919	Lagging	-85.627	0.848	Lagging	-124.939	0.995	Lagging	-20.304	0.951	Lagging	-64.695
185	FLT185-3PH	1.000	Leading	4.566	0.919	Lagging	-85.646	0.848	Lagging	-125.006	0.995	Lagging	-20.342	0.951	Lagging	-64.713
186	FLT186-3PH	1.000	Leading	4.498	0.919	Lagging	-85.620	0.848	Lagging	-124.948	0.995	Lagging	-20.236	0.951	Lagging	-64.691
187	FLT187-3PH	1.000	Leading	4.450	0.919	Lagging	-85.678	0.848	Lagging	-124.962	0.995	Lagging	-20.331	0.951	Lagging	-64.727
188	FLT188-3PH	1.000	Leading	4.080	0.921	Lagging	-84.635	0.849	Lagging	-124.484	0.995	Lagging	-20.027	0.952	Lagging	-64.254
189	FLT189-3PH	1.000	Leading	4.270	0.921	Lagging	-84.798	0.849	Lagging	-124.564	0.995	Lagging	-20.272	0.952	Lagging	-64.462
190	FLT190-3PH	1.000	Leading	4.510	0.919	Lagging	-85.640	0.848	Lagging	-124.960	0.995	Lagging	-20.213	0.951	Lagging	-64.696

Study Generator GEN-2016-056

The Power Factor Analysis shows that GEN-2016-056 has a power factor range of 0.979 leading to 0.994 lagging for the 2016 Winter Peak conditions, a power factor range of 0.998 leading to 0.871 lagging for the 2017 Summer Peak conditions, a power factor range of 0.945 lagging to 0.781 lagging for the 2020 Summer Peak conditions, a power factor range of 0.999 leading to 0.949 lagging for the 2020 Winter Peak conditions, and a power factor range of 0.869 lagging to 1.0 unity for the 2025 Summer Peak conditions.

Table 5-15
Power Factor Analysis: GEN-2016-058

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	1.000	Lagging	-2.613	0.809	Lagging	-145.174	0.980	Lagging	-40.957	1.000	Lagging	-5.907	0.999	Lagging	-7.980
1	FLT01-3PH	1.000	Lagging	-2.260	0.811	Lagging	-144.501	0.980	Lagging	-40.788	1.000	Lagging	-5.697	0.999	Lagging	-7.940
2	FLT02-3PH	1.000	Lagging	-2.659	0.807	Lagging	-146.441	0.978	Lagging	-42.559	0.999	Lagging	-6.355	0.999	Lagging	-9.388
3	FLT03-3PH	1.000	Lagging	-2.620	0.809	Lagging	-145.242	0.980	Lagging	-41.046	1.000	Lagging	-5.917	0.999	Lagging	-8.119
4	FLT04-3PH	1.000	Lagging	-2.680	0.809	Lagging	-145.193	0.980	Lagging	-41.123	1.000	Lagging	-6.106	0.999	Lagging	-8.189
5	FLT05-3PH	1.000	Lagging	-3.688	0.804	Lagging	-147.854	0.977	Lagging	-43.380	0.999	Lagging	-7.552	0.999	Lagging	-9.699
6	FLT06-3PH	1.000	Lagging	-2.616	0.809	Lagging	-145.262	0.980	Lagging	-41.041	1.000	Lagging	-5.931	0.999	Lagging	-8.029
7	FLT07-3PH	1.000	Lagging	-2.640	0.809	Lagging	-145.231	0.980	Lagging	-40.995	1.000	Lagging	-5.939	0.999	Lagging	-8.002
8	FLT08-3PH	1.000	Lagging	-2.638	0.809	Lagging	-145.227	0.980	Lagging	-40.987	1.000	Lagging	-5.936	0.999	Lagging	-7.995
9	FLT09-3PH	1.000	Lagging	-2.651	0.809	Lagging	-145.485	0.979	Lagging	-41.243	1.000	Lagging	-6.076	0.999	Lagging	-8.301
10	FLT10-3PH	1.000	Lagging	-2.610	0.809	Lagging	-145.190	0.980	Lagging	-40.962	1.000	Lagging	-5.914	0.999	Lagging	-7.987
11	FLT11-3PH	1.000	Lagging	-2.689	0.810	Lagging	-145.026	0.979	Lagging	-41.195	1.000	Lagging	-6.133	0.999	Lagging	-8.324
20	FLT20-3PH	0.999	Lagging	-8.101	0.809	Lagging	-145.430	0.979	Lagging	-41.644	1.000	Leading	0.649	0.999	Lagging	-8.342
21	FLT21-3PH	0.996	Lagging	-17.213	0.797	Lagging	-151.783	0.974	Lagging	-46.976	0.995	Lagging	-20.741	0.996	Lagging	-17.958
22	FLT22-3PH	1.000	Lagging	-1.747	0.810	Lagging	-144.790	0.979	Lagging	-41.338	1.000	Lagging	-6.008	0.999	Lagging	-7.774
23	FLT23-3PH	1.000	Lagging	-2.678	0.819	Lagging	-139.891	0.982	Lagging	-38.348	0.999	Lagging	-6.471	1.000	Lagging	-4.865
24	FLT24-3PH	1.000	Lagging	-2.613	0.809	Lagging	-145.174	0.980	Lagging	-40.957	1.000	Lagging	-5.907	0.999	Lagging	-7.980
26	FLT26-3PH	0.990	Lagging	-28.536	0.786	Lagging	-157.486	0.963	Lagging	-55.680	0.987	Lagging	-32.226	0.992	Lagging	-26.168
35	FLT35-3PH	0.998	Lagging	-11.533	0.793	Lagging	-153.430	0.971	Lagging	-49.024	0.997	Lagging	-16.707	0.997	Lagging	-14.298
36	FLT36-3PH	0.999	Lagging	-9.403	0.797	Lagging	-151.787	0.973	Lagging	-47.421	0.997	Lagging	-14.280	0.998	Lagging	-12.972
37	FLT37-3PH	0.998	Lagging	-12.872	0.798	Lagging	-151.015	0.974	Lagging	-46.134	0.997	Lagging	-16.655	0.998	Lagging	-11.762
38	FLT38-3PH	1.000	Lagging	-2.713	0.809	Lagging	-145.122	0.980	Lagging	-40.916	1.000	Lagging	-6.021	0.999	Lagging	-8.158
39	FLT39-3PH	1.000	Lagging	-3.128	0.803	Lagging	-148.478	0.977	Lagging	-43.890	0.999	Lagging	-6.824	0.999	Lagging	-9.709
40	FLT40-3PH	0.999	Lagging	-9.507	0.795	Lagging	-152.526	0.973	Lagging	-47.814	0.998	Lagging	-13.921	0.998	Lagging	-12.583
41	FLT41-3PH	1.000	Lagging	-3.171	0.802	Lagging	-148.709	0.977	Lagging	-44.097	0.999	Lagging	-6.900	0.999	Lagging	-9.896
42	FLT42-3PH	0.990	Lagging	-28.076	0.765	Lagging	-168.233	0.947	Lagging	-67.503	0.988	Lagging	-31.046	0.990	Lagging	-28.356
43	FLT43-3PH	1.000	Lagging	-2.716	0.808	Lagging	-145.688	0.978	Lagging	-42.424	1.000	Lagging	-5.898	0.999	Lagging	-8.604
53	FLT53-3PH	1.000	Leading	1.538	0.780	Lagging	-160.508	0.963	Lagging	-55.910	1.000	Lagging	-1.766	0.995	Lagging	-20.894
54	FLT54-3PH	1.000	Leading	0.139	0.784	Lagging	-158.571	0.967	Lagging	-52.830	0.998	Lagging	-12.693	0.993	Lagging	-24.441
55	FLT55-3PH	1.000	Leading	0.052	0.795	Lagging	-152.433	0.973	Lagging	-47.458	1.000	Lagging	-3.422	0.998	Lagging	-12.308
56	FLT56-3PH	0.996	Leading	19.035	0.838	Lagging	-130.279	0.985	Lagging	-35.502	0.990	Leading	29.207	1.000	Lagging	-1.968
57	FLT57-3PH	1.000	Leading	0.730	0.813	Lagging	-143.098	0.978	Lagging	-42.597	1.000	Leading	0.530	0.999	Lagging	-6.737
58	FLT58-3PH	1.000	Leading	2.708	0.802	Lagging	-148.986	0.977	Lagging	-43.849	1.000	Lagging	-0.841	0.999	Lagging	-8.466
59	FLT59-3PH	0.999	Lagging	-8.603	0.761	Lagging	-170.392	0.951	Lagging	-65.062	0.995	Lagging	-19.895	0.994	Lagging	-22.334
60	FLT60-3PH	1.000	Leading	0.035	0.830	Lagging	-134.242	0.987	Lagging	-32.222	1.000	Lagging	-0.710	1.000	Leading	4.848
61	FLT61-3PH	1.000	Lagging	-3.169	0.806	Lagging	-146.774	0.978	Lagging	-42.717	1.000	Lagging	-5.995	0.999	Lagging	-9.538
62	FLT62-3PH	1.000	Lagging	-2.715	0.783	Lagging	-158.680	0.965	Lagging	-54.237	1.000	Lagging	-6.286	0.996	Lagging	-18.874
63	FLT63-3PH	1.000	Lagging	-3.131	0.806	Lagging	-146.654	0.978	Lagging	-42.586	1.000	Lagging	-5.998	0.999	Lagging	-9.424
64	FLT64-3PH	1.000	Lagging	-2.613	0.801	Lagging	-149.262	0.975	Lagging	-45.131	0.999	Lagging	-7.725	0.998	Lagging	-11.578
65	FLT65-3PH	0.996	Leading	17.498	0.810	Lagging	-144.579	0.985	Lagging	-34.881	1.000	Lagging	-0.552	0.999	Leading	6.826
66	FLT66-3PH	1.000	Leading	2.501	0.804	Lagging	-147.869	0.978	Lagging	-42.768	1.000	Lagging	-1.007	0.999	Lagging	-7.473
67	FLT67-3PH	0.997	Lagging	-15.580	0.766	Lagging	-167.862	0.959	Lagging	-59.232	0.995	Lagging	-20.919	0.990	Lagging	-29.120
73	FLT73-3PH	1.000	Lagging	-2.613	0.809	Lagging	-145.174	0.980	Lagging	-40.957	1.000	Lagging	-5.907	0.999	Lagging	-7.980
74	FLT74-3PH	1.000	Lagging	-1.747	0.810	Lagging	-144.790	0.979	Lagging	-41.338	1.000	Lagging	-6.008	0.999	Lagging	-7.774
75	FLT75-3PH	1.000	Leading	1.265	0.812	Lagging	-143.592	0.982	Lagging	-38.487	1.000	Lagging	-1.896	1.000	Lagging	-3.988
76	FLT76-3PH	1.000	Lagging	-2.977	0.802	Lagging	-149.186	0.971	Lagging	-49.446	0.999	Lagging	-9.860	0.999	Lagging	-8.635
84	FLT84-3PH	1.000	Lagging	-0.789	0.812	Lagging	-143.804	0.981	Lagging	-39.259	1.000	Lagging	-5.378	1.000	Lagging	-4.608
85	FLT85-3PH	1.000	Lagging	-5.761	0.791	Lagging	-154.854	0.971	Lagging	-49.565	0.999	Lagging	-9.760	0.997	Lagging	-14.208
86	FLT86-3PH	1.000	Lagging	-2.105	0.806	Lagging	-146.786	0.978	Lagging	-42.390	0.999	Lagging	-7.501	0.998	Lagging	-11.456
87	FLT87-3PH	1.000	Lagging	-3.981	0.789	Lagging	-155.649	0.970	Lagging	-49.858	0.999	Lagging	-8.179	0.998	Lagging	-13.514
88	FLT88-3PH	1.000	Lagging	-3.135	0.809	Lagging	-145.420	0.979	Lagging	-41.204	0.999	Lagging	-6.354	0.999	Lagging	-8.183
89	FLT89-3PH	1.000	Lagging	-4.265	0.806	Lagging	-147.018	0.978	Lagging	-42.636	0.999	Lagging	-7.712	0.999	Lagging	-9.348
90	FLT90-3PH	1.000	Lagging	-3.021	0.809	Lagging	-145.337	0.980	Lagging	-41.122	1.000	Lagging	-6.244	0.999	Lagging	-8.104
91	FLT91-3PH	1.000	Lagging	-2.792	0.808	Lagging	-145.987	0.979	Lagging	-41.615	1.000	Lagging	-6.044	0.999	Lagging	-8.809
92	FLT92-3PH	1.000	Lagging	-4.428	0.805	Lagging	-147.448	0.977	Lagging	-43.205	0.999	Lagging	-7.270	0.999	Lagging	-9.802
93	FLT93-3PH	0.999	Lagging	-7.694	0.787	Lagging	-156.839	0.970	Lagging	-50.209	0.998	Lagging	-14.077	0.993	Lagging	-23.553
94	FLT94-3PH	0.999	Lagging	-10.718	0.810	Lagging	-144.540	0.977	Lagging	-43.201	0.999	Lagging	-7.019	0.997	Lagging	-14.232
95	FLT95-3PH	1.000	Lagging	-2.613	0.786	Lagging	-157.284	0.972	Lagging	-48.654	0.998	Lagging	-11.895	0.998	Lagging	-12.909
100	FLT100-3PH	1.000	Lagging	-5.479	0.804	Lagging	-148.129	0.977	Lagging	-44.037	0.999	Lagging	-7.710	0.999	Lagging	-10.882
101	FLT101-3PH	1.000	Lagging	-2.111	0.811	Lagging	-144.383	0.980	Lagging	-40.284	1.000	Lagging	-5.378	0.999	Lagging	-7.578
104	FLT104-3PH	1.000	Lagging	-3.226	0.809	Lagging	-145.117	0.979	Lagging	-41.173	0.999	Lagging	-6.404	0.999	Lagging	-8.009
105	FLT105-3PH	1.000	Lagging	-4.813	0.809	Lagging	-145.485	0.979	Lagging	-41.543	0.999	Lagging	-8.318	0.999	Lagging	-8.679
106	FLT106-3PH	1.000	Lagging	-2.634	0.809	Lagging	-145.210	0.980	Lagging	-40.992	1.000	Lagging	-5.934	0.999	Lagging	-8.027
107	FLT107-3PH	1.000	Lagging	-3.318	0.809	Lagging	-145.177	0.979	Lagging	-41.205	0.999	Lagging	-6.464	0.999	Lagging	-8.012
108	FLT108-3PH	1.000	Lagging	-2.827	0.809	Lagging	-145.338	0.980	Lagging	-41.022	1.000	Lagging	-6.027	0.999	Lagging	-8.154
109	FLT109-3PH	1.000	Lagging	-4.994	0.809	Lagging	-145.515	0.979	Lagging	-41.557	0.999	Lagging	-8.516	0.999	Lagging	-8.692
110	FLT110-3PH	1.000	Lagging	-4.813	0.809	Lagging	-145.485	0.979	Lagging	-41.543	0.999	Lagging	-8.318	0.999	Lagging	-8.679
111	FLT111-3PH	1.000	Lagging	-2.753	0.809	Lagging	-145.260	0.980	Lagging	-41.021	1.000	Lagging	-6.072	0.999	Lagging	-8.106
117	FLT117-3PH	1.000	Lagging	-3.002	0.809	Lagging	-145.310	0.980	Lagging	-41.107	1.000	Lagging	-6.186	0.999	Lagging	-8.048
118	FLT118-3PH	1.000	Lagging	-3.075	0.809	Lagging	-145.459	0.979	Lagging	-41.169	0.999	Lagging	-6.421	0.999	Lagging	-8.461
119	FLT119-3PH	1.000	Lagging	-2.749	0.809	Lagging	-145.273	0.980	Lagging	-41.073	1.000	Lagging	-6.113	0.999	Lagging	-8.083
120	FLT120-3PH	1.000	Lagging	-3.726	0.808	Lagging	-145.663	0.979	Lagging	-41.451	0.999	Lagging	-7.493	0.999	Lagging	-8.072
121	FLT121-3PH	1.000	Lagging	-2.598	0.809	Lagging	-145.157	0.980	Lagging	-40.943	1.000	Lagging	-5.856	0.999	Lagging	-8.014
126	FLT126-3PH	1.000	Leading	1.069	0.819	Lagging	-139.862	0.980	Lagging	-40.957	1.000	Lagging	-5.907	0.999	Lagging	-7.980
127	FLT127-3PH	1.000	Lagging	-3.550	0.809	Lagging	-145.571	0.977	Lagging	-43.369	0.999	Lagging	-8.647	0.999	Lagging	-9.959

Table 5-15 (continued)
Power Factor Analysis: GEN-2016-058

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
128	FLT128-3PH	1.000	Lagging	-2.075	0.803	Lagging	-148.517	0.978	Lagging	-42.803	1.000	Leading	2.804	0.995	Lagging	-20.497
129	FLT129-3PH	0.999	Lagging	-10.258	0.790	Lagging	-155.163	0.978	Lagging	-43.147	1.000	Lagging	-4.621	0.999	Lagging	-10.187
130	FLT130-3PH	1.000	Lagging	-3.054	0.809	Lagging	-145.134	0.979	Lagging	-41.252	0.999	Lagging	-6.381	0.999	Lagging	-8.168
131	FLT131-3PH	1.000	Lagging	-5.039	0.808	Lagging	-146.070	0.980	Lagging	-41.091	1.000	Lagging	-6.064	0.997	Lagging	-15.139
132	FLT132-3PH	0.997	Lagging	-15.580	0.766	Lagging	-167.862	0.959	Lagging	-59.232	0.995	Lagging	-20.919	0.990	Lagging	-29.120
133	FLT133-3PH	1.000	Lagging	-5.688	0.785	Lagging	-157.699	0.972	Lagging	-47.906	0.999	Lagging	-8.404	0.997	Lagging	-15.051
140	FLT140-3PH	1.000	Lagging	-3.347	0.809	Lagging	-145.296	0.979	Lagging	-41.137	0.999	Lagging	-6.700	0.999	Lagging	-8.718
141	FLT141-3PH	1.000	Lagging	-3.710	0.809	Lagging	-145.472	0.979	Lagging	-41.251	0.999	Lagging	-6.934	0.999	Lagging	-7.888
142	FLT142-3PH	1.000	Lagging	-3.019	0.808	Lagging	-145.686	0.979	Lagging	-41.531	0.999	Lagging	-6.424	0.999	Lagging	-9.000
143	FLT143-3PH	1.000	Lagging	-2.873	0.809	Lagging	-145.359	0.979	Lagging	-41.154	1.000	Lagging	-6.061	0.999	Lagging	-8.226
144	FLT144-3PH	1.000	Lagging	-3.318	0.809	Lagging	-145.177	0.979	Lagging	-41.205	0.999	Lagging	-6.464	0.999	Lagging	-8.012
145	FLT145-3PH	1.000	Lagging	-2.549	0.809	Lagging	-145.156	0.980	Lagging	-40.949	1.000	Lagging	-5.839	0.999	Lagging	-8.248
146	FLT146-3PH	1.000	Lagging	-3.365	0.807	Lagging	-146.444	0.978	Lagging	-42.218	0.999	Lagging	-6.696	0.999	Lagging	-9.758
147	FLT147-3PH	1.000	Lagging	-4.278	0.813	Lagging	-143.445	0.980	Lagging	-40.420	0.999	Lagging	-7.423	1.000	Lagging	-5.989
148	FLT148-3PH	1.000	Lagging	-1.671	0.807	Lagging	-146.411	0.979	Lagging	-41.892	1.000	Lagging	-5.009	0.999	Lagging	-7.362
157	FLT157-3PH	0.999	Lagging	-8.517	0.807	Lagging	-146.473	0.978	Lagging	-42.560	0.999	Lagging	-7.412	0.999	Lagging	-10.191
158	FLT158-3PH	1.000	Lagging	-2.977	0.802	Lagging	-149.186	0.971	Lagging	-49.446	0.999	Lagging	-9.860	0.999	Lagging	-8.635
159	FLT159-3PH	1.000	Lagging	-3.141	0.810	Lagging	-144.914	0.978	Lagging	-42.635	0.999	Lagging	-7.576	1.000	Lagging	-5.264
168	FLT168-3PH	1.000	Lagging	-2.613	0.809	Lagging	-145.174	0.980	Lagging	-40.957	1.000	Lagging	-5.907	0.999	Lagging	-7.980
169	FLT169-3PH	0.985	Lagging	-35.051	0.773	Lagging	-164.016	0.899	Lagging	-97.598	0.970	Lagging	-50.502	0.946	Lagging	-68.396
170	FLT170-3PH	0.855	Leading	121.307	0.996	Leading	17.891	0.872	Leading	112.054	0.854	Leading	121.711	0.782	Leading	159.647
171	FLT171-3PH	0.997	Lagging	-15.580	0.766	Lagging	-167.862	0.959	Lagging	-59.232	0.995	Lagging	-20.919	0.990	Lagging	-29.120
172	FLT172-3PH	0.999	Lagging	-8.603	0.761	Lagging	-170.392	0.951	Lagging	-65.062	0.995	Lagging	-19.895	0.994	Lagging	-22.334
173	FLT173-3PH	1.000	Leading	2.501	0.804	Lagging	-147.869	0.978	Lagging	-42.768	1.000	Lagging	-1.007	0.999	Lagging	-7.473
174	FLT174-3PH	0.996	Leading	17.498	0.810	Lagging	-144.579	0.985	Lagging	-34.881	1.000	Lagging	-0.552	0.999	Leading	6.826
175	FLT175-3PH	1.000	Leading	0.035	0.830	Lagging	-134.242	0.987	Lagging	-32.222	1.000	Lagging	-0.710	1.000	Leading	4.848
176	FLT176-3PH	1.000	Lagging	-2.613	0.809	Lagging	-145.174	0.964	Lagging	-55.151	0.997	Lagging	-14.377	0.997	Lagging	-14.580
184	FLT184-3PH	1.000	Lagging	-2.632	0.810	Lagging	-144.935	0.980	Lagging	-40.733	1.000	Lagging	-6.024	0.999	Lagging	-7.853
185	FLT185-3PH	1.000	Lagging	-2.617	0.809	Lagging	-145.204	0.979	Lagging	-41.150	1.000	Lagging	-6.219	0.999	Lagging	-8.011
186	FLT186-3PH	1.000	Lagging	-2.612	0.810	Lagging	-144.979	0.980	Lagging	-40.786	1.000	Lagging	-5.953	0.999	Lagging	-7.875
187	FLT187-3PH	1.000	Lagging	-2.695	0.809	Lagging	-145.090	0.980	Lagging	-40.870	1.000	Lagging	-6.115	0.999	Lagging	-7.974
188	FLT188-3PH	1.000	Leading	0.707	0.820	Lagging	-139.544	0.983	Lagging	-37.655	1.000	Lagging	-1.314	1.000	Lagging	-3.589
189	FLT189-3PH	1.000	Lagging	-0.012	0.818	Lagging	-140.490	0.982	Lagging	-38.103	1.000	Lagging	-3.001	1.000	Lagging	-5.989
190	FLT190-3PH	1.000	Lagging	-2.637	0.809	Lagging	-145.084	0.980	Lagging	-40.872	1.000	Lagging	-5.963	0.999	Lagging	-7.933

Study Generator GEN-2016-058

The Power Factor Analysis shows that GEN-2016-058 has a power factor range of 0.855 leading to 0.985 lagging for the 2016 Winter Peak conditions, a power factor range of 0.996 leading to 0.761 lagging for the 2017 Summer Peak conditions, a power factor range of 0.872 lagging to 0.899 lagging for the 2020 Summer Peak conditions, a power factor range of 0.854 leading to 0.969 lagging for the 2020 Winter Peak conditions, and a power factor range of 0.782 leading to 0.946 lagging for the 2025 Summer Peak conditions.

Table 5-16
Power Factor Analysis: GEN-2016-062

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
1	FLT01-3PH	1.000	Leading	2.188	1.000	Lagging	-4.290	1.000	Leading	0.032	1.000	Lagging	-0.472	1.000	Leading	2.451
2	FLT02-3PH	1.000	Leading	2.192	1.000	Lagging	-4.281	1.000	Leading	0.035	1.000	Lagging	-0.478	1.000	Leading	2.453
3	FLT03-3PH	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.451
4	FLT04-3PH	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Leading	0.032	1.000	Lagging	-0.475	1.000	Leading	2.450
5	FLT05-3PH	1.000	Leading	2.192	1.000	Lagging	-4.280	1.000	Leading	0.034	1.000	Lagging	-0.489	1.000	Leading	2.453
6	FLT06-3PH	1.000	Leading	2.191	1.000	Lagging	-4.287	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
7	FLT07-3PH	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.475	1.000	Leading	2.452
8	FLT08-3PH	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.475	1.000	Leading	2.452
9	FLT09-3PH	1.000	Leading	2.191	1.000	Lagging	-4.287	1.000	Leading	0.033	1.000	Lagging	-0.472	1.000	Leading	2.452
10	FLT10-3PH	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
11	FLT11-3PH	1.000	Leading	2.191	1.000	Lagging	-4.290	1.000	Leading	0.031	1.000	Lagging	-0.475	1.000	Leading	2.450
20	FLT20-3PH	1.000	Leading	2.185	1.000	Lagging	-4.289	1.000	Leading	0.032	1.000	Lagging	-0.459	1.000	Leading	2.451
21	FLT21-3PH	1.000	Leading	2.176	1.000	Lagging	-4.298	1.000	Leading	0.024	1.000	Lagging	-0.516	1.000	Leading	2.437
22	FLT22-3PH	1.000	Leading	2.190	1.000	Lagging	-4.294	1.000	Leading	0.030	1.000	Lagging	-0.479	1.000	Leading	2.450
23	FLT23-3PH	1.000	Leading	2.188	1.000	Lagging	-4.285	1.000	Leading	0.035	1.000	Lagging	-0.480	1.000	Leading	2.455
24	FLT24-3PH	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
26	FLT26-3PH	1.000	Leading	2.165	1.000	Lagging	-4.305	1.000	Leading	0.011	1.000	Lagging	-0.548	1.000	Leading	2.426
35	FLT35-3PH	1.000	Leading	2.181	1.000	Lagging	-4.292	1.000	Leading	0.020	1.000	Lagging	-0.511	1.000	Leading	2.441
36	FLT36-3PH	1.000	Leading	2.183	1.000	Lagging	-4.291	1.000	Leading	0.023	1.000	Lagging	-0.502	1.000	Leading	2.443
37	FLT37-3PH	1.000	Leading	2.180	1.000	Lagging	-4.288	1.000	Leading	0.026	1.000	Lagging	-0.511	1.000	Leading	2.447
38	FLT38-3PH	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.475	1.000	Leading	2.451
39	FLT39-3PH	1.000	Leading	2.192	1.000	Lagging	-4.284	1.000	Leading	0.032	1.000	Lagging	-0.475	1.000	Leading	2.452
40	FLT40-3PH	1.000	Leading	2.185	1.000	Lagging	-4.286	1.000	Leading	0.025	1.000	Lagging	-0.498	1.000	Leading	2.446
41	FLT41-3PH	1.000	Leading	2.192	1.000	Lagging	-4.284	1.000	Leading	0.032	1.000	Lagging	-0.475	1.000	Leading	2.452
42	FLT42-3PH	1.000	Leading	2.168	1.000	Lagging	-4.294	1.000	Leading	0.002	1.000	Lagging	-0.524	1.000	Leading	2.418
43	FLT43-3PH	1.000	Leading	2.189	1.000	Lagging	-4.287	1.000	Leading	0.031	1.000	Lagging	-0.474	1.000	Leading	2.451
53	FLT53-3PH	1.000	Leading	2.157	1.000	Lagging	-4.273	1.000	Leading	0.039	1.000	Lagging	-0.504	1.000	Leading	2.474
54	FLT54-3PH	1.000	Leading	2.187	1.000	Lagging	-4.253	1.000	Leading	0.043	1.000	Lagging	-0.468	1.000	Leading	2.413
55	FLT55-3PH	1.000	Leading	2.137	1.000	Lagging	-4.278	1.000	Leading	0.038	1.000	Lagging	-0.529	1.000	Leading	2.468
56	FLT56-3PH	1.000	Leading	1.456	1.000	Lagging	-5.362	1.000	Lagging	-1.148	1.000	Lagging	-1.291	1.000	Leading	1.586
57	FLT57-3PH	1.000	Leading	2.071	1.000	Lagging	-4.484	1.000	Lagging	-0.102	1.000	Lagging	-0.624	1.000	Leading	2.262
58	FLT58-3PH	1.000	Leading	2.132	1.000	Lagging	-4.277	1.000	Leading	0.041	1.000	Lagging	-0.533	1.000	Leading	2.472
59	FLT59-3PH	1.000	Leading	2.194	1.000	Lagging	-4.324	1.000	Lagging	-0.007	1.000	Lagging	-0.491	1.000	Leading	2.436
60	FLT60-3PH	1.000	Leading	2.180	1.000	Lagging	-4.309	1.000	Leading	0.019	1.000	Lagging	-0.487	1.000	Leading	2.392
61	FLT61-3PH	1.000	Leading	2.162	1.000	Lagging	-4.314	1.000	Lagging	-0.002	1.000	Lagging	-0.497	1.000	Leading	2.406
62	FLT62-3PH	1.000	Leading	2.178	1.000	Lagging	-4.309	1.000	Leading	0.008	1.000	Lagging	-0.490	1.000	Leading	2.447
63	FLT63-3PH	1.000	Leading	2.164	1.000	Lagging	-4.312	1.000	Leading	0.001	1.000	Lagging	-0.496	1.000	Leading	2.410
64	FLT64-3PH	1.000	Leading	2.191	1.000	Lagging	-4.297	1.000	Leading	0.022	1.000	Lagging	-0.478	1.000	Leading	2.448
65	FLT65-3PH	1.000	Leading	2.200	1.000	Lagging	-4.413	1.000	Lagging	-0.053	1.000	Lagging	-0.493	1.000	Leading	2.387
66	FLT66-3PH	1.000	Leading	2.129	1.000	Lagging	-4.277	1.000	Leading	0.042	1.000	Lagging	-0.537	1.000	Leading	2.471
67	FLT67-3PH	1.000	Leading	2.073	1.000	Lagging	-4.493	1.000	Lagging	-1.035	1.000	Lagging	-1.721	1.000	Leading	1.446
73	FLT73-3PH	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
74	FLT74-3PH	1.000	Leading	2.190	1.000	Lagging	-4.294	1.000	Leading	0.030	1.000	Lagging	-0.479	1.000	Leading	2.450
75	FLT75-3PH	1.000	Leading	2.195	1.000	Lagging	-4.286	1.000	Leading	0.037	1.000	Lagging	-0.462	1.000	Leading	2.458
76	FLT76-3PH	1.000	Leading	2.189	1.000	Lagging	-4.296	1.000	Leading	0.017	1.000	Lagging	-0.486	1.000	Leading	2.448
84	FLT84-3PH	1.000	Leading	2.193	1.000	Lagging	-4.287	1.000	Leading	0.037	1.000	Lagging	-0.475	1.000	Leading	2.467
85	FLT85-3PH	1.000	Leading	2.174	1.000	Lagging	-4.320	1.000	Leading	0.000	1.000	Lagging	-0.497	1.000	Leading	2.419
86	FLT86-3PH	1.000	Leading	2.185	1.000	Lagging	-4.302	1.000	Leading	0.017	1.000	Lagging	-0.487	1.000	Leading	2.417
87	FLT87-3PH	1.000	Leading	2.161	1.000	Lagging	-4.321	1.000	Lagging	-0.002	1.000	Lagging	-0.514	1.000	Leading	2.430
88	FLT88-3PH	1.000	Leading	2.188	1.000	Lagging	-4.290	1.000	Leading	0.031	1.000	Lagging	-0.477	1.000	Leading	2.450
89	FLT89-3PH	1.000	Leading	2.183	1.000	Lagging	-4.294	1.000	Leading	0.026	1.000	Lagging	-0.484	1.000	Leading	2.443
90	FLT90-3PH	1.000	Leading	2.189	1.000	Lagging	-4.290	1.000	Leading	0.031	1.000	Lagging	-0.476	1.000	Leading	2.450
91	FLT91-3PH	1.000	Leading	2.190	1.000	Lagging	-4.290	1.000	Leading	0.030	1.000	Lagging	-0.474	1.000	Leading	2.448
92	FLT92-3PH	1.000	Leading	2.185	1.000	Lagging	-4.296	1.000	Leading	0.024	1.000	Lagging	-0.480	1.000	Leading	2.444
93	FLT93-3PH	1.000	Leading	2.180	1.000	Lagging	-4.325	1.000	Lagging	-0.001	1.000	Lagging	-0.506	1.000	Leading	2.414
94	FLT94-3PH	1.000	Leading	2.173	1.000	Lagging	-4.297	1.000	Leading	0.024	1.000	Lagging	-0.480	1.000	Leading	2.437
95	FLT95-3PH	1.000	Leading	2.191	1.000	Lagging	-4.302	1.000	Leading	0.019	1.000	Lagging	-0.489	1.000	Leading	2.441
100	FLT100-3PH	1.000	Leading	2.183	1.000	Lagging	-4.297	1.000	Leading	0.022	1.000	Lagging	-0.482	1.000	Leading	2.439
101	FLT101-3PH	1.000	Leading	2.192	1.000	Lagging	-4.287	1.000	Leading	0.034	1.000	Lagging	-0.472	1.000	Leading	2.454
104	FLT104-3PH	1.000	Leading	2.190	1.000	Lagging	-4.289	1.000	Leading	0.032	1.000	Lagging	-0.476	1.000	Leading	2.452
105	FLT105-3PH	1.000	Leading	2.188	1.000	Lagging	-4.290	1.000	Leading	0.031	1.000	Lagging	-0.482	1.000	Leading	2.450
106	FLT106-3PH	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
107	FLT107-3PH	1.000	Leading	2.190	1.000	Lagging	-4.289	1.000	Leading	0.032	1.000	Lagging	-0.476	1.000	Leading	2.452
108	FLT108-3PH	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
109	FLT109-3PH	1.000	Leading	2.187	1.000	Lagging	-4.290	1.000	Leading	0.031	1.000	Lagging	-0.483	1.000	Leading	2.450
110	FLT110-3PH	1.000	Leading	2.188	1.000	Lagging	-4.290	1.000	Leading	0.031	1.000	Lagging	-0.482	1.000	Leading	2.450
111	FLT111-3PH	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
117	FLT117-3PH	1.000	Leading	2.190	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
118	FLT118-3PH	1.000	Leading	2.190	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.475	1.000	Leading	2.451
119	FLT119-3PH	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
120	FLT120-3PH	1.000	Leading	2.190	1.000	Lagging	-4.288	1.000	Leading	0.032	1.000	Lagging	-0.479	1.000	Leading	2.452
121	FLT121-3PH	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.473	1.000	Leading	2.452
126	FLT126-3PH	1.000	Lagging	-4.618	0.997	Lagging	-19.190	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
127	FLT127-3PH	0.999	Leading	11.145	0.995	Leading	25.135	0.998	Leading	16.120	0.997	Leading	18.329	0.993	Leading	29.763

Table 5-16 (continued)
Power Factor Analysis: GEN-2016-062

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
128	FLT128-3PH	1.000	Leading	2.202	1.000	Lagging	-4.289	1.000	Leading	0.010	1.000	Lagging	-0.630	1.000	Leading	2.567
129	FLT129-3PH	1.000	Leading	1.671	1.000	Lagging	-4.809	1.000	Lagging	-0.181	1.000	Lagging	-0.345	1.000	Leading	2.138
130	FLT130-3PH	1.000	Leading	2.249	1.000	Lagging	-4.255	1.000	Lagging	-0.003	1.000	Lagging	-0.505	1.000	Leading	2.340
131	FLT131-3PH	1.000	Lagging	-2.621	1.000	Leading	7.081	1.000	Lagging	-0.177	1.000	Lagging	-0.635	0.994	Leading	27.880
132	FLT132-3PH	1.000	Leading	2.073	1.000	Lagging	-4.493	1.000	Lagging	-1.035	1.000	Lagging	-1.721	1.000	Leading	1.446
133	FLT133-3PH	1.000	Leading	1.530	1.000	Lagging	-6.650	1.000	Lagging	-1.190	1.000	Lagging	-1.190	1.000	Leading	0.942
140	FLT140-3PH	1.000	Leading	2.191	1.000	Lagging	-4.289	1.000	Leading	0.032	1.000	Lagging	-0.475	1.000	Leading	2.450
141	FLT141-3PH	1.000	Leading	2.189	1.000	Lagging	-4.288	1.000	Leading	0.032	1.000	Lagging	-0.477	1.000	Leading	2.451
142	FLT142-3PH	1.000	Leading	2.191	1.000	Lagging	-4.287	1.000	Leading	0.032	1.000	Lagging	-0.475	1.000	Leading	2.450
143	FLT143-3PH	1.000	Leading	2.190	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.451
144	FLT144-3PH	1.000	Leading	2.190	1.000	Lagging	-4.289	1.000	Leading	0.032	1.000	Lagging	-0.476	1.000	Leading	2.452
145	FLT145-3PH	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.473	1.000	Leading	2.451
146	FLT146-3PH	1.000	Leading	2.190	1.000	Lagging	-4.288	1.000	Leading	0.031	1.000	Lagging	-0.476	1.000	Leading	2.450
147	FLT147-3PH	1.000	Leading	2.190	1.000	Lagging	-4.289	1.000	Leading	0.033	1.000	Lagging	-0.478	1.000	Leading	2.454
148	FLT148-3PH	1.000	Leading	2.192	1.000	Lagging	-4.288	1.000	Leading	0.032	1.000	Lagging	-0.473	1.000	Leading	2.452
157	FLT157-3PH	1.000	Leading	2.178	1.000	Lagging	-4.292	1.000	Leading	0.026	1.000	Lagging	-0.481	1.000	Leading	2.440
158	FLT158-3PH	1.000	Leading	2.189	1.000	Lagging	-4.296	1.000	Leading	0.017	1.000	Lagging	-0.486	1.000	Leading	2.448
159	FLT159-3PH	1.000	Leading	2.190	1.000	Lagging	-4.288	1.000	Leading	0.029	1.000	Lagging	-0.478	1.000	Leading	2.458
168	FLT168-3PH	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Leading	0.033	1.000	Lagging	-0.474	1.000	Leading	2.452
169	FLT169-3PH	1.000	Leading	2.053	1.000	Lagging	-4.530	1.000	Leading	0.260	1.000	Lagging	-0.288	1.000	Leading	2.522
170	FLT170-3PH	1.000	Leading	1.957	1.000	Lagging	-4.327	1.000	Lagging	-0.030	1.000	Lagging	-0.427	1.000	Leading	2.389
171	FLT171-3PH	1.000	Leading	2.073	1.000	Lagging	-4.493	1.000	Lagging	-1.035	1.000	Lagging	-1.721	1.000	Leading	1.446
172	FLT172-3PH	1.000	Leading	2.194	1.000	Lagging	-4.324	1.000	Lagging	-0.007	1.000	Lagging	-0.491	1.000	Leading	2.436
173	FLT173-3PH	1.000	Leading	2.129	1.000	Lagging	-4.277	1.000	Leading	0.042	1.000	Lagging	-0.537	1.000	Leading	2.471
174	FLT174-3PH	1.000	Leading	2.200	1.000	Lagging	-4.413	1.000	Lagging	-0.053	1.000	Lagging	-0.493	1.000	Leading	2.387
175	FLT175-3PH	1.000	Leading	2.180	1.000	Lagging	-4.309	1.000	Leading	0.019	1.000	Lagging	-0.487	1.000	Leading	2.392
176	FLT176-3PH	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Lagging	-6.699	1.000	Lagging	-5.367	1.000	Lagging	-5.984
184	FLT184-3PH	1.000	Leading	2.189	1.000	Lagging	-4.291	1.000	Leading	0.026	1.000	Lagging	-0.496	1.000	Leading	2.444
185	FLT185-3PH	1.000	Leading	2.191	1.000	Lagging	-4.288	1.000	Leading	0.027	1.000	Lagging	-0.484	1.000	Leading	2.451
186	FLT186-3PH	1.000	Leading	2.189	1.000	Lagging	-4.291	1.000	Leading	0.028	1.000	Lagging	-0.488	1.000	Leading	2.446
187	FLT187-3PH	1.000	Leading	2.190	1.000	Lagging	-4.290	1.000	Leading	0.027	1.000	Lagging	-0.494	1.000	Leading	2.445
188	FLT188-3PH	1.000	Leading	2.150	1.000	Lagging	-4.327	1.000	Leading	0.020	1.000	Lagging	-0.493	1.000	Leading	2.428
189	FLT189-3PH	1.000	Leading	2.166	1.000	Lagging	-4.316	1.000	Leading	0.014	1.000	Lagging	-0.556	1.000	Leading	2.437
190	FLT190-3PH	1.000	Leading	2.190	1.000	Lagging	-4.289	1.000	Leading	0.030	1.000	Lagging	-0.483	1.000	Leading	2.448

Study Generator GEN-2016-062

The Power Factor Analysis shows that GEN-2016-062 has a power factor range of 0.999 leading to 0.999 lagging for the 2016 Winter Peak conditions, a power factor range of 0.995 leading to 0.997 lagging for the 2017 Summer Peak conditions, a power factor range of 0.997 lagging to 0.999 lagging for the 2020 Summer Peak conditions, a power factor range of 0.997 leading to 0.999 lagging for the 2020 Winter Peak conditions, and a power factor range of 0.993 leading to 0.999 lagging for the 2025 Summer Peak conditions.

Table 5-17
Power Factor Analysis: GEN-2016-069

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.966	Leading	8.351	0.967	Leading	8.219	0.968	Leading	8.110	0.970	Leading	7.816	0.968	Leading	8.190
1	FLT01-3PH	0.964	Leading	8.605	0.966	Leading	8.384	0.968	Leading	8.132	0.970	Leading	7.884	0.966	Leading	8.391
2	FLT02-3PH	0.968	Leading	8.188	0.966	Leading	8.421	0.967	Leading	8.286	0.972	Leading	7.591	0.966	Leading	8.439
3	FLT03-3PH	0.966	Leading	8.349	0.967	Leading	8.196	0.968	Leading	8.095	0.970	Leading	7.815	0.968	Leading	8.167
4	FLT04-3PH	0.967	Leading	8.207	0.970	Leading	7.909	0.969	Leading	8.024	0.971	Leading	7.765	0.968	Leading	8.071
5	FLT05-3PH	0.970	Leading	7.805	0.967	Leading	8.213	0.970	Leading	7.897	0.975	Leading	7.194	0.970	Leading	7.895
6	FLT06-3PH	0.966	Leading	8.370	0.967	Leading	8.277	0.968	Leading	8.171	0.970	Leading	7.813	0.967	Leading	8.244
7	FLT07-3PH	0.967	Leading	8.260	0.968	Leading	8.143	0.969	Leading	8.028	0.971	Leading	7.728	0.968	Leading	8.114
8	FLT08-3PH	0.967	Leading	8.270	0.968	Leading	8.142	0.969	Leading	8.028	0.971	Leading	7.736	0.968	Leading	8.114
9	FLT09-3PH	0.966	Leading	8.452	0.966	Leading	8.359	0.967	Leading	8.276	0.969	Leading	7.940	0.966	Leading	8.354
10	FLT10-3PH	0.966	Leading	8.342	0.967	Leading	8.197	0.968	Leading	8.100	0.970	Leading	7.807	0.968	Leading	8.179
11	FLT11-3PH	0.967	Leading	8.209	0.971	Leading	7.773	0.969	Leading	7.964	0.971	Leading	7.758	0.969	Leading	8.006
20	FLT20-3PH	0.967	Leading	8.281	0.967	Leading	8.214	0.968	Leading	8.107	0.970	Leading	7.879	0.968	Leading	8.189
21	FLT21-3PH	0.968	Leading	8.111	0.968	Leading	8.183	0.968	Leading	8.068	0.972	Leading	7.523	0.968	Leading	8.179
22	FLT22-3PH	0.967	Leading	8.313	0.968	Leading	8.193	0.968	Leading	8.078	0.971	Leading	7.727	0.968	Leading	8.184
23	FLT23-3PH	0.967	Leading	8.292	0.967	Leading	8.219	0.968	Leading	8.112	0.971	Leading	7.780	0.968	Leading	8.184
24	FLT24-3PH	0.966	Leading	8.351	0.967	Leading	8.219	0.968	Leading	8.110	0.970	Leading	7.816	0.968	Leading	8.190
26	FLT26-3PH	0.969	Leading	7.928	0.968	Leading	8.158	0.969	Leading	8.033	0.974	Leading	7.302	0.968	Leading	8.170
35	FLT35-3PH	0.969	Leading	8.016	0.970	Leading	7.841	0.971	Leading	7.731	0.973	Leading	7.427	0.969	Leading	7.954
36	FLT36-3PH	0.968	Leading	8.122	0.969	Leading	7.961	0.970	Leading	7.847	0.972	Leading	7.540	0.969	Leading	8.036
37	FLT37-3PH	0.970	Leading	7.859	0.967	Leading	8.215	0.968	Leading	8.134	0.973	Leading	7.430	0.968	Leading	8.067
38	FLT38-3PH	0.967	Leading	8.291	0.968	Leading	8.130	0.969	Leading	8.029	0.971	Leading	7.753	0.968	Leading	8.100
39	FLT39-3PH	0.967	Leading	8.313	0.967	Leading	8.211	0.968	Leading	8.114	0.970	Leading	7.801	0.968	Leading	8.172
40	FLT40-3PH	0.968	Leading	8.142	0.967	Leading	8.201	0.968	Leading	8.101	0.972	Leading	7.641	0.968	Leading	8.160
41	FLT41-3PH	0.967	Leading	8.310	0.967	Leading	8.210	0.968	Leading	8.114	0.970	Leading	7.799	0.968	Leading	8.170
42	FLT42-3PH	0.970	Leading	7.834	0.967	Leading	8.228	0.968	Leading	8.136	0.972	Leading	7.640	0.968	Leading	8.147
43	FLT43-3PH	0.967	Leading	8.290	0.967	Leading	8.208	0.968	Leading	8.098	0.970	Leading	7.819	0.968	Leading	8.170
53	FLT53-3PH	0.966	Leading	8.345	0.967	Leading	8.212	0.968	Leading	8.102	0.970	Leading	7.821	0.968	Leading	8.190
54	FLT54-3PH	0.966	Leading	8.335	0.967	Leading	8.224	0.968	Leading	8.115	0.970	Leading	7.818	0.968	Leading	8.188
55	FLT55-3PH	0.966	Leading	8.341	0.967	Leading	8.214	0.968	Leading	8.104	0.970	Leading	7.820	0.968	Leading	8.190
56	FLT56-3PH	0.967	Leading	8.284	0.967	Leading	8.230	0.968	Leading	8.122	0.970	Leading	7.852	0.968	Leading	8.186
57	FLT57-3PH	0.966	Leading	8.338	0.967	Leading	8.221	0.968	Leading	8.113	0.970	Leading	7.823	0.968	Leading	8.189
58	FLT58-3PH	0.966	Leading	8.340	0.967	Leading	8.214	0.968	Leading	8.105	0.970	Leading	7.823	0.968	Leading	8.190
59	FLT59-3PH	0.969	Leading	7.937	0.967	Leading	8.205	0.968	Leading	8.093	0.971	Leading	7.745	0.968	Leading	8.183
60	FLT60-3PH	0.966	Leading	8.353	0.967	Leading	8.218	0.968	Leading	8.106	0.970	Leading	7.819	0.968	Leading	8.190
61	FLT61-3PH	0.966	Leading	8.344	0.967	Leading	8.220	0.968	Leading	8.111	0.970	Leading	7.817	0.968	Leading	8.189
62	FLT62-3PH	0.966	Leading	8.367	0.967	Leading	8.209	0.968	Leading	8.093	0.970	Leading	7.813	0.968	Leading	8.191
63	FLT63-3PH	0.966	Leading	8.345	0.967	Leading	8.220	0.968	Leading	8.111	0.970	Leading	7.817	0.968	Leading	8.189
64	FLT64-3PH	0.966	Leading	8.351	0.967	Leading	8.218	0.968	Leading	8.108	0.970	Leading	7.813	0.968	Leading	8.190
65	FLT65-3PH	0.965	Leading	8.493	0.968	Leading	8.076	0.970	Leading	7.874	0.971	Leading	7.759	0.968	Leading	8.176
66	FLT66-3PH	0.966	Leading	8.339	0.967	Leading	8.214	0.968	Leading	8.105	0.970	Leading	7.823	0.968	Leading	8.191
67	FLT67-3PH	0.964	Leading	8.625	0.968	Leading	8.118	0.969	Leading	7.958	0.973	Leading	7.453	0.967	Leading	8.198
73	FLT73-3PH	0.966	Leading	8.351	0.967	Leading	8.219	0.968	Leading	8.110	0.970	Leading	7.816	0.968	Leading	8.190
74	FLT74-3PH	0.967	Leading	8.313	0.968	Leading	8.193	0.968	Leading	8.078	0.971	Leading	7.727	0.968	Leading	8.184
75	FLT75-3PH	0.966	Leading	8.408	0.967	Leading	8.229	0.968	Leading	8.136	0.970	Leading	7.883	0.967	Leading	8.199
76	FLT76-3PH	0.966	Leading	8.344	0.967	Leading	8.218	0.968	Leading	8.110	0.970	Leading	7.824	0.968	Leading	8.190
84	FLT84-3PH	0.966	Leading	8.355	0.967	Leading	8.212	0.968	Leading	8.101	0.970	Leading	7.804	0.968	Leading	8.193
85	FLT85-3PH	0.966	Leading	8.367	0.967	Leading	8.202	0.968	Leading	8.083	0.970	Leading	7.797	0.968	Leading	8.190
86	FLT86-3PH	0.966	Leading	8.349	0.967	Leading	8.219	0.968	Leading	8.110	0.970	Leading	7.816	0.968	Leading	8.186
87	FLT87-3PH	0.966	Leading	8.361	0.967	Leading	8.203	0.968	Leading	8.084	0.970	Leading	7.812	0.968	Leading	8.193
88	FLT88-3PH	0.966	Leading	8.345	0.967	Leading	8.218	0.968	Leading	8.110	0.970	Leading	7.815	0.968	Leading	8.190
89	FLT89-3PH	0.966	Leading	8.344	0.967	Leading	8.216	0.968	Leading	8.106	0.970	Leading	7.816	0.968	Leading	8.191
90	FLT90-3PH	0.966	Leading	8.346	0.967	Leading	8.218	0.968	Leading	8.110	0.970	Leading	7.816	0.968	Leading	8.191
91	FLT91-3PH	0.966	Leading	8.351	0.967	Leading	8.218	0.968	Leading	8.110	0.970	Leading	7.816	0.968	Leading	8.190
92	FLT92-3PH	0.966	Leading	8.352	0.967	Leading	8.215	0.968	Leading	8.104	0.970	Leading	7.813	0.968	Leading	8.190
93	FLT93-3PH	0.967	Leading	8.323	0.968	Leading	8.193	0.968	Leading	8.077	0.971	Leading	7.714	0.968	Leading	8.186
94	FLT94-3PH	0.966	Leading	8.360	0.967	Leading	8.206	0.968	Leading	8.100	0.971	Leading	7.786	0.968	Leading	8.188
95	FLT95-3PH	0.966	Leading	8.351	0.967	Leading	8.218	0.968	Leading	8.106	0.970	Leading	7.813	0.968	Leading	8.189
100	FLT100-3PH	0.966	Leading	8.351	0.967	Leading	8.216	0.968	Leading	8.105	0.970	Leading	7.815	0.968	Leading	8.189
101	FLT101-3PH	0.966	Leading	8.348	0.967	Leading	8.217	0.968	Leading	8.108	0.970	Leading	7.809	0.968	Leading	8.190
104	FLT104-3PH	0.966	Leading	8.328	0.967	Leading	8.212	0.968	Leading	8.102	0.970	Leading	7.792	0.968	Leading	8.189
105	FLT105-3PH	0.967	Leading	8.291	0.967	Leading	8.207	0.968	Leading	8.095	0.971	Leading	7.748	0.968	Leading	8.182
106	FLT106-3PH	0.966	Leading	8.350	0.967	Leading	8.218	0.968	Leading	8.110	0.970	Leading	7.816	0.968	Leading	8.190
107	FLT107-3PH	0.967	Leading	8.325	0.967	Leading	8.210	0.968	Leading	8.101	0.970	Leading	7.790	0.968	Leading	8.188
108	FLT108-3PH	0.966	Leading	8.346	0.967	Leading	8.219	0.968	Leading	8.111	0.970	Leading	7.814	0.968	Leading	8.190
109	FLT109-3PH	0.967	Leading	8.284	0.967	Leading	8.206	0.968	Leading	8.095	0.971	Leading	7.741	0.968	Leading	8.182
110	FLT110-3PH	0.967	Leading	8.291	0.967	Leading	8.207	0.968	Leading	8.095	0.971	Leading	7.748	0.968	Leading	8.182
111	FLT111-3PH	0.966	Leading	8.348	0.967	Leading	8.219	0.968	Leading	8.111	0.970	Leading	7.813	0.968	Leading	8.190
117	FLT117-3PH	0.966	Leading	8.333	0.967	Leading	8.212	0.968	Leading	8.107	0.970	Leading	7.808	0.968	Leading	8.192
118	FLT118-3PH	0.966	Leading	8.345	0.967	Leading	8.222	0.968	Leading	8.116	0.970	Leading	7.812	0.968	Leading	8.191
119	FLT119-3PH	0.966	Leading	8.342	0.967	Leading	8.215	0.968	Leading	8.108	0.970	Leading	7.807	0.968	Leading	8.190
120	FLT120-3PH	0.967	Leading	8.256	0.968	Leading	8.179	0.968	Leading	8.110	0.971	Leading	7.738	0.968	Leading	8.178
121	FLT121-3PH	0.966	Leading	8.353	0.967	Leading	8.219	0.968	Leading	8.109	0.970	Leading	7.820	0.968	Leading	8.183
126	FLT126-3PH	0.965	Leading	8.547	0.967	Leading	8.288	0.968	Leading	8.110	0.970	Leading	7.816	0.968	Leading	8.190
127	FLT127-3PH	0.967	Leading	8.319	0.967	Leading	8.220	0.968	Leading	8.103	0.971	Leading	7.713	0.968	Leading	8.189

Table 5-17 (continued)
Power Factor Analysis: GEN-2016-069

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2020 Summer Peak			2020 Winter Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
128	FLT128-3PH	0.967	Leading	8.287	0.967	Leading	8.221	0.968	Leading	8.108	0.970	Leading	7.791	0.968	Leading	8.182
129	FLT129-3PH	0.975	Leading	7.110	0.965	Leading	8.488	0.968	Leading	8.117	0.971	Leading	7.756	0.968	Leading	8.169
130	FLT130-3PH	0.966	Leading	8.342	0.967	Leading	8.221	0.968	Leading	8.111	0.970	Leading	7.815	0.968	Leading	8.194
131	FLT131-3PH	0.968	Leading	8.099	0.967	Leading	8.233	0.968	Leading	8.111	0.970	Leading	7.810	0.967	Leading	8.207
132	FLT132-3PH	0.964	Leading	8.625	0.968	Leading	8.118	0.969	Leading	7.958	0.973	Leading	7.453	0.967	Leading	8.198
133	FLT133-3PH	0.974	Leading	7.251	0.968	Leading	8.173	0.967	Leading	8.283	0.962	Leading	8.880	0.967	Leading	8.211
140	FLT140-3PH	0.966	Leading	8.357	0.967	Leading	8.208	0.968	Leading	8.098	0.970	Leading	7.814	0.968	Leading	8.170
141	FLT141-3PH	0.967	Leading	8.313	0.967	Leading	8.216	0.968	Leading	8.108	0.970	Leading	7.790	0.968	Leading	8.171
142	FLT142-3PH	0.966	Leading	8.341	0.967	Leading	8.220	0.968	Leading	8.115	0.970	Leading	7.812	0.968	Leading	8.184
143	FLT143-3PH	0.966	Leading	8.348	0.967	Leading	8.219	0.968	Leading	8.113	0.970	Leading	7.815	0.968	Leading	8.190
144	FLT144-3PH	0.967	Leading	8.325	0.967	Leading	8.210	0.968	Leading	8.101	0.970	Leading	7.790	0.968	Leading	8.188
145	FLT145-3PH	0.966	Leading	8.354	0.967	Leading	8.220	0.968	Leading	8.112	0.970	Leading	7.820	0.968	Leading	8.183
146	FLT146-3PH	0.966	Leading	8.337	0.967	Leading	8.219	0.968	Leading	8.113	0.970	Leading	7.802	0.968	Leading	8.190
147	FLT147-3PH	0.967	Leading	8.230	0.967	Leading	8.205	0.968	Leading	8.090	0.971	Leading	7.769	0.968	Leading	8.182
148	FLT148-3PH	0.967	Leading	8.290	0.967	Leading	8.212	0.968	Leading	8.105	0.970	Leading	7.790	0.968	Leading	8.182
157	FLT157-3PH	0.966	Leading	8.347	0.967	Leading	8.219	0.968	Leading	8.110	0.970	Leading	7.815	0.968	Leading	8.188
158	FLT158-3PH	0.966	Leading	8.344	0.967	Leading	8.218	0.968	Leading	8.110	0.970	Leading	7.824	0.968	Leading	8.190
159	FLT159-3PH	0.966	Leading	8.356	0.967	Leading	8.218	0.968	Leading	8.107	0.970	Leading	7.805	0.968	Leading	8.192
168	FLT168-3PH	0.966	Leading	8.351	0.967	Leading	8.219	0.968	Leading	8.110	0.970	Leading	7.816	0.968	Leading	8.190
169	FLT169-3PH	0.964	Leading	8.600	0.968	Leading	8.095	0.969	Leading	7.995	0.971	Leading	7.678	0.968	Leading	8.190
170	FLT170-3PH	0.966	Leading	8.429	0.967	Leading	8.218	0.968	Leading	8.145	0.969	Leading	8.021	0.967	Leading	8.195
171	FLT171-3PH	0.964	Leading	8.625	0.968	Leading	8.118	0.969	Leading	7.958	0.973	Leading	7.453	0.967	Leading	8.198
172	FLT172-3PH	0.969	Leading	7.937	0.967	Leading	8.205	0.968	Leading	8.093	0.971	Leading	7.745	0.968	Leading	8.183
173	FLT173-3PH	0.966	Leading	8.339	0.967	Leading	8.214	0.968	Leading	8.105	0.970	Leading	7.823	0.968	Leading	8.191
174	FLT174-3PH	0.965	Leading	8.493	0.968	Leading	8.076	0.970	Leading	7.874	0.971	Leading	7.759	0.968	Leading	8.176
175	FLT175-3PH	0.966	Leading	8.353	0.967	Leading	8.218	0.968	Leading	8.106	0.970	Leading	7.819	0.968	Leading	8.190
176	FLT176-3PH	0.966	Leading	8.351	0.967	Leading	8.219	0.968	Leading	8.191	0.980	Leading	6.439	0.969	Leading	8.039
184	FLT184-3PH	0.972	Leading	7.607	0.974	Leading	7.330	0.973	Leading	7.373	0.976	Leading	7.041	0.974	Leading	7.297
185	FLT185-3PH	0.975	Leading	7.214	0.967	Leading	8.255	0.988	Leading	4.966	0.986	Leading	5.243	0.972	Leading	7.600
186	FLT186-3PH	0.970	Leading	7.911	0.972	Leading	7.625	0.971	Leading	7.658	0.974	Leading	7.339	0.971	Leading	7.686
187	FLT187-3PH	0.971	Leading	7.709	0.973	Leading	7.489	0.973	Leading	7.453	0.975	Leading	7.122	0.974	Leading	7.299
188	FLT188-3PH	0.960	Leading	9.107	0.958	Leading	9.325	0.968	Leading	8.140	0.977	Leading	6.858	0.951	Leading	10.155
189	FLT189-3PH	0.938	Leading	11.612	0.915	Leading	13.850	0.978	Leading	6.708	0.976	Leading	6.943	0.955	Leading	9.766
190	FLT190-3PH	0.968	Leading	8.148	0.969	Leading	7.988	0.969	Leading	7.968	0.972	Leading	7.598	0.969	Leading	8.032

Study Generator GEN-2016-069

The Power Factor Analysis shows that GEN-2016-069 has a power factor range of 0.937 to 0.975 leading for the 2016 Winter Peak conditions, a power factor range of 0.915 to 0.973 leading for the 2017 Summer Peak conditions, a power factor range of 0.967 to 0.987 leading for the 2020 Summer Peak conditions, a power factor range of 0.962 to 0.986 leading for the 2020 Winter Peak conditions, and a power factor range of 0.951 to 0.973 leading for the 2025 Summer Peak conditions.

SECTION 6: LOW WIND/IRRADIANCE ANALYSIS

The objective of this task was to determine the impact of low wind/solar irradiance or no wind/solar irradiance conditions on wind farms and solar farms, respectively. The 2016 Winter Peak, 2017 Summer Peak, 2020 Summer Peak, 2020 Winter Peak, and 2025 Summer Peak power flows provided by SPP were examined for this analysis.

6.1 Approach

Low/no wind and low/no solar irradiance conditions were examined for all renewable interconnections. Generators were disabled (independently), but the collector systems remained in-service. In order to maintain generation and load balance in the SPP area, the generation was scaled after disabling the respective generator. The amount of reactive power injected into the transmission network was recorded at the respective point of interconnection. This reactive power comes from the capacitance of the project's transmission lines and collector cables. A shunt reactor was added at the high side bus to bring the Mvar flow into the POI down to approximately zero.

6.2 Low Wind/Irradiance Analysis Results

The reactance needed to bring the Mvar flow into the point of interconnect to zero Mvar was recorded for each season for renewable interconnections. Refer to Table 6-1 for the results of this analysis. The table lists the generators examined and the amount of reactive power needed for zero Mvar flow into the POI for each season.

Table 6-1
Low Wind/Irradiance Analysis

Request	Size (MW)	Point of Interconnection	Reactor Size (Mvar)				
			16WP	17SP	20SP	20WP	25SP
GEN-2015-018	80	Tap on Curry County to Bailey County 115 kV	2.95	2.95	2.95	2.95	2.95
GEN-2015-033	152	Tap on Tuco to OKU 345 kV	9.19	9.19	9.19	9.19	9.19
GEN-2015-039	50	Tap on Deaf Smith to Plant X 230 kV	0.10	0.10	0.10	0.10	0.10
GEN-2015-040	50	Mustang 230 kV	0.10	0.10	0.10	0.10	0.10
GEN-2015-078	50	Mustang 115 kV	1.09	1.09	1.09	1.09	1.09
ASGI-2016-001	2.5	Wolfforth 115 kV	0.00	0.00	0.00	0.00	0.00
ASGI-2016-002	0.35 Uprate	Hurlwood 69 kV	0.30	0.30	0.30	0.30	0.30
GEN-2016-002	74	Happy 115 kV	1.70	1.70	1.70	1.70	1.70
ASGI-2016-004	10	Palo Duro 115 kV	0.00	0.00	0.00	0.00	0.00
GEN-2016-015	100	Andrews 230 kV	0.79	0.79	0.79	0.79	0.79
GEN-2016-039	112	Swisher 230 kV	3.96	3.96	3.96	3.96	3.96
GEN-2016-056	200	Carlisle 230 kV	3.23	3.23	3.23	3.23	3.23
GEN-2016-058	200	Yoakm 345 kV	2.43	2.43	2.43	2.43	2.43
GEN-2016-062	250.7	Andrews 230 kV	12.70	12.70	12.70	12.70	12.70
GEN-2016-069	31.35	Chaves County 115 kV	0.36	0.36	0.36	0.36	0.36

SECTION 7: CONCLUSIONS

Summary of Stability Analysis

The Stability Analysis determined that there were multiple contingencies across all seasons that resulted in system/voltage instability, generation tripping offline, and poor post-fault voltage recovery when all generation interconnection requests were at 100% output.

To mitigate the system/voltage instability, voltage violations, generation tripping offline, and poor post-fault steady-state voltages, the following upgrades were provided by SPP and implemented (upgrades provided here are required for 16WP season and thus, implemented in remaining years):

- Crawfish Draw to Seminole 765 kV circuit #1
- Crawfish Draw 765/345 kV transformer 1 & 2
- Seminole 765/345 kV transformer 1 & 2
- Potter County to Grapevine to Chisholm 345 kV circuit #1
- Potter County to Tolk 345 kV circuit #1
- Tolk to Crawfish Draw 345 kV circuit #1
- OKU SVC +300/-100 Mvar (add +200 Mvar)
- Add 200 Mvar Capacitor Bank at OKU 345 kV (550 Mvar capacitor bank total)
- Chaves County – Price – CV Pine – Capitan 115 kV circuit #1
    - Required to be implemented in 16WP and 17SP
    - Line exists in 20WP, 20SP, and 25SP
- Grapevine to Beaver County 345 kV circuit #1
- Beaver County to Clark County 345 kV circuit #1
- Re-terminate the Yoakum to TUCO 345 kV line from TUCO to Crawfish Draw
- TUCO to Crawfish Draw 345 kV circuit #2
- Rio Blanco +300/-100 Mvar SVC

In the 16WP and 20WP seasons, under normal system dispatch, system instability exists for a fault at Crawfish Draw 765 kV that results in the loss of the Crawfish Draw to Seminole 765 kV line. For this reason, it is necessary to limit the flow along the Crawfish Draw to Seminole 765 kV line. The following flow limits are required for the 16WP and 20WP seasons, respectively:

- 16WP Flow Limit on Crawfish Draw to Seminole 765 kV: 1625 MW from Crawfish Draw 765 kV end
- 20WP Flow Limit on Crawfish Draw to Seminole 765 kV: 1395 MW from Crawfish Draw 765 kV end

Several violations exist only in the 20SP, 20WP, and 25SP seasons. Refer below for the additional mitigation required for these seasons (seasons listed in parenthesis for which mitigation is required):

- NA Enrich 115 kV capacitor bank: 28.8 Mvar (20WP, 20SP) (an existing cap bank)
- Drinkard 115 kV capacitor bank: 14.4 Mvar (20WP) (an existing cap bank)
- Additional Andrews to NA Enrich 115 kV circuit #2
- Seminole to Mustang 115 kV circuit #1 (25SP)
- Hereford 115 kV capacitor bank: 25 Mvar (25SP) (a new cap bank)

Note for GEN-2016-015, for a three-phase fault at the point of interconnection (Andrews 230 kV), the TMEIC photovoltaic inverter model (ITMEIC) tripped offline due to over frequency protection and over voltage protection. For this study, the over frequency and over voltage protection were set to 75 Hz and 1.8 p.u., respectively, to avoid instantaneous tripping. It is recommended the supplier of the TMEIC photovoltaic inverter model examine this model for three-phase faults that cause the model to trip on over frequency and over voltage protection.

For GEN-2016-002, the Gamesa User Model (GD0800_V32.lib) exhibited errors in the stability analysis. It was observed that other interconnection projects utilized the Gamesa GXX048 module (GXX048_v32.lib) which exhibited expected response to system disturbances. Therefore, the GXX048 module was used to replace the supplied GD0800 module.

After implementing the above upgrades, the contingency analysis was re-simulated for all contingencies. With the upgrades, the Stability Analysis determined that there was no wind turbine tripping or system instability observed as a result of interconnecting all study projects at 100% output.

Summary of the Short Circuit Analysis

The short circuit analysis was performed on the 2017 Summer Peak and 2025 Summer Peak power flows for all study projects. Refer to Table 7-1 and Table 7-2 for a list of maximum fault currents observed for each study project for the 17SP and 25SP cases, respectively.

Table 7-1
2017SP: List of Maximum Fault Currents Observed for Each Study Project

Study Project	Fault Current at POI (kA)	Maximum Fault Current (kA)	Fault Location	Bus Voltage (kV)
GEN-2015-018	5.59	28.04	Tolk East/West	230 kV
GEN-2015-033	8.01	31.96	Cimaron	345 kV
GEN-2015-039	7.24	28.04	Tolk East/West	230 kV
GEN-2015-040	15.55	32.93	Hobbs Int	115 kV
GEN-2015-041	19.73	40.49	Seminole	138 kV
GEN-2015-078	22.30	32.93	Hobbs Int	115 kV
ASGI-2016-001	11.29	28.04	Tolk East/West	230 kV
ASGI-2016-002	3.06	25.48	Tuco	230 kV
GEN-2016-002	5.99	25.48	Tuco	230 kV
ASGI-2016-004	6.61	20.62	Nichols	115 kV
GEN-2016-015	8.30	32.93	Hobbs Int	115 kV
GEN-2016-039	10.36	28.04	Tolk East/West	230 kV
GEN-2016-056	11.82	28.04	Tolk East/West	230 kV
GEN-2016-058	8.72	40.49	Seminole	138 kV
GEN-2016-062	8.30	32.93	Hobbs Int	115 kV
GEN-2016-069	6.27	29.59	Cunningham	115 kV

Table 7-2
2025SP: List of Maximum Fault Currents Observed for Each Study Project

Study Project	Fault Current at POI (kA)	Maximum Fault Current (kA)	Fault Location	Bus Voltage (kV)
GEN-2015-018	5.87	28.45	Tolk East/West	230 kV
GEN-2015-033	8.15	35.26	LP-Cook	69 kV
GEN-2015-039	7.52	29.38	Tuco Int	230 kV
GEN-2015-040	15.87	33.75	Hobbs Int	115 kV
GEN-2015-041	21.30	40.63	Seminole	138 kV
GEN-2015-078	23.55	33.75	Hobbs Int	115 kV
ASGI-2016-001	11.99	35.26	LP-Cook	69 kV
ASGI-2016-002	3.09	29.38	Tuco Int	230 kV
GEN-2016-002	6.11	29.38	Tuco Int	230 kV
ASGI-2016-004	6.97	31.88	Nichols	115 kV
GEN-2016-015	9.24	33.75	Hobbs Int	115 kV
GEN-2016-039	10.59	31.88	Nichols	115 kV
GEN-2016-056	15.85	35.26	LP-Cook	69 kV
GEN-2016-058	9.22	40.63	Seminole	138 kV
GEN-2016-062	9.24	33.75	Hobbs Int	115 kV
GEN-2016-069	6.36	30.33	Cunningham	115 kV

Summary of Power Factor Analysis

The upgrades identified in the Stability Analysis were implemented in the power flow cases and utilized for the Power Factor Analysis. Refer to Table 7-3 for the power factor analysis results for each study generator.

Table 7-3
Power Factor Analysis Summary for Study Projects

Study Project	Power Factor Range for Each Study Project[1]									
	16WP		17SP		20SP		20WP		25SP	
GEN-2015-018	0.990	1.000	-0.973	0.973	-0.995	0.984	-1.000	0.989	-0.992	0.968
GEN-2015-033	-0.970	-0.999	-0.995	0.999	-0.993	0.999	-0.998	0.990	-0.991	0.999
GEN-2015-039	-0.602	0.860	-0.281	0.981	-0.312	0.932	-0.653	0.782	-0.435	0.981
GEN-2015-040	-0.372	0.997	-0.560	-0.940	-0.641	1.000	-0.334	0.996	-0.653	0.940
GEN-2015-041	N/A	N/A	-0.899	0.940	-0.884	0.982	N/A	N/A	-0.915	0.961
GEN-2015-078	-0.729	-0.956	-0.664	-0.942	-0.669	-0.885	-0.721	-0.956	-0.584	-0.894
ASGI-2016-001	-0.154	0.485	-0.147	0.248	-0.140	0.251	-0.186	0.522	-0.117	0.315
ASGI-2016-002	-0.691	0.932	-0.653	0.732	-0.636	0.720	-0.793	0.939	-0.565	0.806
GEN-2016-002	-0.999	0.981	-0.964	0.982	-0.972	0.990	0.980	1.000	-0.934	0.971
ASGI-2016-004	-0.514	0.756	-0.518	0.793	-0.458	0.701	-0.490	0.748	-0.492	0.666
GEN-2016-015	-0.999	0.994	-0.982	0.970	-0.998	0.987	-0.999	0.984	-0.998	0.958
GEN-2016-039	-0.999	0.987	-0.993	0.977	-0.995	0.978	-1.000	0.985	-0.983	0.971
GEN-2016-056	-0.994	0.979	-0.871	0.998	-0.781	0.945	-0.949	0.999	-0.869	1.000
GEN-2016-058	-0.985	0.855	-0.761	0.996	-0.899	0.872	-0.969	0.854	-0.946	0.782
GEN-2016-062	-0.999	0.999	-0.997	0.995	-0.999	0.997	-0.999	0.997	-0.999	0.993
GEN-2016-069	0.937	0.975	0.915	0.973	0.967	0.987	0.962	0.986	0.951	0.973

[1]Lagging power factors are negative and leading power factors are positive

Summary of Low Wind/Irradiance Analysis

The amount of reactive power injected into the transmission network was recorded at the point of interconnection for each wind and solar powered interconnection request for each season. The maximum reactance needed for zero Mvar flow was 12.7 Mvar for GEN-2016-062 (Andrews 230 kV). The minimum reactance needed for zero Mvar flow was 0.0 Mvar for ASGI-2016-001 (Wolfforth 115 kV) and ASGI-2016-004 (Palo Duro 115 kV).

11.17.6 J7: GROUP 7 DYNAMIC STABILITY ANALYSIS REPORT

Group 7 Stability Impact Study

DISIS-2016-001

January 2017
Generator Interconnection

SPP Southwest Power Pool

Revision History

Date	Author	Change Description
1/31/2017	SPP	DISIS-2016-001 Group 7 Stability Report Issued

Executive Summary

DISIS-2016-001 Group 7 Interconnection Customers have requested a Definitive Interconnection System Impact Study detailing the impacts of interconnecting the generation projects shown below.

- GEN-2016-008 – 40.0 MW photovoltaic solar generation facility using eighty (80) Advanced Energy 500NX 0.5 MW inverters interconnecting to the Western Farmers Electric Cooperative (WFEC) transmission system at the existing Granite 69 kV station.
- GEN-2016-037 – 300.0 MW wind generation facility using one-hundred fifty (150) Vestas V110 2.0 MW wind turbine generators interconnecting to the American Electric Power (AEPW) transmission system at a tap on the proposed Gracemont to Chisholm 345 kV line.
- GEN-2016-051 – 9.8 MW uprate, 0.1 MW per turbine, to the existing 147.0 MW Weatherford wind generation facility currently comprised of ninety-eight (98) GE 1.5 MW wind turbine generators interconnected to the American Electric Power (AEPW) transmission system at the existing Weatherford Windfarm Tap 138 kV station. GEN-2016-051 request is to uprate each of the ninety-eight (98) GE 1.5 MW wind turbine generators to 1.6 MW rating for a total nameplate capacity of 156.8 MW.

A stability cluster impact analysis was performed for the generation project from the DISIS-2016-001 Group 7 study. The analysis was performed on three (3) seasonal models including 2016 winter peak (16WP), the 2017 summer peak (17SP), and the 2025 summer peak (25SP) cases. These cases are modified versions of the 2015 model series of Model Development Working Group (MDWG) dynamic study models. A total of one-hundred sixteen (116) contingencies were evaluated for the three (3) seasonal cases.

Stability analysis has determined with all previously assigned Network Upgrades in service, rerouting the Woodward to Border 345 kV line to tie into the proposed Chisholm 345 kV substation, GEN-2016-008 installing the extended frequency protection option, and resetting the protective relays on the Wheeler to Sweetwater 230kV line, all generators in the monitored areas remained stable and within the pre-contingency, voltage recovery, and post fault voltage recovery criterion of 0.7pu to 1.2pu for the entire modeled disturbances. Under certain system conditions the interconnection requests may be required to curtail generation output to maintain system reliability.

In addition to the cluster impact stability analysis, a stand-alone stability analysis was conducted for each request. This analysis demonstrated that GEN-2016-008 must install the extended frequency protection option, GEN-2016-037 requires rerouting the Woodward to Border 345 kV line to tie into the proposed Chisholm 345 kV substation and the protective relays on the Wheeler to Sweetwater 230kV line to be reset.

Power factor analysis for each generation project was performed on the current study 2016 winter peak, 2017 summer peak, and 2025 summer peak cases with identified system upgrades. As reactive power is required for all projects, the final requirement in the GIA will be the pro-forma 95% lagging to 95% leading at the point of interconnection.

A reduced generation analysis was conducted for wind farms to determine reactor inductive amounts to compensate the capacitive effects on the transmission system during low or reduced wind conditions cause by the interconnecting project's generator lead transmission line and collector systems. Each request may be required to install the following reactors on their facilities: GEN-2016-008 – 0.5 Mvar, GEN-2016-037 – 29.8 Mvar, and GEN-2016-051 – 0.5 Mvar.

Short Circuit analysis was conducted using the current study upgrade 2025 summer peak case.

Nothing in this study should be construed as a guarantee of delivery or transmission service. If the customer wishes to sell power from the facility, a separate request for transmission service must be requested on Southwest Power Pool's OASIS by the Customer.

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1. Introduction

DISIS-2016-001 Group 7 Interconnection Customers have requested a Definitive Interconnection System Impact Study detailing the impacts of interconnecting the generation projects shown **Table 1-1** below.

Table 1-1: Group 7 Interconnection Requests

Request	Capacity (MW)	Generator Model	Point of Interconnection
GEN-2016-008	40.0	Advanced Energy 500NX 0.5 MW solar inverters (587063)	Granite 69kV (520927)
GEN-2016-037	300.0	Vestas V110 2.0 MW (587233)	Tap Chisholm (511553) – Gracemont (515800) 345kV, (G16-037-TAP, 560078)
GEN-2016-051	9.8 (uprate of GEN-2003-022 & GEN-2004-020; Total power = 156.8 MW)	GE 1.6 MW (579363)	Tap Clinton Junction (511534) – Weatherford Southeast (511536) 138kV, (Weatherford Windfarm Tap 138kV, 511506)

The previously queued generation projects in the Group 7 area are listed in **Table 1-2** below.

Table 1-2: Group 7 Prior Queued Interconnection Requests

Request	Capacity (MW)	Generator Model	Point of Interconnection
Blue Canyon I (GEN-2001-026)	74.3	NEG Micon (Vestas) NM72 (WT1G1) (599006)	Washita 138kV (521089)
Red Hills Wind (GEN-2002-005)	120.0	Acciona 1.5 MW (599018)	Moorewood – Elk City 138kV (521116)
Blue Canyon II (GEN-2003-004, GEN-2004-023, & GEN-2005-003)	151.2	Vestas V80 1.8 MW (599003)	Washita 138kV (521089)
Blue Canyon V (GEN-2003-005 & GEN-2011-037)	105.6	GE 1.6 MW (599023)	Blue Canyon V Tap on the Anadarko – Paradise 138kV line (521129)
Weatherford (GEN-2003-022 & GEN-2004-020)	147.0	GE 1.5 MW (579363)	Weatherford Windfarm Tap 138kV (511506)
Elk City II (GEN-2006-002)	100.8	GE 1.5 MW (599036) & GE 1.6 MW (599038)	Sweetwater 230kV (511541)
Dempsey (GEN-2006-035)	224.0	Gamesa G87 or G90 2.0 MW (599049 & 599050)	Sweetwater 230kV (511541)
Elk City (GEN-2006-043)	98.9	Siemens 2.3 MW (599051)	Sweetwater 230kV (511541)
GEN-2007-052	150	Gas Turbine (521110, 521111, & 521112)	Anadarko 138kV (520814)
Rocky Ridge (GEN-2008-023)	148.8	GE 1.6 MW (599092 & 599094)	Hobart Junction 138kV (511463)
Blue Canyon VI (GEN-2008-037)	99.0	Vestas V90 VCUS 1.8 MW (599098)	Washita 138kV (521089)
GEN-2011-049	250.7	Siemens 2.3 MW (583093 & 583096)	Border 345kV (515458)

Table 1-2: Group 7 Prior Queued Interconnection Requests

Request	Capacity (MW)	Generator Model	Point of Interconnection
GEN-2012-028	74.8	Vestas V110 VCSS 2.0 MW (583403)	Gotebo 69kV (520925)
GEN-2015-004	52.9 (uprate of GEN-2011-049; Total power = 303.6 MW)	Siemens 2.3 MW (583093 & 583096)	Border 345kV (515458)
GEN-2015-013	120.0	Eaton Power Xpert Solar Inverters 1.67 MW (584553)	Snyder 138kV (521052)
GEN-2015-055	40.0	Advanced Energy AE 500NX 0.5 MW solar inverters (584933)	Erick 138kV (520903)
GEN-2015-071	200.0	Vestas V110 2.0 MW (585083)	Chisholm (511553) 345kV
GEN-2015-084	51.3	GE 1.9 MW solar inverter (585213)	Hollis (511507) 138kV
GEN-2015-085	122.4	GE 3.6 MW solar inverter (585223)	Altus (511440) 138kV

A stability analysis was performed for the addition of the generation projects in Group 7. The analysis was performed on three (3) seasonal models including 2016 winter peak (16WP), the 2017 summer peak (17SP), and the 2025 summer peak (25SP) cases. These cases are modified versions of the 2015 model series of Model Development Working Group (MDWG) dynamic study models.

The stability analysis determines the impacts of the new interconnecting project on the stability and voltage recovery of the nearby systems and the ability of the interconnecting project to meet FERC Order 661A. If problems with stability or voltage recovery are identified, the need for reactive compensation or system upgrades is investigated. The contingencies listed in **Table 3-1** were used in the stability analysis.

The power factor analysis determines the power factor at the point of interconnection (POI) for the wind interconnection projects for pre-contingency and post-contingency conditions. The contingencies used in the power factor analysis are a subset of the stability analysis contingencies shown in **Table 3-1**.

A reduced generation analysis was conducted for wind farms to determine reactor inductive amounts to compensate the capacitive effects on the transmission system during low or reduced wind conditions cause by the interconnecting project's generator lead transmission line and collector systems. **Table 5-1** displays the minimum reactor inductive amount requirement to compensate capacitive effects from the GEN-2016-008, GEN-2016-037, & GEN-2016-051 facilities.

Short Circuit analysis was conducted using the current study upgrade 2025 summer peak case. The results from the Short circuit analysis are show in Appendix F.

Nothing in this System Impact Study constitutes a request for transmission service or grants the Interconnection Customer any rights to transmission service. If the customer wishes to sell power from

the facility, a separate request for transmission service must be requested on Southwest Power Pool's OASIS by the Customer.

2. Facilities

A one-line PSS/E slider drawings from the 16WP case for each of the generation interconnection requests in this study is shown in **Figure 2-1**, **Figure 2-2**, & **Figure 2-3**.

Figure 2-1*:* GEN-2016-008 One-line Diagram

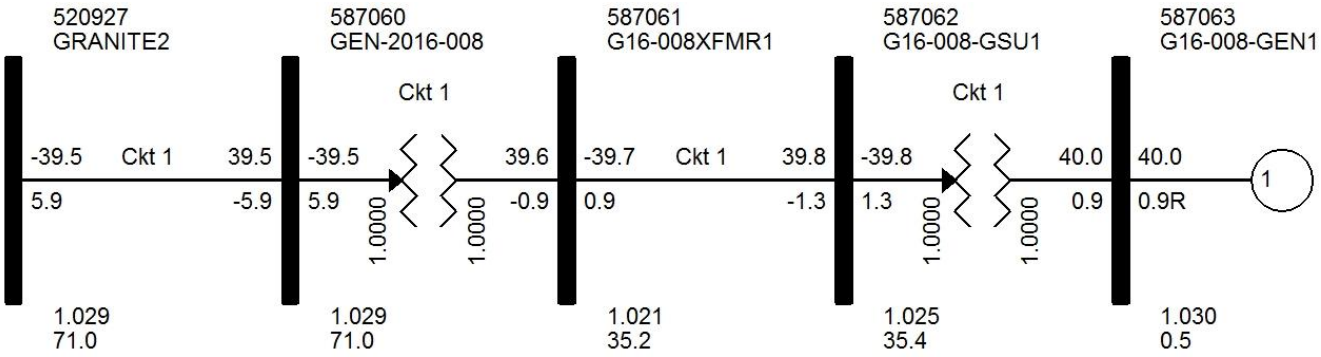


Figure 2-2*:* GEN-2016-037 One-line Diagram

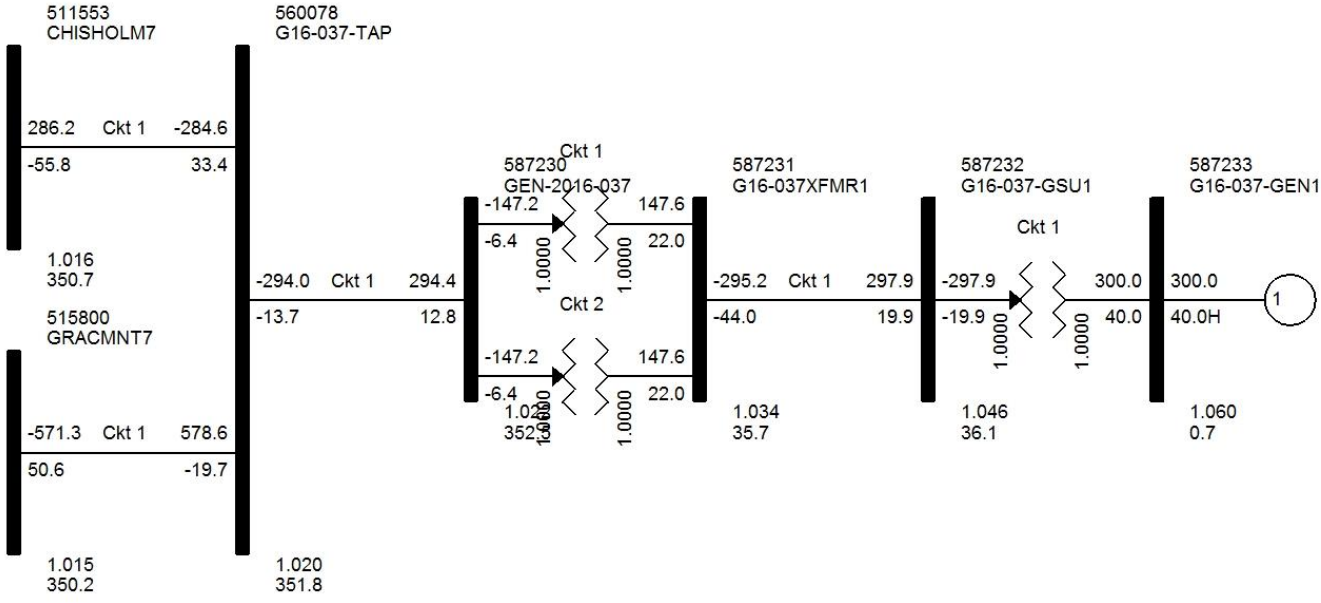
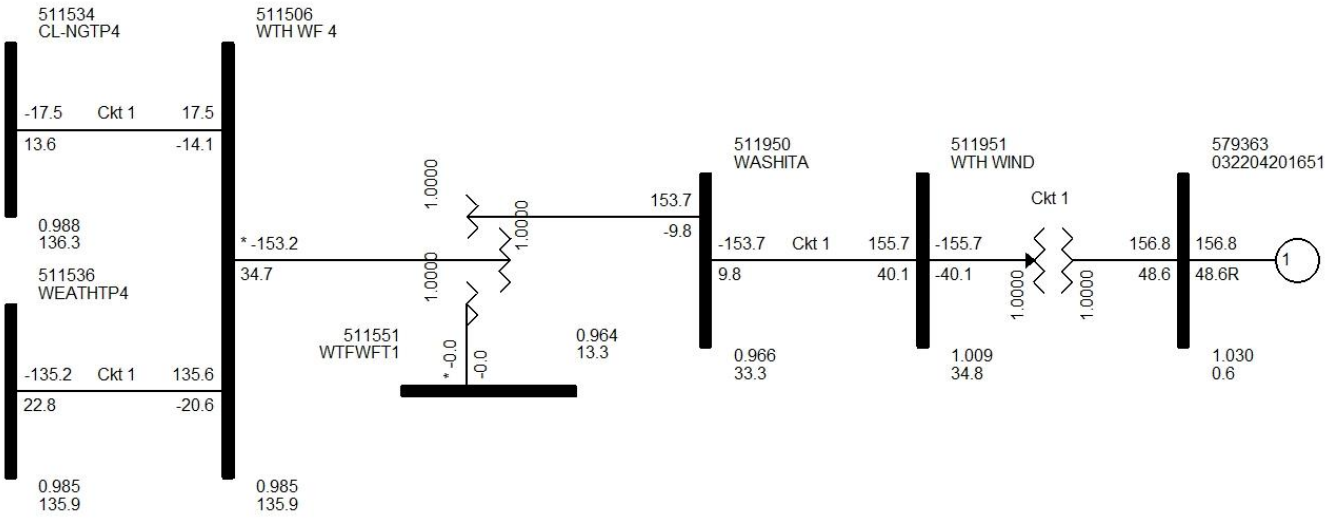


Figure 2-3: GEN-2016-051 One-line Diagram



3. Stability Analysis

Transient stability analysis is used to determine if the transmission system can maintain angular stability and ensure bus voltages stay within planning criteria bandwidth during and after a disturbance while considering the addition of a generator interconnection request.

Model Preparation

Transient stability analysis was performed using modified versions of the 2015 series of Model Development Working Group (MDWG) dynamic study models including the 2016 winter peak, 2017 summer peak, and the 2025 summer peak seasonal models. The cases are then loaded with prior queued interconnection requests and network upgrades assigned to those interconnection requests. Finally the prior queued and study generation are dispatched into the SPP footprint. Initial simulations are then carried out for a no-disturbance run of twenty (20) seconds to verify the numerical stability of the model.

Disturbances

One-hundred sixteen (116) contingencies were identified for use in this study and are listed in **Table 3-1**. These contingencies are faults at locations defined by SPP Generation Interconnection Staff. These contingencies include three-phase N-1, single-phase stuck breaker, and three-phase prior outage faults. Single-phase line faults were simulated by applying fault impedance to the positive sequence network at the fault location to represent the effect of the negative and zero sequence networks on the positive sequence network. The fault impedance was computed to give a positive sequence voltage at the specified fault location of approximately 60% of pre-fault voltage. This method is in agreement with SPP current practice.

Except for transformer faults, the typical sequence of events for a three-phase fault is as follows:

1. apply fault at particular location
2. continue fault for five (5) cycles, clear the fault by tripping the faulted facility
3. after an additional twenty (20) cycles, re-close the previous facility back into the fault
4. continue fault for five (5) additional cycles
5. trip the faulted facility and remove the fault

Transformer faults are typically modeled as three-phase faults, unless otherwise noted. The sequence of events for a transformer fault is as follows:

1. apply fault for five (5) cycles
2. clear the fault by tripping the affected transformer facility (unless otherwise noted there will be no re-closing into a transformer fault)

The SPP areas monitored during the stability analysis were:

- 520: American Electric Power (AEPW)
- 524: Oklahoma Gas and Electric Company (OKGE)
- 525: Western Farmers Electric Cooperative (WFEC)
- 526: Southwestern Public Service (SPS)
- 531: Midwest Energy, Inc. (MIDW)
- 534: Sunflower Electric Power Corp. (SUNC)
- 536: Westar Energy, Inc. (WERE)

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
0	FLT_000_NOFAULT	No Fault Conditions
1	FLT_001_GRANITE2_LKCREEK2_69kV	3 phase fault on the Granite (520927) to LK Creek (520978) 69 kV line, near Granite. a. Apply fault at the Granite 69 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
2	FLT_002_GRANITE2_OMMANGM2_69kV	3 phase fault on the Granite (520927) to OMMANGM2 (529342) 69 kV line, near Granite. a. Apply fault at the Granite 69 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
3	FLT_003_LKCREEK2_LONEWLF2_69kV	3 phase fault on the LK Creek (520978) to Lone WLF (520982) 69kV line, near LK Creek. a. Apply fault at the LK Creek 69 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
4	FLT_004_LKCREEK2_CARTERJ2_69kV	3 phase fault on the LK Creek (520978) to Carter J (520846) 69 kV line, near Lk Creek. a. Apply fault at the Lk Creek 69 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
5	FLT_005_OMMANGM2_RUSSELL2_69kV	3 phase fault on the OMMANGM2 (529342) to Russell (521042) 69 kV line, near OMMANGM2. a. Apply fault at the OMMANGM2 69 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
6	FLT_006_RUSSELL2_RUSSELL4_69_138kV	3 phase fault on the Russell 69 kV (521042) to Russell 138kV (521043) to Russell 13.8kV (521175) transformer, near Russell 69 kV. a. Apply fault at the Russell 69 kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
7	FLT_007_RUSSELL2_ALTUS2_69kV	3 phase fault on the Russell (521042) to Altus (520803) 69 kV line, near Russell. a. Apply fault at the Russell 69 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
8	FLT_008_RUSSELL2_GYPSUM2_69kV	3 phase fault on the Russell (521042) to Gypsum (520929) 69 kV line, near Russell. a. Apply fault at the Russell 69 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
9	FLT_009_RUSSELL2_VERNON2_69kV	3 phase fault on the Russell (521042) to Vernon (521081) 69 kV line, near Russell. a. Apply fault at the Russell 69 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
10	FLT_010_RUSSELL4_ALTUSJT4_138kV	3 phase fault on the Russell (521043) to Altus (511440) 138 kV line, near Russell. a. Apply fault at the Russell 138 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
11	FLT_011_RUSSELL4_LAKEP4WT_138kV	3 phase fault on the Russell (521043) to LAKEP4WT (512110) 138 kV line, near Russell. a. Apply fault at the Russell 138 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
12	FLT_012_LAKEP4WT_LAKEP2WT_138_69kV	3 phase fault on the LAKEP4WT 138kV (512110) to LAKEP2WT 69kV (512111) to LP2TERT 14.4kV (512112) transformer, near LAKEP4WT 138kV. a. Apply fault at the LAKEP4WT 138kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
13	FLT_013_LAKEP4WT_CHILD4WT_138kV	3 phase fault on the LAKEP4WT (512110) to CHILD4WT (512101) 138 kV line, near LAKEP4WT. a. Apply fault at the LAKEP4WT 138 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
14	FLT_014_CHILD4WT_HOLTP4WT_138kV	3 phase fault on the CHILD4WT (512101) to HOLTP4WT (512103) 138 kV line, near CHILD4WT. a. Apply fault at the CHILD4WT 138 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
15	FLT_015_ALTUSJT4_OMPARK4_138kV	3 phase fault on the Altus (511440) to Ompark (529345) 138 kV line, near Altus. a. Apply fault at the Altus 138 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
16	FLT_016_ALTUSJT4_SNYDER4_138kV	3 phase fault on the Altus (511440) to Snyder (511435) 138 kV line, near Altus. a. Apply fault at the Altus 138 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
17	FLT_017_SNYDER4_SNYDER2_138_69kV	3 phase fault on the Snyder 138kV (521052) to Snyder 69kV (521051) to Snyder 14.4kV (521176) transformer, near Snyder 138kV. a. Apply fault at the Snyder 138kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
18	FLT_018_SNYDER4_CACHE4_138kV	3 phase fault on the Snyder (511435) to Cache (511500) 138 kV line, near Snyder. a. Apply fault at the Snyder 138 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
19	FLT_019_OMPVET4_OMALTUS4_138kV	3 phase fault on the Ompvet (529298) to Omaltus (529302) 138 kV line, near Ompvet. a. Apply fault at the Ompvet 138 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
20	FLT_020_GOTEBO2_CORDELL2_69kV	3 phase fault on the Gotebo (520925) to CORDELL (520866) 69 kV line, near Gotebo. a. Apply fault at the Gotebo 69 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
21	FLT_021_GOTEBO2_MTNVIEW2_69kV	3 phase fault on the Gotebo (520925) to MTNVIEW (521003) 69 kV line, near Gotebo. a. Apply fault at the Gotebo 69 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
22	FLT_022_INDPARK2_ARAPAHO2_69kV	3 phase fault on the INDPARK (520955) to ARAPAHO (520815) 69 kV line, near INDPARK. a. Apply fault at the INDPARK 69 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
23	FLT_023_WASHITA4_WASHITA2_138_69kV	3 phase fault on the Washita 69kV (521088) to Washita 138kV (521089) to Washita 13.8kV (521179), near Washita 138kV. a. Apply fault at the Washita 138kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
24	FLT_024_WASHITA2_CADDO2_69kV	3 phase fault on the Washita (521088) to Caddo (520838) 69 kV line, near Washita. a. Apply fault at the Washita 69 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
25	FLT_025_ELKCTY4_ELKCTY2_138_69kV	3 phase fault on the Elk City 69kV (511459) to Elk City 138kV (511458) to Elk City 13.8kV (511493), near Elk City 138kV. a. Apply fault at the Elk City 138kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
26	FLT_026_ELKCTY4_ELKCITY6_138_230kV	3 phase fault on the Elk City 138kV (511458) to Elk City 230kV (511490) to Elk City 13.8kV (511482), near Elk City 138kV. a. Apply fault at the Elk City 138kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
27	FLT_027_ELKCTY4_FALCNRD4_138kV	3 phase fault on the Elk City (511458) to FALCNRD (511511) 138kV line, near Elk City. a. Apply fault at the Elk City 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
28	FLT_028_ELKCTY4_CLAFTP4_138kV	3 phase fault on the Elk City (511458) to CL-AFTP (511446) 138kV line, near Elk City. a. Apply fault at the Elk City 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
29	FLT_029_ELKCTY4_RHWIND4_138kV	3 phase fault on the Elk City (511458) to RHWIND/ GEN-2002-005 (521116) 138kV line, near Elk City. a. Apply fault at the Elk City 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
30	FLT_030_G16037TAP_CHISHOLM7_345kV	3 phase fault on the G16-037-Tap (560078) to Chisholm (511553) 345 kV line, near G16-037-Tap. a. Apply fault at the G16-037-Tap 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
31	FLT_031_G16037TAP_GRACMNT7_345kV	3 phase fault on the G16-037-Tap (560078) to Gracemont (515800) 345 kV line, near G16-037-Tap. a. Apply fault at the G16-037-Tap 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
32	FLT_032_CHISHOLM7_CHISHOLM6_345_230kV	3 phase fault on the Chisholm (511553) 345kV to Chisholm (511557) 230kV to Chisholm (511558) 13.8kV transformer, near Chisholm 345kV. a. Apply fault at the Chisholm 345kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
33	FLT_033_CHISHOLM6_ELKCITY6_230kV	3 phase fault on the Chisholm (511557) to Elk City (511490) 230kV line, near Chisholm. a. Apply fault at the Chisholm 230kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
34	FLT_034_CHISHOLM6_SWEETWT6_230kV	3 phase fault on the Chisholm (511557) to Sweetwater (511541) 230kV line, near Chisholm. a. Apply fault at the Chisholm 230kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
35	FLT_035_SWEETWT6_STLNDEMARC6_230kV	3 phase fault on the Sweetwater (511541) to STLN-DEMARC (523779) 230kV line, near Sweetwater. a. Apply fault at the Sweetwater 230kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
36	FLT_036_WHEELER6_GRAPEVINE6_230kV	3 phase fault on the Wheeler (523777) to Grapevine (523771) 230kV line, near Wheeler. a. Apply fault at the Wheeler 230kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
37	FLT_037_GRACMNT7_MINCO7_345kV	3 phase fault on the Gracemont (515800) to Minco 345kV line, near Gracemont. a. Apply fault at the Gracemont 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
38	FLT_038_GRACMNT7_GRACMNT4_345_138kV	3 phase fault on the Gracemont (515800) 345kV to Gracemont (515802) 138kV to Gracemont (515801) 13.8kV transformer, near Gracemont. a. Apply fault at the Gracemont 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.
39	FLT_039_GRACMNT4_ANADARK4_138kV	3 phase fault on the Gracemont (515800) to Anadarko (520814) 138kV line, near Gracemont. a. Apply fault at the Gracemont 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
40	FLT_040_GRACMNT4_WASHITA4_138kV	3 phase fault on the Gracemont (515800) to Washita (521089) 138kV CKT 1, near Gracemont. a. Apply fault at the Gracemont 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
41	FLT_041_DBLGRACMNT4_WASHITA4_138kV	3 phase fault on the Gracemont (515800) to Washita (521089) 138kV CKT 1 & 2, near Gracemont. a. Apply fault at the Gracemont 138kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).
42	FLT_042_ANADARK4_BLUCAN54_138kV	3 phase fault on the Anadarko (520814) to Blucan (521129) 138kV line, near Anadarko. a. Apply fault at the Anadarko 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
43	FLT_043_ANADARK4_POCASET4_138kV	3 phase fault on the Anadarko (520814) to Pocaset (521031) 138kV line, near Anadarko. a. Apply fault at the Anadarko 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
44	FLT_044_ANADARK4_SEQUOYAHJ4_138kV	3 phase fault on the Anadarko (520814) to SEQUOYAHJ (520422) 138kV line, near Anadarko. a. Apply fault at the Anadarko 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
45	FLT_045_ANADARK4_SWS4_138kV	3 phase fault on the Anadarko (520814) to S.W.S. (511477) 138kV line, near Anadarko. a. Apply fault at the Anadarko 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
46	FLT_046_WASHITA4_SWS4_138kV	3 phase fault on the Washita (521089) to S.W.S. (511477) 138kV line, near Washita. a. Apply fault at the Washita 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
47	FLT_047_SWS4_ELSWORTH4_138kV	3 phase fault on the S.W.S. (511477) to Elsworth (511563) 138kV line, near S.W.S. . a. Apply fault at the S.W.S. 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
48	FLT_048_SWS4_NORGE4_138kV	3 phase fault on the S.W.S. (511477) to Norge (511483) 138kV line, near S.W.S. . a. Apply fault at the S.W.S. 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
49	FLT_049_GRACMNT7_LES7_345kV	3 phase fault on the Gracemont (515800) to L.E.S. (511468) 345kV line, near Gracemont. a. Apply fault at the Gracemont 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
50	FLT_050_LES7_LES4_345_138kV	3 phase fault on the L.E.S. (511468) 345kV to L.E.S. (511467) 138kV to L.E.S. (511414) 13.8kV transformer circuit 1, near the 345kV bus. a. Apply fault at the L.E.S. 345kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
51	FLT_051_LES4_FLETAP4_138kV	3 phase fault on the L.E.S. (511467) to Fle Tap (511423) 138kV line, near L.E.S. a. Apply fault at the L.E.S. 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
52	FLT_052_LES4_SHERID4_138kV	3 phase fault on the L.E.S. (511467) to Sherid (511474) 138kV line, near L.E.S. a. Apply fault at the L.E.S. 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
53	FLT_053_LES4_COMANC4_138kV	3 phase fault on the L.E.S. (511467) to Comanc (511437) 138kV line, near L.E.S. a. Apply fault at the L.E.S. 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
54	FLT_054_LES7_OKU7_345kV	3 phase fault on the L.E.S. (511468) to O.K.U. (511456) 345kV line, near L.E.S. a. Apply fault at the L.E.S. 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
55	FLT_055_LES7_G14057T_345kV	3 phase fault on the L.E.S. (511468) to G14-057/ Tap (560013) 345kV line, near L.E.S. a. Apply fault at the L.E.S. 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
56	FLT_056_G14057T_SUNNYSD7_345kV	3 phase fault on the G14-057 Tap (560013) to Sunny SD (515136) 345kV line, near G14-057 Tap. a. Apply fault at the G14-057 Tap 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
57	FLT_057_SUNNYSD7_SUNNYSD4_345_138kV	3 phase fault on the Sunny SD (515136) 345kV to Sunny SD (515135) 138kV to Sunny SD (515405) 13.8kV transformer circuit 1, near the 345kV bus. a. Apply fault at the Sunny SD 345kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
58	FLT_058_SUNNYSD7_G16063TAP_345kV	3 phase fault on the Sunny SD (515136) to G16-063 TAP (560088) 345kV line, near Sunny SD. a. Apply fault at the Sunny SD 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
59	FLT_059_JOHNCO7_PITTSB7_345kV	3 phase fault on the Johnco (514809) to PITTSB (510907) 345kV line, near Johnco. a. Apply fault at the Johnco 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
60	FLT_060_PITTSB7_SEMINOL7_345kV	3 phase fault on the PITTSB (510907) to Seminol (515045) 345kV line, near PITTSB. a. Apply fault at the PITTSB 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
61	FLT_061_PITTSB7_VALIANT7_345kV	3 phase fault on the PITTSB (510907) to Valiant (510911) 345kV line, near PITTSB. a. Apply fault at the PITTSB 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
62	FLT_062_PITTSB7_CRIVER7_345kV	3 phase fault on the PITTSB (510907) to C River (515422) 345kV line, near PITTSB. a. Apply fault at the PITTSB 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
63	FLT_063_OKU7_G14074TAP_345kV	3 phase fault on the O.K.U. (511456) to G14-074-Tap (560027) 345kV line, near O.K.U. a. Apply fault at the O.K.U. 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
64	FLT_064_TUCOINT7_TUCOINT6_345_230kV	3 phase fault on the TUCO_Int (525832) 345kV to TUCO_Int (525830) 230kV to TUCO_Int (525824) 13.2kV transformer circuit 1, near the 345kV bus. a. Apply fault at the TUCO_Int 345kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
65	FLT_065_TUCOINT7_BORDER7_345kV	3 phase fault on the TUCO_Int (525832) to Border (515458) 345kV line, near TUCO_Int. a. Apply fault at the TUCO_Int 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
66	FLT_066_BORDER7_WWRDEHV7_345kV	3 phase fault on the Border (515458) to Woodward (515375) 345kV line, near Border. a. Apply fault at the Border 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
67	FLT_067_TUCOINT7_YOAKUM345_345kV (25SP only)	3 phase fault on the TUCO_Int (525832) to Yoakum (526936) 345kV line, near TUCO_Int. a. Apply fault at the TUCO_Int 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
68	FLT_068_TUCOINT6_SWISHER6_230kV	3 phase fault on the TUCO_Int (525830) to Swisher (525213) 230kV line, near TUCO_Int. a. Apply fault at the TUCO_Int 230kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
69	FLT_069_TUCOINT6_CARLISLE6_230kV	3 phase fault on the TUCO_Int (525830) to Carlisle (526161) 230kV line, near TUCO_Int. a. Apply fault at the TUCO_Int 230kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
70	FLT_070_MINCO7_CIMARON7_345kV	3 phase fault on the Minco (514801) to Cimarron (514901) 345kV line, near Minco. a. Apply fault at the Minco 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
71	FLT_071_TUCOINT6_TOLKEAST6_230kV	3 phase fault on the TUCO_Int (525830) to TOLK_EAST (525524) 230kV line, near TUCO_Int. a. Apply fault at the TUCO_Int 230kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
72	FLT_072_TUCOINT6_JONES6_230kV	3 phase fault on the TUCO_Int (525830) to Jones (526337) 230kV line, near TUCO_Int. a. Apply fault at the TUCO_Int 230kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
73	FLT_073_YOAKUM345_HOBBSINT7_345kV (25SP Only)	3 phase fault on the Yoakum (526936) to HOBBS_INT (527896) 345kV line, near Yoakum. a. Apply fault at the Yoakum 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
74	FLT_074_CIMARON7_MATHWSN7_345kV	3 phase fault on the Cimarron (514901) to Mathewson (515497) 345kV line, CKT 1, near Cimarron. a. Apply fault at the Cimarron 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
75	FLT_075_DBLCIMARON7_MATHWSN7_345kV	3 phase fault on the Cimarron (514901) to Mathewson (515497) 345kV CKT 1 & 2, near Cimarron. a. Apply fault at the Cimarron 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).
76	FLT_076_CIMARON7_NORTWST7_345kV	3 phase fault on the Cimarron (514901) to Northwest (514880) 345kV line, near Cimarron. a. Apply fault at the Cimarron 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
77	FLT_077_CIMARON7_DRAPER7_345kV	3 phase fault on the Cimarron (514901) to Draper (514934) 345kV line, near Cimarron. a. Apply fault at the Cimarron 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
78	FLT_078_NORTWST7_ARCADIA7_345kV	3 phase fault on the Northwest (514880) to Arcadia (514908) 345kV line, near Northwest. a. Apply fault at the Northwest 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
79	FLT_079_NORTWST7_SPRNGCK7_345kV	3 phase fault on the Northwest (514880) to SPRNGCK (514881) 345kV line, near Northwest. a. Apply fault at the Northwest 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
80	FLT_080_DRAPER7_SEMINOL7_345kV	3 phase fault on the Draper (514934) to Seminol (515045) 345kV line, CKT 1 near Draper. a. Apply fault at the Draper 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
81	FLT_081_SEMINOL7_MUSKOGE7_345kV	3 phase fault on the Seminol (515045) to Muskoge (515224) 345kV line, near Seminol. a. Apply fault at the Seminol 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
82	FLT_082_REDBUD7_RSS7_345kV	3 phase fault on the Redbud (514909) to R. S. S. (509782) 345kV line, near Redbud. a. Apply fault at the Redbud 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
83	FLT_083_MATHWSN7_G15063T_345kV	3 phase fault on the Mathewson (515497) to G15-063 Tap (560055) 345kV line, near Mathewson. a. Apply fault at the Mathewson 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
84	FLT_084_WOODRNG7_HUNTERS7_345kV	3 phase fault on the WOODRNG (514715) to Hunters (515476) 345kV line, near WOODRNG. a. Apply fault at the WOODRNG 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
85	FLT_085_WOODRNG7_G16061TAP_345kV	3 phase fault on the WOODRNG (514715) to G16-061-TAP (560084) 345kV line, near WOODRNG. a. Apply fault at the WOODRNG 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
86	FLT_086_MATHWSN7_TATONGA7_345kV	3 phase fault on the Mathewson (515497) to Tatonga (515407) 345kV line, CKT 1, near Mathewson. a. Apply fault at the Mathewson 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
87	FLT_087_DBLMATHWSN7_TATONGA7_345kV (25SP Only)	3 phase fault on the Mathewson (515497) to Tatonga (515407) 345kV CKT 1 & 2, near Mathewson. a. Apply fault at the Mathewson 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).
88	FLT_088_TATONGA7_G11051TAP_345kV	3 phase fault on the Tatonga (515407) to G11-051-TAP (562075) 345kV line, CKT 1, near Tatonga. a. Apply fault at the Tatonga 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
89	FLT_089_DBLTATONGA7_G11051TAP_345kV (25SP only)	3 phase fault on the Tatonga (515407) to G11-051-TAP (562075) 345kV CKT 1 & 2, near Tatonga. a. Apply fault at the Tatonga 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).
90	FLT_090_ARCADIA7_REDBUD7_345kV	3 phase fault on the Arcadia (514908) to Redbud (514909) 345kV line, CKT 1, near Arcadia. a. Apply fault at the Arcadia 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
91	FLT_091_DBLARCADIA7_REDBUD7_345kV	3 phase fault on the Arcadia (514908) to Redbud (514909) 345kV CKT 1 & 2, near Arcadia. a. Apply fault at the Arcadia 345kV bus. b. Clear fault after 5 cycles and trip the faulted lines (CKT 1 and 2).
92	FLT_092_WTHWF4_CLNGTP4_138kV	3 phase fault on the Weatherford (511506) to Clinton Junction (511534) 138kV line, near Weatherford. a. Apply fault at the Weatherford 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
93	FLT_093_WTHWF4_WEATHTP4_138kV	3 phase fault on the Weatherford (511506) to Weatherford Tap (511536) 138kV line, near Weatherford. a. Apply fault at the Weatherford 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
94	FLT_094_WEATHTP4_WTHSE4_138kV	3 phase fault on the Weatherford Tap (511536) to WTH SE (511497) 138kV line, near Weatherford Tap. a. Apply fault at the Weatherford Tap 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
95	FLT_095_WTHSE4_WTHSE2_138_69kV	3 phase fault on the WTH SE (511497) 138kV to WTH SE (511496) 69kV to WTH SE (511505) 13.8kV transformer, near WTH SE 138kV. a. Apply fault at the WTH SE 138kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
96	FLT_096_WTHSE4_WTHJCT4_138kV	3 phase fault on the WTH SE (511497) to WTH JCT (511489) 138kV line, near WTH SE. a. Apply fault at the WTH SE 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
97	FLT_097_CANGAS4_JENSEN4_138kV	3 phase fault on the CAN GAS (511540) to JENSEN (514821) 138kV line, near CAN GAS. a. Apply fault at the CAN GAS 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
98	FLT_098_CLNGTP4_CLINTJC4_138kV	3 phase fault on the Clinton Junction Tap (511534) to Clinton Junction (511485) 138kV line, near Clinton Junction Tap (511534). a. Apply fault at the Clinton Junction Tap (511534) 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
99	FLT_099_CLINTJC4_CLINTJC2_138_69kV	3 phase fault on the Clinton Junction (511485) 138kV to Clinton Junction (511484) 69kV to Clinton Junction (511499) 13.8kV transformer, near Clinton Junction 138kV. a. Apply fault at the Clinton Junction 138kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.
100	FLT_100_CLINTJC4_CLINTON4_138kV	3 phase fault on the Clinton Junction (511485) to Clinton (520856) 138kV line, near Clinton Junction. a. Apply fault at the Clinton Junction 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
101	FLT_101_CLINTJC4_ELKCTY4_138kV	3 phase fault on the Clinton Junction (511485) to Elk City (511458) 138kV line, near Clinton Junction. a. Apply fault at the Clinton Junction 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
102	FLT_102_WASHITA4_ONEY4_138kV	3 phase fault on the ONEY (521017) to Washita (521089) 138kV line, near Washita. a. Apply fault at the Washita 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
103	FLT_103_PO1GRANITE2_OMMANGM2_69kV	**Prior Outage Scenario 1** a. Prior Outage: Switch out the Carter J (520846) to LK Creek (520978) 69 kV line. b. Apply a 3 phase fault on the Granite (520927) to OMMANGM2 (529342) 69 kV line, near Granite. c. Clear fault after 5 cycles by tripping the faulted line d. Wait 20 cycles, and then re-close the line in (b) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
104	FLT_104_PO2GRANITE2_LKCREEK2_69kV	**Prior Outage Scenario 2** a. Prior Outage: Switch out the Russell (521042) to Altus (520803) 69 kV line. b. Apply a 3 phase fault on the Granite (520927) to LK Creek (520978) 69 kV line, near Granite. c. Clear fault after 5 cycles by tripping the faulted line d. Wait 20 cycles, and then re-close the line in (b) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
105	FLT_105_PO3GRANITE2_LKCREEK2_69kV	**Prior Outage Scenario 3** a. Prior Outage: Switch out the Vernon (521081) to Russell (521042) 69 kV line. b. Apply a 3 phase fault on the Granite (520927) to LK Creek (520978) 69 kV line, near Granite. c. Clear fault after 5 cycles by tripping the faulted line d. Wait 20 cycles, and then re-close the line in (b) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
106	FLT_106_SB1RUSSELL2_ALTUS2VERNON2_69KV	**Stuck Breaker Scenario 1** a. Apply a single phase fault on Russell (521042) 69 kV bus. b. Wait 16 cycles and remove fault. c. Trip Russell (521042) to Altus (520803)69 kV line. d. Trip Russell (521042) to Vernon (521081) 69 kV line.
107	FLT_107_PO4CHISHOLM7_CHISHOLM6_345_230kV	**Prior Outage Scenario 4** a. Prior Outage: Switch out the G16-037-Tap (560078) to Gracemont (515800) 345kV line. b. Apply a 3 phase fault on the Chisholm (511553) 345kV to Chisholm (511557) 230kV to Chisholm (511558) 13.8kV transformer, near Chisholm 345kV c. Clear fault after 5 cycles by tripping the faulted transformer
108	FLT_108_PO5GRACMNT7_MINCO7_345kV	**Prior Outage Scenario 5** a. Prior Outage: Switch out the G16-037-Tap (560078) to Chisholm (511553) 345kV line. b. Apply a 3 phase fault on the Gracemont (515800) to Minco 345kV line, near Gracemont. c. Clear fault after 5 cycles by tripping the faulted line. d. Wait 20 cycles, and then re-close the line in (b) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
109	FLT_109_SB2CHISHOLM7_WWRDEHV7_345kV	**Stuck Breaker Scenario 2** a. Apply a single phase fault on Chisholm (511553) 345kV bus. b. Wait 16 cycles and remove fault. c. Trip the Chisholm (511553) to Woodward (515375) 345kV line. d. Trip Chisholm (511553) 345kV to Chisholm (511557) 230kV to Chisholm (511558) 13.8kV transformer.
110	FLT_110_SB3GRACMNT7_G16037TAPMINCO7_345kV	**Stuck Breaker Scenario 3** a. Apply a single phase fault on Gracemont (515800) 345kV bus. b. Wait 16 cycles and remove fault. c. Trip Gracemont (515800) to G16-037-Tap (560078) 345kV line. d. Trip Gracemont (515800) to Minco (514801) 345kV line.
111	FLT_111_PO6WTHWF4_WEATHTP4_138kV	**Prior Outage Scenario 6** a. Prior Outage: Switch out the Clinton Junction (511485) to Elk City (511458) 138kV line. b. Apply a 3 phase fault on the Weatherford (511506) to Weatherford Tap (511536) 138kV line, near Weatherford. c. Clear fault after 5 cycles by tripping the faulted line. d. Wait 20 cycles, and then re-close the line in (b) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
112	FLT_112_PO7WTHWF4_CLNGTP4_138kV	**Prior Outage Scenario 7** a. Prior Outage: Switch out the WTH SE (511497) to WTH JCT (511489) 138kV line. b. Apply a 3 phase fault on the Weatherford (511506) to Clinton Junction (511534) 138kV line, near Weatherford. c. Clear fault after 5 cycles by tripping the faulted line and. d. Wait 20 cycles, and then re-close the line in (b) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
113	FLT_113_SB4CLINTJC4_ELKCTY4CLINTON4_138kV	**Stuck Breaker Scenario 4** a. Apply a single phase fault on Clinton Junction (511485) 138kV bus. b. Wait 16 cycles and remove fault. c. Trip Clinton Junction (511485) to Elk City (511458) 138kV line. d. Trip Clinton Junction (511485) to Clinton (520856)138kV line.
114	FLT_114_SUNNYSD7_JOHNCO7_345kV	3 phase fault on the Sunny SD (515136) to Johnco (514809) 345kV line, near Sunny SD. a. Apply fault at the Sunny SD 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
115	FLT_115_CHISHOLM7_BORDER7_345kV	3 phase fault on the Chisholm (511553) to Border (515458) 345kV line, near Chisholm. a. Apply fault at the Chisholm 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Table 3-1: Contingencies Evaluated

Cont. No.	Contingency Name	Description
116	FLT_116_CHISHOLM7_WWRD EHV7_345kV	3 phase fault on the Chisholm (511553) to Woodward (515375) 345kV line, near Chisholm. a. Apply fault at the Chisholm 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Results

The stability analysis was performed and the results are summarized in **Table 3-2**. The stability plots will be available upon customer request.

Table 3-2: Stability Analysis Results

Contingency Number and Name		DISIS-2016-001 G7 Cluster			GEN-2016-008 Stand Alone			GEN-2016-037 Stand Alone			GEN-2016-051 Stand Alone		
		2016WP	2017SP	2025SP	2016WP	2017SP	2025SP	2016WP	2017SP	2025SP	2016WP	2017SP	2025SP
0	FLT_000_NOFAULT	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE
1	FLT_001_GRANITE2_LKCREEK2_69kV	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]						
2	FLT_002_GRANITE2_OMMANGM2_69kV	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]						
3	FLT_003_LKCREEK2_LONEWLF2_69kV	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]						
4	FLT_004_LKCREEK2_CARTERJ2_69kV	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]						
5	FLT_005_OMMANGM2_RUSSELL2_69kV	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]						
6	FLT_006_RUSSELL2_RUSSELL4_69_138kV	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]						
7	FLT_007_RUSSELL2_ALTUS2_69kV	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]						
8	FLT_008_RUSSELL2_GYPSUM2_69kV	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]						
9	FLT_009_RUSSELL2_VERNON2_69kV	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]						
10	FLT_010_RUSSELL4_ALTUSJT4_138kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE						
11	FLT_011_RUSSELL4_LAKEP4WT_138kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE						
12	FLT_012_LAKEP4WT_LAKEP2WT_138_69kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE						
13	FLT_013_LAKEP4WT_CHILD4WT_138kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE						
14	FLT_014_CHILD4WT_HOLTP4WT_138kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE						
15	FLT_015_ALTUSJT4_OMPARK4_138kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE						
16	FLT_016_ALTUSJT4_SNYDER4_138kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE						
17	FLT_017_SNYDER4_SNYDER2_138_69kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE						
18	FLT_018_SNYDER4_CACHE4_138kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE						
19	FLT_019_OMPVET4_OMALTUS4_138kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE						
20	FLT_020_GOTEBO2_CORDELL2_69kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE			
21	FLT_021_GOTEBO2_MTNVIEW2_69kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE			
22	FLT_022_INDPARK2_ARAPAHO2_69kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE			
23	FLT_023_WASHITA4_WASHITA2_138_69kV	STABLE[2]	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE			
24	FLT_024_WASHITA2_CADDO2_69kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE			
25	FLT_025_ELKCTY4_ELKCTY2_138_69kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE
26	FLT_026_ELKCTY4_ELKCITY6_138_230kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE
27	FLT_027_ELKCTY4_FALCNRD4_138kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE
28	FLT_028_ELKCTY4_CLAFTP4_138kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE
29	FLT_029_ELKCTY4_RHWIND4_138kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE
30	FLT_030_G16037TAP_CHISHOLM7_345kV	STABLE[3]	STABLE[3]	STABLE[3]				STABLE[3]	STABLE[3]	STABLE[3]	STABLE	STABLE	STABLE
31	FLT_031_G16037TAP_GRACMNT7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
32	FLT_032_CHISHOLM7_CHISHOLM6_345_230kV	STABLE[4]	STABLE[4]	STABLE[4]				STABLE[4]	STABLE[4]	STABLE[4]	STABLE[4]	STABLE[4]	STABLE[4]
33	FLT_033_CHISHOLM6_ELKCITY6_230kV	STABLE[5]	STABLE[5]	STABLE[5]				STABLE[5]	STABLE[5]	STABLE[5]	STABLE[5]	STABLE[5]	STABLE[5]
34	FLT_034_CHISHOLM6_SWEETWT6_230kV	STABLE[5]	STABLE[5]	STABLE[5]				STABLE[5]	STABLE[5]	STABLE[5]	STABLE[5]	STABLE[5]	STABLE[5]
35	FLT_035_SWEETWT6_STLNDEMARC6_230kV	STABLE[4,5]	STABLE[4,5]	STABLE[4,5]				STABLE[4,5]	STABLE[4,5]	STABLE[4,5]	STABLE	STABLE	STABLE
36	FLT_036_WHEELER6_GRAPEVINE6_230kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
37	FLT_037_GRACMNT7_MINCO7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
38	FLT_038_GRACMNT7_GRACMNT4_345_138kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
39	FLT_039_GRACMNT4_ANADARK4_138kV	STABLE[2]	STABLE[2]	STABLE				STABLE	STABLE	STABLE			
40	FLT_040_GRACMNT4_WASHITA4_138kV	STABLE[2]	STABLE[2]	STABLE				STABLE	STABLE	STABLE			
41	FLT_041_DBLGRACMNT4_WASHITA4_138kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			

Table 3-2: Stability Analysis Results

Contingency Number and Name		DISIS-2016-001 G7 Cluster			GEN-2016-008 Stand Alone			GEN-2016-037 Stand Alone			GEN-2016-051 Stand Alone		
		2016WP	2017SP	2025SP	2016WP	2017SP	2025SP	2016WP	2017SP	2025SP	2016WP	2017SP	2025SP
42	FLT_042_ANADARK4_BLUCAN54_138kV	STABLE[2]	STABLE	STABLE				STABLE	STABLE	STABLE			
43	FLT_043_ANADARK4_POCASET4_138kV	STABLE[2]	STABLE	STABLE				STABLE	STABLE	STABLE			
44	FLT_044_ANADARK4_SEQUOYAHJ4_138kV	STABLE[2]	STABLE	STABLE				STABLE	STABLE	STABLE			
45	FLT_045_ANADARK4_SWS4_138kV	STABLE[2]	STABLE	STABLE				STABLE	STABLE	STABLE			
46	FLT_046_WASHITA4_SWS4_138kV	STABLE[2]	STABLE[2]	STABLE[2]				STABLE	STABLE	STABLE			
47	FLT_047_SWS4_ELSWORTH4_138kV	STABLE[2]	STABLE[2]	STABLE[2]				STABLE	STABLE	STABLE			
48	FLT_048_SWS4_NORGE4_138kV	STABLE[2]	STABLE[2]	STABLE[2]				STABLE	STABLE	STABLE			
49	FLT_049_GRACMNT7_LES7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
50	FLT_050_LES7_LES4_345_138kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
51	FLT_051_LES4_FLETAP4_138kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
52	FLT_052_LES4_SHERID4_138kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
53	FLT_053_LES4_COMANC4_138kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
54	FLT_054_LES7_OKU7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
55	FLT_055_LES7_G14057T_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
56	FLT_056_G14057T_SUNNYSD7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
57	FLT_057_SUNNYSD7_SUNNYSD4_345_138kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
58	FLT_058_SUNNYSD7_G16063TAP_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
59	FLT_059_JOHNCO7_PITTSB7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
60	FLT_060_PITTSB7_SEMINOL7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
61	FLT_061_PITTSB7_VALIANT7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
62	FLT_062_PITTSB7_CRIVER7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
63	FLT_063_OKU7_G14074TAP_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
64	FLT_064_TUCOINT7_TUCOINT6_345_230kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
65	FLT_065_TUCOINT7_BORDER7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
66	FLT_066_BORDER7_WWRDEHV7_345kV (base case only)	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE
67	FLT_067_TUCOINT7_YOAKUM345_345kV (25SP only)			STABLE						STABLE			
68	FLT_068_TUCOINT6_SWISHER6_230kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
69	FLT_069_TUCOINT6_CARLISLE6_230kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
70	FLT_070_MINCO7_CIMARON7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
71	FLT_071_TUCOINT6_TOLKEAST6_230kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
72	FLT_072_TUCOINT6_JONES6_230kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
73	FLT_073_YOAKUM345_HOBBSINT7_345kV (25SP Only)			STABLE						STABLE			
74	FLT_074_CIMARON7_MATHWSN7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
75	FLT_075_DBLCIMARON7_MATHWSN7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
76	FLT_076_CIMARON7_NORTWST7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
77	FLT_077_CIMARON7_DRAPER7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
78	FLT_078_NORTWST7_ARCADIA7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
79	FLT_079_NORTWST7_SPRNGCK7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
80	FLT_080_DRAPER7_SEMINOL7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
81	FLT_081_SEMINOL7_MUSKOGE7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
82	FLT_082_REDBUD7_RSS7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
83	FLT_083_MATHWSN7_G15063T_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
84	FLT_084_WOODRNG7_HUNTERS7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
85	FLT_085_WOODRNG7_G16061TAP_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			

Table 3-2: Stability Analysis Results

Contingency Number and Name		DISIS-2016-001 G7 Cluster			GEN-2016-008 Stand Alone			GEN-2016-037 Stand Alone			GEN-2016-051 Stand Alone		
		2016WP	2017SP	2025SP	2016WP	2017SP	2025SP	2016WP	2017SP	2025SP	2016WP	2017SP	2025SP
86	FLT_086_MATHWSN7_TATONGA7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
87	FLT_087_DBLMATHWSN7_TATONGA7_345kV (25SP Only)			STABLE						STABLE			
88	FLT_088_TATONGA7_G11051TAP_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
89	FLT_089_DBLTATONGA7_G11051TAP_345kV (25SP only)			STABLE						STABLE			
90	FLT_090_ARCADIA7_REDBUD7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
91	FLT_091_DBLARCADIA7_REDBUD7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
92	FLT_092_WTHWF4_CLNGTP4_138kV	STABLE	STABLE	STABLE							STABLE	STABLE	STABLE
93	FLT_093_WTHWF4_WEATHTP4_138kV	STABLE	STABLE	STABLE							STABLE	STABLE	STABLE
94	FLT_094_WEATHTP4_WTHSE4_138kV	STABLE	STABLE	STABLE							STABLE	STABLE	STABLE
95	FLT_095_WTHSE4_WTHSE2_138_69kV	STABLE	STABLE	STABLE							STABLE	STABLE	STABLE
96	FLT_096_WTHSE4_WTHJCT4_138kV	STABLE	STABLE	STABLE							STABLE	STABLE	STABLE
97	FLT_097_CANGAS4_JENSEN4_138kV	STABLE	STABLE	STABLE							STABLE	STABLE	STABLE
98	FLT_098_CLNGTP4_CLINTJC4_138kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE	STABLE	STABLE	STABLE
99	FLT_099_CLINTJC4_CLINTJC2_138_69kV	STABLE	STABLE	STABLE							STABLE	STABLE	STABLE
100	FLT_100_CLINTJC4_CLINTON4_138kV	STABLE	STABLE	STABLE							STABLE	STABLE	STABLE
101	FLT_101_CLINTJC4_ELKCTY4_138kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE
102	FLT_102_WASHITA4_ONEY4_138kV	STABLE[2]	STABLE[2]	STABLE[2]				STABLE	STABLE	STABLE	STABLE	STABLE	STABLE
103	FLT_103_PO1GRANITE2_OMMANGM2_69kV	STABLE[1,6]	STABLE[1,6]	STABLE[1,6]	STABLE[1,6]	STABLE[1,6]	STABLE[1,6]						
104	FLT_104_PO2GRANITE2_LKCREEK2_69kV	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]						
105	FLT_105_PO3GRANITE2_LKCREEK2_69kV	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]						
106	FLT_106_SB1RUSSELL2_ALTUS2VERNON2_69KV	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]	STABLE[1]						
107	FLT_107_PO4CHISHOLM7_CHISHOLM6_345_230kV	STABLE[3]	STABLE[3]	STABLE[3]				STABLE[3]	STABLE[3]	STABLE[3]			
108	FLT_108_PO5GRACMNT7_MINCO7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
109	FLT_109_SB2CHISHOLM7_WWRDEHV7_345kV	STABLE	STABLE	STABLE				STABLE	STABLE	STABLE			
110	FLT_110_SB3GRACMNT7_G16037TAPMINCO7_345kV	STABLE[3]	STABLE[3]	STABLE[3]				STABLE	STABLE	STABLE			
111	FLT_111_PO6WTHWF4_WEATHTP4_138kV	STABLE	STABLE	STABLE							STABLE	STABLE	STABLE
112	FLT_112_PO7WTHWF4_CLNGTP4_138kV	STABLE[7]	STABLE[7]	STABLE[7]							STABLE[7]	STABLE[7]	STABLE[7]
113	FLT_113_SB4CLINTJC4_ELKCTY4CLINTON4_138kV	STABLE	STABLE	STABLE							STABLE	STABLE	STABLE
114	FLT_114_SUNNYSD7_JOHNCO7_345kV	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE	STABLE
115	FLT_115_CHISHOLM7_BORDER7_345kV	STABLE[4]	STABLE[4]	STABLE[4]				STABLE[4]	STABLE[4]	STABLE[4]			
116	FLT_116_CHISHOLM7_WWRDEHV7_345kV	STABLE[4]	STABLE[4]	STABLE[4]				STABLE[4]	STABLE[4]	STABLE[4]			

[1] Requires GEN-2016-008 to install extended frequency protection
[2] Requires GEN-2008-037 over-voltage protection at 1.2 pu trip time setting extended from 0.08 to 2.0
[3] Requires rerouting the Woodward to Border 345 kV line to tie into the proposed Chisholm 345 kV substation
[4] Requires disabling SLNOS1 relay on Wheeler-Sweetwater(State-line demarcation) 230 kV to prevent tripping of circuit
[5] Requires GEN-2006-035 under-voltage protection trip #7 setting adjusted from 0.0 pu to 0.9 pu and trip time adjusted from 0.06 to 2.55
[6] Requires curtailment of GEN-2016-008
[7] Requires curtailment of GEN-2016-051

FERC LVRT Compliance

FERC Order #661A places specific requirements on wind farms through its Low Voltage Ride Through (LVRT) provisions. For Interconnection Agreements signed after December 31, 2006, wind farms shall stay on line for faults at the POI that draw the voltage down at the POI to 0.0 pu. The faults listed below in ***Table 3-3*** were tested to meet Order 661A LVRT provisions. The results are listed in **Table 3-2**.

Table 3-3 LVRT Contingencies

Contingency Number and Name	Description
FLT_001_GRANITE2_LKCREEK2_69kV	3 phase fault on the Granite (520927) to LK Creek (520978) 69 kV line, near Granite. a. Apply fault at the Granite 69 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
FLT_002_GRANITE2_OMMANGM2_69kV	3 phase fault on the Granite (520927) to OMMANGM2 (529342) 69 kV line, near Granite. a. Apply fault at the Granite 69 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
FLT_030_G16037TAP_CHISHOLM7_345kV	3 phase fault on the G16-037-Tap (560078) to Chisholm (511553) 345 kV line, near G16-037-Tap. a. Apply fault at the G16-037-Tap 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
FLT_031_G16037TAP_GRACMNT7_345kV	3 phase fault on the G16-037-Tap (560078) to Gracemont (515800) 345 kV line, near G16-037-Tap. a. Apply fault at the G16-037-Tap 345 kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
FLT_092_WTHWF4_CLNGTP4_138kV	3 phase fault on the Weatherford (511506) to Clinton Junction (511534) 138kV line, near Weatherford. a. Apply fault at the Weatherford 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
FLT_093_WTHWF4_WEATHTP4_138kV	3 phase fault on the Weatherford (511506) to Weatherford Tap (511536) 138kV line, near Weatherford. a. Apply fault at the Weatherford 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

4. Power Factor Analysis

The power factor analysis was performed for each project included in this study and is designed to demonstrate the reactive power requirements at the point of interconnection (POI) using the current study upgrade cases. For all projects that require reactive power, the final requirement in the GIA will be the pro-forma 95% lagging to 95% leading at the POI.

Model Preparation

For each project included in this study, as well as previous queued projects modeled at the same POI, the projects were turned off for the power factor analysis. The projects were replaced by an equivalent generator located at the POI producing the total MW of the project at that POI and 0.0 Mvar capability.

A Mvar generator without limits was modeled at the interconnection project POI to hold a voltage schedule at the POI consistent with the greater of the voltage schedule in the base case or unity (1.0 pu) voltage.

Disturbances

Each N-1 contingency evaluated in the Stability Analysis found in ***Table 3-1*** was also included in the determination of the power factor requirements.

Results

The power factor ranges are summarized in **Table 4-1** and the resultant ranges are shown **Table D-1** for GEN-2016-008, **Table D-2** for GEN-2016-037, and **Table D-3** for GEN-2016-051. The analysis showed that reactive power is required for the study project, the final requirement in the Generation Interconnection Agreement (GIA) for each project will be the pro-forma 95% lagging to 95% leading at the POI.

For analyzing power factor results a positive Q (Mvar) output indicts that the equivalent generator is supplying reactive power to the system, implying a lagging power factor. A negative Q (Mvar) output indicts that the equivalent generator is absorbing reactive power from the system, implying a leading power factor.

Table 4-1*:* Summary of Power Factor Analysis at the POI

Request	Capacity (MW)	Point of Interconnection (POI)	Fuel	Generator	Lagging (providing Mvars)	Leading (absorbing Mvars)
GEN-2016-008	40	Granite 69kV (520927)	Solar	Advanced Energy 500NX 0.5 MW solar inverters (587063)	0.95	0.95
GEN-2016-037	300	Tap Chisholm (511553) – Gracemont (515800) 345kV, (G16-037-TAP, 560078)	Wind	Vestas V110 2.0 MW (587233)	0.95	0.95

Table 4-1*:* Summary of Power Factor Analysis at the POI

Request	Capacity (MW)	Point of Interconnection (POI)	Fuel	Generator	Lagging (providing Mvars)	Leading (absorbing Mvars)
GEN-2016-051	9.8 (uprate of GEN-2003-022 & GEN-2004-020; Total power = 156.8 MW)	Tap Clinton Junction (511534) – Weatherford Southeast (511536) 138kV, (WTH WF 138kV, 511506)	Wind	GE 1.6 MW (579363)	0.95	0.95

NOTE: As reactive power is required for all projects, the final requirement in the GIA will be the pro-forma 95% lagging to 95% leading at the point of interconnection.

5. Reduced Wind Generation Analysis

A low wind analysis has been performed for the GEN-2016-008, GEN-2016-037, & GEN-2016-051 Interconnection Requests. SPP performed this low wind analysis for excessive capacitive charging current for the addition of the Interconnection Request facilities. The high side of the each Interconnection Customer's transformer will interconnect to The Point of Interconnection (POI).

The POI for GEN-2016-008 will be at the existing Granite 69 kV station interconnected by an approximate less than one (1) mile overhead 69 kV transmission line, GEN-2016-037 will be at a new 345 kV substation tapping the proposed Chisholm – Gracemont 345 kV line interconnected by an approximately five (5) mile overhead 345 kV transmission line, & GEN-2016-051 will be at the existing Weatherford Windfarm Tap a 138kV station built for the GEN-2003-022 & GEN-2004-020 interconnection requests tapping Clinton Junction – Weatherford Southeast 138kV line.

The project generators and capacitors (if any) were turned off in the base case. The resulting reactive power injection into the transmission network comes from the capacitance of the project's transmission lines and collector cables is shown in **Figure E-1** for GEN-2016-008, **Figure E-3** for GEN-2016-037, and **Figure E-5** for GEN-2016-051. Shunt reactors were added at the study project substation 34.5 kV bus to bring the Mvar flow into the POI down to approximately zero as show in **Figure E-2** for GEN-2016-008, **Figure E-4** for GEN-2016-037, and **Figure E-6** for GEN-2016-051.

Final shunt reactor requirement for each project with the model information provided to SPP is shown in **Table 5-1**. It is the interconnection customer's responsibility to design and install the reactive compensation equipment necessary to control the reactive power injection at the POI. If an equivalent means of compensation is installed, the reactive power required may vary with system conditions (e.g. a higher compensation amount is required for voltages above unity at the POI and a lower compensation amount is required for voltages below unity at the POI).

Table 5-1*:* Summary of Reduced Wind Generation Analysis

Request	Point of Interconnection (POI)	Reactor Size (Mvar)
GEN-2016-008	Granite 69kV (520927)	0.5
GEN-2016-037	Tap Chisholm (511553) – Gracemont (515800) 345kV, (G16-037-TAP, 560078)	29.8
GEN-2016-051	Tap Clinton Junction (511534) – Weatherford Southeast (511536) 138kV, (WTH WF 138kV, 511506)	0.5

6. Short Circuit Analysis

The short circuit analysis was performed on the 2017 & 2025 Summer Peak power flow cases using the PSS/E ASCC program. Since the power flow model does not contain negative and zero sequence data, only three-phase symmetrical fault current levels were calculated at the point of interconnection up to and including five levels away.

Short Circuit Analysis was conducting using flat conditions with the following PSS/E ASCCC program settings:

- BUS VOLTAGES SET TO 1 PU AT 0 PHASE ANGLE
- GENERATOR P=0, Q=0
- TRANSFORMER TAP RATIOS=1.0 PU and PHASE ANGLES=0.0
- LINE CHARGING=0.0 IN +/-/0 SEQUENCE
- LOAD=0.0 IN +/- SEQUENCE, CONSIDERED IN ZERO SEQUENCE
- LINE/FIXED/SWITCHED SHUNTS=0.0 AND MAGNETIZING ADMITTANCE=0.0 IN +/-/0 SEQUENCE
- DC LINES AND FACTS DEVICES BLOCKED
- TRANSFORMER ZERO SEQUENCE IMPEDANCE CORRECTIONS IGNORED

Results

The results of the short circuit analysis are shown in **Appendix F; Table F-1** for GEN-2016-008, **Table F-2** for GEN-2016-037, and **Table F-3** for GEN-2016-051.

7. Conclusion

DISIS-2016-001 Group 7 Interconnection Customer(s) have requested an Impact Study to determine the impacts of interconnecting generation to the SPP Transmission System.

A stability cluster impact analysis was performed for the generation projects from the DISIS-2016-001 Group 7 study. The analysis was performed on three (3) seasonal models including 2016 winter peak (16WP), the 2017 summer peak (17SP), and the 2025 summer peak (25SP) cases. These cases are modified versions of the 2015 model series of Model Development Working Group (MDWG) dynamic study models. A total of one-hundred sixteen (116) contingencies were evaluated for the three (3) seasonal cases.

The stability analysis has determine with all previously assigned network upgrades, rerouting the Woodward to Border 345 kV line to tie into the proposed Chisholm 345 kV substation, GEN-2016-008 installing the extended frequency protection option, and resetting the protective relays on the Wheeler to Sweetwater 230kV line, all generators in the monitored areas remained stable and within the pre-contingency, voltage recovery, and post fault voltage recovery criterion of 0.7pu to 1.2pu for the entire modeled disturbances. Under certain system conditions the interconnection requests may be required to curtail generation output to maintain system reliability.

In addition to the cluster impact stability analysis, a stand-alone stability analysis was conducted for each request. This analysis demonstrated that GEN-2016-008 must install the extended frequency protection option, GEN-2016-037 requires rerouting the Woodward to Border 345 kV line to tie into the proposed Chisholm 345 kV substation and the protective relays on the Wheeler to Sweetwater 230kV line to be reset.

Power factor analysis for each generation project was performed on the current study 2016 winter peak, 2017 summer peak, and 2025 summer peak cases with identified system upgrades. As reactive power is required for all projects, the final requirement in the GIA will be the pro-forma 95% lagging to 95% leading at the point of interconnection.

A reduced generation analysis was conducted for wind farms to determine reactor size necessary to compensate the capacitive effects on the transmission system during low or reduced wind conditions caused by the interconnecting project's generator lead transmission line and collector systems. Each request may be required to install the following reactors on their facilities: GEN-2016-008 – 0.5 Mvar, GEN-2016-037 – 29.8 Mvar, and GEN-2016-051 – 0.5 Mvar.

Short Circuit analysis was conducted using the current study 2025 summer peak case with identified system upgrades.

Nothing in this study should be construed as a guarantee of delivery or transmission service. If the customer wishes to sell power from the facility, a separate request for transmission service must be requested on Southwest Power Pool's OASIS by the Customer.

Appendix A – 2016 Winter Peak Stability Plots

(Available on request)

Appendix B – 2017 Summer Peak Stability Plots

(Available on request)

Appendix C – 2025 Summer Peak Stability Plots

(Available on request)

Appendix D – Power Factor Analysis Results

Table D-1: GEN-2016-008 Power Factor Analysis Results

DISIS-2016-001 Group 07 Leading power factor is absorbing vars; Lagging power factor is providing vars										
GEN-2016-008 POI: Granite 69 kV (520927) **Power at POI (MW): 40.0**		2016 Winter Peak POI Voltage = 1.013 pu			2017 Summer Peak POI Voltage = 1.001 pu			2025 Summer Peak POI Voltage = 1.002 pu		
	Contingency Name	**Mvars at POI**	**Power Factor**		**Mvars at POI**	**Power Factor**		**Mvars at POI**	**Power Factor**	
0	FLT_00_NoFault	-11.5950	0.9605	LEAD	-12.0648	0.9574	LEAD	-11.8809	0.9586	LEAD
1	FLT_01_GRANITE2_LKCREEK2_69kV	-9.0222	0.9755	LEAD	-8.9920	0.9757	LEAD	-11.0712	0.9638	LEAD
2	FLT_02_GRANITE2_OMMANGM2_69kV	-8.9591	0.9758	LEAD	-8.9463	0.9759	LEAD	-7.9444	0.9808	LEAD
3	FLT_03_LKCREEK2_LONEWLF2_69kV	-10.6028	0.9666	LEAD	-11.2986	0.9623	LEAD	-11.6940	0.9598	LEAD
4	FLT_04_LKCREEK2_CARTERJ2_69kV	-10.7837	0.9655	LEAD	-10.5495	0.9669	LEAD	-13.1186	0.9502	LEAD
5	FLT_05_OMMANGM2_RUSSELL2_69kV	-7.6620	0.9821	LEAD	-6.7606	0.9860	LEAD	-7.2180	0.9841	LEAD
6	FLT_06_RUSSELL2_RUSSELL4_69_138kV	-10.3430	0.9682	LEAD	-10.6382	0.9664	LEAD	-11.6821	0.9599	LEAD
7	FLT_07_RUSSELL2_ALTUS2_69kV	-11.9707	0.9580	LEAD	-12.6720	0.9533	LEAD	-13.3636	0.9485	LEAD
8	FLT_08_RUSSELL2_GYPSUM2_69kV	-13.4489	0.9479	LEAD	-14.0185	0.9437	LEAD	-13.8276	0.9451	LEAD
9	FLT_09_RUSSELL2_VERNON2_69kV	-12.4440	0.9549	LEAD	-11.5796	0.9606	LEAD	-11.7267	0.9596	LEAD
10	FLT_10_RUSSELL4_ALTUSJT4_138kV	-12.1619	0.9568	LEAD	-12.0082	0.9578	LEAD	-11.8527	0.9588	LEAD
11	FLT_11_RUSSELL4_LAKEP4WT_138kV	-10.9585	0.9645	LEAD	-12.3409	0.9556	LEAD	-12.7740	0.9526	LEAD
12	FLT_12_LAKEP4WT_LAKEP2WT_138_69kV	-12.1993	0.9565	LEAD	-15.0344	0.9361	LEAD	-14.8960	0.9371	LEAD
13	FLT_13_LAKEP4WT_CHILD4WT_138kV	-12.0246	0.9577	LEAD	-11.6296	0.9602	LEAD	-11.2678	0.9625	LEAD
14	FLT_14_CHILD4WT_HOLTP4WT_138kV	-13.7529	0.9457	LEAD	-11.1799	0.9631	LEAD	-11.5508	0.9607	LEAD
15	FLT_15_ALTUSJT4_OMPARK4_138kV	-11.6027	0.9604	LEAD	-12.3514	0.9555	LEAD	-12.3177	0.9557	LEAD
16	FLT_16_ALTUSJT4_SNYDER4_138kV	-11.3142	0.9622	LEAD	-11.7707	0.9593	LEAD	-11.6983	0.9598	LEAD
17	FLT_17_SNYDER4_SNYDER2_138_69kV	-12.4348	0.9549	LEAD	-11.7862	0.9592	LEAD	-12.0165	0.9577	LEAD
18	FLT_18_SNYDER4_CACHE4_138kV	-10.9290	0.9646	LEAD	-12.8389	0.9522	LEAD	-13.1860	0.9497	LEAD
19	FLT_19_OMPVET4_OMALTUS4_138kV	-11.4307	0.9615	LEAD	-11.9687	0.9580	LEAD	-11.6655	0.9600	LEAD
20	FLT_20_GOTEBO2_CORDELL2_69kV	-9.7441	0.9716	LEAD	-9.8048	0.9712	LEAD	-10.1278	0.9694	LEAD
21	FLT_21_GOTEBO2_MTNVIEW2_69kV	-7.7392	0.9818	LEAD	-8.2187	0.9795	LEAD	-9.2936	0.9741	LEAD
22	FLT_22_INDPARK2_ARAPAHO2_69kV	-9.3968	0.9735	LEAD	-9.0565	0.9753	LEAD	-8.9495	0.9759	LEAD
23	FLT_23_WASHITA4_WASHITA2_138_69kV	-11.8676	0.9587	LEAD	-11.6668	0.9600	LEAD	-11.7729	0.9593	LEAD
24	FLT_24_WASHITA2_CADDO2_69kV	-9.9366	0.9705	LEAD	-10.8900	0.9649	LEAD	-10.7798	0.9656	LEAD
25	FLT_25_ELKCTY4_ELKCTY2_138_69kV	-5.9450	0.9891	LEAD	2.1979	0.9985	LAG	8.0869	0.9802	LAG
26	FLT_26_ELKCTY4_ELKCITY6_138_230kV	-8.9922	0.9757	LEAD	-9.5380	0.9727	LEAD	-8.7954	0.9767	LEAD
27	FLT_27_ELKCTY4_FALCNRD4_138kV	-11.9782	0.9580	LEAD	-12.5487	0.9541	LEAD	-12.3781	0.9553	LEAD
28	FLT_28_ELKCTY4_CLAFTP4_138kV	-11.9842	0.9579	LEAD	-12.0426	0.9575	LEAD	-11.9031	0.9585	LEAD
29	FLT_29_ELKCTY4_RHWIND4_138kV	-11.2854	0.9624	LEAD	-11.5909	0.9605	LEAD	-11.2248	0.9628	LEAD
30	FLT_30_G16037TAP_CHISHOLM7_345kV	-10.5455	0.9670	LEAD	-11.1926	0.9630	LEAD	-11.2051	0.9629	LEAD
31	FLT_31_G16037TAP_GRACMNT7_345kV	-8.7800	0.9767	LEAD	-10.1897	0.9691	LEAD	-11.7526	0.9594	LEAD
32	FLT_32_CHISHOLM7_CHISHOLM6_345_230kV	-9.8810	0.9708	LEAD	-10.7914	0.9655	LEAD	-11.5961	0.9605	LEAD
33	FLT_33_CHISHOLM6_ELKCITY6_230kV	-8.9882	0.9757	LEAD	-9.5341	0.9727	LEAD	-8.7928	0.9767	LEAD
34	FLT_34_CHISHOLM6_SWEETWT6_230kV	-10.6526	0.9663	LEAD	-11.2970	0.9624	LEAD	-11.0211	0.9641	LEAD
35	FLT_35_SWEETWT6_STLNDEMARC6_230kV	-11.4893	0.9611	LEAD	-11.0433	0.9639	LEAD	-11.2676	0.9625	LEAD
36	FLT_36_WHEELER6_GRAPEVINE6_230kV	-11.4558	0.9614	LEAD	-11.7275	0.9596	LEAD	-11.6029	0.9604	LEAD
37	FLT_37_GRACMNT7_MINCO7_345kV	-11.0293	0.9640	LEAD	-11.6794	0.9599	LEAD	-11.6198	0.9603	LEAD
38	FLT_38_GRACMNT7_GRACMNT4_345_138kV	-11.1649	0.9632	LEAD	-11.3983	0.9617	LEAD	-10.8159	0.9653	LEAD
39	FLT_39_GRACMNT4_ANADARK4_138kV	-11.4122	0.9616	LEAD	-11.9785	0.9580	LEAD	-11.7909	0.9592	LEAD

DISIS-2016-001 Group 07
Leading power factor is absorbing vars; Lagging power factor is providing vars

	GEN-2016-008 POI: Granite 69 kV (520927) **Power at POI (MW): 40.0**	2016 Winter Peak POI Voltage = 1.013 pu			2017 Summer Peak POI Voltage = 1.001 pu			2025 Summer Peak POI Voltage = 1.002 pu		
	Contingency Name	**Mvars at POI**	**Power Factor**		**Mvars at POI**	**Power Factor**		**Mvars at POI**	**Power Factor**	
40	FLT_40_GRACMNT4_WASHITA4_138kV	-11.3719	0.9619	LEAD	-11.9302	0.9583	LEAD	-11.8118	0.9591	LEAD
41	FLT_42_ANADARK4_BLUCAN54_138kV	-11.4465	0.9614	LEAD	-11.7777	0.9593	LEAD	-11.5453	0.9608	LEAD
42	FLT_43_ANADARK4_POCASET4_138kV	-11.4274	0.9615	LEAD	-11.8282	0.9590	LEAD	-11.5111	0.9610	LEAD
43	FLT_44_ANADARK4_SEQUOYAHJ4_138kV	-11.4040	0.9617	LEAD	-11.7883	0.9592	LEAD	-11.6510	0.9601	LEAD
44	FLT_45_ANADARK4_SWS4_138kV	-11.3215	0.9622	LEAD	-12.1074	0.9571	LEAD	-11.8726	0.9587	LEAD
45	FLT_46_WASHITA4_SWS4_138kV	-11.5170	0.9610	LEAD	-11.2266	0.9628	LEAD	-10.7675	0.9656	LEAD
46	FLT_47_SWS4_ELSWORTH4_138kV	-11.4632	0.9613	LEAD	-11.8842	0.9586	LEAD	-11.4564	0.9613	LEAD
47	FLT_48_SWS4_NORGE4_138kV	-11.4441	0.9614	LEAD	-11.8845	0.9586	LEAD	-11.7025	0.9598	LEAD
48	FLT_49_GRACMNT7_LES7_345kV	-11.6438	0.9601	LEAD	-11.5766	0.9606	LEAD	-11.8878	0.9586	LEAD
49	FLT_50_LES7_LES4_345_138kV	-11.6003	0.9604	LEAD	-12.0493	0.9575	LEAD	-11.8757	0.9586	LEAD
50	FLT_51_LES4_FLETAP4_138kV	-11.5149	0.9610	LEAD	-11.9526	0.9581	LEAD	-11.5572	0.9607	LEAD
51	FLT_52_LES4_SHERID4_138kV	-11.7329	0.9596	LEAD	-11.5762	0.9606	LEAD	-11.5768	0.9606	LEAD
52	FLT_53_LES4_COMANC4_138kV	-11.4895	0.9611	LEAD	-12.0401	0.9576	LEAD	-11.8409	0.9589	LEAD
53	FLT_54_LES7_OKU7_345kV	-10.4365	0.9676	LEAD	-11.5702	0.9606	LEAD	-11.7900	0.9592	LEAD
54	FLT_55_LES7_G14057T_345kV	-11.2409	0.9627	LEAD	-11.9087	0.9584	LEAD	-11.8467	0.9588	LEAD
55	FLT_56_G14057T_SUNNYSD7_345kV	-11.2486	0.9627	LEAD	-11.9370	0.9582	LEAD	-11.9358	0.9582	LEAD
56	FLT_57_SUNNYSD7_SUNNYSD4_345_138kV	-11.5956	0.9605	LEAD	-12.0688	0.9574	LEAD	-11.8909	0.9585	LEAD
57	FLT_58_SUNNYSD7_G16063TAP_345kV	-11.5951	0.9605	LEAD	-12.0254	0.9577	LEAD	-11.8417	0.9589	LEAD
58	FLT_59_JOHNCO7_PITTSB7_345kV	-11.5981	0.9604	LEAD	-12.0361	0.9576	LEAD	-11.8550	0.9588	LEAD
59	FLT_60_PITTSB7_SEMINOL7_345kV	-11.5063	0.9610	LEAD	-11.9826	0.9579	LEAD	-11.8193	0.9590	LEAD
60	FLT_61_PITTSB7_VALIANT7_345kV	-11.5386	0.9608	LEAD	-12.0220	0.9577	LEAD	-11.8520	0.9588	LEAD
61	FLT_62_PITTSB7_CRIVER7_345kV	-11.5875	0.9605	LEAD	-12.0698	0.9574	LEAD	-11.8799	0.9586	LEAD
62	FLT_63_OKU7_G14074TAP_345kV	-11.5494	0.9608	LEAD	-12.0023	0.9578	LEAD	-11.2296	0.9628	LEAD
63	FLT_64_TUCOINT7_TUCOINT6_345_230kV	-11.6446	0.9601	LEAD	-12.0956	0.9572	LEAD	-11.8684	0.9587	LEAD
64	FLT_65_TUCOINT7_BORDER7_345kV	-11.1067	0.9635	LEAD	-11.5358	0.9608	LEAD	-11.7789	0.9593	LEAD
65	FLT_67_TUCOINT7_YOAKUM345_345kV							-11.8536	0.9588	LEAD
66	FLT_68_TUCOINT6_SWISHER6_230kV	-11.5417	0.9608	LEAD	-12.0564	0.9575	LEAD	-11.8684	0.9587	LEAD
67	FLT_69_TUCOINT6_CARLISLE6_230kV	-11.6162	0.9603	LEAD	-12.0959	0.9572	LEAD	-11.8789	0.9586	LEAD
68	FLT_70_MINCO7_CIMARON7_345kV	-11.0947	0.9636	LEAD	-11.6658	0.9600	LEAD	-11.5446	0.9608	LEAD
69	FLT_71_TUCOINT6_TOLKEAST6_230kV	-11.6047	0.9604	LEAD	-12.0869	0.9573	LEAD	-11.8824	0.9586	LEAD
70	FLT_72_TUCOINT6_JONES6_230kV	-11.6435	0.9601	LEAD	-12.0827	0.9573	LEAD	-11.8794	0.9586	LEAD
71	FLT_73_YOAKUM345_HOBBSINT7_345kV							-11.8725	0.9587	LEAD
72	FLT_74_CIMARON7_MATHWSN7_345kV	-11.5428	0.9608	LEAD	-12.0179	0.9577	LEAD	-11.8701	0.9587	LEAD
73	FLT_76_CIMARON7_NORTWST7_345kV	-11.6100	0.9604	LEAD	-12.1078	0.9571	LEAD	-11.9113	0.9584	LEAD
74	FLT_77_CIMARON7_DRAPER7_345kV	-11.5242	0.9609	LEAD	-12.0545	0.9575	LEAD	-11.9530	0.9581	LEAD
75	FLT_78_NORTWST7_ARCADIA7_345kV	-11.6243	0.9603	LEAD	-12.1117	0.9571	LEAD	-11.9319	0.9583	LEAD
76	FLT_79_NORTWST7_SPRNGCK7_345kV	-11.5535	0.9607	LEAD	-12.0317	0.9576	LEAD	-11.8918	0.9585	LEAD
77	FLT_80_DRAPER7_SEMINOL7_345kV	-11.5536	0.9607	LEAD	-12.0413	0.9576	LEAD	-11.8677	0.9587	LEAD
78	FLT_81_SEMINOL7_MUSKOGE7_345kV	-11.5825	0.9605	LEAD	-12.0642	0.9574	LEAD	-11.8703	0.9587	LEAD
79	FLT_82_REDBUD7_RSS7_345kV	-11.5937	0.9605	LEAD	-12.0557	0.9575	LEAD	-11.8600	0.9587	LEAD
80	FLT_83_MATHWSN7_G15063T_345kV	-11.5302	0.9609	LEAD	-12.0283	0.9576	LEAD	-11.8392	0.9589	LEAD
81	FLT_84_WOODRNG7_HUNTERS7_345kV	-11.5852	0.9605	LEAD	-12.0580	0.9574	LEAD	-11.8440	0.9588	LEAD
82	FLT_85_WOODRNG7_G16061TAP_345kV	-11.6233	0.9603	LEAD	-12.0931	0.9572	LEAD	-11.9019	0.9585	LEAD
83	FLT_86_MATHWSN7_TATONGA7_345kV	-11.0124	0.9641	LEAD	-11.6068	0.9604	LEAD	-11.9005	0.9585	LEAD
84	FLT_88_TATONGA7_G11051TAP_345kV	-11.0182	0.9641	LEAD	-11.8293	0.9589	LEAD	-11.8546	0.9588	LEAD
85	FLT_90_ARCADIA7_REDBUD7_345kV	-11.5989	0.9604	LEAD	-12.0671	0.9574	LEAD	-11.8828	0.9586	LEAD

DISIS-2016-001 Group 07 Leading power factor is absorbing vars; Lagging power factor is providing vars										
GEN-2016-008 POI: Granite 69 kV (520927) **Power at POI (MW): 40.0**		2016 Winter Peak POI Voltage = 1.013 pu			2017 Summer Peak POI Voltage = 1.001 pu			2025 Summer Peak POI Voltage = 1.002 pu		
	Contingency Name	**Mvars at POI**	**Power Factor**		**Mvars at POI**	**Power Factor**		**Mvars at POI**	**Power Factor**	
86	FLT_92_WTHWF4_CLNGTP4_138kV	-11.8830	0.9586	LEAD	-12.3070	0.9558	LEAD	-12.0368	0.9576	LEAD
87	FLT_93_WTHWF4_WEATHTP4_138kV	-11.0398	0.9640	LEAD	-11.1802	0.9631	LEAD	-11.2191	0.9628	LEAD
88	FLT_94_WEATHTP4_WTHSE4_138kV	-11.1274	0.9634	LEAD	-11.2907	0.9624	LEAD	-11.2978	0.9624	LEAD
89	FLT_95_WTHSE4_WTHSE2_138_69kV	-11.6689	0.9600	LEAD	-12.0915	0.9572	LEAD	-11.8718	0.9587	LEAD
90	FLT_96_WTHSE4_WTHJCT4_138kV	-11.0794	0.9637	LEAD	-11.3703	0.9619	LEAD	-11.4479	0.9614	LEAD
91	FLT_97_CANGAS4_JENSEN4_138kV	-10.7781	0.9656	LEAD	-10.9373	0.9646	LEAD	-10.8750	0.9650	LEAD
92	FLT_98_CLNGTP4_CLINTJC4_138kV	-12.2809	0.9560	LEAD	-12.7141	0.9530	LEAD	-12.4270	0.9550	LEAD
93	FLT_99_CLINTJC4_CLINTJC2_138_69kV	-11.4669	0.9613	LEAD	-11.9044	0.9585	LEAD	-11.7203	0.9597	LEAD
94	FLT_100_CLINTJC4_CLINTON4_138kV	-11.4646	0.9613	LEAD	-11.9627	0.9581	LEAD	-11.7701	0.9593	LEAD
95	FLT_101_CLINTJC4_ELKCTY4_138kV	-12.1120	0.9571	LEAD	-12.7867	0.9525	LEAD	-12.9111	0.9517	LEAD
96	FLT_102_WASHITA4_ONEY4_138kV	-11.3788	0.9618	LEAD	-11.5466	0.9608	LEAD	-11.0390	0.9640	LEAD
97	FLT_114_SUNNYSD7_JOHNCO7_345kV	-11.5717	0.9606	LEAD	-12.0580	0.9574	LEAD	-11.8850	0.9586	LEAD
98	FLT_115_CHISHOLM7_BORDER7_345kV	-12.0668	0.9574	LEAD	-12.7797	0.9526	LEAD	-12.6443	0.9535	LEAD
99	FLT_116_CHISHOLM7_WWRDEHV7_345kV	-10.4040	0.9678	LEAD	-10.8474	0.9651	LEAD	-10.9071	0.9648	LEAD

Table D-2: GEN-2016-037 Power Factor Analysis Results

DISIS-2016-001 Group 07 Leading power factor is absorbing vars; Lagging power factor is providing vars										
GEN-2016-037 POI: Tap on Chisholm-Gracemont Ckt 1 345 kV (560078) **Power at POI (MW): 300.0**		2016 Winter Peak POI Voltage = 1.017 pu			2017 Summer Peak POI Voltage = 1.023 pu			2025 Summer Peak POI Voltage = 1.026 pu		
	Contingency Name	**Mvars at POI**	**Power Factor**		**Mvars at POI**	**Power Factor**		**Mvars at POI**	**Power Factor**	
100	FLT_00_NoFault	-1.7314	1.0000	LEAD	-6.2754	0.9998	LEAD	-9.7826	0.9995	LEAD
101	FLT_01_GRANITE2_LKCREEK2_69kV	-1.9185	1.0000	LEAD	-6.1904	0.9998	LEAD	-9.5843	0.9995	LEAD
102	FLT_02_GRANITE2_OMMANGM2_69kV	-0.0933	1.0000	LEAD	-4.3453	0.9999	LEAD	-8.2485	0.9996	LEAD
103	FLT_03_LKCREEK2_LONEWLF2_69kV	-1.8226	1.0000	LEAD	-6.3149	0.9998	LEAD	-9.9589	0.9994	LEAD
104	FLT_04_LKCREEK2_CARTERJ2_69kV	-2.1851	1.0000	LEAD	-6.4797	0.9998	LEAD	-9.9486	0.9995	LEAD
105	FLT_05_OMMANGM2_RUSSELL2_69kV	-0.3290	1.0000	LEAD	-4.8446	0.9999	LEAD	-8.3281	0.9996	LEAD
106	FLT_06_RUSSELL2_RUSSELL4_69_138kV	-1.6954	1.0000	LEAD	-6.2465	0.9998	LEAD	-9.6963	0.9995	LEAD
107	FLT_07_RUSSELL2_ALTUS2_69kV	-1.3843	1.0000	LEAD	-6.1569	0.9998	LEAD	-9.7862	0.9995	LEAD
108	FLT_08_RUSSELL2_GYPSUM2_69kV	-1.8062	1.0000	LEAD	-6.3480	0.9998	LEAD	-9.7699	0.9995	LEAD
109	FLT_09_RUSSELL2_VERNON2_69kV	-1.4368	1.0000	LEAD	-6.0596	0.9998	LEAD	-9.6561	0.9995	LEAD
110	FLT_10_RUSSELL4_ALTUSJT4_138kV	-1.7972	1.0000	LEAD	-6.4085	0.9998	LEAD	-9.5971	0.9995	LEAD
111	FLT_11_RUSSELL4_LAKEP4WT_138kV	-1.3454	1.0000	LEAD	-6.2369	0.9998	LEAD	-9.5398	0.9995	LEAD
112	FLT_12_LAKEP4WT_LAKEP2WT_138_69kV	-1.6755	1.0000	LEAD	-6.2211	0.9998	LEAD	-9.7766	0.9995	LEAD
113	FLT_13_LAKEP4WT_CHILD4WT_138kV	-1.2842	1.0000	LEAD	-6.1597	0.9998	LEAD	-9.4351	0.9995	LEAD
114	FLT_14_CHILD4WT_HOLTP4WT_138kV	-0.1946	1.0000	LEAD	-5.6554	0.9998	LEAD	-9.6497	0.9995	LEAD
115	FLT_15_ALTUSJT4_OMPARK4_138kV	-2.1490	1.0000	LEAD	-6.1573	0.9998	LEAD	-9.6495	0.9995	LEAD
116	FLT_16_ALTUSJT4_SNYDER4_138kV	1.3233	1.0000	LAG	-4.5348	0.9999	LEAD	-8.9358	0.9996	LEAD
117	FLT_17_SNYDER4_SNYDER2_138_69kV	-2.1455	1.0000	LEAD	-6.3591	0.9998	LEAD	-9.8837	0.9995	LEAD
118	FLT_18_SNYDER4_CACHE4_138kV	12.9918	0.9991	LAG	3.0117	0.9999	LAG	-4.6967	0.9999	LEAD

DISIS-2016-001 Group 07
Leading power factor is absorbing vars; Lagging power factor is providing vars

	GEN-2016-037 POI: Tap on Chisholm-Gracemont Ckt 1 345 kV (560078) **Power at POI (MW): 300.0**	2016 Winter Peak POI Voltage = 1.017 pu			2017 Summer Peak POI Voltage = 1.023 pu			2025 Summer Peak POI Voltage = 1.026 pu		
	Contingency Name	**Mvars at POI**	**Power Factor**		**Mvars at POI**	**Power Factor**		**Mvars at POI**	**Power Factor**	
119	FLT_19_OMPVET4_OMALTUS4_138kV	-2.2284	1.0000	LEAD	-6.3758	0.9998	LEAD	-9.6241	0.9995	LEAD
120	FLT_20_GOTEBO2_CORDELL2_69kV	-1.3324	1.0000	LEAD	-5.6712	0.9998	LEAD	-9.3156	0.9995	LEAD
121	FLT_21_GOTEBO2_MTNVIEW2_69kV	1.2501	1.0000	LAG	-4.4332	0.9999	LEAD	-8.6802	0.9996	LEAD
122	FLT_22_INDPARK2_ARAPAHO2_69kV	-1.6083	1.0000	LEAD	-5.9805	0.9998	LEAD	-9.7042	0.9995	LEAD
123	FLT_23_WASHITA4_WASHITA2_138_69kV	-1.4530	1.0000	LEAD	-6.3828	0.9998	LEAD	-9.7697	0.9995	LEAD
124	FLT_24_WASHITA2_CADDO2_69kV	-0.1775	1.0000	LEAD	-5.5070	0.9998	LEAD	-9.3187	0.9995	LEAD
125	FLT_25_ELKCTY4_ELKCTY2_138_69kV	-2.9581	1.0000	LEAD	-8.1012	0.9996	LEAD	-12.3049	0.9992	LEAD
126	FLT_26_ELKCTY4_ELKCITY6_138_230kV	-3.5398	0.9999	LEAD	-15.1897	0.9987	LEAD	-24.1365	0.9968	LEAD
127	FLT_27_ELKCTY4_FALCNRD4_138kV	-2.7056	1.0000	LEAD	-7.6980	0.9997	LEAD	-11.2666	0.9993	LEAD
128	FLT_28_ELKCTY4_CLAFTP4_138kV	-3.5966	0.9999	LEAD	-7.4570	0.9997	LEAD	-12.0912	0.9992	LEAD
129	FLT_29_ELKCTY4_RHWIND4_138kV	-2.5383	1.0000	LEAD	-6.7648	0.9997	LEAD	-9.7707	0.9995	LEAD
130	FLT_30_G16037TAP_CHISHOLM7_345kV	-38.7898	0.9917	LEAD	-34.6217	0.9934	LEAD	-28.0226	0.9957	LEAD
131	FLT_31_G16037TAP_GRACMNT7_345kV	19.0027	0.9980	LAG	25.4909	0.9964	LAG	24.6461	0.9966	LAG
132	FLT_32_CHISHOLM7_CHISHOLM6_345_230kV	-30.5433	0.9949	LEAD	-27.6536	0.9958	LEAD	-25.1745	0.9965	LEAD
133	FLT_33_CHISHOLM6_ELKCITY6_230kV	-2.5595	1.0000	LEAD	-14.2091	0.9989	LEAD	-23.1521	0.9970	LEAD
134	FLT_34_CHISHOLM6_SWEETWT6_230kV	-8.9286	0.9996	LEAD	-6.8102	0.9997	LEAD	-1.3820	1.0000	LEAD
135	FLT_35_SWEETWT6_STLNDEMARC6_230kV	12.0684	0.9992	LAG	20.8649	0.9976	LAG	27.9221	0.9957	LAG
136	FLT_36_WHEELER6_GRAPEVINE6_230kV	2.3974	1.0000	LAG	2.5330	1.0000	LAG	2.1939	1.0000	LAG
137	FLT_37_GRACMNT7_MINCO7_345kV	2.7289	1.0000	LAG	-4.2135	0.9999	LEAD	-3.7186	0.9999	LEAD
138	FLT_38_GRACMNT7_GRACMNT4_345_138kV	-9.6527	0.9995	LEAD	-10.6532	0.9994	LEAD	-16.3204	0.9985	LEAD
139	FLT_39_GRACMNT4_ANADARK4_138kV	4.2306	0.9999	LAG	-3.2817	0.9999	LEAD	-7.4555	0.9997	LEAD
140	FLT_40_GRACMNT4_WASHITA4_138kV	-2.1677	1.0000	LEAD	-6.1327	0.9998	LEAD	-9.9579	0.9994	LEAD
141	FLT_42_ANADARK4_BLUCAN54_138kV	-1.1955	1.0000	LEAD	-6.3436	0.9998	LEAD	-9.9616	0.9994	LEAD
142	FLT_43_ANADARK4_POCASET4_138kV	0.9008	1.0000	LAG	-3.7732	0.9999	LEAD	-6.5740	0.9998	LEAD
143	FLT_44_ANADARK4_SEQUOYAHJ4_138kV	-0.0496	1.0000	LEAD	-4.2158	0.9999	LEAD	-8.3147	0.9996	LEAD
144	FLT_45_ANADARK4_SWS4_138kV	0.5263	1.0000	LAG	-6.4376	0.9998	LEAD	-9.1813	0.9995	LEAD
145	FLT_46_WASHITA4_SWS4_138kV	0.6513	1.0000	LAG	3.0649	0.9999	LAG	2.5465	1.0000	LAG
146	FLT_47_SWS4_ELSWORTH4_138kV	-0.9717	1.0000	LEAD	-5.2204	0.9998	LEAD	-6.8006	0.9997	LEAD
147	FLT_48_SWS4_NORGE4_138kV	0.0077	1.0000	LAG	-4.4706	0.9999	LEAD	-7.9896	0.9996	LEAD
148	FLT_49_GRACMNT7_LES7_345kV	-5.9005	0.9998	LEAD	-7.7449	0.9997	LEAD	-10.1650	0.9994	LEAD
149	FLT_50_LES7_LES4_345_138kV	-3.7548	0.9999	LEAD	-9.0378	0.9995	LEAD	-13.1491	0.9990	LEAD
150	FLT_51_LES4_FLETAP4_138kV	-1.2896	1.0000	LEAD	-5.6639	0.9998	LEAD	-7.5572	0.9997	LEAD
151	FLT_52_LES4_SHERID4_138kV	-2.2352	1.0000	LEAD	-7.2177	0.9997	LEAD	-10.5462	0.9994	LEAD
152	FLT_53_LES4_COMANC4_138kV	0.2716	1.0000	LAG	-5.5640	0.9998	LEAD	-8.5903	0.9996	LEAD
153	FLT_54_LES7_OKU7_345kV	47.3531	0.9878	LAG	11.2154	0.9993	LAG	-6.1996	0.9998	LEAD
154	FLT_55_LES7_G14057T_345kV	10.7280	0.9994	LAG	1.8473	1.0000	LAG	-1.6392	1.0000	LEAD
155	FLT_56_G14057T_SUNNYSD7_345kV	9.1572	0.9995	LAG	-0.7445	1.0000	LEAD	-5.6904	0.9998	LEAD
156	FLT_57_SUNNYSD7_SUNNYSD4_345_138kV	-1.7922	1.0000	LEAD	-6.4295	0.9998	LEAD	-9.9987	0.9994	LEAD
157	FLT_58_SUNNYSD7_G16063TAP_345kV	-1.3828	1.0000	LEAD	-4.5881	0.9999	LEAD	-7.3128	0.9997	LEAD
158	FLT_59_JOHNCO7_PITTSB7_345kV	-1.5416	1.0000	LEAD	-5.4531	0.9998	LEAD	-8.7310	0.9996	LEAD
159	FLT_60_PITTSB7_SEMINOL7_345kV	0.0318	1.0000	LAG	-5.1621	0.9999	LEAD	-8.6828	0.9996	LEAD
160	FLT_61_PITTSB7_VALIANT7_345kV	-0.4145	1.0000	LEAD	-5.3873	0.9998	LEAD	-8.9194	0.9996	LEAD
161	FLT_62_PITTSB7_CRIVER7_345kV	-1.4979	1.0000	LEAD	-6.4550	0.9998	LEAD	-9.8237	0.9995	LEAD
162	FLT_63_OKU7_G14074TAP_345kV	13.2715	0.9990	LAG	-3.1034	0.9999	LEAD	10.7650	0.9994	LAG
163	FLT_64_TUCOINT7_TUCOINT6_345_230kV	-2.1454	1.0000	LEAD	-6.1895	0.9998	LEAD	-9.5836	0.9995	LEAD

DISIS-2016-001 Group 07 Leading power factor is absorbing vars; Lagging power factor is providing vars										
GEN-2016-037 POI: Tap on Chisholm-Gracemont Ckt 1 345 kV (560078) **Power at POI (MW): 300.0**		2016 Winter Peak POI Voltage = 1.017 pu			2017 Summer Peak POI Voltage = 1.023 pu			2025 Summer Peak POI Voltage = 1.026 pu		
	Contingency Name	**Mvars at POI**	**Power Factor**		**Mvars at POI**	**Power Factor**		**Mvars at POI**	**Power Factor**	
164	FLT_65_TUCOINT7_BORDER7_345kV	27.6816	0.9958	LAG	24.2242	0.9968	LAG	13.2895	0.9990	LAG
165	FLT_67_TUCOINT7_YOAKUM345_345kV							-11.7363	0.9992	LEAD
166	FLT_68_TUCOINT6_SWISHER6_230kV	-1.4851	1.0000	LEAD	-6.0762	0.9998	LEAD	-8.7282	0.9996	LEAD
167	FLT_69_TUCOINT6_CARLISLE6_230kV	-2.0428	1.0000	LEAD	-7.0891	0.9997	LEAD	-10.0012	0.9994	LEAD
168	FLT_70_MINCO7_CIMARON7_345kV	-18.5401	0.9981	LEAD	-17.9591	0.9982	LEAD	-13.4088	0.9990	LEAD
169	FLT_71_TUCOINT6_TOLKEAST6_230kV	-1.7914	1.0000	LEAD	-6.7623	0.9997	LEAD	-9.9599	0.9994	LEAD
170	FLT_72_TUCOINT6_JONES6_230kV	-2.3383	1.0000	LEAD	-6.7201	0.9997	LEAD	-9.9431	0.9995	LEAD
171	FLT_73_YOAKUM345_HOBBSINT7_345kV							-9.6403	0.9995	LEAD
172	FLT_74_CIMARON7_MATHWSN7_345kV	0.8658	1.0000	LAG	-3.9716	0.9999	LEAD	-7.9032	0.9997	LEAD
173	FLT_76_CIMARON7_NORTWST7_345kV	-2.8822	1.0000	LEAD	-8.4737	0.9996	LEAD	-12.1451	0.9992	LEAD
174	FLT_77_CIMARON7_DRAPER7_345kV	-3.5455	0.9999	LEAD	-7.4869	0.9997	LEAD	-12.6614	0.9991	LEAD
175	FLT_78_NORTWST7_ARCADIA7_345kV	-3.6739	0.9999	LEAD	-8.1014	0.9996	LEAD	-12.9343	0.9991	LEAD
176	FLT_79_NORTWST7_SPRNGCK7_345kV	0.0960	1.0000	LAG	-4.5109	0.9999	LEAD	-9.2258	0.9995	LEAD
177	FLT_80_DRAPER7_SEMINOL7_345kV	-0.5214	1.0000	LEAD	-5.5494	0.9998	LEAD	-8.9578	0.9996	LEAD
178	FLT_81_SEMINOL7_MUSKOGE7_345kV	-1.3810	1.0000	LEAD	-6.4764	0.9998	LEAD	-9.7146	0.9995	LEAD
179	FLT_82_REDBUD7_RSS7_345kV	-2.1498	1.0000	LEAD	-6.5248	0.9998	LEAD	-9.4891	0.9995	LEAD
180	FLT_83_MATHWSN7_G15063T_345kV	1.8192	1.0000	LAG	-4.4397	0.9999	LEAD	-7.7216	0.9997	LEAD
181	FLT_84_WOODRNG7_HUNTERS7_345kV	-1.1385	1.0000	LEAD	-6.0775	0.9998	LEAD	-9.0911	0.9995	LEAD
182	FLT_85_WOODRNG7_G16061TAP_345kV	-2.5137	1.0000	LEAD	-7.0849	0.9997	LEAD	-10.7227	0.9994	LEAD
183	FLT_86_MATHWSN7_TATONGA7_345kV	34.3766	0.9935	LAG	13.6142	0.9990	LAG	-7.4561	0.9997	LEAD
184	FLT_88_TATONGA7_G11051TAP_345kV	19.5869	0.9979	LAG	4.3165	0.9999	LAG	-7.8713	0.9997	LEAD
185	FLT_90_ARCADIA7_REDBUD7_345kV	-1.8726	1.0000	LEAD	-6.3256	0.9998	LEAD	-9.8177	0.9995	LEAD
186	FLT_92_WTHWF4_CLNGTP4_138kV	-3.4395	0.9999	LEAD	-7.7714	0.9997	LEAD	-10.8705	0.9993	LEAD
187	FLT_93_WTHWF4_WEATHTP4_138kV	8.4665	0.9996	LAG	2.0082	1.0000	LAG	-3.8042	0.9999	LEAD
188	FLT_94_WEATHTP4_WTHSE4_138kV	7.5910	0.9997	LAG	0.9637	1.0000	LAG	-4.5850	0.9999	LEAD
189	FLT_95_WTHSE4_WTHSE2_138_69kV	-2.1070	1.0000	LEAD	-6.4841	0.9998	LEAD	-9.8364	0.9995	LEAD
190	FLT_96_WTHSE4_WTHJCT4_138kV	10.2966	0.9994	LAG	2.0285	1.0000	LAG	-4.3330	0.9999	LEAD
191	FLT_97_CANGAS4_JENSEN4_138kV	8.3935	0.9996	LAG	1.2500	1.0000	LAG	-4.4508	0.9999	LEAD
192	FLT_98_CLNGTP4_CLINTJC4_138kV	-4.4634	0.9999	LEAD	-9.0335	0.9995	LEAD	-12.0303	0.9992	LEAD
193	FLT_99_CLINTJC4_CLINTJC2_138_69kV	-0.9639	1.0000	LEAD	-5.3060	0.9998	LEAD	-8.8621	0.9996	LEAD
194	FLT_100_CLINTJC4_CLINTON4_138kV	0.6639	1.0000	LAG	-5.4779	0.9998	LEAD	-9.4958	0.9995	LEAD
195	FLT_101_CLINTJC4_ELKCTY4_138kV	2.8601	1.0000	LAG	-4.8043	0.9999	LEAD	-11.5728	0.9993	LEAD
196	FLT_102_WASHITA4_ONEY4_138kV	-1.3826	1.0000	LEAD	-6.0605	0.9998	LEAD	-7.8497	0.9997	LEAD
197	FLT_114_SUNNYSD7_JOHNCO7_345kV	-0.6567	1.0000	LEAD	-5.7742	0.9998	LEAD	-9.5315	0.9995	LEAD
198	FLT_115_CHISHOLM7_BORDER7_345kV	-32.9895	0.9940	LEAD	-41.3601	0.9906	LEAD	-56.7895	0.9826	LEAD
199	FLT_116_CHISHOLM7_WWRDEHV7_345kV	74.2127	0.9707	LAG	55.6377	0.9832	LAG	55.3477	0.9834	LAG

Table D-3: GEN-2016-051 Power Factor Analysis Results

DISIS-2016-001 Group 07 Leading power factor is absorbing vars; Lagging power factor is providing vars			
GEN-2016-051 POI: Weatherford Windfarm Tap 138 kV (511506) **Power at POI (MW): 156.8**	2016 Winter Peak POI Voltage = 1.0 pu	2017 Summer Peak POI Voltage = 1.0 pu	2025 Summer Peak POI Voltage = 1.0 pu

	Contingency Name	Mvars at POI	Power Factor		Mvars at POI	Power Factor		Mvars at POI	Power Factor	
200	FLT_00_NoFault	-16.8013	0.9943	LEAD	-15.9865	0.9948	LEAD	-13.9916	0.9960	LEAD
201	FLT_01_GRANITE2_LKCREEK2_69kV	-16.9916	0.9942	LEAD	-15.9586	0.9949	LEAD	-13.8464	0.9961	LEAD
202	FLT_02_GRANITE2_OMMANGM2_69kV	-15.5514	0.9951	LEAD	-14.5459	0.9957	LEAD	-12.7535	0.9967	LEAD
203	FLT_03_LKCREEK2_LONEWLF2_69kV	-16.8765	0.9943	LEAD	-16.0961	0.9948	LEAD	-14.2205	0.9959	LEAD
204	FLT_04_LKCREEK2_CARTERJ2_69kV	-17.1472	0.9941	LEAD	-16.2193	0.9947	LEAD	-14.2198	0.9959	LEAD
205	FLT_05_OMMANGM2_RUSSELL2_69kV	-15.7131	0.9950	LEAD	-14.8823	0.9955	LEAD	-12.7687	0.9967	LEAD
206	FLT_06_RUSSELL2_RUSSELL4_69_138kV	-16.7960	0.9943	LEAD	-15.9740	0.9949	LEAD	-13.9132	0.9961	LEAD
207	FLT_07_RUSSELL2_ALTUS2_69kV	-16.6236	0.9944	LEAD	-15.9378	0.9949	LEAD	-14.0231	0.9960	LEAD
208	FLT_08_RUSSELL2_GYPSUM2_69kV	-16.8742	0.9943	LEAD	-16.0319	0.9948	LEAD	-14.0092	0.9960	LEAD
209	FLT_09_RUSSELL2_VERNON2_69kV	-16.6668	0.9944	LEAD	-15.8608	0.9949	LEAD	-13.9084	0.9961	LEAD
210	FLT_10_RUSSELL4_ALTUSJT4_138kV	-16.7302	0.9944	LEAD	-15.8318	0.9949	LEAD	-13.7737	0.9962	LEAD
211	FLT_11_RUSSELL4_LAKEP4WT_138kV	-16.6978	0.9944	LEAD	-15.8024	0.9950	LEAD	-13.7374	0.9962	LEAD
212	FLT_12_LAKEP4WT_LAKEP2WT_138_69kV	-16.8550	0.9943	LEAD	-15.9850	0.9948	LEAD	-13.9853	0.9960	LEAD
213	FLT_13_LAKEP4WT_CHILD4WT_138kV	-17.0699	0.9941	LEAD	-15.8526	0.9949	LEAD	-13.6039	0.9963	LEAD
214	FLT_14_CHILD4WT_HOLTP4WT_138kV	-17.5790	0.9938	LEAD	-15.9448	0.9949	LEAD	-13.9041	0.9961	LEAD
215	FLT_15_ALTUSJT4_OMPARK4_138kV	-17.1713	0.9941	LEAD	-15.9138	0.9949	LEAD	-13.7656	0.9962	LEAD
216	FLT_16_ALTUSJT4_SNYDER4_138kV	-15.1961	0.9953	LEAD	-15.0023	0.9955	LEAD	-13.3760	0.9964	LEAD
217	FLT_17_SNYDER4_SNYDER2_138_69kV	-16.8936	0.9942	LEAD	-16.0407	0.9948	LEAD	-14.0503	0.9960	LEAD
218	FLT_18_SNYDER4_CACHE4_138kV	-9.2186	0.9983	LEAD	-11.1953	0.9975	LEAD	-10.9314	0.9976	LEAD
219	FLT_19_OMPVET4_OMALTUS4_138kV	-17.2470	0.9940	LEAD	-16.1090	0.9948	LEAD	-13.9424	0.9961	LEAD
220	FLT_20_GOTEBO2_CORDELL2_69kV	-16.3930	0.9946	LEAD	-15.5235	0.9951	LEAD	-13.6127	0.9963	LEAD
221	FLT_21_GOTEBO2_MTNVIEW2_69kV	-14.8811	0.9955	LEAD	-14.6410	0.9957	LEAD	-13.0448	0.9966	LEAD
222	FLT_22_INDPARK2_ARAPAHO2_69kV	-16.6730	0.9944	LEAD	-15.8080	0.9950	LEAD	-13.9291	0.9961	LEAD
223	FLT_23_WASHITA4_WASHITA2_138_69kV	-16.7116	0.9944	LEAD	-16.0390	0.9948	LEAD	-14.0055	0.9960	LEAD
224	FLT_24_WASHITA2_CADDO2_69kV	-16.0227	0.9948	LEAD	-15.5609	0.9951	LEAD	-13.7008	0.9962	LEAD
225	FLT_25_ELKCTY4_ELKCTY2_138_69kV	-18.1158	0.9934	LEAD	-17.8970	0.9935	LEAD	-16.4979	0.9945	LEAD
226	FLT_26_ELKCTY4_ELKCITY6_138_230kV	-12.0860	0.9970	LEAD	-9.5742	0.9981	LEAD	-4.3412	0.9996	LEAD
227	FLT_27_ELKCTY4_FALCNRD4_138kV	-17.7002	0.9937	LEAD	-17.2974	0.9940	LEAD	-15.4024	0.9952	LEAD
228	FLT_28_ELKCTY4_CLAFTP4_138kV	-18.6089	0.9930	LEAD	-17.3356	0.9939	LEAD	-16.4500	0.9945	LEAD
229	FLT_29_ELKCTY4_RHWIND4_138kV	-17.7718	0.9936	LEAD	-16.8198	0.9943	LEAD	-14.4906	0.9958	LEAD
230	FLT_30_G16037TAP_CHISHOLM7_345kV	-8.7324	0.9985	LEAD	-11.2626	0.9974	LEAD	-11.5085	0.9973	LEAD
231	FLT_31_G16037TAP_GRACMNT7_345kV	0.8338	1.0000	LAG	-4.6922	0.9996	LEAD	-9.3140	0.9982	LEAD
232	FLT_32_CHISHOLM7_CHISHOLM6_345_230kV	-2.6822	0.9999	LEAD	-7.8470	0.9988	LEAD	-9.4636	0.9982	LEAD
233	FLT_33_CHISHOLM6_ELKCITY6_230kV	-12.0754	0.9970	LEAD	-9.5642	0.9981	LEAD	-4.3350	0.9996	LEAD
234	FLT_34_CHISHOLM6_SWEETWT6_230kV	-20.0895	0.9919	LEAD	-17.1210	0.9941	LEAD	-12.7577	0.9967	LEAD
235	FLT_35_SWEETWT6_STLNDEMARC6_230kV	-13.8620	0.9961	LEAD	-10.7640	0.9977	LEAD	-8.1962	0.9986	LEAD
236	FLT_36_WHEELER6_GRAPEVINE6_230kV	-15.8958	0.9949	LEAD	-14.2202	0.9959	LEAD	-12.1653	0.9970	LEAD
237	FLT_37_GRACMNT7_MINCO7_345kV	-7.6632	0.9988	LEAD	-9.4019	0.9982	LEAD	-9.9388	0.9980	LEAD
238	FLT_38_GRACMNT7_GRACMNT4_345_138kV	-15.2241	0.9953	LEAD	-13.9661	0.9961	LEAD	-11.2416	0.9974	LEAD
239	FLT_39_GRACMNT4_ANADARK4_138kV	-15.6331	0.9951	LEAD	-15.4857	0.9952	LEAD	-13.7078	0.9962	LEAD
240	FLT_40_GRACMNT4_WASHITA4_138kV	-15.6934	0.9950	LEAD	-15.3688	0.9952	LEAD	-13.5762	0.9963	LEAD
241	FLT_42_ANADARK4_BLUCAN54_138kV	-16.4359	0.9946	LEAD	-15.8318	0.9949	LEAD	-13.8543	0.9961	LEAD
242	FLT_43_ANADARK4_POCASET4_138kV	-14.5528	0.9957	LEAD	-13.8831	0.9961	LEAD	-11.6757	0.9972	LEAD
243	FLT_44_ANADARK4_SEQUOYAHJ4_138kV	-15.8187	0.9949	LEAD	-14.8586	0.9955	LEAD	-13.2292	0.9965	LEAD
244	FLT_45_ANADARK4_SWS4_138kV	-15.5406	0.9951	LEAD	-16.1418	0.9947	LEAD	-13.7481	0.9962	LEAD
245	FLT_46_WASHITA4_SWS4_138kV	-16.1032	0.9948	LEAD	-11.7513	0.9972	LEAD	-8.6742	0.9985	LEAD
246	FLT_47_SWS4_ELSWORTH4_138kV	-16.5454	0.9945	LEAD	-15.8787	0.9949	LEAD	-13.2696	0.9964	LEAD
247	FLT_48_SWS4_NORGE4_138kV	-15.9299	0.9949	LEAD	-15.0211	0.9954	LEAD	-13.0451	0.9966	LEAD
248	FLT_49_GRACMNT7_LES7_345kV	-17.4692	0.9939	LEAD	-16.3969	0.9946	LEAD	-14.5725	0.9957	LEAD
249	FLT_50_LES7_LES4_345_138kV	-16.8312	0.9943	LEAD	-16.0809	0.9948	LEAD	-14.0850	0.9960	LEAD
250	FLT_51_LES4_FLETAP4_138kV	-16.6784	0.9944	LEAD	-16.0001	0.9948	LEAD	-13.4629	0.9963	LEAD

DISIS-2016-001 Group 07
Leading power factor is absorbing vars; Lagging power factor is providing vars

	GEN-2016-051 POI: Weatherford Windfarm Tap 138 kV (511506) Power at POI (MW): 156.8	2016 Winter Peak POI Voltage = 1.0 pu			2017 Summer Peak POI Voltage = 1.0 pu			2025 Summer Peak POI Voltage = 1.0 pu		
	Contingency Name	**Mvars at POI**	**Power Factor**		**Mvars at POI**	**Power Factor**		**Mvars at POI**	**Power Factor**	
251	FLT_52_LES4_SHERID4_138kV	-16.7935	0.9943	LEAD	-16.0835	0.9948	LEAD	-14.0222	0.9960	LEAD
252	FLT_53_LES4_COMANC4_138kV	-16.5074	0.9945	LEAD	-15.8867	0.9949	LEAD	-13.9122	0.9961	LEAD
253	FLT_54_LES7_OKU7_345kV	-11.3268	0.9974	LEAD	-14.0531	0.9960	LEAD	-13.8085	0.9961	LEAD
254	FLT_55_LES7_G14057T_345kV	-9.5534	0.9981	LEAD	-11.6636	0.9972	LEAD	-11.4179	0.9974	LEAD
255	FLT_56_G14057T_SUNNYSD7_345kV	-8.1576	0.9986	LEAD	-10.5524	0.9977	LEAD	-10.5730	0.9977	LEAD
256	FLT_57_SUNNYSD7_SUNNYSD4_345_138kV	-16.6621	0.9944	LEAD	-15.8488	0.9949	LEAD	-13.8825	0.9961	LEAD
257	FLT_58_SUNNYSD7_G16063TAP_345kV	-16.1132	0.9948	LEAD	-15.5817	0.9951	LEAD	-13.7504	0.9962	LEAD
258	FLT_59_JOHNCO7_PITTSB7_345kV	-16.5281	0.9945	LEAD	-15.9676	0.9949	LEAD	-14.1290	0.9960	LEAD
259	FLT_60_PITTSB7_SEMINOL7_345kV	-17.4287	0.9939	LEAD	-16.6532	0.9944	LEAD	-14.5667	0.9957	LEAD
260	FLT_61_PITTSB7_VALIANT7_345kV	-17.1249	0.9941	LEAD	-16.1385	0.9947	LEAD	-14.1029	0.9960	LEAD
261	FLT_62_PITTSB7_CRIVER7_345kV	-16.7637	0.9943	LEAD	-15.9594	0.9949	LEAD	-13.9605	0.9961	LEAD
262	FLT_63_OKU7_G14074TAP_345kV	-15.1092	0.9954	LEAD	-15.9645	0.9949	LEAD	-12.6926	0.9967	LEAD
263	FLT_64_TUCOINT7_TUCOINT6_345_230kV	-16.9130	0.9942	LEAD	-16.0619	0.9948	LEAD	-13.9659	0.9961	LEAD
264	FLT_65_TUCOINT7_BORDER7_345kV	-14.5022	0.9958	LEAD	-13.5254	0.9963	LEAD	-12.2838	0.9969	LEAD
265	FLT_67_TUCOINT7_YOAKUM345_345kV							-14.2156	0.9959	LEAD
266	FLT_68_TUCOINT6_SWISHER6_230kV	-16.7037	0.9944	LEAD	-15.9553	0.9949	LEAD	-13.9268	0.9961	LEAD
267	FLT_69_TUCOINT6_CARLISLE6_230kV	-16.8738	0.9943	LEAD	-16.1452	0.9947	LEAD	-14.0192	0.9960	LEAD
268	FLT_70_MINCO7_CIMARON7_345kV	-5.1712	0.9995	LEAD	-7.0150	0.9990	LEAD	-7.7912	0.9988	LEAD
269	FLT_71_TUCOINT6_TOLKEAST6_230kV	-16.8225	0.9943	LEAD	-16.0600	0.9948	LEAD	-14.0001	0.9960	LEAD
270	FLT_72_TUCOINT6_JONES6_230kV	-16.9532	0.9942	LEAD	-16.0670	0.9948	LEAD	-14.0137	0.9960	LEAD
271	FLT_73_YOAKUM345_HOBBSINT7_345kV							-13.9832	0.9960	LEAD
272	FLT_74_CIMARON7_MATHWSN7_345kV	-16.2481	0.9947	LEAD	-15.4984	0.9952	LEAD	-13.5657	0.9963	LEAD
273	FLT_76_CIMARON7_NORTWST7_345kV	-16.9711	0.9942	LEAD	-16.3914	0.9946	LEAD	-14.3720	0.9958	LEAD
274	FLT_77_CIMARON7_DRAPER7_345kV	-17.1101	0.9941	LEAD	-16.2728	0.9947	LEAD	-14.6150	0.9957	LEAD
275	FLT_78_NORTWST7_ARCADIA7_345kV	-17.2469	0.9940	LEAD	-16.4044	0.9946	LEAD	-14.5091	0.9957	LEAD
276	FLT_79_NORTWST7_SPRNGCK7_345kV	-16.3655	0.9946	LEAD	-15.4251	0.9952	LEAD	-13.6584	0.9962	LEAD
277	FLT_80_DRAPER7_SEMINOL7_345kV	-16.6198	0.9944	LEAD	-15.7830	0.9950	LEAD	-13.7428	0.9962	LEAD
278	FLT_81_SEMINOL7_MUSKOGE7_345kV	-16.7730	0.9943	LEAD	-16.0983	0.9948	LEAD	-14.0269	0.9960	LEAD
279	FLT_82_REDBUD7_RSS7_345kV	-17.2560	0.9940	LEAD	-16.3601	0.9946	LEAD	-14.1872	0.9959	LEAD
280	FLT_83_MATHWSN7_G15063T_345kV	-16.1500	0.9947	LEAD	-15.7551	0.9950	LEAD	-13.7972	0.9962	LEAD
281	FLT_84_WOODRNG7_HUNTERS7_345kV	-16.6541	0.9944	LEAD	-16.0086	0.9948	LEAD	-14.0464	0.9960	LEAD
282	FLT_85_WOODRNG7_G16061TAP_345kV	-16.9661	0.9942	LEAD	-16.1508	0.9947	LEAD	-14.1183	0.9960	LEAD
283	FLT_86_MATHWSN7_TATONGA7_345kV	-8.6195	0.9985	LEAD	-11.0530	0.9975	LEAD	-13.1813	0.9965	LEAD
284	FLT_88_TATONGA7_G11051TAP_345kV	-12.2431	0.9970	LEAD	-13.6663	0.9962	LEAD	-13.7115	0.9962	LEAD
285	FLT_90_ARCADIA7_REDBUD7_345kV	-16.8238	0.9943	LEAD	-15.9829	0.9948	LEAD	-13.9921	0.9960	LEAD
286	FLT_92_WTHWF4_CLNGTP4_138kV	-13.4347	0.9963	LEAD	-13.4231	0.9964	LEAD	-12.5203	0.9968	LEAD
287	FLT_93_WTHWF4_WEATHTP4_138kV	-16.8911	0.9942	LEAD	-15.9278	0.9949	LEAD	-14.3019	0.9959	LEAD
288	FLT_94_WEATHTP4_WTHSE4_138kV	-16.2907	0.9946	LEAD	-14.5656	0.9957	LEAD	-12.7649	0.9967	LEAD
289	FLT_95_WTHSE4_WTHSE2_138_69kV	-10.8163	0.9976	LEAD	-13.4727	0.9963	LEAD	-10.9674	0.9976	LEAD
290	FLT_96_WTHSE4_WTHJCT4_138kV	-27.4354	0.9850	LEAD	-25.4643	0.9871	LEAD	-23.3836	0.9891	LEAD
291	FLT_97_CANGAS4_JENSEN4_138kV	-3.1585	0.9998	LEAD	3.0154	0.9998	LAG	8.9013	0.9984	LAG
292	FLT_98_CLNGTP4_CLINTJC4_138kV	-5.9323	0.9993	LEAD	-5.5396	0.9994	LEAD	-4.5510	0.9996	LEAD
293	FLT_99_CLINTJC4_CLINTJC2_138_69kV	-17.5483	0.9938	LEAD	-13.6915	0.9962	LEAD	-9.3722	0.9982	LEAD
294	FLT_100_CLINTJC4_CLINTON4_138kV	-18.9538	0.9928	LEAD	-16.4526	0.9945	LEAD	-14.7412	0.9956	LEAD
295	FLT_101_CLINTJC4_ELKCTY4_138kV	-17.9422	0.9935	LEAD	-11.3867	0.9974	LEAD	-4.9808	0.9995	LEAD

	DISIS-2016-001 Group 07 Leading power factor is absorbing vars; Lagging power factor is providing vars									
	GEN-2016-051 POI: Weatherford Windfarm Tap 138 kV (511506) **Power at POI (MW): 156.8**	2016 Winter Peak POI Voltage = 1.0 pu			2017 Summer Peak POI Voltage = 1.0 pu			2025 Summer Peak POI Voltage = 1.0 pu		
	Contingency Name	**Mvars at POI**	**Power Factor**		**Mvars at POI**	**Power Factor**		**Mvars at POI**	**Power Factor**	
296	FLT_102_WASHITA4_ONEY4_138kV	-13.3857	0.9964	LEAD	-4.0761	0.9997	LEAD	0.3661	1.0000	LAG
297	FLT_114_SUNNYSD7_JOHNCO7_345kV	-16.0083	0.9948	LEAD	-15.5639	0.9951	LEAD	-13.7838	0.9962	LEAD
298	FLT_115_CHISHOLM7_BORDER7_345kV	-19.6565	0.9922	LEAD	-18.9340	0.9928	LEAD	-16.7583	0.9943	LEAD
299	FLT_116_CHISHOLM7_WWRDEHV7_345kV	-7.1437	0.9990	LEAD	-8.8206	0.9984	LEAD	-8.0116	0.9987	LEAD

Appendix E – Reduced Wind Generation Analysis Results

Below figures are from the 2016WP model with identified upgrades in-service. The other two cases (2017SP and 2025SP) were almost identical since the Interconnection Request facilities design is the same in all cases.

Figure E-1*:* GEN-2016-008 with generators turned off

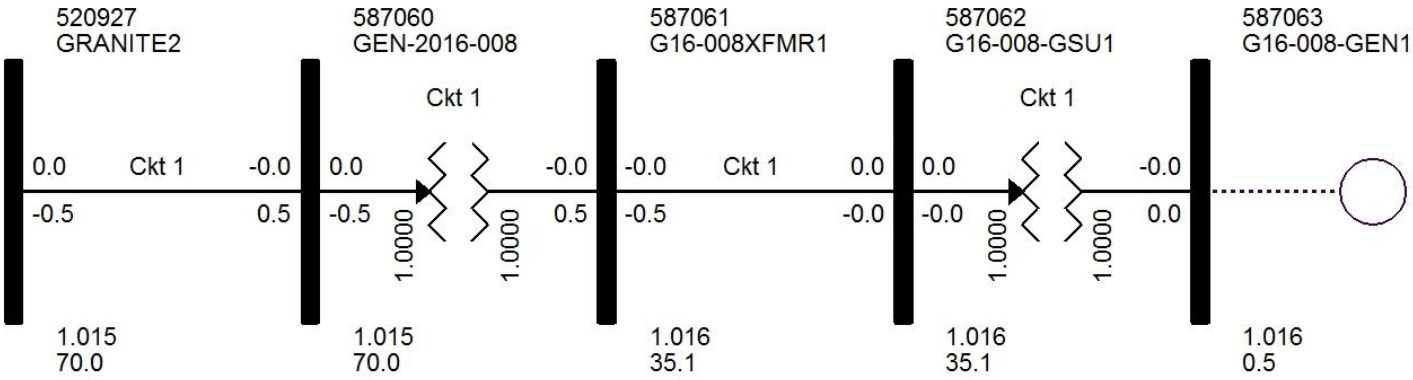


Figure E-2*:* GEN-2016-008 with generators turned off and shunt reactors added to the customer 34.5kV substation

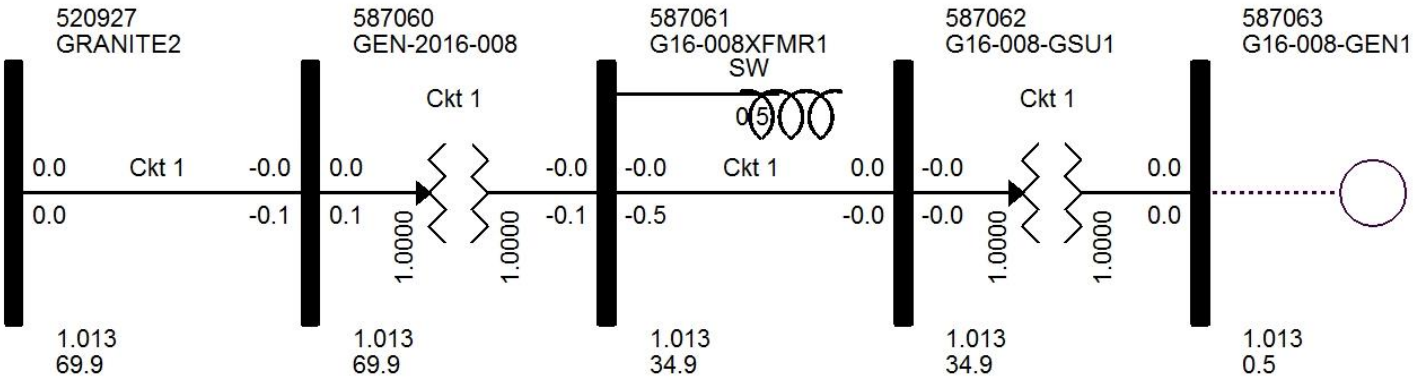


Figure E-3*:* GEN-2016-037 with generators turned off

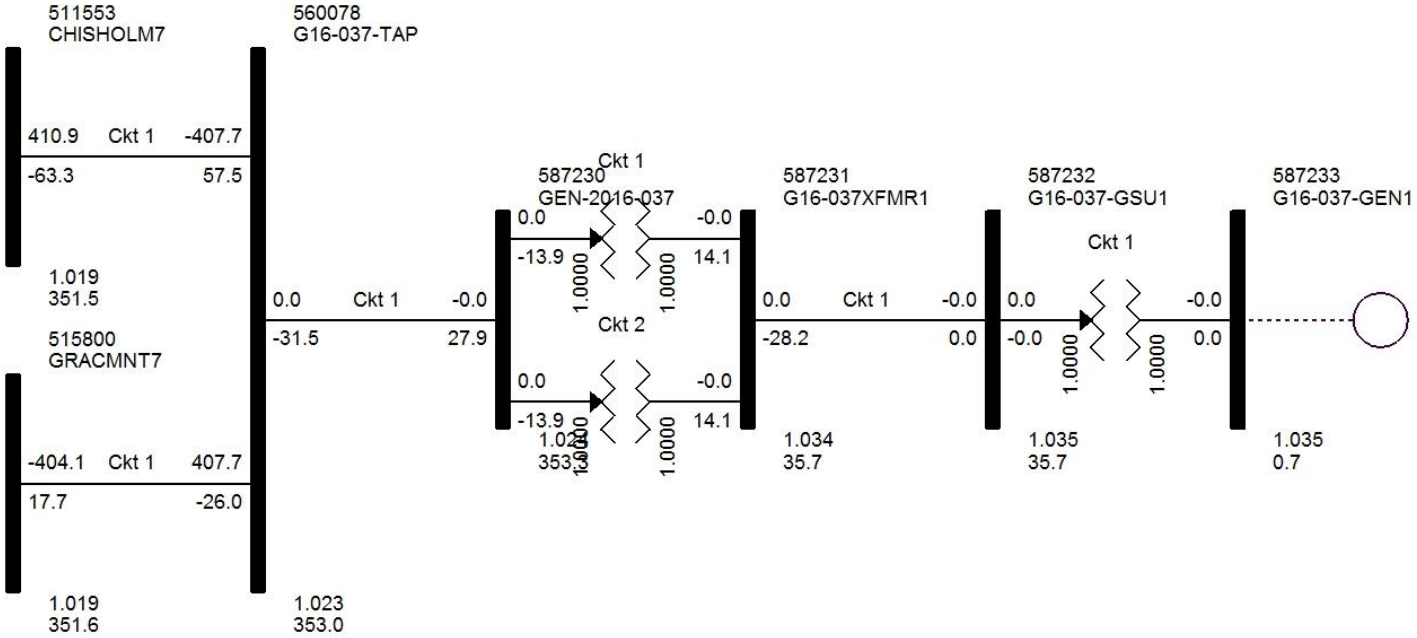


Figure E-4*:* GEN-2016-037 with generators turned off and shunt reactors added to the customer 34.5kV substation

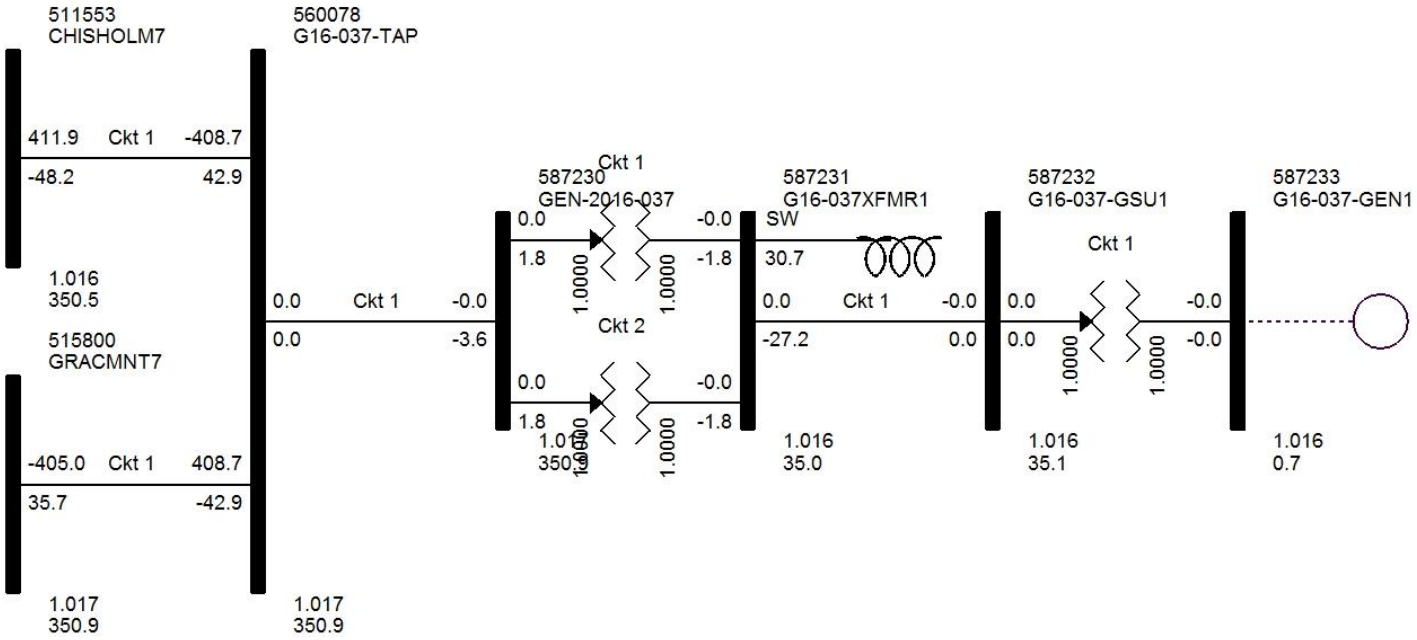


Figure E-5*:* GEN-2016-051 with generators turned off

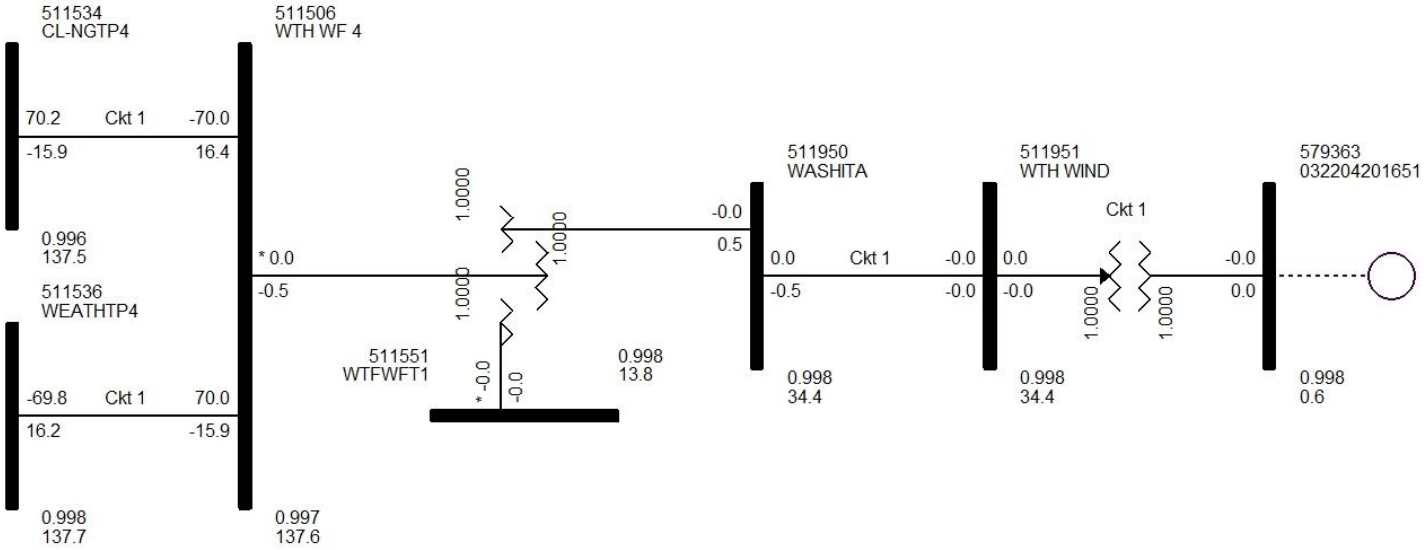
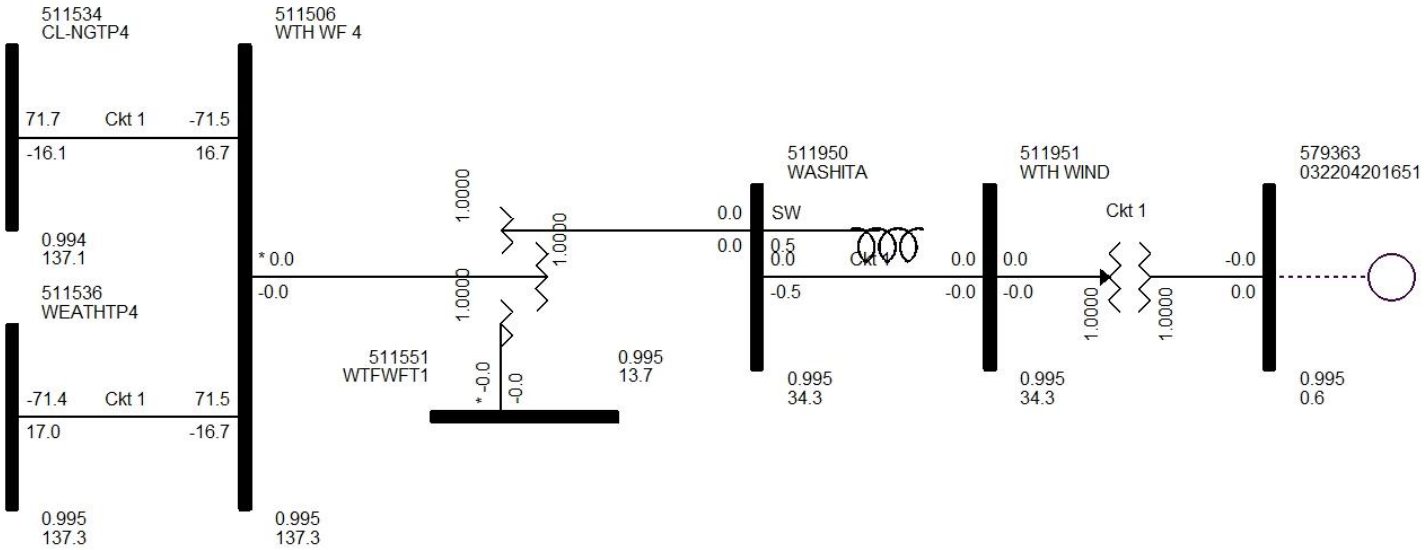


Figure E-6*:* GEN-2016-051 with generators turned off and shunt reactors added to the customer 34.5kV substation



Appendix F – Short Circuit Analysis Results

Table F-1: GEN-2016-008 Short Circuit Analysis Results

DISIS-2016-001 Group 7 – GEN-2016-008 POI: Granite 69 kV (520927) 5 Bus Level Short Circuit Analysis												
Bus			3 Phase Short Circuit Current (Amps)									
			17SP					25SP				
			Base Case		Upgrade Cluster Case		Cluster Increase	Base Case		Upgrade Cluster Case		Cluster Increase
Number	Name	Voltage (kV)	Magnitude	Angle	Magnitude	Angle	Magnitude	Magnitude	Angle	Magnitude	Angle	Magnitude
511433	HINTON 4	138	4835.4	-79.98	4854.5	-79.97	19.1	4847	-79.97	4863.7	-79.96	16.7
511446	CL-AFTP4	138	6174	-77.52	6370.6	-77.55	196.6	6227.8	-77.47	6419.1	-77.5	191.3
511447	CL-CITY2	69	4292.5	-77.34	4316.5	-77.33	24	4301.1	-77.33	4323.7	-77.32	22.6
511458	ELKCTY-4	138	10506.6	-81.15	11435.6	-81.7	929	10610.3	-81.11	11536.4	-81.66	926.1
511459	ELKCTY-2	69	6801.5	-84.3	6955.3	-84.57	153.8	6878.1	-84.29	7028.6	-84.56	150.5
511463	HOB-JCT4	138	6369	-77.73	6457.2	-77.69	88.2	6463.4	-77.66	6545	-77.62	81.6
511481	WEATHER2	69	4195.1	-78.74	4212.6	-78.71	17.5	4202	-78.72	4218.2	-78.7	16.2
511484	CLINTJC2	69	5641	-81.64	5685.6	-81.65	44.6	5656.8	-81.63	5698.8	-81.65	42
511485	CLINTJC4	138	5889.8	-78.97	5995.7	-78.94	105.9	5926.1	-78.94	6026.7	-78.91	100.6
511489	WTH_JCT4	138	4595.5	-79.94	4630.5	-79.93	35	4610.3	-79.93	4642.5	-79.91	32.2
511490	ELKCITY6	230	6540.8	-82.48	7683	-82.85	1142.2	6588.4	-82.47	7736.8	-82.85	1148.4
511496	WTH_SE 2	69	4586.3	-80.68	4606.6	-80.66	20.3	4594.4	-80.67	4613.2	-80.65	18.8
511497	WTH_SE 4	138	4633.5	-79.93	4670.2	-79.92	36.7	4648.8	-79.92	4682.7	-79.9	33.9
511504	SAYRE--4	138	4067.5	-75.48	4184.4	-75.5	116.9	4081.4	-75.44	4196.6	-75.47	115.2
511506	WTH WF 4	138	4894.2	-80.19	4942.7	-80.17	48.5	4912.9	-80.17	4958.1	-80.15	45.2
511511	FALCNRD4	138	7477.5	-78.76	7924.8	-78.99	447.3	7528.6	-78.72	7972.1	-78.95	443.5
511517	THOMAST2	69	4071.4	-77.29	4088.2	-77.26	16.8	4078	-77.28	4093.5	-77.25	15.5
511522	FOSSTAP2	69	4689.7	-78.76	4719.3	-78.76	29.6	4700.3	-78.75	4728.1	-78.75	27.8
511523	FOSSPLT2	69	1914.3	-64.9	1919.1	-64.86	4.8	1916	-64.88	1920.5	-64.85	4.5
511531	HAMJCT 2	69	1772.6	-61.84	1782.9	-61.77	10.3	1777.3	-61.77	1787.2	-61.71	9.9
511532	WEATHER4	138	4164.8	-79.32	4197.2	-79.3	32.4	4177.7	-79.3	4207.8	-79.28	30.1
511533	CLIN-NG4	138	4879.8	-79.55	4937.6	-79.53	57.8	4900.9	-79.53	4955.2	-79.51	54.3
511534	CL-NGTP4	138	5100.3	-79.8	5163.5	-79.79	63.2	5123.4	-79.78	5182.8	-79.76	59.4
511535	CLIN-AF4	138	4708	-74.12	4821.4	-74.06	113.4	4739	-74.06	4848.9	-74.01	109.9
511536	WEATHTP4	138	4729.7	-80.08	4771.6	-80.07	41.9	4746.4	-80.07	4785.3	-80.05	38.9
511548	REDROCKRD4	138	6353.9	-79.84	6373.6	-79.82	19.7	6370.5	-79.83	6386.7	-79.82	16.2
511557	CHISHOLM6	230	8148.7	-83.96	11208.3	-85.38	3059.6	8202.2	-83.96	11301.1	-85.39	3098.9
511561	ELLIS 4	138	5504.6	-77.88	5623.4	-77.93	118.8	5521.1	-77.85	5638.6	-77.91	117.5
520503	DEERCR	138	4314.5	-79.57	4348.3	-79.54	33.8	4354.2	-79.55	4384.7	-79.53	30.5
520856	CLINTON4	138	5112.3	-79.2	5183.9	-79.18	71.6	5144.9	-79.17	5212.2	-79.15	67.3
520897	ELKCITY2	69	5755.9	-82.23	5860.4	-82.41	104.5	5830.8	-82.23	5932.6	-82.4	101.8
521092	WEATHFD4	138	4358.6	-79.25	4398.1	-79.22	39.5	4393.2	-79.23	4429.4	-79.2	36.2
521116	RHWIND4	138	7005.6	-80.47	7261.8	-80.67	256.2	7037.7	-80.45	7291.1	-80.64	253.4
599015	REDHIL-HVB1	138	6370.3	-80.68	6572.6	-80.85	202.3	6395.7	-80.66	6595.7	-80.83	200

Table F-2: GEN-2016-037 Short Circuit Analysis Results

DISIS-2016-001 Group 7 – GEN-2016-037 POI: Tap on Chisholm-Gracemont Ckt 1 345 kV (560078) 5 Bus Level Short Circuit Analysis												
Bus			3 Phase Short Circuit Current (Amps)									
			17SP					25SP				
			Base Case		Upgrade Cluster Case		Cluster Increase	Base Case		Upgrade Cluster Case		Cluster Increase
Number	Name	Voltage (kV)	Magnitude	Angle	Magnitude	Angle	Magnitude	Magnitude	Angle	Magnitude	Angle	Magnitude
511421	VERDEN 4	138	9425.9	-80.58	9456.7	-80.56	30.8	9860.7	-80.59	9881.5	-80.57	20.8
511422	FLETCHR4	138	7592	-80.48	7621.6	-80.46	29.6	7804.9	-80.45	7827.4	-80.43	22.5
511423	FLE TAP4	138	8274.5	-81.06	8309.6	-81.04	35.1	8528.1	-81.04	8555	-81.03	26.9
511425	TUTCONT4	138	10602.1	-80.92	10625.4	-80.9	23.3	10673	-80.9	10689.7	-80.89	16.7
511431	LWS S4	138	10528.1	-81.64	10599.2	-81.61	71.1	10659.9	-81.58	10721.2	-81.56	61.3
511436	COMANC-2	69	9639.1	-81.68	9654.4	-81.67	15.3	9677.8	-81.64	9690.4	-81.63	12.6
511437	COMANC-4	138	17291.4	-83.79	17453.7	-83.77	162.3	17592.3	-83.72	17733.4	-83.7	141.1
511439	LWSTAP 4	138	10957.1	-81.73	11034.1	-81.71	77	11100	-81.67	11166.5	-81.65	66.5
511445	CARNEG-4	138	7407	-80.85	7454.1	-80.81	47.1	7705.5	-80.98	7743.6	-80.94	38.1
511446	CL-AFTP4	138	6174	-77.52	6370.6	-77.55	196.6	6227.8	-77.47	6419.1	-77.5	191.3
511456	O.K.U.-7	345	5096	-84.35	5191.8	-84.37	95.8	5176.8	-84.35	5262.4	-84.36	85.6
511458	ELKCTY-4	138	10506.6	-81.15	11435.6	-81.7	929	10610.3	-81.11	11536.4	-81.66	926.1
511459	ELKCTY-2	69	6801.5	-84.3	6955.3	-84.57	153.8	6878.1	-84.29	7028.6	-84.56	150.5
511466	L.E.S.-2	69	16267.1	-84.76	16333.7	-84.75	66.6	16412.6	-84.73	16468.8	-84.73	56.2
511467	L.E.S.-4	138	22993.2	-84.43	23323.3	-84.42	330.1	23602.7	-84.36	23894.9	-84.36	292.2
511468	L.E.S.-7	345	12047	-84.7	12359.7	-84.68	312.7	12317.9	-84.7	12606.8	-84.68	288.9
511469	LGORE-N2	69	7921.3	-78.12	7936.8	-78.11	15.5	7961.8	-78.08	7974.6	-78.07	12.8
511470	LGORE-S2	69	6882.2	-78.53	6894.1	-78.52	11.9	6907.8	-78.5	6917.7	-78.49	9.9
511474	SHERID4	138	11752.2	-82.65	11839.7	-82.63	87.5	11913.6	-82.59	11989.2	-82.57	75.6
511476	S.W.S.-2	69	4151.4	-87.44	4155.2	-87.44	3.8	4216.4	-87.57	4218.7	-87.56	2.3
511477	S.W.S.-4	138	26834.2	-83.57	27151.9	-83.53	317.7	33565.6	-84.61	33862	-84.57	296.4
511483	NORGE--4	138	10999.4	-75.48	11033.7	-75.43	34.3	11367.3	-75.28	11390.8	-75.24	23.5
511485	CLINTJC4	138	5889.8	-78.97	5995.7	-78.94	105.9	5926.1	-78.94	6026.7	-78.91	100.6
511486	ELGINJT4	138	9637.5	-81.08	9685.4	-81.06	47.9	9917.5	-81.06	9955.2	-81.03	37.7
511487	ELGINJT2	69	8383.4	-81.5	8400.3	-81.5	16.9	8471.7	-81.51	8484.8	-81.5	13.1
511488	112GORE4	138	11903.8	-81.91	11995.9	-81.89	92.1	12075.9	-81.85	12155.6	-81.83	79.7
511490	ELKCITY6	230	6540.8	-82.48	7683	-82.85	1142.2	6588.4	-82.47	7736.8	-82.85	1148.4
511494	COMMTAP4	138	20297.7	-83.69	20545.7	-83.68	248	20763.4	-83.61	20981.2	-83.6	217.8
511511	FALCNRD4	138	7477.5	-78.76	7924.8	-78.99	447.3	7528.6	-78.72	7972.1	-78.95	443.5
511512	RPPAPER4	138	11291.9	-81.78	11374.2	-81.75	82.3	11445.2	-81.72	11516.4	-81.7	71.2
511537	ARTVLTP4	138	11156.3	-81.65	11235.7	-81.62	79.4	11303.1	-81.58	11371.6	-81.56	68.5
511541	SWEETWT6	230	6569.8	-83.12	7706.1	-83.46	1136.3	6594.2	-83.12	7737.6	-83.45	1143.4
511542	BUFFCK6	230	5033.9	-82.71	5675.3	-82.91	641.4	5048.2	-82.71	5692.3	-82.9	644.1
511544	DEMPSEY6	230	4452.6	-82.7	4898.6	-82.79	446	4462.8	-82.7	4910.2	-82.78	447.4
511547	ROARK6	230	4051.6	-82.82	4430.5	-82.94	378.9	4060.3	-82.82	4440.3	-82.93	380
511553	CHISHOLM7	345	5809.7	-84.49	11226.9	-85.44	5417.2	5850.9	-84.49	11394.1	-85.45	5543.2
511557	CHISHOLM6	230	8148.7	-83.96	11208.3	-85.38	3059.6	8202.2	-83.96	11301.1	-85.39	3098.9
511563	ELSWORTH 4	138	9564.2	-81.09	9611.2	-81.06	47	9848.1	-81.06	9884.9	-81.04	36.8
514785	WOODWRD4	138	12048.1	-80.93	12327.5	-80.77	279.4	12169.7	-80.99	12428.9	-80.8	259.2

DISIS-2016-001 Group 7 – GEN-2016-037 POI: Tap on Chisholm-Gracemont Ckt 1 345 kV (560078) 5 Bus Level Short Circuit Analysis												
Bus			3 Phase Short Circuit Current (Amps)									
			17SP					25SP				
			Base Case		Upgrade Cluster Case		Cluster Increase	Base Case		Upgrade Cluster Case		Cluster Increase
Number	Name	Voltage (kV)	Magnitude	Angle	Magnitude	Angle	Magnitude	Magnitude	Angle	Magnitude	Angle	Magnitude
514787	DEWEY 4	138	7161.9	-77.26	7219.9	-77.2	58	7183.9	-77.24	7238.5	-77.18	54.6
514796	IODINE-4	138	7154.5	-79.88	7227	-79.85	72.5	7210.9	-79.87	7272.6	-79.84	61.7
514801	MINCO 7	345	16173.5	-85.15	16807.7	-85.08	634.2	16538.8	-85.2	17101	-85.13	562.2
514809	JOHNCO 7	345	8807.7	-84.31	9297.6	-84.51	489.9	8836.5	-84.3	9322.6	-84.5	486.1
514819	EL-RENO4	138	15225	-80.01	15278.1	-79.99	53.1	15290.1	-80.04	15330.8	-80.01	40.7
514820	JENSENT4	138	15001.6	-79.44	15062.1	-79.41	60.5	15066.3	-79.45	15112.8	-79.42	46.5
514863	HAYMAKR4	138	26019.4	-82.45	26126.4	-82.4	107	26078.4	-82.47	26148.2	-82.42	69.8
514879	NORTWST4	138	42459.8	-85.93	43139.8	-85.91	680	42953.1	-85.97	43532.9	-85.95	579.8
514880	NORTWST7	345	29386.9	-86.05	30828.6	-85.97	1441.7	30575.5	-86.09	31913.8	-86.01	1338.3
514881	SPRNGCK7	345	21422.1	-85.53	22083.8	-85.44	661.7	21925	-85.53	22524.9	-85.45	599.9
514894	CZECHAL4	138	28025.3	-82.98	27830	-82.85	-195.3	27704.2	-83	27463.7	-82.87	-240.5
514895	SARA 4	138	18587.3	-84.1	18636.7	-84.08	49.4	18621.3	-84.1	18656.9	-84.08	35.6
514898	CIMARON4	138	42082.5	-85	42563.7	-84.97	481.2	42447.1	-85.06	42822	-85.04	374.9
514901	CIMARON7	345	29753.7	-85.77	31640.7	-85.66	1887	31179.1	-85.95	32971.5	-85.87	1792.4
514908	ARCADIA7	345	24884	-86.46	25165.5	-86.42	281.5	26074.1	-86.55	26322.9	-86.52	248.8
514933	DRAPER 4	138	38556.9	-85.17	38783.5	-85.13	226.6	38611.4	-85.15	38796.1	-85.12	184.7
514934	DRAPER 7	345	20378.3	-85.15	20608.2	-85.08	229.9	20536.8	-85.12	20735	-85.07	198.2
515045	SEMINOL7	345	25906.2	-86.18	26121.3	-86.14	215.1	26079.4	-86.15	26268.1	-86.11	188.7
515135	SUNNYSD4	138	16910.6	-84	17172.6	-84.06	262	16956.9	-83.99	17211.5	-84.05	254.6
515136	SUNNYSD7	345	9851.3	-84.5	10132.2	-84.58	280.9	9896	-84.48	10170.5	-84.56	274.5
515375	WWRDEHV7	345	16979.4	-86.06	19283.9	-86.13	2304.5	19308.5	-86.13	21592.2	-86.18	2283.7
515376	WWRDEHV4	138	22350.5	-86.09	23424.7	-86.22	1074.2	23371	-86.25	24294.7	-86.34	923.7
515394	KEENAN 4	138	7941.3	-84.91	8073	-84.93	131.7	8066.6	-84.94	8174	-84.96	107.4
515398	OUSPRT 4	138	8715.4	-82.16	8874.2	-82.14	158.8	8866.7	-82.16	8996.5	-82.13	129.8
515407	TATONGA7	345	10673.3	-86.79	10925.3	-86.8	252	16181.8	-86.56	16809.4	-86.57	627.6
515407	TATONGA7	345	10673.3	-86.79	10925.3	-86.8	252	16181.8	-86.56	16809.4	-86.57	627.6
515444	MCNOWND7	345	16128.5	-85.14	16758.9	-85.07	630.4	16491.7	-85.19	17050.5	-85.12	558.8
515448	CRSRDSW7	345	8266.5	-85.98	8416.8	-85.98	150.3	11225.1	-85.54	11523.6	-85.52	298.5
515458	BORDER 7	345	4966.4	-86.22	7613.3	-85.85	2646.9	5087.2	-86.22	7707	-85.86	2619.8
515497	MATHWSN7	345	27587.5	-85.77	29982.6	-85.65	2395.1	29766.6	-86.08	32173	-85.96	2406.4
515549	MNCWND37	345	11276.9	-84.89	11566.3	-84.83	289.4	11444.6	-84.91	11697.7	-84.86	253.1
515582	SLNGWND7	345	7122.4	-85.74	7227.1	-85.73	104.7	9058.7	-85.25	9240.5	-85.22	181.8
515585	MAMTHPW7	345	9429.6	-86.61	9623.7	-86.62	194.1	13426.7	-86.34	13851.6	-86.34	424.9
515599	G07621119-20	345	12024.9	-85.61	12997.1	-85.59	972.2	13007	-85.58	13881.1	-85.55	874.1
515600	KNGFSHR7	345	11011.8	-84.89	11407.9	-84.88	396.1	11165.4	-84.92	11539.4	-84.92	374
515610	FSHRTAP7	345	15928.4	-85.09	16854.5	-85.1	926.1	16282.7	-85.15	17170.6	-85.17	887.9
515800	GRACMNT7	345	14772.7	-85.23	15850.5	-85.23	1077.8	15209.4	-85.32	16240.1	-85.31	1030.7
515802	GRACMNT4	138	25648.3	-84.72	26106	-84.74	457.7	27930.2	-84.83	28341.3	-84.85	411.1
515997	WWPAR4	138	16517.7	-84.16	17044.1	-84.16	526.4	16973.3	-84.21	17422.4	-84.21	449.1
520211	HARPER2	69	14434.7	-81.96	14470.1	-81.95	35.4	18082.9	-83.41	18108.7	-83.4	25.8
520422	SEQUOYAHJ4	138	21386.6	-81.53	21538.7	-81.48	152.1	23063.6	-81.55	23181.1	-81.51	117.5

DISIS-2016-001 Group 7 – GEN-2016-037 POI: Tap on Chisholm-Gracemont Ckt 1 345 kV (560078) 5 Bus Level Short Circuit Analysis												
Bus			3 Phase Short Circuit Current (Amps)									
			17SP					25SP				
			Base Case		Upgrade Cluster Case		Cluster Increase	Base Case		Upgrade Cluster Case		Cluster Increase
Number	Name	Voltage (kV)	Magnitude	Angle	Magnitude	Angle	Magnitude	Magnitude	Angle	Magnitude	Angle	Magnitude
520810	ANADARK2	69	15383.8	-82.11	15424	-82.1	40.2	19682.1	-83.76	19712.5	-83.74	30.4
520814	ANADARK4	138	27927.8	-84.09	28192.9	-84.05	265.1	30940.9	-84.4	31157.4	-84.37	216.5
520827	BINGERJ4	138	7172.2	-82.18	7216.2	-82.17	44	7376.2	-82.23	7412.1	-82.22	35.9
520828	BLANCHD4	69	4999.8	-75.15	5001.7	-75.15	1.9	5018.8	-75.01	5020	-75.01	1.2
520838	CADDO 2	69	11758.4	-78.33	11783.1	-78.31	24.7	13693.9	-78.4	13710.3	-78.39	16.4
520859	COGAR 2	69	4050.2	-70.94	4052.5	-70.93	2.3	4121.5	-70.78	4122.9	-70.77	1.4
520867	CORN TP4	138	13513.6	-77.1	13560.1	-77.06	46.5	13917.5	-76.93	13950.3	-76.9	32.8
520912	FLETCH-4	138	6839.9	-78.05	6854.5	-78.03	14.6	7016.9	-78.06	7027.1	-78.04	10.2
520923	GEORGIA4	138	16103.8	-80.64	16189.9	-80.6	86.1	17067.7	-80.64	17131.9	-80.6	64.2
521017	ONEY 4	138	10062.9	-82.62	10134.2	-82.61	71.3	10516.5	-82.72	10574.1	-82.7	57.6
521024	PARADSE4	138	4476.4	-77.73	4482.7	-77.71	6.3	4526.7	-77.66	4531.2	-77.64	4.5
521027	PINERDG2	69	4819	-73.27	4824.4	-73.25	5.4	4920.3	-72.97	4923.8	-72.96	3.5
521031	POCASET4	138	7455.1	-80.74	7469.2	-80.72	14.1	7576.4	-80.71	7586.1	-80.7	9.7
521072	TUTTLE 4	138	6432.2	-80.18	6440.7	-80.17	8.5	6490.2	-80.15	6496.1	-80.14	5.9
521088	WASHITA2	69	9242.8	-79.91	9261.7	-79.9	18.9	9730.5	-79.55	9743	-79.54	12.5
521089	WASHITA4	138	24249	-83.82	24571.3	-83.8	322.3	27473	-84.23	27757.1	-84.2	284.1
521103	BLUCAN14	138	6917.6	-86.09	6926.4	-86.09	8.8	6997.7	-86.12	7003.9	-86.12	6.2
521113	SLICKHILLS4	138	7270.7	-85.98	7281.3	-85.98	10.6	7366.7	-86.02	7374.2	-86.01	7.5
521116	RHWIND4	138	7005.6	-80.47	7261.8	-80.67	256.2	7037.7	-80.45	7291.1	-80.64	253.4
521129	BLUCAN5 4	138	4791.1	-77.96	4798.2	-77.94	7.1	4849.3	-77.88	4854.4	-77.87	5.1
523777	WHEELER 6	230	5384.8	-82.14	5841.4	-82.21	456.6	5396.7	-82.13	5854.8	-82.21	458.1
523779	STLN-DEMARC6	230	6086.1	-82.74	6936.4	-82.94	850.3	6105.4	-82.73	6960	-82.94	854.6
525213	SWISHER 6	230	10318.3	-82.46	10499.3	-82.45	181	10477.9	-82.44	10635	-82.43	157.1
525524	TOLK_EAST 6	230	25495	-86.16	25775.6	-86.09	280.6	26288.4	-86.12	26540.6	-86.06	252.2
525828	TUCO_INT 3	115	19033.5	-82.73	19562.7	-82.74	529.2	19901.8	-83.03	20313	-82.98	411.2
525830	TUCO_INT 6	230	19246.1	-84.53	20475.3	-84.56	1229.2	22301.9	-85.09	23372	-85.06	1070.1
525832	TUCO_INT 7	345	10103.3	-85.89	10789.6	-85.91	686.3	12299.8	-86.13	12966.7	-86.1	666.9
525832	TUCO_INT 7	345	10103.3	-85.89	10789.6	-85.91	686.3	12299.8	-86.13	12966.7	-86.1	666.9
525840	ANTELOPE_1 6	230	19104	-84.55	20313.3	-84.57	1209.3	22130.2	-85.11	23181.2	-85.07	1051
526161	CARLISLE 6	230	10308	-83.04	12312.4	-83.74	2004.4	13262.6	-83.79	15268.3	-84.25	2005.7
526337	JONES 6	230	19178.5	-86.23	19822.3	-86.18	643.8	20810.6	-86.14	21707.9	-86.12	897.3
526935	YOAKUM 6	230	11685.6	-83.67	11847.1	-83.56	161.5	15314.2	-84.78	15549.4	-84.7	235.2
526936	YOAKUM_345	345			3922.2	-86.47		8485.1	-86.27	8636.5	-86.2	151.4
527896	HOBBS_INT 7	345						8207.7	-86.76	8432	-86.7	224.3
529304	OMDUNCN4	138	6588.7	-69.85	6606.7	-69.8	18	6644.6	-69.72	6659.1	-69.68	14.5
532796	WICHITA7	345	23589.9	-86.11	24908.5	-86.09	1318.6	24567.6	-86.26	25867.5	-86.23	1299.9
539638	FLATRDG4	138	14584.2	-85.82	14956.2	-85.9	372	14794	-85.7	15142.4	-85.77	348.4
539800	CLARKCOUNTY7	345	12576.3	-84.74	14674.9	-84.47	2098.6	12664.4	-84.73	14742.4	-84.47	2078
539801	THISTLE7	345	15239.8	-85.87	16336.1	-85.9	1096.3	15602.8	-85.89	16640.6	-85.91	1037.8
539804	THISTLE4	138	16244.5	-86.46	16705.7	-86.55	461.2	16473.2	-86.38	16904	-86.45	430.8
560000	G11-14-TAP	345	13051.5	-86.33	14092.4	-86.45	1040.9	13416.5	-86.35	14387.4	-86.46	970.9

DISIS-2016-001 Group 7 – GEN-2016-037 POI: Tap on Chisholm-Gracemont Ckt 1 345 kV (560078) 5 Bus Level Short Circuit Analysis												
Bus			3 Phase Short Circuit Current (Amps)									
			17SP					25SP				
			Base Case		Upgrade Cluster Case		Cluster Increase	Base Case		Upgrade Cluster Case		Cluster Increase
Number	Name	Voltage (kV)	Magnitude	Angle	Magnitude	Angle	Magnitude	Magnitude	Angle	Magnitude	Angle	Magnitude
560013	G14-057T	345	9412.9	-85.01	9588.7	-85.01	175.8	9510.9	-85	9675.5	-85.01	164.6
560027	G14-074-TAP	345	6085.2	-85.14	6715	-85.29	629.8	6516.1	-85.15	7127.2	-85.28	611.1
560033	G1524&G1525T	345	19058	-86.3	20611.5	-86.28	1553.5	19598.4	-86.4	21128.5	-86.38	1530.1
560055	G15-063T	345	16822.5	-84.89	17850.5	-84.84	1028	17262.7	-84.94	18248.9	-84.88	986.2
560070	G16-001-TAP	345			13957.5	-86.43		13213.9	-86.31	14473.4	-86.45	1259.5
560071	G16-003-TAP	345			15144.5	-86.35		14544.8	-86.26	16052.6	-86.38	1507.8
560072	G16-005-TAP	345			13510.7	-85.17		11884.1	-85.29	13589.9	-85.18	1705.8
560078	G16-037-TAP	345	6659.3	-84.68	8653.7	-84.98	1994.4	6726.5	-84.7	8731.1	-84.99	2004.6
560087	G16-073-TAP	345			11227.9	-86.37		9825.4	-86.4	11342.6	-86.4	1517.2
560088	G16-063-TAP	345	6535.7	-85.86	6608.5	-85.9	72.8	6544.4	-85.86	6615.2	-85.9	70.8
562075	G11-051-TAP	345	11844.9	-86.57	12384.2	-86.61	539.3	16699.6	-86.42	17703	-86.45	1003.4
562790	G15-038T	345	13241.9	-84.93	14070.9	-84.98	829	13482.5	-84.97	14284.1	-85.04	801.6
583090	G1149&G1504	345	4550.6	-86.08	6592.2	-85.64	2041.6	4649	-86.07	6660.4	-85.64	2011.4
583110	GEN-2011-051	345	11844.9	-86.57	12384.2	-86.61	539.3	16699.6	-86.42	17703	-86.45	1003.4
583340	GEN-2012-020	230	8657	-84.15	8851.3	-84.13	194.3	9114.4	-84.26	9255	-84.22	140.6
584060	GEN-2014-056	345	8332	-84.94	8482	-84.89	150	8419.2	-84.95	8549.4	-84.91	130.2
584070	G1457&G1642	345	6203.2	-85.01	6281.7	-85.01	78.5	6240.4	-85	6314.2	-85.01	73.8
584440	GEN-2014-074	345	5759.5	-85.08	6393.1	-85.25	633.6	6138.5	-85.08	6755.2	-85.23	616.7
584700	GEN-2015-029	345	7446.5	-85.24	7565.3	-85.22	118.8	9692.3	-84.59	9908.6	-84.55	216.3
584950	GEN-2015-057	345	8125.6	-83.62	8267.8	-83.56	142.2	8208.4	-83.62	8331.8	-83.56	123.4
584980	GEN-2015-060	138	5623.9	-86.36	5669.3	-86.38	45.4	5667.2	-86.39	5703.7	-86.39	36.5
585060	GEN-2015-068	345	8508.5	-85.73	8979	-85.73	470.5	9976.1	-85.87	10400.5	-85.83	424.4
585080	GEN-2015-071	345	5386.1	-82.28	9535.8	-80.66	4149.7	5420.5	-82.27	9652.5	-80.6	4232
585180	GEN-2015-081	345	10367.2	-86.19	10769.2	-86.2	402	13806.7	-85.92	14470.8	-85.91	664.1
585270	GEN-2015-093	345	9042.2	-84.98	9418.5	-84.96	376.3	9197.5	-85.02	9549.3	-85	351.8
585280	GEN-2015-092	345	6019	-85	6092.5	-85	73.5	6053.8	-84.99	6122.9	-85	69.1
585410	GREAT_WESTRN	345	9314.9	-85.33	9839.1	-85.28	524.2	9844.3	-85.28	10295.5	-85.23	451.2
585420	COWBOY_RIDGE	345	7307.5	-85.07	7611.1	-85.02	303.6	7614.1	-85.02	7868.6	-84.97	254.5
585430	PRSIMN_CRK1	345	10711	-85.49	11463.3	-85.45	752.3	11470.9	-85.45	12134.6	-85.41	663.7
585440	PRSIMN_CRK2	345	9851.2	-85.39	10480.6	-85.35	629.4	10486.8	-85.34	11035.9	-85.3	549.1
587000	GEN-2016-001	345			11739.4	-86.03				12097.3	-86.03	
587020	GEN-2016-003	345			15144.5	-86.35				16052.6	-86.38	
587040	GEN-2016-005	345			11020	-85.03				11071.5	-85.03	
587230	GEN-2016-037	345			7397.8	-84.41				7454.3	-84.42	
587300	GEN-2016-045	345			4459.9	-86.48				4462.8	-86.48	
587380	GEN-2016-057	345			4363.8	-86.42				4366.6	-86.42	
587390	GEN-2016-058	345			3910.1	-86.46				8578.2	-86.18	
599095	BCVI_HVB	138	7270.7	-85.98	7281.3	-85.98	10.6	7366.7	-86.02	7374.2	-86.01	7.5

Table F-3: GEN-2016-051 Short Circuit Analysis Results

DISIS-2016-001 Group 7 – GEN-2016-051 POI: Weatherford Windfarm Tap 138 kV (511506) 5 Bus Level Short Circuit Analysis												
Bus			3 Phase Short Circuit Current (Amps)									
			17SP					25SP				
			Base Case		Upgrade Cluster Case		Base Case	Upgrade Cluster Case		Base Case		
Number	Name	Voltage (kV)	Magnitude	Angle	Magnitude	Angle	Magnitude	Magnitude	Angle	Magnitude	Angle	Magnitude
511435	SNYDER-4	138	5075.6	-78.4	5102.4	-78.37	26.8	5146.8	-78.42	5170.1	-78.4	23.3
511438	DUKE---2	69	3161.6	-69.45	3168.5	-69.42	6.9	3297.8	-69.75	3303.5	-69.73	5.7
511440	ALTUSJT4	138	4235.2	-77.7	4259.7	-77.67	24.5	4292.6	-77.75	4314.3	-77.72	21.7
511441	ALTUSJT2	69	5030.4	-80.9	5047.1	-80.9	16.7	5070.1	-80.95	5084.8	-80.95	14.7
511459	ELKCTY-2	69	6801.5	-84.3	6955.3	-84.57	153.8	6878.1	-84.29	7028.6	-84.56	150.5
511520	DAV TAP2	69	2103.5	-70.33	2106	-70.32	2.5	2121.1	-70.39	2123.1	-70.37	2
512101	CHILD4WT	138	1625.9	-73.8	1629.9	-73.78	4	1633.2	-73.79	1636.9	-73.77	3.7
512110	LAKEP4WT	138	2049.7	-73.74	2055.7	-73.72	6	2066.6	-73.72	2072	-73.69	5.4
512111	LAKEP2WT	69	2975.3	-74.85	2981.6	-74.84	6.3	2997.7	-74.79	3003.3	-74.77	5.6
512113	VRNMTAP2	69	2279.4	-71.81	2282.4	-71.8	3	2305.8	-71.94	2308.2	-71.93	2.4
520424	WCORDELLJ2	69	2705.2	-70.21	2707.7	-70.19	2.5	2721	-70.18	2723.1	-70.16	2.1
520504	GOULD	69	2008.3	-54.6	2010.8	-54.56	2.5	2043.2	-54.35	2045.2	-54.32	2
520803	ALTUS_ 2	69	3158.6	-72	3164.8	-71.98	6.2	3234.6	-72.16	3239.6	-72.14	5
520804	ALTUSAF2	69	2613.6	-68.13	2617.7	-68.11	4.1	2661.9	-68.17	2665.2	-68.15	3.3
520805	ALTUSSW2	69	3170.4	-72.07	3176.5	-72.05	6.1	3241.3	-72.21	3246.3	-72.19	5
520846	CARTERJ2	69	3650.3	-74.55	3680.8	-74.56	30.5	3747.7	-74.77	3776.7	-74.77	29
520866	CORDELL2	69	2753.9	-70.44	2756.5	-70.41	2.6	2771	-70.4	2773.2	-70.38	2.2
520873	CANUTE 2	69	1460	-71.89	1465.8	-71.88	5.8	1468.9	-71.89	1474.4	-71.88	5.5
520875	DILL 2	69	2189.1	-73.2	2202.1	-73.2	13	2209.3	-73.21	2221.7	-73.21	12.4
520876	DILL JT2	69	4359.1	-77.13	4411.1	-77.18	52	4439.7	-77.22	4489.9	-77.26	50.2
520877	DIVERSW2	69	1744.1	-69.99	1745.5	-69.97	1.4	1753	-70	1754	-69.99	1
520895	ELDORDJ2	69	2224.3	-56.31	2227.5	-56.27	3.2	2267.5	-56.07	2270.1	-56.04	2.6
520896	ELDORDO2	69	2030.9	-60.04	2033.6	-60.01	2.7	2051.6	-59.84	2053.9	-59.81	2.3
520897	ELKCITY2	69	5755.9	-82.23	5860.4	-82.41	104.5	5830.8	-82.23	5932.6	-82.4	101.8
520925	GOTEBO 2	69	4290.3	-75.14	4296.1	-75.12	5.8	4354.6	-75.14	4359.2	-75.12	4.6
520927	GRANITE2	69	3005.5	-71.11	3014.8	-71.08	9.3	3403.9	-73.12	3412.4	-73.09	8.5
520929	GYPSUM 2	69	2479.4	-58.07	2483.4	-58.03	4	2542.1	-57.86	2545.3	-57.82	3.2
520978	LKCREEK2	69	3479.4	-71.87	3493.2	-71.85	13.8	3762.2	-72.94	3774.9	-72.92	12.7
520980	LOCKETT2	69	1849	-70.64	1850.8	-70.63	1.8	1863.5	-70.7	1865	-70.69	1.5
520982	LONEWLF2	69	3089.8	-71.58	3096.8	-71.56	7	3210.7	-71.96	3216.6	-71.94	5.9
521003	MTNVIEW2	69	3386.6	-71.71	3389.6	-71.69	3	3423.6	-71.57	3425.7	-71.56	2.1
521009	NAVAJO 2	69	3232.6	-72.29	3238.8	-72.27	6.2	3296.6	-72.4	3301.7	-72.38	5.1
521027	PINERDG2	69	4819	-73.27	4824.4	-73.25	5.4	4920.3	-72.97	4923.8	-72.96	3.5
521042	RUSSELL2	69	3859.4	-73.1	3870	-73.08	10.6	4062.1	-73.67	4070.9	-73.65	8.8
521043	RUSSELL4	138	3272.2	-77.35	3287	-77.33	14.8	3314	-77.43	3327	-77.41	13
521081	VERNON 2	69	2280.8	-71.81	2283.7	-71.8	2.9	2307.2	-71.94	2309.6	-71.93	2.4
529342	OMMANGM2	69	2887.9	-70.95	2895.9	-70.93	8	3423.9	-73.98	3431.4	-73.95	7.5
529345	OMPARK-4	138	4122.5	-77.69	4146.4	-77.66	23.9	4175.5	-77.73	4196.7	-77.7	21.2

DISIS-2016-001 Group 7 – GEN-2016-051 POI: Weatherford Windfarm Tap 138 kV (511506) 5 Bus Level Short Circuit Analysis												
Bus			3 Phase Short Circuit Current (Amps)									
			17SP					25SP				
			Base Case		Upgrade Cluster Case		Base Case	Upgrade Cluster Case		Base Case		
Number	Name	Voltage (kV)	Magnitude	Angle	Magnitude	Angle	Magnitude	Magnitude	Angle	Magnitude	Angle	Magnitude
583400	GEN-2012-028	69	4068.4	-76.87	4073	-76.85	4.6	4119.2	-76.88	4122.8	-76.86	3.6
585220	GEN-2015-085	138	3378.4	-78.2	3394	-78.17	15.6	3414.8	-78.24	3428.6	-78.22	13.8
587060	GEN-2016-008	69			2978.2	-70.95				3365.9	-72.92	

11.17.7 J8: GROUP 8 DYNAMIC STABILITY ANALYSIS REPORT

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Southwest Power Pool, Inc. (SPP)

DISIS-2016-001 (Group 08) Definitive Impact Study

Final Report

REP-0029
Revision #00

February 2017

Submitted By:
Mitsubishi Electric Power Products, Inc. (MEPPI)
Power Systems Engineering Services Department
Warrendale, PA

Title: **DISIS-2016-001 (Group 08) Definitive Impact Study: Final Report REP-0029**
Date: February 2017
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EXECUTIVE SUMMARY

SPP requested a Definitive Interconnection System Impact Study (DISIS). The DISIS required a Stability Analysis, Short Circuit Analysis, Power Factor Analysis, and Low Wind/No Wind Analysis detailing the impacts of the interconnecting projects as shown in Table ES-1.

Table ES-1
Interconnection Projects Evaluated

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2016-009	29	GENROU (Steam; 587073, 587074)	Osage 69kV (514742)
GEN-2016-012	200	Vestas V110 2.0MW (wind; 587084)	Tap Waverly (532799) - La Cygne (542981) 345kV, (G16-012-TAP,560073)
GEN-2016-022	151.8	Vestas V126 3.45MW (wind; 587163)	Ranch Road 345kV (515576)
GEN -2016-024	55.86	Sunny Central 2940 2.67/2.94MW (solar; 587103)	Midian 138kV (532990)
GEN-2016-031	1.5MW uprate of GEN-2015-001 (total = 201.3MW)	Vestas V126 3.3MW (wind; 584453)	Ranch Road 345kV (515576)
GEN-2016-032	200	Vestas V110 2MW (wind; 587213)	Tap Marshall (514733)- Cottonwood Creek (514827) 138kV, (G16-032-TAP, 560077)
GEN -2016-048	82.32	Sunny Central 2940 2.94MW (solar; 587333)	Sooner 138kV (514802)
GEN-2016-060	25.3	G.E. 2.3MW (wind; 585203)	Belle Plain 138kV (533063)
GEN-2016-061	250.7	GE 2.3 MW (wind; 587413)	Tap Woodring (514715) – Sooner (514803) 345kV (G16-061-TAP, 560084)
GEN-2016-068	250	GE 2.0MW (wind; 587463)	Woodring 345kV (514715)
GEN-2016-071	200.1	GE 2.3MW (wind; 587483)	Chilocco 138kV (521198)
GEN-2016-072	300	Vestas V110 VCSS 2.0MW (wind; 587493)	Renfrow (515543) 345 kV
GEN-2016-073	220	GE 2.0MW (wind; 587503)	Tap on Thistle (539801) to Wichita (532796) 345kV, ckt1&2 (Buffalo Flats 345kV; 560033)

SUMMARY OF STABILITY ANALYSIS

The Stability Analysis determined that there were multiple contingencies that resulted in system instability, generation tripping offline, or voltage violations for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions when all generation interconnection requests were at 100% output.

The following system upgrades and adjustments are recommended:

- Addition of Wolf Creek to Neosho 345 kV line circuit #1 to improve voltage stability in the vicinity of Waverly and to mitigate tripping of project generators GEN-2016-012 and GEN-2016-024.
- Reduction of generation at GEN-2016-071 and GEN-2011-057 following prior outage of Middleton Tap to Peckham Tap 345 kV line for FLT123-PO (see Figure 3-15 for the amount of reduction in 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak) to mitigate instability and generator tripping.

SUMMARY OF THE SHORT CIRCUIT ANALYSIS

The Short Circuit Analysis was performed on the 2017 Summer Peak and 2025 Summer Peak power flow for all study projects. Refer to Table ES-2 and ES-3 for a list of maximum fault currents observed for each study project for the 2017 Summer Peak and 2025 Summer Peak Cluster Scenarios, respectively.

Table ES-2
List of Maximum Fault Currents Observed in 2017 Summer Peak Power Flow for Each Study Project

Study Project	Fault Current at POI (kA)	Maximum Fault Current (kA)	Fault Location	Bus Voltage (kV)
GEN-2016-009	5.66	9.98	CHIKASI2	69
GEN-2016-012	14.13	39.28	CRAIG 5	161
GEN-2016-022	14.12	43.13	NORTWST4	138
GEN-2016-024	10.11	37.71	EVANS N4	139
GEN-2016-031	14.12	43.13	NORTWST4	138
GEN-2016-032	3.38	43.11	NORTWST4	138
GEN-2016-048	31.89	43.11	NORTWST4	138
GEN-2016-060	8.99	31.47	ROSEHIL4	138
GEN-2016-061	16.67	43.11	NORTWST4	138
GEN-2016-068	18.95	43.11	NORTWST4	138
GEN-2016-071	8.98	11.64	KILDARE4	138
GEN-2016-072	11.5	37.71	EVANS N4	138
GEN-2016-073	20.6	37.67	EVANS N4	138

Table ES-3
List of Maximum Fault Currents Observed in 2025 Summer Peak Power Flow for Each Study Project

Study Project	Fault Current at POI (kA)	Maximum Fault Current (kA)	Fault Location	Bus Voltage (kV)
GEN-2016-009	18.54	32.32	SOONER 4	138
GEN-2016-012	14.16	42.78	EVANS N4	138
GEN-2016-022	14.15	43.52	NORTWST4	138
GEN-2016-024	10.2	42.78	EVANS N4	138
GEN-2016-031	14.15	43.52	NORTWST4	138
GEN-2016-032	3.38	43.52	NORTWST4	138
GEN-2016-048	32.31	43.52	NORTWST4	138
GEN-2016-060	10.44	42.78	EVANS N4	138
GEN-2016-061	16.8	43.52	NORTWST4	138
GEN-2016-068	19.29	43.52	NORTWST4	138
GEN-2016-071	9.22	22.27	VIOLA 4	138
GEN-2016-072	12.15	42.78	EVANS N4	138
GEN-2016-073	21.11	42.73	EVANS N4	138

SUMMARY OF POWER FACTOR ANALYSIS

The Power Factor Analysis was performed on the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak power flow for all study projects. Refer to Table ES-4 for a list of the power factor ranges observed for each study project.

Table ES-4
Power Factor Ranges Observed for Each Study Project in 2016 Winter Peak, 2016 Summer Peak, and 2025 Summer Peak

Generator	Power Factor Range for each study generator[1]					
	16WP		17SP		25SP	
GEN-2016-009	-0.62	0.938	-0.676	0.929	-0.8	0.941
GEN-2016-012	-0.704	0.998	-0.963	0.837	-0.959	0.837
GEN-2016-022	-0.886	-0.994	-0.95	0.999	-0.959	0.998
GEN-2016-024	-0.681	-0.978	-0.858	-0.999	-0.795	-0.985
GEN-2016-031	-0.93	-0.997	-0.971	0.999	-0.976	0.999
GEN-2016-032	-0.957	0.998	-0.978	0.999	-0.957	0.984
GEN-2016-048	-0.601	-0.836	-0.644	-0.842	-0.649	-0.838
GEN-2016-060	-0.885	-0.998	-0.973	0.992	-0.973	0.999
GEN-2016-061	-0.667	Unity	-0.792	0.987	-0.8	0.988
GEN-2016-068	-0.552	-0.996	-0.658	0.985	-0.803	0.988
GEN-2016-071	-0.962	0.992	-0.991	0.992	-0.996	0.995
GEN-2016-072	-0.925	0.998	-0.98	0.997	-0.989	0.997
GEN-2016-073	-0.835	-0.995	-0.968	-0.999	-0.978	Unity

[1]Lagging power factors are negative and leading power factors are positive

SUMMARY OF LOW WIND/NO WIND ANALYSIS

The amount of reactive power injected into the transmission network was recorded at the point of interconnection for all study generators for each Cluster Scenario. The maximum reactance needed for zero Mvar flow was 34.7 Mvar for the line connecting GEN-2016-068 to the Woodring 345 kV line. The minimum reactance needed for zero Mvar flow was 0.1 Mvar for for the line connecting GEN-2016-009 to the Osage 69 kV line.

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SECTION 1: OBJECTIVES

The objective of this report is to provide Southwest Power Pool, Inc. (SPP) with the deliverables for the DISIS-2016-001 (Group 08) Definitive Impact Study. SPP requested an Interconnection System Impact Study for thirteen (13) generation interconnections for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak, which requires a Stability Analysis, Short Circuit Analysis, Power Factor Analysis, Low Wind/No Wind Analysis, and an Impact Study Report.

SECTION 2: BACKGROUND

The Siemens Power Technologies, Inc. PSS/E power system simulation program Version 32.2.2 was used for this study. SPP provided the stability database cases for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and a list of contingencies to be examined. The model includes the study projects shown in Table 2-1 and the previously queued projects listed in Table 2-2. Refer to Appendix A for the steady-state and dynamic model data for the study projects. A power flow one-line diagram for each generation interconnection project is shown in Figures 2-1 through 2-12. Note that the one-line diagrams represent the 2025 Summer Peak case.

The Stability Analysis determined the impacts of the new interconnecting projects on the stability and voltage recovery of the nearby system and the ability of the interconnecting projects to meet FERC Order 661A. If problems with stability or voltage recovery are identified, the need for reactive compensation or system upgrades will be investigated. Three-phase faults and single line-to-ground faults will be examined as listed in Table 2-3. Note that all contingencies listed were examined for the cluster scenario, and specified contingencies (indicated by an X) were examined for each Stand Alone generator.

A Short Circuit Analysis was performed on the 2017 Summer Peak and 2025 Summer Peak study year for each study generator in the Cluster Scenario. The study was performed five buses out from the study generator's point of interconnection and results were documented.

The Power Factor Analysis determined the power factor at the point of interconnection for the wind or solar interconnection projects for pre-contingency and post-contingency conditions. The N-1, three phase contingencies listed in Table 2-3 were used in the Power Factor analysis.

The Low Wind/No Wind Analysis was completed for all wind or solar farm interconnections. This analysis determined if reactive support is needed to have an Mvar flow of approximately zero at the point of interconnection (POI).

Table 2-1

Interconnection Projects Evaluated

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2016-009	29	GENROU (Steam; 587073, 587074)	Osage 69kV (514742)
GEN-2016-012	200	Vestas V110 2.0MW (wind; 587084)	Tap Waverly (532799) - La Cygne (542981) 345kV, (G16-012-TAP,560073)
GEN-2016-022	151.8	Vestas V126 3.45MW (wind; 587163)	Ranch Road 345kV (515576)
GEN -2016-024	50	Sunny Central 2940 2.67/2.94MW (solar; 587103)	Midian 138kV (532990)
GEN-2016-031	1.5MW uprate of GEN-2015-001 (total = 201.3MW)	Vestas V126 3.3MW (wind; 584453)	Ranch Road 345kV (515576)
GEN-2016-032	200	Vestas V110 2MW (wind; 587213)	Tap Marshall (514733)- Cottonwood Creek (514827) 138kV, (G16-032-TAP, 560077)
GEN -2016-048	74	Sunny Central 2940 2.94MW (solar; 587333)	Sooner 138kV (514802)
GEN-2016-060	25.3	G.E. 2.3MW (wind; 585203)	Belle Plain 138kV (533063)
GEN-2016-061	250.7	GE 2.3 MW (wind; 587413)	Tap Woodring (514715) – Sooner (514803) 345kV (G16-061-TAP, 560084)
GEN-2016-068	250	GE 2.0MW (wind; 587463)	Woodring 345kV (514715)
GEN-2016-071	200.1	GE 2.3MW (wind; 587483)	Chilocco 138kV (521198)
GEN-2016-072	300	Vestas V110 VCSS 2.0MW (wind; 587493)	Renfrow (515543) 345 kV
GEN-2016-073	220	GE 2.0MW (wind; 587503)	Tap on Thistle (539801) to Wichita (532796) 345kV, ckt1&2 (Buffalo Flats 345kV; 560033)

Table 2-2
Previously Queued Nearby Interconnection Projects Included

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2002-004	199.5	GE.1.5MW	Latham 345kV (532800)
GEN-2005-013	199.8	Vestas V90 1.8MW	Caney River 345kV (532780)
GEN-2007-025	299.2	GE 1.6MW	Viola 345kV (532798)
GEN-2008-013	300	G.E. 1.68MW	Hunter 345kV (515476)
GEN-2008-021	1261 Summer 1283 Winter	GENROU	Wolf Creek 345kV (532797)
GEN-2008-098	100.8	Vestas V100 1.8MW	Tap on the Wolf Creek – LaCygne 345kV line (560004)
GEN-2009-025	59.8	Siemens 2.3MW	Tap on the Deerck – Sincblk 69KV line (515528)
GEN-2010-003	100.8	Vestas V100 1.8MW	Tap on the Wolf Creek – LaCygne 345kV line (560004)
GEN-2010-005	299.2	GE 1.6MW	Viola 345kV (532798)
ASGI-2010-006	150	GE1.5MW	Remington 138kV (301369)
GEN-2010-055	4.8	GENROU	Wekiwa 138kV (509757)
GEN-2011-057	150.0	Vestas V110 VCSS 2.0MW	Creswell 138kV (532981)
KCPL Distributed: Osawatomie	76.0	GENROU (543078)	Paola 161kV
GEN-2012-032	300	Vestas V112 3.0MW	Tap Rose Hill-Sooner 345kV (562318)
GEN-2012-033	98.8	GE 1.62MW	Tap Bunch Creek-South 4th 138kV(562303)
GEN-2012-041	85 Summer 121.5 Winter	GENROU	Tap Rose Hill-Sooner 345kV (562318)
GEN-2013-012	4 x 168.0MW Summer 4 x 215MW Winter	GENROU (514910) (514911) (514912) (514942)	Redbud 345kV (514909)
GEN-2013-028	516.4 Summer 559.5 Winter	GENROU (583743, 583746)	Tap on Tulsa N to GRDA1 345kV (562423)
GEN-2013-029	300	Vestas V100 VCSS 2MW (583753, 583756)	Renfrow 345kV(515543)
GEN-2014-064	248.4	GE 2.3MW	Otter 138kV (514708)
ASGI-2014-014	56.4W/54.3S	GENROU	Ferguson 69kV (512664)

Table 2-2 (continued)
Previously Queued Nearby Interconnection Projects Included

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2015-001	199.8	Vestas V126 3.3MW Vestas V126 3.0MW (wind; 584453, '1' & '2')	Ranch Road 345kV (515576)
GEN-2015-015	154.6	Siemens 2.3MW with Power Boost (115kW => 2.415MW)	Tap Medford Tap – Coyote 138kV (560031)
GEN-2015-016	200.0	Vestas V110 2.0MW	Tap Centerville – Marmaton 161kV (560029)
GEN-2015-024	220.0	GE 2.0MW	Tap on Thistle to Wichita 345kV, ckt1&2 (560033)
GEN-2015-025	220.0	GE 2.0MW	Tap on Thistle to Wichita 345kV, ckt1&2 (560033)
GEN-2015-030	200.1	GE 2.3MW	Sooner 345kV (514803)
ASGI-2015-004	54.300 Summer 56.364 Winter	GENSAL	Coffeyville Municipal Light & Power Northern Industrial Park Substation 69kV (512735)
GEN-2015-034	200	Vestas V112- 2MW	Ranch Road 345kV (515576)
GEN-2015-047	300	Vestas V110-2MW	Sooner 345kV Tap (514803)
GEN-2015-052	300	Vestas V110-2MW	Tap on Opensky (515621) to RoseHill (532794) 345 kV (560053)
GEN-2015-062	4.5	G.E. 1.79MW	Breckenridge 138kV (514815)
GEN-2015-063	300	Vestas V110-2MW	Tap on Woodring (514715) to Matthewson (515497) 345 kV (560055)
GEN-2015-069	300	Vestas V110-2MW	Union Ridge 230kV (532874)
GEN-2015-073	200.1	Siemens 2.3MW	Emporia/Lang 345kV (532768)
GEN-2015-066	248	G.E. 2.3MW	Tap on Cleveland (512694) to Sooner (514803) 345 kV (560056)
GEN-2015-067	150	PV inverter user model	Sooner 138kV (514802)
GEN-2015-083	125	G.E. 2.3MW	Belle Plain 138kV (533063)
GEN-2015-090	220	G.E. 2MW	Wichita (532796)-Thistle (539801) 345kV Tap (GEN-2015-024 (560033) 345kV)

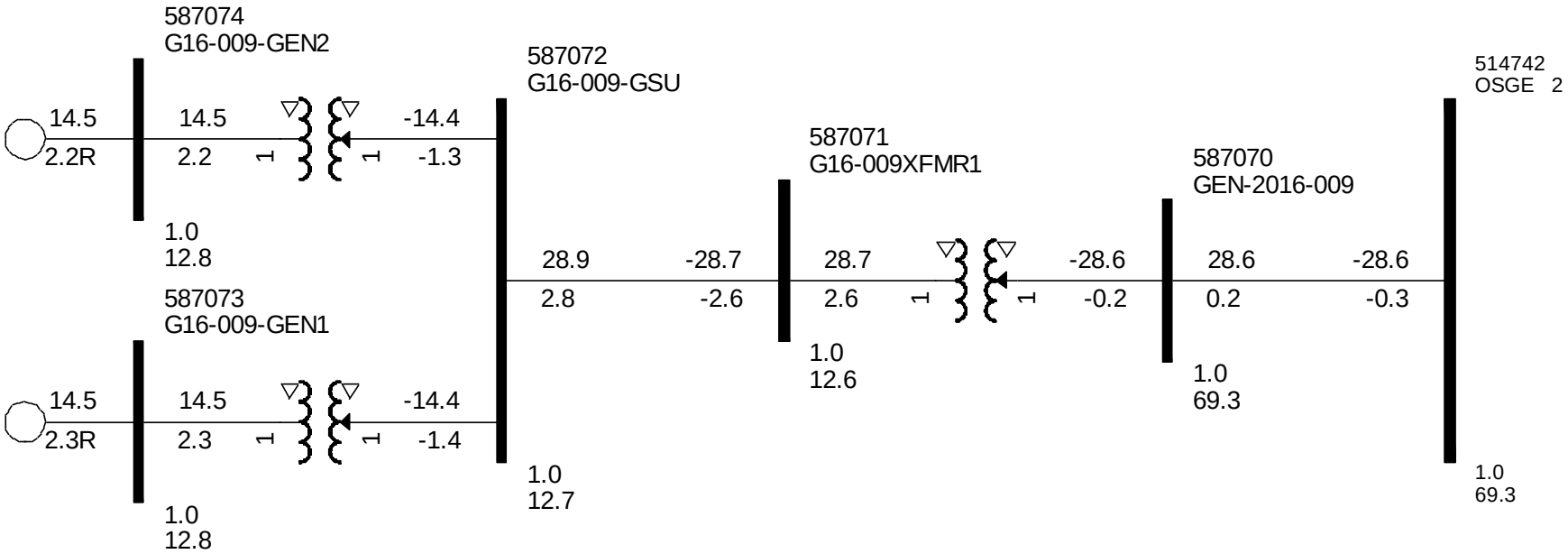

Figure 2-1. Power flow one-line diagram for interconnection project at the Osage 69 kV POI (GEN-2016-009)

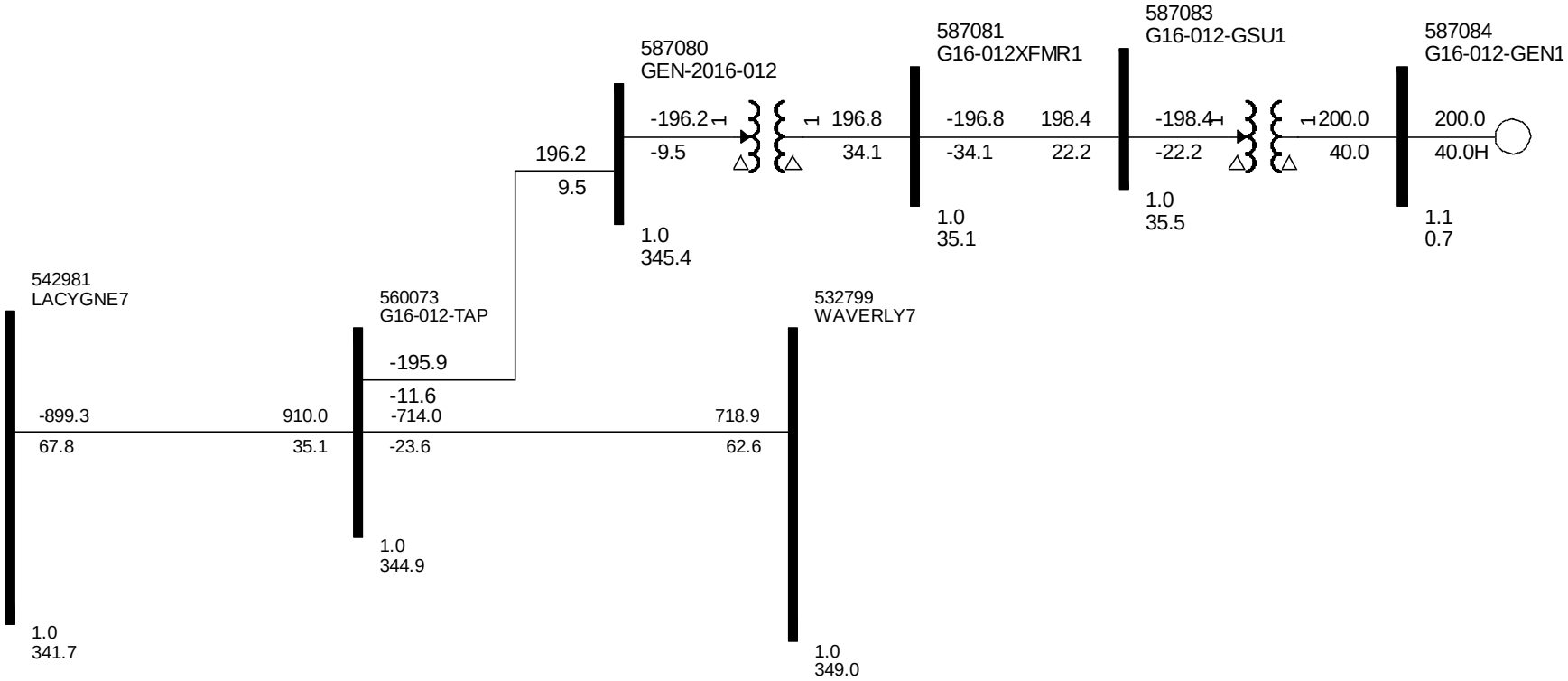

Figure 2-2. Power flow one-line diagram for interconnection project at the Tap along Waverly to LaCygne 345 kV line (GEN-2016-012)

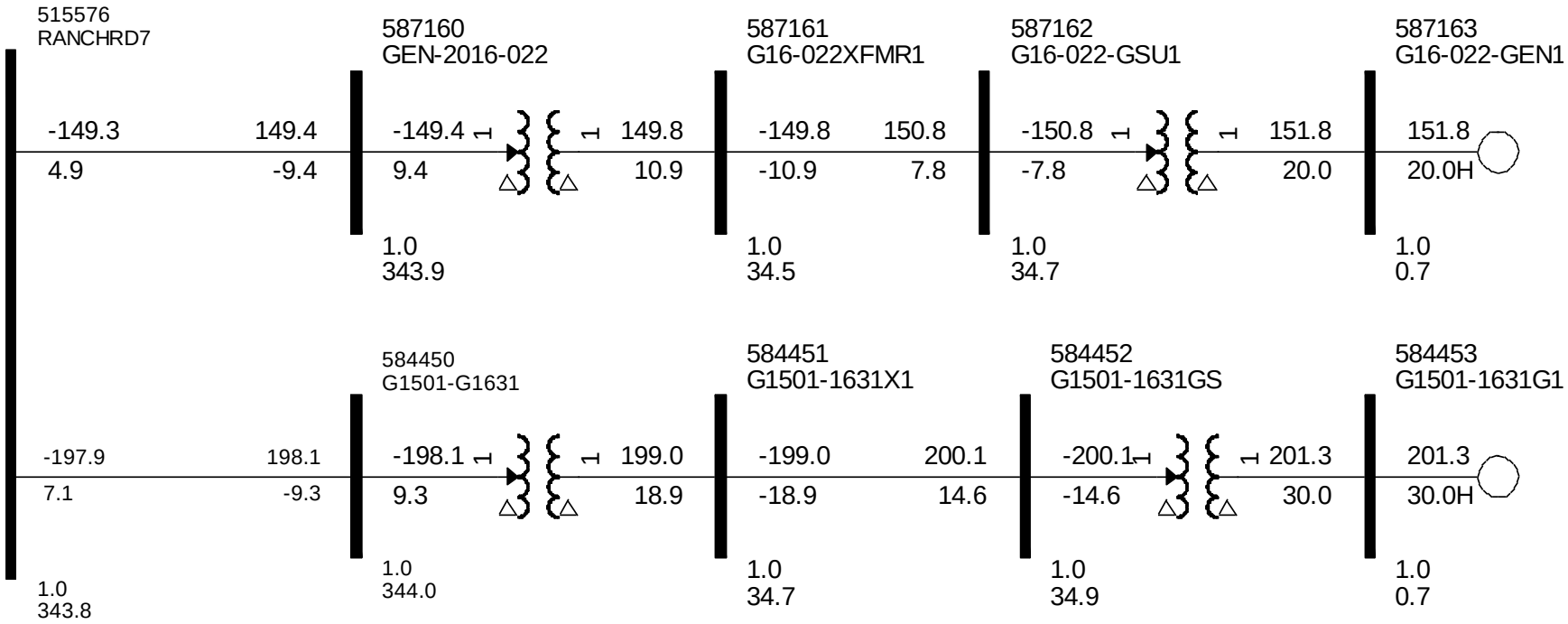

Figure 2-3. Power flow one-line diagram for interconnection projects at the Ranch Road 345 kV POI (GEN-2016-022 & GEN-2016-031)

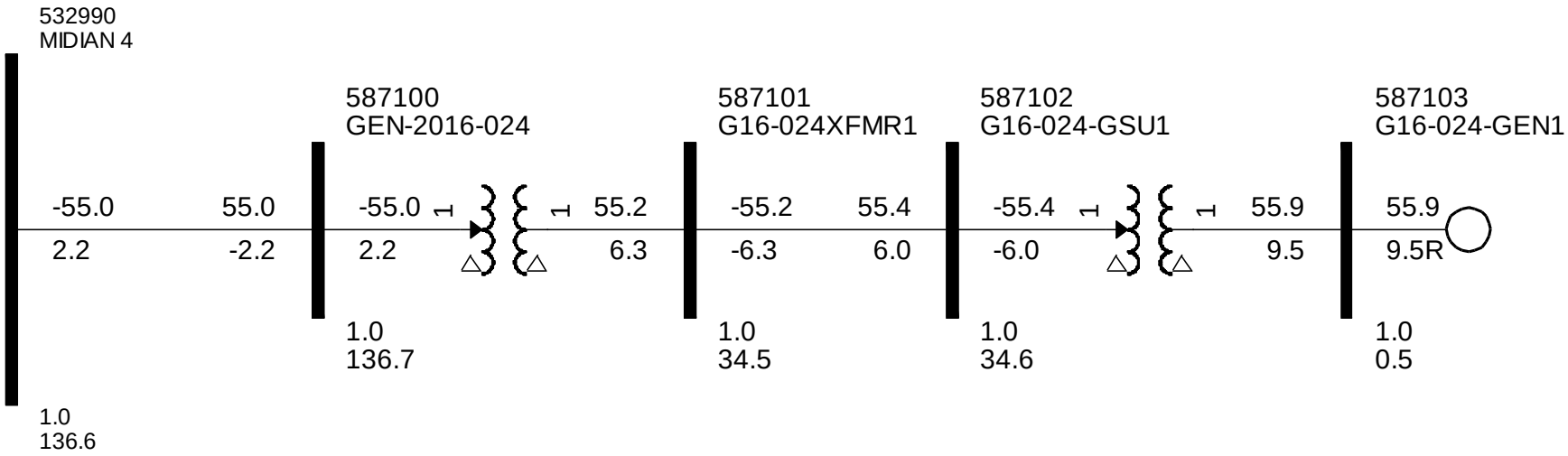

Figure 2-4. Power flow one-line diagram for interconnection project at the Midian 138 kV POI (GEN-2016-024)

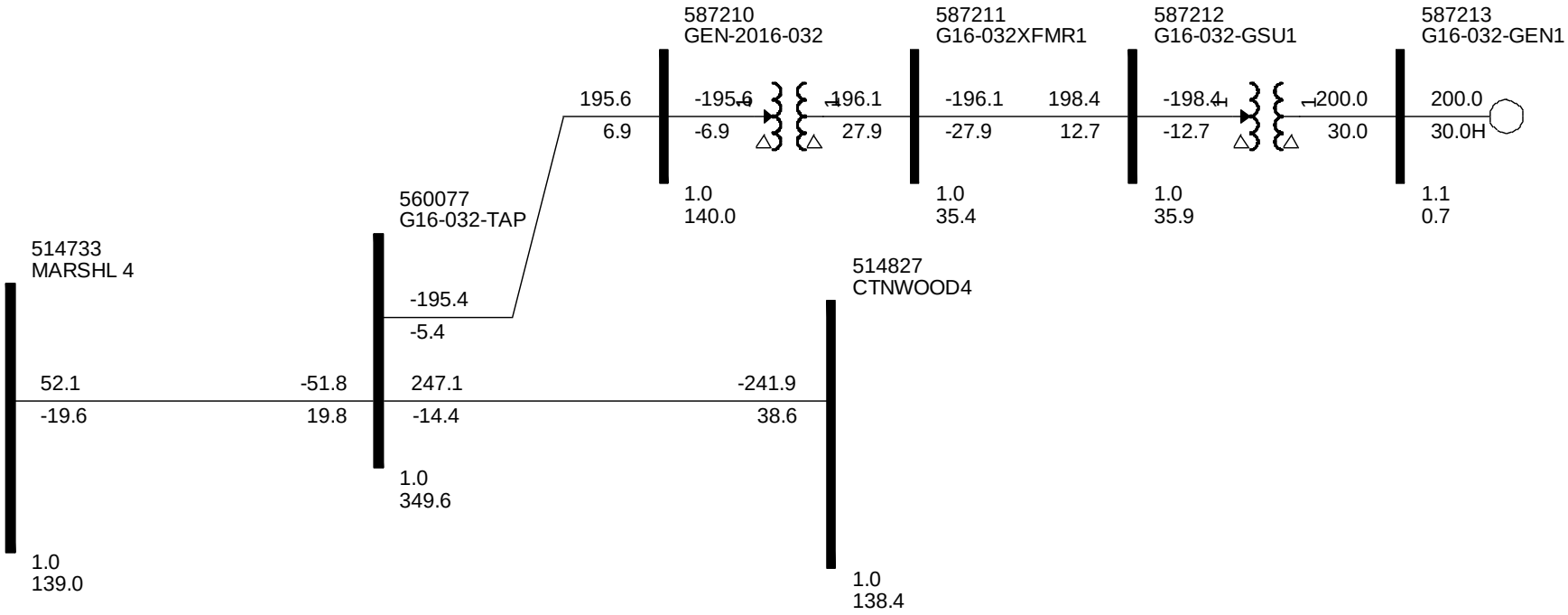

Figure 2-5. Power flow one-line diagram for interconnection project at the Tap along Marshall to Cottonwood 138 kV line (GEN-2016-032)

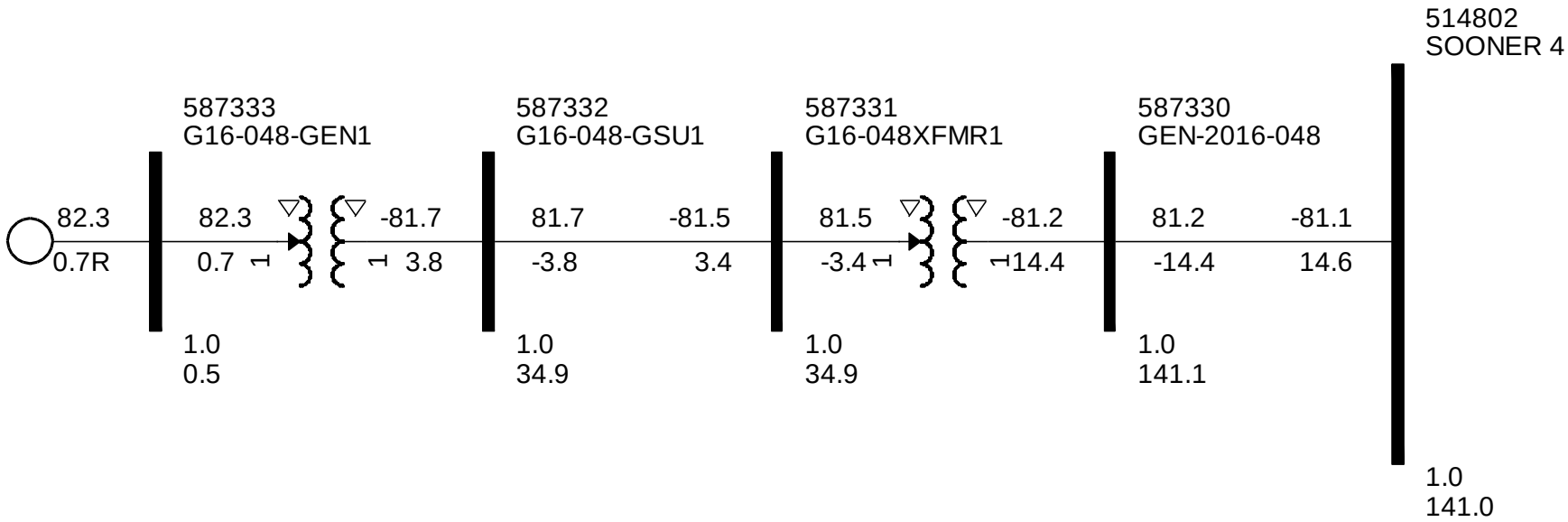

Figure 2-6. Power flow one-line diagram for interconnection at the Sooner 138 kV POI (GEN-2016-048)

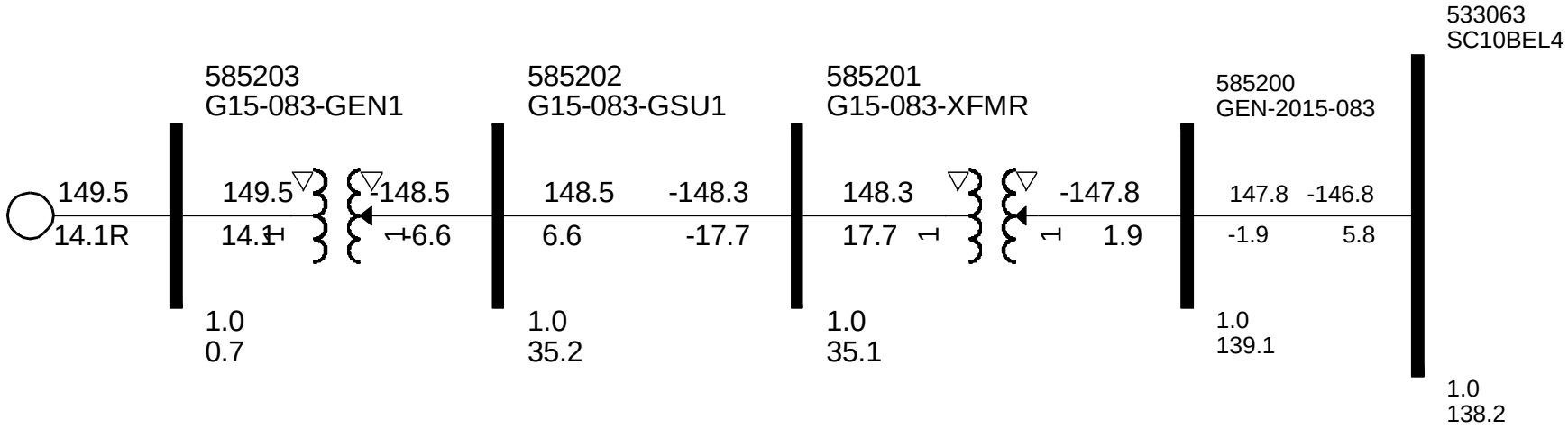

Figure 2-7. Power flow one-line diagram for interconnection project at the Belle Plain 138 kV (GEN-2016-060 and prior queued GEN-2015-083)

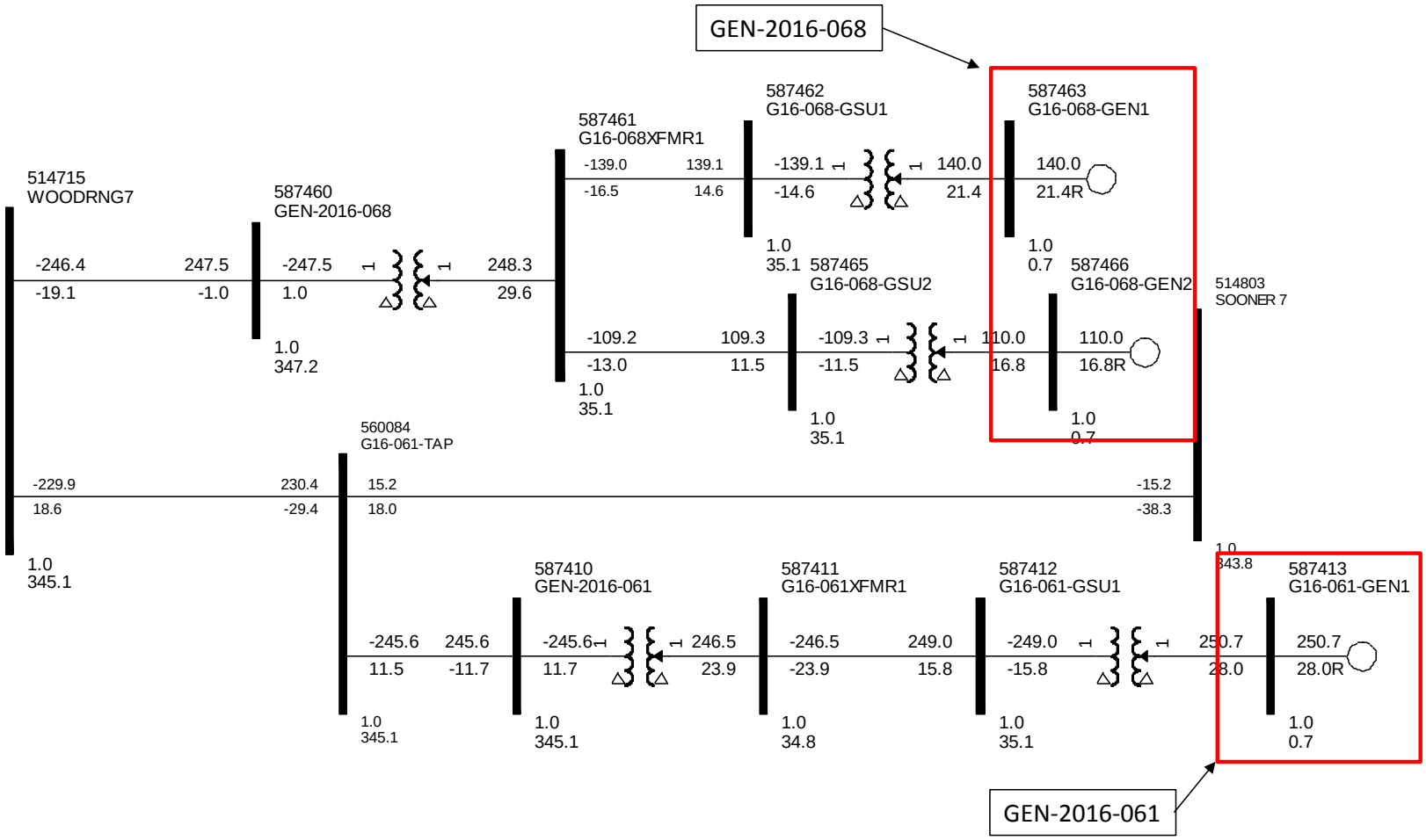

Figure 2-8. Power flow one-line diagram for interconnection projects at the Tap along Woodring to Sooner 345 kV line (GEN-2016-061) and at the Woodring 345 kV POI (GEN-2016-068)

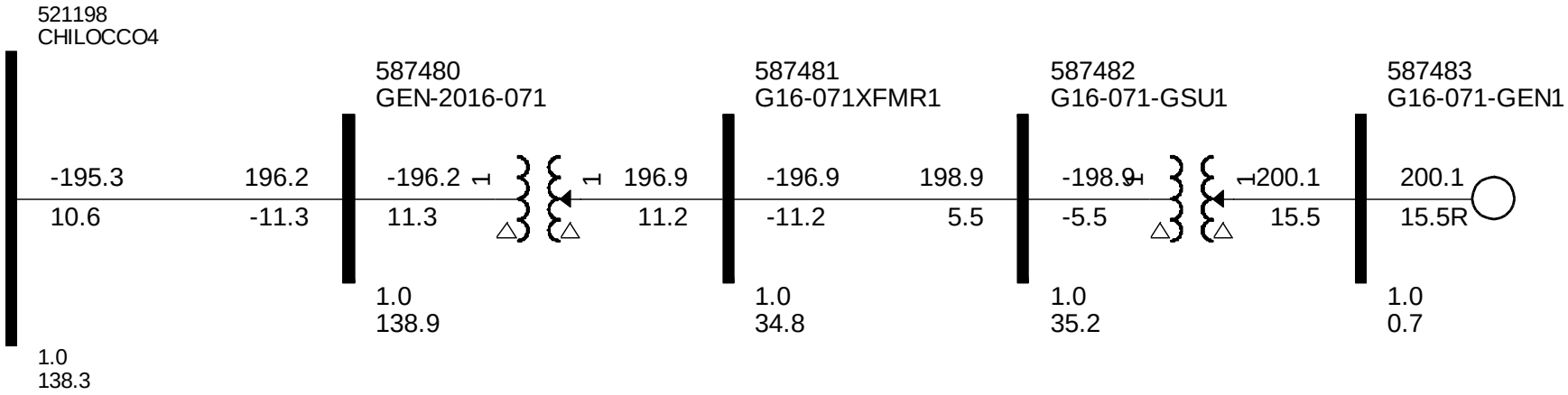

Figure 2-9. Power flow one-line diagram for interconnection project at the Chilocco 138 kV POI (GEN-2016-071)

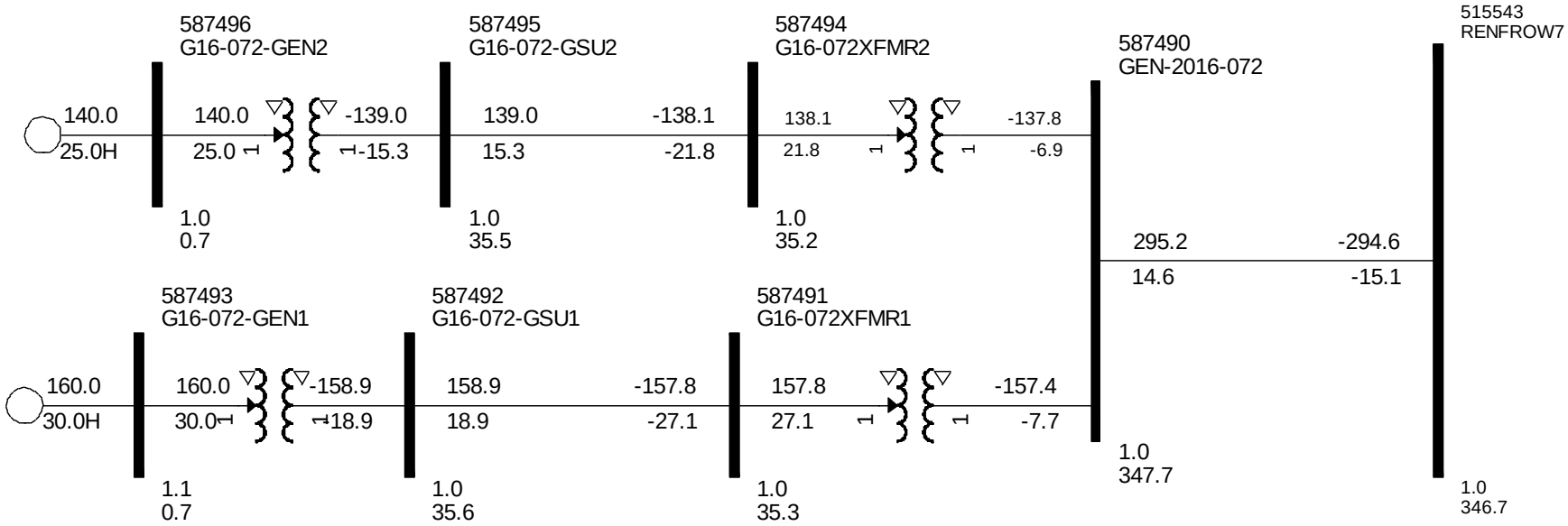

Figure 2-10. Power flow one-line diagram for interconnection project at the Renfro 345 kV POI (GEN-2016-072)

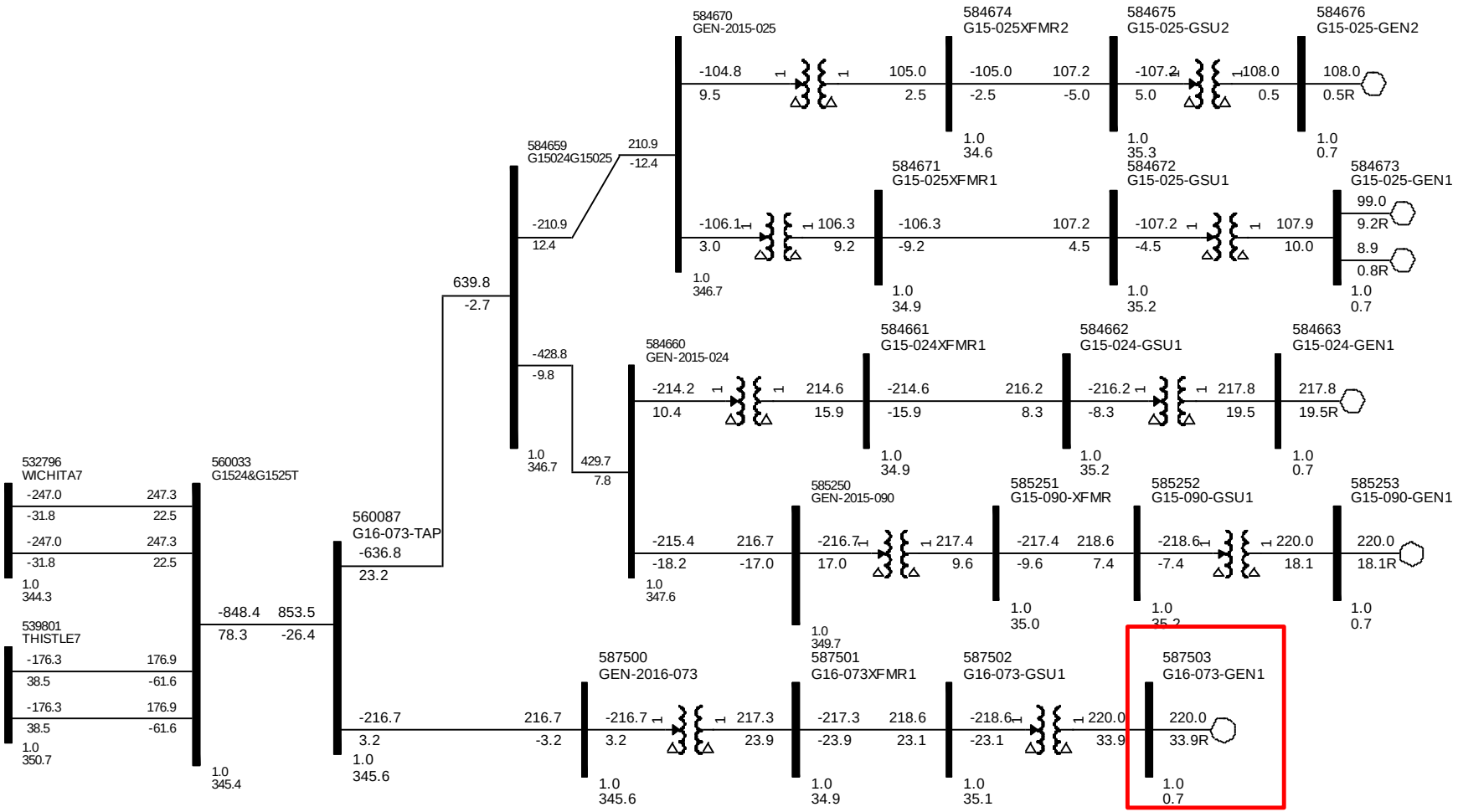

Figure 2-11. Power flow one-line diagram for interconnection project at Tap along Thistle to Wichita 345 kV line (GEN-2016-073)

Table 2-3
Case List with Contingency Description

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
1	FLT01-3PH	3 phase fault on the Osage (514742) to CONBLKT (515402) 69kV circuit 1 line, near Osage. a. Apply fault at the Osage 69kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X												
2	FLT02-3PH	3 phase fault on the Osage (514743) 138/(514742) 69/(515744) 13.2kV transformer, near Osage 69kV. a. Apply fault at the Osage 69kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.	X												
3	FLT03-3PH	3 phase fault on the Osage (514742) to OMWW (529249) 69kV circuit 1 line, near Osage. a. Apply fault at the Osage 69kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X												
4	FLT04-3PH	3 phase fault on the Osage (514743) to White Eagle (514761) 138kV circuit 1 line, near Osage. a. Apply fault at the Osage 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X												
5	FLT05-3PH	3 phase fault on the Osage (514743) to Sooner Pump Tap (514798) 138kV circuit 1 line, near Osage. a. Apply fault at the Osage 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X												

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6	FLT06-3PH	3 phase fault on the Osage (514743) to Marland Tap (514770) 138kV circuit 1 line, near Osage. a. Apply fault at the Osage 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X												
7	FLT07-3PH	3 phase fault on the Osage (514743) to Webber Tap (510376) 138kV circuit 1 line, near Osage. a. Apply fault at the Osage 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X												
8	FLT08-3PH	3 phase fault on the Osage (514743) to Standing Bear (514758) 138kV circuit 1 line, near Osage. a. Apply fault at the Osage 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X												
9	FLT09-SB	**Stuck Breaker on Osage – CONBLKT2 69kV circuit 1 line** a. Apply single-phase fault at Osage (514742) on the 69kV bus. b. After 16 cycles, trip the Osage 138 (514743)/69/(515744) 13.2kV transformer c. Trip the Osage – CONBLKT2 (515402) 69kV circuit 1 line, and remove the fault	X												
10	FLT10-SB	**Stuck Breaker on Osage Transformer circuit 1 line** a. Apply single-phase fault at Osage (514742) on the 69kV bus. b. After 16 cycles, trip the Osage 138/69/13.2kV (514743/514742/515744) transformer c. Trip the Osage 138/69/13.2kV (514743/514742/515744) transformer, and remove the fault	X												

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11	FLT11-SB	**Stuck Breaker on Osage – Marland Tap 138kV circuit 1 line** a. Apply single-phase fault at Osage (514743) on the 138kV bus. b. After 16 cycles, trip the Osage – Marland Tap (514770) 138kV circuit 1 line c. Trip the Osage – Webber Tap (510376) 138kV circuit 1 line, and remove the fault	X												
12	FLT12-PO	**Prior outage on the Osage (514742) – CONBLKT2 (515402) 69kV line** 3 phase fault on the Osage 138/69/13.2kV (514743/514742/515744) transformer, near Osage. a. Apply fault at the Osage 69kV bus. b. Clear fault after 5 cycles by tripping the faulted line.	X												
13	FLT13-PO	**Prior outage on the Osage 138/69/13.2kV (514743/514742/515744) transformer** 3 phase fault on the Osage 138/69/13.2kV (514743/514742/515745) transformer, near Osage. a. Apply fault at the Osage 69kV bus. b. Clear fault after 5 cycles by tripping the faulted line.	X												
14	FLT14-PO	**Prior outage on the Osage (514743) – Standing Bear (514758) 138kV line** 3 phase fault on the Osage (514743) – White Eagle (514761) 138kV line, near Osage. a. Apply fault at the Osage 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	X												
15	FLT15-3PH	3 phase fault on the G16-012-Tap (560073) to LaCygne (542981) 345kV circuit 1 line, near G16-012-Tap. a. Apply fault at the G16-012-Tap 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X											
16	FLT16-3PH	3 phase fault on the G16-012-Tap (560073) to Waverly (532799) 345kV circuit 1 line, near G16-012-Tap. a. Apply fault at the G16-012-Tap 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X											

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17	FLT17-3PH	3 phase fault on the Waverly (532799) to Wolf Creek (532797) 345kV line, near Waverly. a. Apply fault at the Waverly 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X											
18	FLT18-3PH	3 phase fault on the Rose Hill (532794) to Wolf Creek (532797) 345kV line, near Wolf Creek. a. Apply fault at the Wolf Creek 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X											
19	FLT19-3PH	3 phase fault on the Benton (532791) to Wolf Creek (532797) 345kV line, near Wolf Creek. a. Apply fault at the Wolf Creek 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X											
20	FLT20-3PH	3 phase fault on Wolf Creek 345/69/17kV (532797/533653/532962) transformer, near Wolf Creek. a. Apply fault at the Wolf Creek 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X											
21	FLT21-3PH	3 phase fault on the LaCygne (542981) to West Gardner (542965) 345kV line, near LaCygne. a. Apply fault at the LaCygne 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X											

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22	FLT22-3PH	3 phase fault on the LaCygne (542981) to Stilwell (542968) 345kV line, near LaCygne. a. Apply fault at the LaCygne 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X											
23	FLT23-3PH	3 phase fault on the LaCygne (542981) to Neosho (532793) 345kV line, near LaCygne. a. Apply fault at the LaCygne 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X											
24	FLT24-SB	**Stuck Breaker on LaCygne – G16-012-Tap 345kV circuit 1 line** a. Apply single-phase fault at LaCygne (542981) on the 345kV bus. b. After 16 cycles, trip the LaCygne – G16-012-Tap (560073) 345kV circuit 1 line c. Trip the LaCygne – West Gardner (542965) 345kV circuit 1 line, and remove the fault		X											
25	FLT25-SB	**Stuck Breaker on LaCygne – West Gardner 345kV circuit 1 line** a. Apply single-phase fault at LaCygne (542981) on the 345kV bus. b. After 16 cycles, trip the LaCygne – West Gardner (542965) 345kV circuit 1 line c. Trip the LaCygne – Stilwell (542968) 345kV circuit 1 line and load #1 at LaCygne, and remove the fault.		X											
26	FLT26-SB	**Stuck Breaker on Wolf Creek – Waverly 345kV circuit 1 line** a. Apply single-phase fault at Wolf Creek (532797) on the 345kV bus. b. After 16 cycles, trip the Wolf Creek – Waverly (532799) 345kV circuit 1 line c. Trip the Wolf Creek – Benton (532791) 345kV circuit 1 line, and remove the fault		X											

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27	FLT27-PO	**Prior outage of the LaCygne (542981) – G16-012-Tap (560073) 345kV line** 3 phase fault on the Wolf Creek (532797) – Rose Hill (532794) 345kV line, near Wolf Creek. a. Apply fault at the Wolf Creek 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X											
28	FLT28-PO	**Prior outage of the LaCygne (542981) – G16-012-Tap (560073) 345kV line** 3 phase fault on the Wolf Creek (532797) – Benton (532791) 345kV line, near Wolf Creek. a. Apply fault at the Wolf Creek 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X											
29	FLT29-PO	**Prior outage of the Waverly (532799) – G16-012-Tap (560073) 345kV line** 3 phase fault on the LaCygne (542981) – West Gardner (542965) 345kV line, near LaCygne. a. Apply fault at the LaCygne 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X											
30	FLT30-PO	**Prior outage of the Waverly (532799) – G16-012-Tap (560073) 345kV line** 3 phase fault on the LaCygne (542981) – Stilwell (542968) 345kV line, near LaCygne. a. Apply fault at the LaCygne 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X											

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31	FLT31-PO	**Prior outage of the Waverly (532799) – G16-012-Tap (560073) 345kV line** 3 phase fault on the LaCygne (542981) – Neosho (532793) 345kV line, near LaCygne. a. Apply fault at the LaCygne 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X											
32	FLT32-PO	**Prior outage of the LaCygne (542981) – West Gardner (542965) 345kV line** 3 phase fault on the LaCygne (542981) – Neosho (532793) 345kV line, near LaCygne. a. Apply fault at the LaCygne 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.		X											
33	FLT33-3PH	3 phase fault on the Open Sky (515621) to Ranch Road (515576) 345kV line, near Ranch Road. a. Apply fault at the Ranch Road 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X		X		X		X				
34	FLT34-3PH	3 phase fault on the Open Sky (515621) to G15-052T (560053) 345kV line, near Open Sky. a. Apply fault at the Open Sky 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X		X								
35	FLT35-3PH	3 phase fault on the Ranch Road (515576) to Sooner (514803) 345kV line, near Ranch Road. a. Apply fault at the Ranch Road 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X		X				X				

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36	FLT36-3PH	3 phase fault on the G15-052T (560053) to Rose Hill (532794) 345kV line, near Rose Hill. a. Apply fault at the Rose Hill 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X		X								
37	FLT37-3PH	3 phase fault on the Sooner (514803) to Spring Creek (514881) 345kV line, near Sooner. a. Apply fault at the Sooner 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X		X		X		X				
38	FLT38-3PH	3 phase fault on the Sooner (514803) to G15-066T (560056) 345kV line, near Sooner. a. Apply fault at the Sooner 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X		X		X		X				
39	FLT39-3PH	3 phase fault on the Sooner (514803) to G16-061-Tap (560084) 345kV line, near Sooner. a. Apply fault at the Sooner 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X		X		X		X				
40	FLT40-3PH	3 phase fault on the Sooner (514803) to G16-061-Tap (560084) 345kV line, near G16-061-Tap. a. Apply fault at the G16-061-Tap 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X		X		X		X				
41	FLT41-3PH	3 phase fault on the Sooner 345/138/13.8kV (514803/514802/515760) transformer, near Sooner. a. Apply fault at the Sooner 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.			X		X		X		X				

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42	FLT42-SB	**Stuck Breaker on Ranch Road – Open Sky 345kV circuit 1 line** a. Apply single-phase fault at Open Sky (515621) on the 345kV bus. b. After 16 cycles, trip the Open Sky – Ranch Road (515576) 345kV circuit 1 line c. Trip the Open Sky – G15-052T (560053) 345kV circuit 1 line, and remove the fault			X		X								
43	FLT43-SB	**Stuck Breaker on Rose Hill – Benton 345kV circuit 1 line** a. Apply single-phase fault at Rose Hill (532794) on the 345kV bus. b. After 16 cycles, trip the Rose Hill – Benton (532791) 345kV circuit 1 line c. Trip the Rose Hill – G15-052T (560053) 345kV circuit 1 line, and remove the fault			X		X								
44	FLT44-SB	**Stuck Breaker on Sooner – Spring Creek 345kV circuit 1 line** a. Apply single-phase fault at Sooner (514803) on the 345kV bus. b. After 16 cycles, trip the Sooner – Spring Creek (514881) 345kV circuit 1 line c. Trip the Sooner – Ranch Road (515576) 345kV circuit 1 line, and remove the fault			X		X		X		X				
45	FLT45-SB	**Stuck Breaker on Sooner – G15-066T 345kV circuit 1 line** a. Apply single-phase fault at Sooner (514803) on the 345kV bus. b. After 16 cycles, trip the Sooner – G15-066T (560056) 345kV circuit 1 line c. Trip the Sooner – Ranch Road (515576) 345kV circuit 1 line, and remove the fault			X		X		X		X				
46	FLT46-SB	**Stuck Breaker on Sooner – G15-066T 345kV circuit 1 line** a. Apply single-phase fault at Sooner (514803) on the 345kV bus. b. After 16 cycles, trip the Sooner – G15-066T (560056) 345kV circuit 1 line c. Trip the Sooner – G16-061-Tap (560084) 345kV circuit 1 line, and remove the fault			X		X		X		X				
47	FLT47-PO	**Prior outage of the Rose Hill (532794) – G15-052T (560053) 345kV line** 3 phase fault on the Ranch Road (515576) – Open Sky (515621) 345kV line, near Ranch Road. a. Apply fault at the Ranch Road 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X		X								

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48	FLT48-PO	**Prior outage of the Sooner (514803) – G15-066T (560056) 345kV line** 3 phase fault on the Ranch Road (515576) – Open Sky (515621) 345kV line, near Ranch Road. a. Apply fault at the Ranch Road 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X		X								
49	FLT49-PO	**Prior outage of the Sooner (514803) – G15-066T (560056) 345kV line** 3 phase fault on the Ranch Road (515576) – Sooner (514803) 345kV line, near Ranch Road. a. Apply fault at the Ranch Road 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X		X								
50	FLT50-3PH	3 phase fault on the Midian (532990) to Butler (532987) 138kV line, near Midian. a. Apply fault at the Midian 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X									
51	FLT51-3PH	3 phase fault on the Midian (532990) to Benton (532986) 138kV line, near Midian. a. Apply fault at the Midian 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X									
52	FLT52-3PH	3 phase fault on the Midian 138/69/13.2kV (532990/533597/533082) transformer, near Midian. a. Apply fault at the Midian 138kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.				X									

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53	FLT53-3PH	3 phase fault on the Butler (532987) to Butler Tap (532989) 138kV line, near Butler. a. Apply fault at the Butler 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X									
54	FLT54-3PH	3 phase fault on the Butler (532987) to Altoona (533001) 138kV line, near Butler. a. Apply fault at the Butler 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X									
55	FLT55-3PH	3 phase fault on the Butler 138/69kV (532987/533583) transformer, near Butler. a. Apply fault at the Butler 138kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.				X									
56	FLT56-3PH	3 phase fault on the Benton (532986) to Chisholm (533035) 138kV line, near Benton. a. Apply fault at the Benton 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X									
57	FLT57-3PH	3 phase fault on the Benton (532986) to 29th (533024) 138kV line, near Benton. a. Apply fault at the Benton 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X									

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58	FLT58-3PH	3 phase fault on the Benton (532986) to Belaire (532988) 138kV line, near Benton. a. Apply fault at the Benton 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X									
59	FLT59-3PH	3 phase fault on the Benton 345/138/13.8kV (532791/532986/532821) transformer, near Benton. a. Apply fault at the Benton 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line.				X									
60	FLT60-SB	**Stuck Breaker on Midian – Benton 138kV circuit 1 line** a. Apply single-phase fault at Midian (532990) on the 138kV bus. b. After 16 cycles, trip the Midian – Benton (532986) 138kV circuit 1 line c. Trip the Midian – Butler (532987) 138kV circuit 1 line, and remove the fault				X									
61	FLT61-SB	**Stuck Breaker on Midian – Benton 138kV circuit 1 line** a. Apply single-phase fault at Midian (532990) on the 138kV bus. b. After 16 cycles, trip the Midian – Benton (532986) 138kV circuit 1 line c. Trip the Midian 138/69/13.2kV (532990/533597/533082) transformer, and remove the fault				X									
62	FLT62-SB	**Stuck Breaker on Midian – Butler 138kV circuit 1 line** a. Apply single-phase fault at Midian (532990) on the 138kV bus. b. After 16 cycles, trip the Midian – Butler (532987) 138kV circuit 1 line c. Trip the Midian 138/69/13.2kV (532990/533597/533082) transformer, and remove the fault				X									
63	FLT63-PO	**Prior outage of the Midian (532990) – Butler (532987) 138kV line** 3 phase fault on the Midian (532990) – Benton (532986) 138kV line, near Midian. a. Apply fault at the Midian 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.				X									

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
64	FLT64-PO	**Prior outage of the Midian (532990) – Butler (532987) 138kV line** 3 phase fault on the Midian 138/69/13.2kV (532990/533597/533082) transformer, near Midian. a. Apply fault at the Midian 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line.				X									
65	FLT65-PO	**Prior outage of the Midian (532990) – Benton (532986) 138kV line** 3 phase fault on the Midian 138/69/13.2kV (532990/533597/533082) transformer, near Midian. a. Apply fault at the Midian 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line.				X									
66	FLT66-3PH	3 phase fault on the G16-032-Tap (560077) to Marshall (514733) 138kV line, near G16-032-Tap. a. Apply fault at the G16-032-Tap 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X							
67	FLT67-3PH	3 phase fault on the G16-032-Tap (560077) to Cottonwood Creek (514827) 138kV line, near G16-032-Tap. a. Apply fault at the G16-032-Tap 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X							
68	FLT68-3PH	3 phase fault on the Cottonwood Creek (514827) to Cresent (515377) 138kV line, near Cottonwood Creek. a. Apply fault at the Cottonwood Creek 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X							

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
69	FLT69-3PH	3 phase fault on the Cottonwood Creek (514827) to Pine St (514829) 138kV line, near Cottonwood Creek. a. Apply fault at the Cottonwood 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X							
70	FLT70-3PH	3 phase fault on the Cottonwood Creek (514827) to Arcadia (514907) 138kV line, near Cottonwood Creek. a. Apply fault at the Cottonwood 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X							
71	FLT71-3PH	3 phase fault on the Cottonwood Creek (514827) to Liberty Lake (515373) 138kV line, near Cottonwood Creek. a. Apply fault at the Cottonwood 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X							
72	FLT72-3PH	3 phase fault on the Marshall (514733) to Woodring (514714) 138kV line, near Marshall. a. Apply fault at the Marshall 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X				X			
73	FLT73-SB	**Stuck Breaker on Marshall – G16-032-Tap 138kV circuit 1 line** a. Apply single-phase fault at Marshall (514733) on the 138kV bus. b. After 16 cycles, trip the Marshall – G16-032-Tap (560077) 138kV circuit 1 line c. Trip the Marshall – Woodring (514714) 138kV circuit 1 line, and remove the fault						X							

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
74	FLT74-SB	**Stuck Breaker on Cottonwood Creek – G16-032-Tap 138kV circuit 1 line** a. Apply single-phase fault at Cottonwood Creek (514827) on the 138kV bus. b. After 16 cycles, trip the Cottonwood Creek – G16-032-Tap (560077) 138kV circuit 1 line c. Trip the Cottonwood Creek – Arcadia (514907) 138kV circuit 1 line, and remove the fault						X							
75	FLT75-SB	**Stuck Breaker on Cottonwood Creek – G16-032-Tap 138kV circuit 1 line** a. Apply single-phase fault at Cottonwood Creek (514827) on the 138kV bus. b. After 16 cycles, trip the Cottonwood Creek – G16-032-Tap (560077) 138kV circuit 1 line c. Trip the Cottonwood Creek – Liberty Lake (515373) 138kV circuit 1 line, and remove the fault						X							
76	FLT76-SB	**Stuck Breaker on Cottonwood Creek – Arcadia 138kV circuit 1 line** a. Apply single-phase fault at Cottonwood Creek (514827) on the 138kV bus. b. After 16 cycles, trip the Cottonwood Creek – Arcadia (514907) 138kV circuit 1 line c. Trip the Cottonwood Creek – Liberty Lake (515373) 138kV circuit 1 line, and remove the fault						X							
77	FLT77-PO	**Prior outage of the Cottonwood Creek (514827) – Liberty Lake (515373) 138kV line** 3 phase fault on the G16-032-Tap (560077) – Cottonwood Creek (514827) 138kV line, near G16-032-Tap. a. Apply fault at the G16-032-Tap 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X							
78	FLT78-PO	**Prior outage of the Cottonwood Creek (514827) – Liberty Lake (515373) 138kV line** 3 phase fault on the G16-032-Tap (560077) – Marshall (514733) 138kV line, near G16-032-Tap. a. Apply fault at the G16-032-Tap 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X							

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
79	FLT79-PO	**Prior outage of the Woodring (514714) – Wauko Tap (514711) 138kV line** 3 phase fault on the G16-032-Tap (560077) – Marshall (514733) 138kV line, near G16-032-Tap. a. Apply fault at the G16-032-Tap 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.						X							
80	FLT80-3PH	3 phase fault on the Ranch Road (515576) to Sooner (514803) 345kV line, near Sooner. a. Apply fault at the Sooner 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.							X						
81	FLT81-3PH	3 phase fault on the Spring Creek (514881) to Northwest (514880) 345kV line, near Spring Creek. a. Apply fault at the Spring Creek 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.							X						
82	FLT82-3PH	3 phase fault on the G15-066T (560056) to Cleveland (512694) 345kV line, near G15-066T. a. Apply fault at the G15-066T 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.							X						
83	FLT83-3PH	3 phase fault on the G16-061-Tap (560084) to Woodring (514715) 345kV line, near G16-061-Tap. a. Apply fault at the G16-061-Tap 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.							X		X	X			

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
84	FLT84-PO	**Prior outage of the Sooner (514803) – G15-066T (560056) 345kV line** 3 phase fault on the Sooner (514803) – G16-061-Tap (560084) 345kV line, near Sooner. a. Apply fault at the Sooner 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.							X		X				
85	FLT85-PO	**Prior outage of the Sooner (514803) – G15-066T (560056) 345kV line** 3 phase fault on the Sooner (514803) – Spring Creek (514881) 345kV line, near Sooner. a. Apply fault at the Sooner 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.							X		X				
86	FLT86-PO	**Prior outage of the Sooner (514803) – Ranch Road (515576) 345kV line** 3 phase fault on the Sooner (514803) – Spring Creek (514881) 345kV line, near Sooner. a. Apply fault at the Sooner 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.							X		X				
87	FLT87-PO	**Prior outage of the Sooner (514803) – Ranch Road (515576) 345kV line** 3 phase fault on the Sooner 345/138/13.8kV (514803/514802/515760) transformer, near Sooner. a. Apply fault at the Sooner 345kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer and remove fault.							X		X				
88	FLT88-3PH	3 phase fault on the Belle Plaine (533063) to Sumner (532984) 138kV line, near Belle Plaine. a. Apply fault at the Belle Plaine 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.								X					

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
89	FLT89-3PH	3 phase fault on the Belle Plaine (533063) to Farber (533042) 138kV line, near Belle Plaine. a. Apply fault at the Belle Plaine 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.								X					
90	FLT90-3PH	3 phase fault on the Farber (533042) to El Paso (533039) 138kV line, near Farber. a. Apply fault at the Farber 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.								X					
91	FLT91-3PH	3 phase fault on the Sumner (532984) to Viola (533075) 138kV line, near Sumner. a. Apply fault at the Sumner 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.								X					
92	FLT92-3PH	3 phase fault on the Sumner (532984) to Oxford (532982) 138kV line, near Sumner. a. Apply fault at the Sumner 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.								X					
93	FLT93-3PH	3 phase fault on the Sumner (532984) to TIMBJCT (532992) 138kV line, near Sumner. a. Apply fault at the Sumner 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.								X					

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
94	FLT94-SB	**Stuck Breaker on Sumner – Viola 138kV circuit 1 line** a. Apply single-phase fault at Sumner (532984) on the 138kV bus. b. After 16 cycles, trip the Sumner – Viola (533075) 138kV circuit 1 line c. Trip the Sumner – TIMBJCT (532992) 138kV circuit 1 line, and remove the fault								X					
95	FLT95-SB	**Stuck Breaker on Sumner – Viola 138kV circuit 1 line** a. Apply single-phase fault at Sumner (532984) on the 138kV bus. b. After 16 cycles, trip the Sumner – Oxford (532982) 138kV circuit 1 line c. Trip the Sumner – TIMBJCT (532992) 138kV circuit 1 line, and remove the fault								X					
96	FLT96-PO	**Prior outage of the Sumner (532984) – TIMBJCT (532992) 138kV line** 3 phase fault on the Belle Plaine (533063) – Farber (533042) 138kV line, near Belle Plaine. a. Apply fault at the Belle Plaine 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.								X					
97	FLT97-PO	**Prior outage of the Sumner (532984) – Oxford (532982) 138kV line** 3 phase fault on the Belle Plaine (533063) – Farber (533042) 138kV line, near Belle Plaine. a. Apply fault at the Belle Plaine 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.								X					
98	FLT98-PO	**Prior outage of the Belle Plaine (533063) – Farber (533042) 138kV line** 3 phase fault on the Sumner (532984) – TIMBJCT (532992) 138kV line, near Sumner. a. Apply fault at the Sumner 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.								X					

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
99	FLT99-3PH	3 phase fault on the Woodring (514715) to Hunters (515476) 345kV line, near Woodring. a. Apply fault at the Woodring 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.									X	X			
100	FLT100-3PH	3 phase fault on the Woodring (514715) to G15-063T (560055) 345kV line, near Woodring. a. Apply fault at the Woodring 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.									X	X			
101	FLT101-3PH	3 phase fault on the Woodring 345/138/13.8kV (514715/514714/515770) transformer, near Woodring. a. Apply fault at the Woodring 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.									X	X			
102	FLT102-SB	**Stuck Breaker on Woodring – G15-061-Tap 345kV circuit 1 line** a. Apply single-phase fault at Woodring (514715) on the 345kV bus. b. After 16 cycles, trip the Woodring – G16-061-Tap (560084) 345kV circuit 1 line c. Trip the Woodring – G15-063T (560055) 345kV circuit 1 line, and remove the fault									X	X			
103	FLT103-PO	**Prior outage of the Woodring (514715) – Hunters (515476) 345kV line** 3 phase fault on the G16-061-Tap (560084) – Sooner (514803) 345kV line, near G16-061-Tap. a. Apply fault at the G16-061-Tap 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.									X	X			

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
104	FLT104-3PH	3 phase fault on the G15-063T (560055) to Mathewson (515497) 345kV line, near G15-063T. a. Apply fault at the G15-063T 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.										X			
105	FLT105-3PH	3 phase fault on the Hunters (515476) to Chisholm (515477) 345kV line, near Hunters. a. Apply fault at the Hunters 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.										X			
106	FLT106-3PH	3 phase fault on the Woodring (514714) to Fairmont Tap (514709) 138kV line, near Woodring. a. Apply fault at the Woodring 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.										X			
107	FLT107-SB	**Stuck Breaker on Woodring – G15-061-Tap 345kV circuit 1 line** a. Apply single-phase fault at Woodring (514715) on the 345kV bus. b. After 16 cycles, trip the Woodring – G16-061-Tap (560084) 345kV circuit 1 line c. Trip the Woodring – Hunters (515476) 345kV circuit 1 line, and remove the fault										X			
108	FLT108-SB	**Stuck Breaker on Woodring – G15-063T 345kV circuit 1 line** a. Apply single-phase fault at Woodring (514715) on the 345kV bus. b. After 16 cycles, trip the Woodring – G15-063T (560055) 345kV circuit 1 line c. Trip the Woodring – Hunters (515476) 345kV circuit 1 line, and remove the fault										X			

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
109	FLT109-PO	**Prior outage of the Woodring (514715) – Hunters (515476) 345kV line** 3 phase fault on the Woodring (514715) – G15-063T (560055) 345kV line, near Woodring. a. Apply fault at the Woodring 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.										X			
110	FLT110-PO	**Prior outage of the Woodring (514715) – G16-061-Tap (560084) 345kV line** 3 phase fault on the Woodring 345/138/13.8kV (514715/514714/515770) transformer, near Woodring. a. Apply fault at the Woodring 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.										X			
111	FLT111-3PH	3 phase fault on the Middleton Tap (514804) to Peckham Tap (515381) 138kV line, near Middleton Tap. a. Apply fault at the Middleton Tap 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.											X		
112	FLT112-3PH	3 phase fault on the Middleton Tap (514804) to Creswell (532981) 138kV line, near Middleton Tap. a. Apply fault at the Middleton Tap 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.											X		
113	FLT113-3PH	3 phase fault on the Peckham Tap (515381) to Newkirk (514759) 138kV line, near Peckham Tap. a. Apply fault at the Peckham Tap 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.											X		

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
114	FLT114-3PH	3 phase fault on the Creswell (532981) to Oxford (532982) 138kV line, near Creswell. a. Apply fault at the Creswell 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.											X		
115	FLT115-3PH	3 phase fault on the Creswell 138/69/13.2kV (532981/533543/533080) transformer, near Creswell. a. Apply fault at the Creswell 138kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer and remove fault.											X		
116	FLT116-3PH	3 phase fault on the Creswell (532981) to Slate Creek (533070) 138kV line, near Creswell. a. Apply fault at the Creswell 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.											X		
117	FLT117-3PH	3 phase fault on the Kildare (514760) to Chikaskia (514757) 138kV line, near Kildare. a. Apply fault at the Kildare 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.											X		
118	FLT118-SB	**Stuck Breaker on Peckham Tap – Middleton Tap 138kV circuit 1 line** a. Apply single-phase fault at Peckham Tap (515381) on the 138kV bus. b. After 16 cycles, trip the Peckham Tap – Middleton Tap (514804) 138kV circuit 1 line c. Trip the Peckham Tap – Newkirk (514759) 138kV circuit 1 line, and remove the fault											X		
119	FLT119-SB	**Stuck Breaker on Creswell – Middleton Tap 138kV circuit 1 line** a. Apply single-phase fault at Creswell (532981) on the 138kV bus. b. After 16 cycles, trip the Creswell – Middleton Tap (514804) 138kV circuit 1 line c. Trip the Creswell – Slate Creek (533070) 138kV circuit 1 line, and remove the fault											X		

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
120	FLT120-SB	**Stuck Breaker on Creswell – Oxford 138kV circuit 1 line** a. Apply single-phase fault at Creswell (532981) on the 138kV bus. b. After 16 cycles, trip the Creswell – Oxford (532982) 138kV circuit 1 line c. Trip the Creswell – Slate Creek (533070) 138kV circuit 1 line, and remove the fault											X		
121	FLT121-PO	**Prior outage of the Middleton Tap (514804) – Peckham Tap (515381) 345kV line** 3 phase fault on the Creswell (532981) – Slate Creek (533070) 138kV line, near Creswell. a. Apply fault at the Creswell 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.											X		
122	FLT122-PO	**Prior outage of the Middleton Tap (514804) – Peckham Tap (515381) 345kV line** 3 phase fault on the Creswell 138/69/13.2kV (532981/533543/533080) transformer, near Creswell. a. Apply fault at the Creswell 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line.											X		
123	FLT123-PO	**Prior outage of the Middleton Tap (514804) – Peckham Tap (515381) 345kV line** 3 phase fault on the Creswell (532981) – Oxford (532982) 138kV line, near Creswell. a. Apply fault at the Creswell 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.											X		
124	FLT124-PO	**Prior outage of the Middleton Tap (514804) – Creswell (532981) 345kV line** 3 phase fault on the Kildare (514760) to Chikaskia (514757) 138kV line, near Kildare. a. Apply fault at the Kildare 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.											X		

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
125	FLT125-3PH	3 phase fault on the G16-072_Tap (560086) to Hunters (515476) 345kV line, near G16-072-Tap. a. Apply fault at the G16-072-Tap 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X	
125a	FLT125-3PH	3 phase fault on the G16-072_Tap (560086) to Renfro (515543) 345kV line, near G16-072-Tap. a. Apply fault at the G16-072-Tap 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												x	
126	FLT126-3PH	3 phase fault on the Renfrow (515543) to Viola (532798) 345kV line, near Renfro. a. Apply fault at the Renfro 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X	
127	FLT127-3PH	3 phase fault on the Viola (532798) to Wichita (532796) 345kV line, near Viola. a. Apply fault at the Viola 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X	X
128	FLT128-3PH	3 phase fault on the Wichita (532796) to Benton (532791) 345kV line, near Wichita. a. Apply fault at the Wichita 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X	X

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
129	FLT129-3PH	3 phase fault on the Wichita (532796) to G14-001 Tap (562476) 345kV line, near Wichita. a. Apply fault at the Wichita 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X	X
130	FLT130-3PH	3 phase fault on the Emporia EC (532768) to G14-001 Tap (562476) 345kV line, near G14-001. a. Apply fault at the G14-001 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X	
131	FLT131-3PH	3 phase fault on the Wichita (532796) to G1524&G1525T (560033) 345kV line circuit 1, near Wichita. a. Apply fault at the Wichita 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X	
132	FLT132-3PH (25SP)	3 phase fault on the Viola 345/138/13.8kV (532798/533075/532832) transformer, near Viola 345. a. Apply fault at the Viola 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.												X	
133	FLT133-3PH	3 phase fault on the Renfrow (515543) 345/(515544) 138/(515545) 13.8kV transformer, near Renfrow 345. a. Apply fault at the Renfrow 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.												X	
134	FLT134-3PH	3 phase fault on the Renfrow (515544) to Sand Ridge (520409) 138kV circuit 1 line, near Renfrow. a. Apply fault at the Renfrow 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X	

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
135	FLT135-SB	**Stuck Breaker on Renfrow – Viola 345kV circuit 1 line** a. Apply single-phase fault at Renfrow (515543) on the 345kV bus. b. After 16 cycles, trip the Renfrow 345/138/13.8kV (515543/515544/515545) transformer c. Trip the Renfrow – Viola (532798) 345 kV circuit 1 line, and remove the fault												X	
136	FLT136-SB	**Stuck Breaker on Renfrow – Hunters 345kV circuit 1 line** a. Apply single-phase fault at Renfrow (515543) on the 345kV bus. b. After 16 cycles, trip the Renfrow 345/138/13.8kV (515543/515544/515545) transformer c. Trip the Renfrow – G16-072-Tap (560086) 345 kV circuit 1 line, and remove the fault												X	
137	FLT137-SB	**Stuck Breaker on Renfrow – Hunter 345kV circuit 1 line** a. Apply single-phase fault at Renfrow (515543) on the 345kV bus. b. After 16 cycles, trip the Renfrow – Viola (532798) 345 kV circuit 1 line, and remove the fault c. Trip the Renfrow – G16-072-Tap (560086) 345 kV circuit 1 line, and remove the fault												X	
138	FLT138-PO	**Prior outage on the Renfrow (515543) 345/ (515544) 138/ (515545) 13.8kV transformer** 3 phase fault on the Renfrow (515543) to Viola (532798) 345kV line, near Renfrow. a. Apply fault at the Renfrow 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X	
139	FLT139-PO	**Prior outage on the Renfrow (515543) 345/ (515544) 138/ (515545) 13.8kV transformer** 3 phase fault on the Renfrow (515543) to G16-072-Tap (560086) 345kV line, near Renfrow. a. Apply fault at the Renfrow 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X	

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
140	FLT140-PO	**Prior outage on the Renfrow (515543) 345/ (515544) 138/ (515545) 13.8kV transformer** 3 phase fault on the Viola (532798) to Wichita (532796) 345kV line, near Viola. a. Apply fault at the Viola 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X	
141	FLT141-PO	**Prior outage on the Renfrow (515544) – Sand Ridge (520409) 138kV line** 3 phase fault on the Renfrow (515544) to Grant Co (515546) 138kV line, near Renfrow. a. Apply fault at the Renfrow 138kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.												X	
142	FLT142-3PH	3 phase fault on the Wichita (532796) to Buffalo Flats (560033) 345kV line circuit 1, near Buffalo Flats. a. Apply fault at the Buffalo Flats 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.													X
143	FLT143-3PH	3 phase fault on the Buffalo Flats (560033) to Thistle (539801) 345kV line circuit 1, near Buffalo Flats. a. Apply fault at the Buffalo Flats 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.													X
144	FLT144-3PH	3 phase fault on the Wichita (532796) to Reno (532771) 345kV line circuit 1, near Wichita. a. Apply fault at the Wichita 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.													X

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
145	FLT145-3PH	3 phase fault on the Thistle (539801) to Woodward (515375) 345kV line circuit 1, near Thistle. a. Apply fault at the Thistle 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.													X
146	FLT146-3PH	3 phase fault on the Thistle (539801) to G16-005-Tap (560072) 345kV line circuit 1, near Thistle. a. Apply fault at the Thistle 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.													X
147	FLT147-3PH	3 phase fault on the Thistle 345/138/13.8kV (539801/539804/539802) transformer, near Thistle. a. Apply fault at the Thistle 345kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer and remove fault.													X
148	FLT148-SB	**Stuck Breaker on Wichita – Buffalo Flats 345kV circuit 1 line** a. Apply single-phase fault at Buffalo Flats (560003) on the 345kV bus. b. After 16 cycles, trip the Buffalo Flats - Wichita (532796) 345kV line circuit 1 c. Trip the Buffalo Flats – Wichita (532796) 345 kV circuit 2 line, and remove the fault													X
149	FLT149-SB	**Stuck Breaker on Buffalo Flats - Thistle 345kV circuit 1 line** a. Apply single-phase fault at Buffalo Flats (560003) on the 345kV bus. b. After 16 cycles, trip the Buffalo Flats - Thistle (539801) 345kV line circuit 1 c. Trip the Buffalo Flats – Thistle 345 kV circuit 2 line, and remove the fault													X
150	FLT150-SB	**Stuck Breaker on Wichita – Reno 345kV circuit 1 line** a. Apply single-phase fault at Wichita (532796) on the 345kV bus. b. After 16 cycles, trip the Wichita – Benton (532791) 345kV line circuit 1 c. Trip the Wichita – Reno (532771) 345 kV line, and remove the fault													X

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
151	FLT151-SB	**Stuck Breaker on Thistle – Woodward 345kV circuit 1 line** a. Apply single-phase fault at Thistle (539801) on the 345kV bus. b. After 16 cycles, trip the Thistle (539801) – Woodward (515375) 345kV line circuit 1 c. Trip the Thistle – Buffalo Flats (560033) 345 kV circuit 1 line, and remove the fault													X
152	FLT152-PO	**Prior outage on the Wichita (532796) – Benton (532791) 345kV line** 3 phase fault on the Wichita (532796) to Viola (532798) 345kV line, near Wichita. a. Apply fault at the Wichita 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.													X
153	FLT153-PO	**Prior outage on the Wichita (532796) – Buffalo Flats (560033) 345kV circuit 1 line** 3 phase fault on the Wichita (532796) to Buffalo Flats (560033) 345kV circuit 2 line, near Buffalo Flats. a. Apply fault at the Buffalo Flats 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.													X
154	FLT154-PO	**Prior outage on the Wichita (532796) – Buffalo Flats (560033) 345kV circuit 1 line** 3 phase fault on the Buffalo Flats (560033) to Thistle (539801) 345kV circuit 2 line, near Buffalo Flats. a. Apply fault at the Buffalo Flats 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.													X
155	FLT155-PO	**Prior outage on the Buffalo Flats (560033) – Thistle (539801) 345kV circuit 1 line** 3 phase fault on the Buffalo Flats (560033) – Thistle (539801) 345kV circuit 2 line, near Buffalo Flats. a. Apply fault at the Buffalo Flats 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.													X
156	FLT156-PO	**Prior outage on the Buffalo Flats (560033) – Thistle (539801) 345kV circuit 1 line** 3 phase fault on the Buffalo Flats (560033) – Wichita (532796) 345kV circuit 1 line, near Buffalo Flats. a. Apply fault at the Buffalo Flats 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.													X

Cont. No.	Cont. Name	Description	GEN-2016-009	GEN-2016-012	GEN-2016-022	GEN-2016-024	GEN-2016-031	GEN-2016-032	GEN-2016-048	GEN-2016-060	GEN-2016-061	GEN-2016-068	GEN-2016-071	GEN-2016-072	GEN-2016-073
157	FLT157-PO	**Prior outage on the Thistle (539801) – Woodward (515375) 345kV circuit 1 line** 3 phase fault on the Thistle (539801) – Buffalo Flats (560033) 345kV circuit 1 line, near Thistle. a. Apply fault at the Thistle 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.													X

SECTION 3: STABILITY ANALYSIS

The objective of the Stability Analysis was to determine the impacts of the generator interconnections on the stability and voltage recovery on the SPP transmission system. If problems with stability or voltage recovery were identified the need for reactive compensation or system upgrades were investigated.

3.1 Approach

SPP provided MEPPI with the following three power flow cases from the DISIS-2016-001 Group 08 study:

- 2016 Winter Peak
- 2017 Summer Peak
- 2025 Summer Peak

Each case was examined prior to the Stability Analysis to ensure the case contained the proposed study projects and any previously queued projects listed in Tables 2-1 and 2-2 respectively. There was no suspect power flow data in the study area. The dynamic datasets were also verified and stable initial system conditions (i.e., "flat lines") were achieved. Three-phase and single phase-to-ground faults listed in Table 2-3 were examined. Single-phase fault impedances were calculated for each season to result in a voltage of approximately 60% of the pre-fault voltage. Refer to Table 3-1 for a list of the calculated single-phase fault impedances used for the Cluster Scenario. Refer to Tables 3-2 through 3-14 for single-phase fault impedances used for each Stand Alone Scenario.

Table 3-1
Calculated Single-Phase Fault Impedances for Cluster Scenarios

Cont. No.*	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
9	FLT09-1PH	-1375.0	-1375.0	-1625.0
10	FLT10-1PH	-1375.0	-1375.0	-1625.0
11	FLT11-1PH	-2609.4	-2609.4	-2812.5
24	FLT24-1PH	-8500.0	-9312.5	-9312.5
25	FLT25-1PH	-8500.0	-9312.5	-9312.5
26	FLT26-1PH	-6062.5	-6062.5	-6062.5
42	FLT42-1PH	-4640.6	-4843.8	-4843.8
43	FLT43-1PH	-6468.8	-6875.0	-7281.3
44	FLT44-1PH	-9312.5	-9312.5	-10125.0
45	FLT45-1PH	-9312.5	-9312.5	-10125.0
46	FLT46-1PH	-9312.5	-9312.5	-10125.0
60	FLT60-1PH	-1500.0	-1625.0	-1625.0
61	FLT61-1PH	-1500.0	-1625.0	-1625.0
62	FLT62-1PH	-1500.0	-1625.0	-1625.0
73	FLT73-1PH	-1375.0	-1375.0	-1375.0
74	FLT74-1PH	-2812.5	-2812.5	-2812.5
75	FLT75-1PH	-2812.5	-2812.5	-2812.5
76	FLT76-1PH	-2812.5	-2812.5	-2812.5
94	FLT94-1PH	N/A	N/A	-1750.0
95	FLT95-1PH	-1125.0	-1250.0	-1750.0
102	FLT102-1PH	-6875.0	-6875.0	-7281.3
107	FLT107-1PH	-6875.0	-6875.0	-7281.3
108	FLT108-1PH	-6875.0	-6875.0	-7281.3
118	FLT118-1PH	-1375.0	-1500.0	-1500.0
119	FLT119-1PH	-1187.5	-1375.0	-1500.0
120	FLT120-1PH	-1187.5	-1375.0	-1500.0
135	FLT135-1PH	-4843.8	-4843.8	-5250.0
136	FLT136-1PH	-4843.8	-4843.8	-5250.0
137	FLT137-1PH	-4843.8	-4843.8	-5250.0
148	FLT148-1PH	-6875.0	-7687.5	-8093.8
149	FLT149-1PH	-6875.0	-7687.5	-8093.8
150	FLT150-1PH	-7687.5	-9312.5	-10125.0
151	FLT151-1PH	-6062.5	-6468.8	-6875.0

*Refer to Table 2-3 for a description of the contingency scenerio

Table 3-2
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-009

Cont. No.*	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
9	FLT09-1PH	-1375.0	-1375.0	-1375.0
10	FLT10-1PH	-1375.0	-1375.0	-1375.0
11	FLT11-1PH	-2609.4	-2609.4	-2609.4

*Refer to Table 2-3 for a description of the contingency scenerio

Table 3-3
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-012

Cont. No.*	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
24	FLT24-1PH	-8500.0	-8500.0	-8500.0
25	FLT25-1PH	-8500.0	-8500.0	-8500.0
26	FLT26-1PH	-6062.5	-6062.5	-6062.5

*Refer to Table 2-3 for a description of the contingency scenerio

Table 3-4
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-022

Cont. No.*	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
42	FLT42-1PH	-4640.6	-4640.6	-4640.6
43	FLT43-1PH	-6468.8	-6468.8	-6468.8
44	FLT44-1PH	-9312.5	-9312.5	-9312.5
45	FLT45-1PH	-9312.5	-9312.5	-9312.5
46	FLT46-1PH	-9312.5	-9312.5	-9312.5

*Refer to Table 2-3 for a description of the contingency scenerio

Table 3-5
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-024

Cont. No.*	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
60	FLT60-1PH	-1500.0	-1500.0	-1500.0
61	FLT61-1PH	-1500.0	-1500.0	-1500.0
62	FLT62-1PH	-1500.0	-1500.0	-1500.0

*Refer to Table 2-3 for a description of the contingency scenerio

Table 3-6
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-031

Cont. No.*	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
42	FLT42-1PH	-4640.6	-4640.6	-4640.6
43	FLT43-1PH	-6468.8	-6468.8	-6468.8
44	FLT44-1PH	-9312.5	-9312.5	-9312.5
45	FLT45-1PH	-9312.5	-9312.5	-9312.5

*Refer to Table 2-3 for a description of the contingency scenerio

Table 3-7
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-032

Cont. No.*	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
73	FLT73-1PH	-1375.0	-1375.0	-1375.0
74	FLT74-1PH	-2812.5	-2812.5	-2812.5
75	FLT75-1PH	-2812.5	-2812.5	-2812.5
76	FLT76-1PH	-2812.5	-2812.5	-2812.5

*Refer to Table 2-3 for a description of the contingency scenerio

Table 3-8
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-048

Cont. No.*	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
44	FLT44-1PH	-9312.5	-9312.5	-9312.5
45	FLT45-1PH	-9312.5	-9312.5	-9312.5
46	FLT46-1PH	-9312.5	-9312.5	-9312.5

*Refer to Table 2-3 for a description of the contingency scenerio

Table 3-9
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-060

Cont. No.*	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
94	FLT94-1PH	N/A	N/A	-1750.0
95	FLT95-1PH	-1125.0	-1125.0	-1125.0

*Refer to Table 2-3 for a description of the contingency scenerio

Table 3-10
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-061

Cont. No.*	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
44	FLT44-1PH	-9312.5	-9312.5	-9312.5
45	FLT45-1PH	-9312.5	-9312.5	-9312.5
46	FLT46-1PH	-9312.5	-9312.5	-9312.5
102	FLT102-1PH	-6875.0	-6875.0	-6875.0

*Refer to Table 2-3 for a description of the contingency scenerio

Table 3-11
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-068

Cont. No.*	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
102	FLT102-1PH	-6875.0	-6875.0	-6875.0
107	FLT107-1PH	-6875.0	-6875.0	-6875.0
108	FLT108-1PH	-6875.0	-6875.0	-6875.0

*Refer to Table 2-3 for a description of the contingency scenerio

Table 3-12
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-071

Cont. No.*	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
118	FLT118-1PH	-1375.0	-1375.0	-1375.0
119	FLT119-1PH	-1187.5	-1187.5	-1187.5
120	FLT120-1PH	-1187.5	-1187.5	-1187.5

*Refer to Table 2-3 for a description of the contingency scenerio

Table 3-13
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-072

Cont. No.*	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
135	FLT135-1PH	-4843.8	-4843.8	-4843.8
136	FLT136-1PH	-4843.8	-4843.8	-4843.8
137	FLT137-1PH	-4843.8	-4843.8	-4843.8

*Refer to Table 2-3 for a description of the contingency scenerio

Table 3-14
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-073

Cont. No.*	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
148	FLT148-1PH	-6875.0	-6875.0	-6875.0
149	FLT149-1PH	-6875.0	-6875.0	-6875.0
150	FLT150-1PH	-7687.5	-7687.5	-7687.5
151	FLT151-1PH	-6062.5	-6062.5	-6062.5

*Refer to Table 2-3 for a description of the contingency scenerio

Bus voltages, machine rotor angles, and previously queued generation in the study area were monitored. Requested and previously queued generation outside the study area was also monitored.

The results of the analysis determined if reactive compensation or system upgrades were required to obtain acceptable system performance. If additional reactive compensation was required, the size, type, and location were determined. The proposed reactive reinforcements would ensure the wind or solar farm meets FERC Order 661A low voltage requirements and return the wind or solar farm to its pre-disturbance operating voltage. If the results indicated the need for fast responding reactive support, dynamic support such as an SVC or STATCOM was investigated. If tripping of the prior queued projects was observed during the stability analysis (for under/over voltage or under/over frequency) the simulations were re-ran with the prior queued project's voltage and frequency tripping disabled.

3.2 Cluster Scenario Stability Analysis Results

The Stability Analysis determined that there were multiple contingencies that resulted in system instability, generation tripping offline, or voltage violations for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions when all generation interconnection requests were at 100% output.

Refer to Table 3-15 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3. Table 3-15 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak cluster scenarios and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady-state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u. If high or low voltages were observed the number of buses failing the voltage criteria was listed.

Refer to Appendix B, Appendix C, and Appendix D for a complete set of plots for all contingencies for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions, respectively.

Table 3-15
Stability Analysis Summary of Results for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak Cluster Scenarios

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
1	FLT01-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
2	FLT02-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
3	FLT03-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
4	FLT04-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
5	FLT05-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
6	FLT06-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
7	FLT07-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
8	FLT08-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
9	FLT09-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
10	FLT10-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
11	FLT11-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
12	FLT12-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
13	FLT13-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
14	FLT14-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
15	FLT15-3PH	-	-	V < 0.9 p.u.	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
16	FLT16-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
17	FLT17-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
18	FLT18-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
19	FLT19-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
20	FLT20-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
21	FLT21-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
22	FLT22-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
23	FLT23-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
24	FLT24-SB	-	-	V < 0.9 p.u.	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
25	FLT25-SB	-	-	Compliant	No[1]	-	-	Compliant	Stable	-	-	Compliant	Stable
26	FLT26-SB	-	-	Compliant	No[1]	-	-	Compliant	No[1]	-	-	Compliant	No[1]
27	FLT27-PO	-	-	Compliant	No[1]	-	-	Compliant	No[1]	-	-	Compliant	No[1]
28	FLT28-PO	-	-	Compliant	No[1]	-	-	Compliant	No[1]	-	-	Compliant	No[1]
29	FLT29-PO	-	-	V < 0.9 p.u.	No[1]	-	-	Compliant	Stable	-	-	Compliant	Stable
30	FLT30-PO	-	-	V < 0.9 p.u.	No[1]	-	-	Compliant	Stable	-	-	Compliant	Stable

[1]Voltage Instability

Table 3-15 (Continued)
Stability Analysis Summary of Results for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak Cluster Scenarios

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
31	FLT31-PO	-	-	V < 0.9 p.u.	No[1]	-	-	Compliant	Stable	-	-	Compliant	Stable
32	FLT32-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
33	FLT33-PO	-	-	V < 0.75 p.u.	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
34	FLT34-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
35	FLT35-PO	-	-	V < 0.75 p.u.	Stable	-	-	V < 0.75 p.u.	Stable	-	-	Compliant	Stable
36	FLT36-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
37	FLT37-PO	-	-	V > 1.1 p.u.	Gen Trip	-	-	V < 0.75 p.u.	Stable	-	-	V < 0.75 p.u.	Stable
38	FLT38-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
39	FLT39-PO	-	-	V < 0.75 p.u.	Stable	-	-	V < 0.75 p.u.	Stable	-	-	Compliant	Stable
40	FLT40-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	V < 0.75 p.u.	Stable
41	FLT41-3PH	-	-	V < 0.75 p.u.	Stable	-	-	V < 0.75 p.u.	Stable	-	-	Compliant	Stable
42	FLT42-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
43	FLT43-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
44	FLT44-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
45	FLT45-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
46	FLT46-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
47	FLT47-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
48	FLT48-PO	-	-	V < 0.75 p.u.	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
49	FLT49-PO	-	-	Compliant	No[1]	-	-	V < 0.75 p.u.	Stable	-	-	Compliant	Stable
50	FLT50-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
51	FLT51-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
52	FLT52-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
53	FLT53-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
54	FLT54-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
55	FLT55-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
56	FLT56-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
57	FLT57-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
58	FLT58-3PH	N/A	N/A	N/A	N/A	-	-	Compliant	Stable	-	-	Compliant	Stable
59	FLT59-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
60	FLT60-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

[1]Voltage Instability

Table 3-15 (Continued)
Stability Analysis Summary of Results for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak Cluster Scenarios

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
61	FLT61-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
62	FLT62-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
63	FLT63-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
64	FLT64-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
65	FLT65-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
66	FLT66-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
67	FLT67-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
68	FLT68-3PH	-	-	V < 0.75 p.u.	Stable	-	-	V < 0.75 p.u.	Stable	-	-	Compliant	Stable
69	FLT69-3PH	-	-	V < 0.75 p.u.	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
70	FLT70-3PH	-	-	V < 0.75 p.u.	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
71	FLT71-3PH	-	-	V < 0.75 p.u.	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
72	FLT72-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
73	FLT73-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
74	FLT74-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
75	FLT75-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
76	FLT76-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
77	FLT77-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
78	FLT78-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
79	FLT79-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
80	FLT80-3PH	-	-	V > 1.1 p.u.	Gen Trip	-	-	V < 0.75 p.u.	Stable	-	-	Compliant	Stable
81	FLT81-3PH	-	-	V > 1.1 p.u.	Gen Trip	-	-	V > 1.1 p.u.	Gen Trip	-	-	V > 1.1 p.u.	Gen Trip
82	FLT82-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
83	FLT83-3PH	-	-	Compliant	Stable	-	-	V < 0.75 p.u.	Stable	-	-	V < 0.75 p.u.	Stable
84	FLT84-PO	-	-	V < 0.9 p.u.	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
85	FLT85-PO	-	-	V < 0.9 p.u.	Gen Trip	-	-	Compliant	Stable	-	-	Compliant	Stable
86	FLT86-PO	-	-	V > 1.1 p.u.	Gen Trip	-	-	V < 0.75 p.u.	Stable	-	-	V < 0.75 p.u.	Stable
87	FLT87-PO	-	-	V < 0.75 p.u.	Stable	-	-	V < 0.75 p.u.	Stable	-	-	Compliant	Stable
88	FLT88-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
89	FLT89-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
90	FLT90-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

[1]Voltage Instability

Table 3-15 (Continued)
Stability Analysis Summary of Results for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak Cluster Scenarios

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
91	FLT91-3PH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	Compliant	Stable
92	FLT92-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
93	FLT93-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
94	FLT94-SB	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	Compliant	Stable
95	FLT95-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
97	FLT97-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
99	FLT99-3PH	-	-	V > 1.1 p.u.	Gen Trip	-	-	V > 1.1 p.u.	Gen Trip	-	-	V < 0.75 p.u.	Stable
100	FLT100-3PH	-	-	V > 1.1 p.u.	Gen Trip	-	-	V > 1.1 p.u.	Gen Trip	-	-	V > 1.1 p.u.	Gen Trip
101	FLT101-3PH	-	-	V < 0.9 p.u.	Stable	-	-	Compliant	Gen Trip	-	-	Compliant	Stable
102	FLT102-SB	-	-	V > 1.1 p.u.	Gen Trip	-	-	V < 0.9 p.u.	Gen Trip	-	-	V < 0.75 p.u.	Stable
103	FLT103-PO	-	-	V < 0.9 p.u.	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
104	FLT104-3PH	-	-	V > 1.1 p.u.	Gen Trip	-	-	V > 1.1 p.u.	Gen Trip	-	-	V > 1.1 p.u.	Gen Trip
105	FLT105-3PH	-	-	Compliant	Stable	-	-	V > 1.1 p.u.	Gen Trip	-	-	V > 1.1 p.u.	Gen Trip
106	FLT106-3PH	-	-	V < 0.9 p.u.	Stable	-	-	V < 0.75 p.u.	Stable	-	-	Compliant	Stable
107	FLT107-SB	-	-	Compliant	No[1]	-	-	V > 1.1 p.u.	Gen Trip	-	-	V < 0.75 p.u.	Stable
108	FLT108-SB	-	-	V > 1.1 p.u.	Gen Trip	-	-	V > 1.1 p.u.	Gen Trip	-	-	V < 0.75 p.u.	Stable
109	FLT109-PO	-	-	V > 1.1 p.u.	Gen Trip	-	-	V > 1.1 p.u.	Gen Trip	-	-	V < 0.75 p.u.	Stable
110	FLT110-PO	-	-	V < 0.9 p.u.	Stable	-	-	V < 0.75 p.u.	Stable	-	-	Compliant	Stable
111	FLT111-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
112	FLT112-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
113	FLT113-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
114	FLT114-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
115	FLT115-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
116	FLT116-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
117	FLT117-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
118	FLT118-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
119	FLT119-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
120	FLT120-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

[1]Voltage Instability

Table 3-15 (Continued)
Stability Analysis Summary of Results for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak Cluster Scenarios

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
121	FLT121-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
122	FLT122-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
123	FLT123-PO	-	-	Compliant	No[1]	-	-	Compliant	No[1]	-	-	Compliant	No[1]
124	FLT124-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
125	FLT125-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
125a	FLT125a-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
126	FLT126-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
127	FLT127-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
128	FLT128-3PH	-	-	V < 0.9 p.u.	Stable	-	-	Compliant	Stable	-	-	V < 0.75 p.u.	Stable
129	FLT129-3PH	-	-	V < 0.9 p.u.	Stable	-	-	Compliant	Stable	-	-	V < 0.75 p.u.	Stable
130	FLT130-3PH	-	-	V < 0.9 p.u.	Gen Trip	-	-	Compliant	Stable	-	-	Compliant	Stable
131	FLT131-3PH	-	-	V < 0.9 p.u.	Stable	-	-	Compliant	Stable	-	-	V < 0.75 p.u.	Stable
132	FLT132-3PH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	-	Compliant	Stable
133	FLT133-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
134	FLT134-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
135	FLT135-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
136	FLT136-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
137	FLT137-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
138	FLT138-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
139	FLT139-PO	-	-	Compliant	Stable	-	-	V < 0.75 p.u.	Stable	-	-	Compliant	Stable
140	FLT140-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
141	FLT141-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
142	FLT142-3PH	-	-	V < 0.9 p.u.	Stable	-	-	Compliant	Stable	-	-	V < 0.75 p.u.	Stable
143	FLT143-3PH	-	-	V < 0.9 p.u.	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
144	FLT144-3PH	-	-	V < 0.9 p.u.	Stable	-	-	Compliant	Stable	-	-	V < 0.75 p.u.	Stable
145	FLT145-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
146	FLT146-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
147	FLT147-3PH	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
148	FLT148-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

[1]Voltage Instability

Table 3-15 (Continued)
Stability Analysis Summary of Results for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak Cluster Scenarios

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability	Voltage Recovery		Post Fault Steady-State Voltage	System Stability
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
149	FLT149-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
150	FLT150-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
151	FLT151-SB	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
152	FLT152-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
153	FLT153-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
154	FLT154-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
155	FLT155-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
156	FLT156-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable
157	FLT157-PO	-	-	Compliant	Stable	-	-	Compliant	Stable	-	-	Compliant	Stable

[1]Voltage Instability

To mitigate the system/voltage instability, voltage violations, generation tripping offline, and poor post-fault steady-state voltages, the following upgrades were provided by SPP and implemented in each season.

- Wolf Creek to Neosho 345 kV line circuit #1 to improve voltage stability in the vicinity of Waverly and to mitigate tripping of project generators GEN-2016-012 and GEN-2016-024.
- Reduction of generation at GEN-2016-071 and GEN-2011-057 following prior outage of Middleton Tap to Peckham Tap 345 kV line for FLT123-PO (see Figure 3-15 for the amount of reduction in 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak) to mitigate instability and generator tripping.

Table 3-16
Reduction of Generation following Prior Contingency for FLT123-PO

Project	Percent Reduction of Output		
	2016 Winter	2017 Summer	2025 Summer
GEN-2011-057	-	20%	20%
GEN-2016-071	20%	20%	20%

In addition to the upgrades above, adjustment of operating settings for GEN-2016-045 and GEN-2015-057, two interconnection requests being studied in Group 1 of DISIS-2016-001, were required for these projects to remain connected to the grid for certain contingencies in this study.

After the upgrades and adjustments were implemented, all violations were mitigated for the Cluster Scenarios.

Refer to Figure 3-1 for comparison of representative post-fault steady-state voltages in the Waverly area for FLT15-3PH for the 16WP Case. FLT15-3PH is a three-phase fault that results in the loss of the LaCygne to G16-012-Tap 345 kV line, which causes post-fault steady-state voltages below 0.9 p.u. in the vicinity of Waverly. The addition of the Wolf Creek to Neosho 345 kV line mitigates the voltage issue. This upgrade mitigates post-fault steady-state voltage issues and voltage instability within the vicinity of Waverly for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak cases.

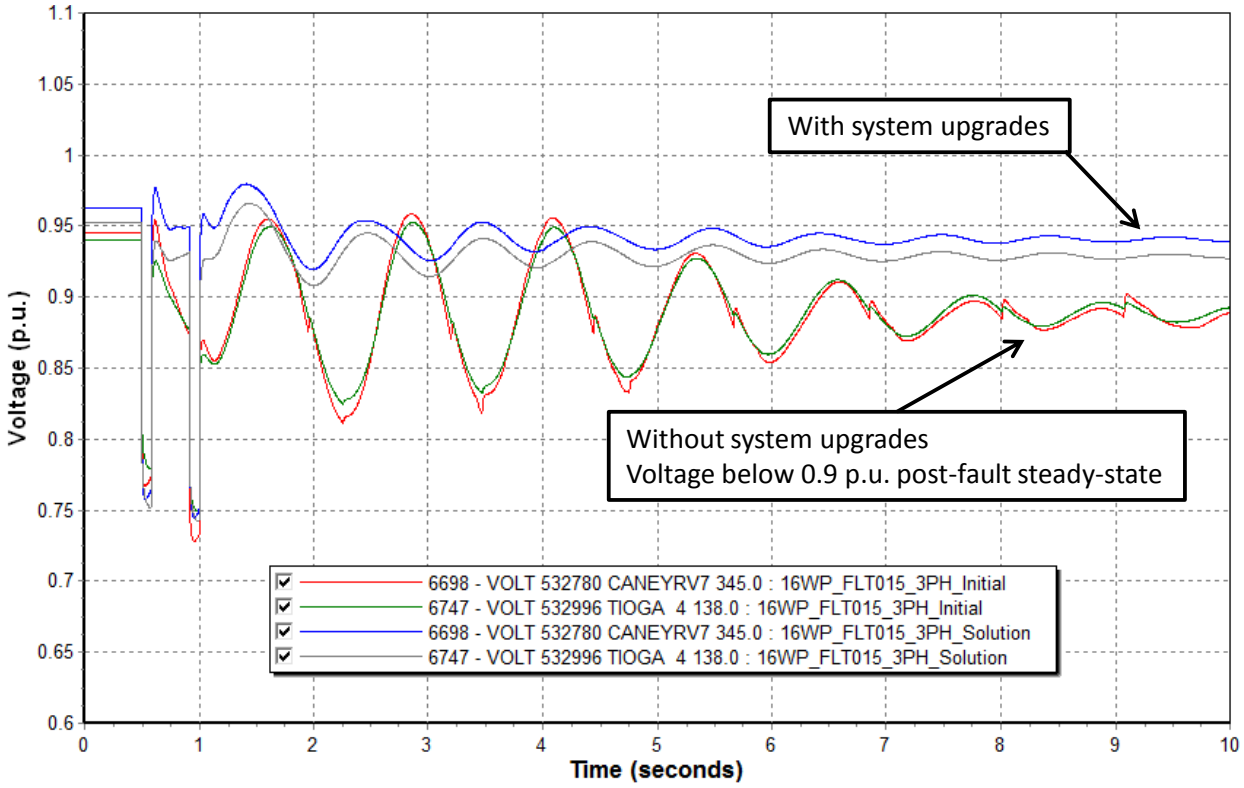


Figure 3-1: Representative plot of Waverly area voltages for FLT15-3PH for the 16WP case with and without system upgrade.

Refer to Figure 3-2 for comparison of representative post-fault steady-state voltages in the Slate Creek area for FLT123-PO for the 17SP case. FLT123-PO, a prior outage of the Middleton Tap to Peckham Tap 345 kV line, results in the loss of the Creswell to Oxford 138 kV line. The loss of these lines causes voltage instability in the vicinity of Slate Creek. Reduction of generation at GEN-2016-071 and GEN-2011-057 mitigates the voltage instability. This solution mitigates the voltage instability at Slate Creek for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak cases.

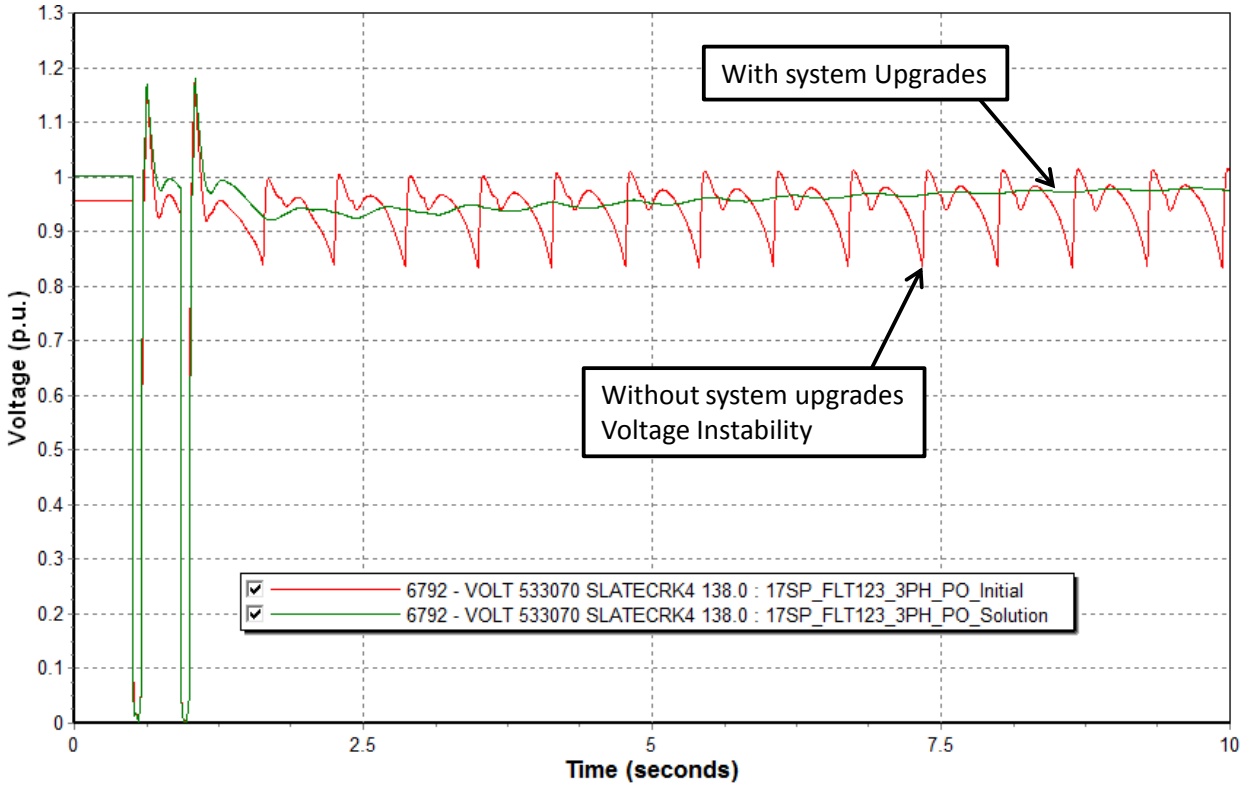


Figure 3-2: Representative plot of Slate Creek area voltage for FLT123-PO for the 16WP case with and without system upgrades.

3.3 Stand Alone Scenario Stability Analysis Results

Stand Alone Scenario Stability Analysis Results: GEN-2016-009

The Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions when GEN-2016-009 was at 100% output.

Refer to Table 3-17 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that correspond to the GEN-2016-009 Stand Alone Analysis. Table 3-17 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u. If high or low voltages were observed the number of buses failing the voltage criteria was listed.

Refer to Appendix E, Appendix F, and Appendix G for a complete set of plots for all the GEN-2016-009 Stand Alone Analysis contingencies for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions.

Table 3-17
Stand Alone Scenario GEN-2016-009: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
1	FLT01-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
2	FLT02-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
3	FLT03-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
4	FLT04-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
5	FLT05-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
6	FLT06-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
7	FLT07-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
8	FLT08-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
9	FLT09-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
10	FLT10-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
11	FLT11-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
12	FLT12-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
13	FLT13-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
14	FLT14-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes

Stand Alone Scenario Stability Analysis Results: GEN-2016-012

The Stability Analysis determined that multiple contingencies result in system instability, generation tripping offline, or voltage violations for the 2016 Winter Peak and 2017 Summer Peak conditions when GEN-2016-012 was at 100% output. These issues are mitigated by application of the system upgrades described for the cluster scenarios.

Refer to Table 3-18 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-012 Stand Alone Analysis. Table 3-18 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u. If high or low voltages were observed the number of buses failing the voltage criteria was listed.

Refer to Appendix E, Appendix F, and Appendix G for a complete set of plots for all the GEN-2016-012 Stand Alone Scenario contingencies for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions.

Table 3-18
Stand Alone Scenario GEN-2016-012: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
15	FLT15-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
16	FLT16-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
17	FLT17-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
18	FLT18-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
19	FLT19-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
20	FLT20-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
21	FLT21-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
22	FLT22-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
23	FLT23-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
24	FLT24-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
25	FLT25-SB	No	No	V < 0.9 p.u.	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
26	FLT26-SB	No	No	Unstable	No[1]	No	No	Unstable	No[1]	No	No	Compliant	Yes
27	FLT27-PO	No	No	Unstable	No[1]	No	No	Unstable	No[1]	No	No	Compliant	Yes
28	FLT28-PO	No	No	Unstable	No[1]	No	No	Unstable	No[1]	No	No	Compliant	Yes
29	FLT29-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
30	FLT30-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
31	FLT31-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
32	FLT32-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes

[1]Voltage instability

To mitigate the voltage instability and low voltages, the solutions as described in the Cluster Scenario were implemented for GEN-2016-012. After the identified solutions were implemented, all violations were mitigated and there were no additional violations observed.

Stand Alone Scenario Stability Analysis Results: GEN-2016-022

The Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions when GEN-2016-022 was at 100% output.

Refer to Table 3-19 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-022 Stand Alone Analysis. Table 3-19 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u. If high or low voltages were observed the number of buses failing the voltage criteria was listed.

Refer to Appendix E, Appendix F, and Appendix G for a complete set of plots for all the GEN-2016-022 Stand Alone Scenario contingencies for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions.

Table 3-19
Stand Alone Scenario GEN-2016-022: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
33	FLT33-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
34	FLT34-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
35	FLT35-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
36	FLT36-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
37	FLT37-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
38	FLT38-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
39	FLT39-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
40	FLT40-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
41	FLT41-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
42	FLT42-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
43	FLT43-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
44	FLT44-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
45	FLT45-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
46	FLT46-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
47	FLT47-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
48	FLT48-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
49	FLT49-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes

Stand Alone Scenario Stability Analysis Results: GEN-2016-024

The Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions when GEN-2016-024 was at 100% output.

Refer to Table 3-20 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-024 Stand Alone Analysis. Table 3-20 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u. If high or low voltages were observed the number of buses failing the voltage criteria was listed.

Refer to Appendix G for a complete set of plots for all the GEN-2016-024 Stand Alone Scenario contingencies for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions.

Table 3-20
Stand Alone Scenario GEN-2016-024: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
50	FLT50-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
51	FLT51-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
52	FLT52-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
53	FLT53-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
54	FLT54-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
55	FLT55-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
56	FLT56-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
57	FLT57-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
58	FLT58-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
59	FLT59-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
60	FLT60-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
61	FLT61-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
62	FLT62-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
63	FLT63-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
64	FLT64-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
65	FLT65-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes

Stand Alone Scenario Stability Analysis Results: GEN-2016-031

The Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions when GEN-2016-031 was at 100% output.

Refer to Table 3-21 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2106-031 Stand Alone Analysis. Table 3-21 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u. If high or low voltages were observed the number of buses failing the voltage criteria was listed.

Refer to Appendix E, Appendix F, and Appendix G for a complete set of plots for all the GEN-2016-031 Stand Alone Scenario contingencies for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions.

Table 3-21
Stand Alone Scenario GEN-2016-031: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
33	FLT33-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
34	FLT34-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
35	FLT35-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
36	FLT36-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
37	FLT37-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
38	FLT38-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
39	FLT39-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
40	FLT40-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
41	FLT41-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
42	FLT42-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
43	FLT43-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
44	FLT44-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
45	FLT45-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
46	FLT46-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
47	FLT47-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
48	FLT48-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
49	FLT49-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes

Stand Alone Scenario Stability Analysis Results: GEN-2016-032

The Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions when GEN-2016-032 was at 100% output.

Refer to Table 3-22 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-032 Stand Alone Analysis. Table 3-22 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u. If high or low voltages were observed the number of buses failing the voltage criteria was listed.

Refer to Appendix E, Appendix F, and Appendix G for a complete set of plots for all the GEN-2016-032 Stand Alone Scenario contingencies for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions.

Table 3-22
Stand Alone Scenario GEN-2016-032: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
66	FLT66-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
67	FLT67-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
68	FLT68-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
69	FLT69-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
70	FLT70-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
71	FLT71-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
72	FLT72-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
73	FLT73-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
74	FLT74-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
75	FLT75-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
76	FLT76-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
77	FLT77-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
78	FLT78-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
79	FLT79-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes

Stand Alone Scenario Stability Analysis Results: GEN-2016-048

The Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions when GEN-2016-048 was at 100% output.

Refer to Table 3-23 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-048 Stand Alone Analysis. Table 3-23 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u. If high or low voltages were observed the number of buses failing the voltage criteria was listed.

Refer to Appendix E, Appendix F, and Appendix G for a complete set of plots for all the GEN-2016-048 Stand Alone Scenario contingencies for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions.

Table 3-23
Stand Alone Scenario GEN-2016-048: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
33	FLT33-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
37	FLT37-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
38	FLT38-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
39	FLT39-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
40	FLT40-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
41	FLT41-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
44	FLT44-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
45	FLT45-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
46	FLT46-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
80	FLT80-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
81	FLT81-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
82	FLT82-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
83	FLT83-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
84	FLT84-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
85	FLT85-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
86	FLT86-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
87	FLT87-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes

Stand Alone Scenario Stability Analysis Results: GEN-2016-060

The Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions when GEN-2016-060 was at 100% output.

Refer to Table 3-24 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-060 Stand Alone Analysis. Table 3-24 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u. If high or low voltages were observed the number of buses failing the voltage criteria was listed.

Refer to Appendix E, Appendix F, and Appendix G for a complete set of plots for all the GEN-2016-060 Stand Alone Scenario contingencies for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions.

Table 3-24
Stand Alone Scenario GEN-2016-060: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
88	FLT88-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
89	FLT89-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
90	FLT90-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
91	FLT91-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
92	FLT92-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
93	FLT93-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
94	FLT94-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
95	FLT95-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
97	FLT97-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes

Stand Alone Scenario Stability Analysis Results: GEN-2016-061

The Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions when GEN-2016-061 was at 100% output.

Refer to Table 3-25 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-061 Stand Alone Analysis. Table 3-25 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u. If high or low voltages were observed the number of buses failing the voltage criteria was listed.

Refer to Appendix E, Appendix F, and Appendix G for a complete set of plots for all the GEN-2016-068 Stand Alone Scenario contingencies for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions.

Table 3-25
Stand Alone Scenario GEN-2016-061: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
72	FLT72-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
83	FLT83-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
99	FLT99-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
100	FLT100-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
101	FLT101-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
102	FLT102-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
103	FLT103-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
104	FLT104-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
105	FLT105-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
106	FLT106-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
107	FLT107-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
108	FLT108-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
109	FLT109-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
110	FLT110-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes

Stand Alone Scenario Stability Analysis Results: GEN-2016-068

The Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions when GEN-2016-068 was at 100% output.

Refer to Table 3-26 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-068 Stand Alone Analysis. Table 3-26 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u. If high or low voltages were observed the number of buses failing the voltage criteria was listed.

Refer to Appendix E, Appendix F, and Appendix G for a complete set of plots for all the GEN-2016-068 Stand Alone Scenario contingencies for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions.

Table 3-26
Stand Alone Scenario GEN-2016-068: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		Voltage Recovery		Stable?	Voltage Recovery		Stable?	Voltage Recovery		Stable?
		Less than .70 p.u.	Greater than 1.20 p.u.		Less than .70 p.u.	Greater than 1.20 p.u.		Less than .70 p.u.	Greater than 1.20 p.u.	
52	FLT52-3PH	No	No	Yes	No	No	Yes	No	No	Yes
53	FLT53-3PH	No	No	Yes	No	No	Yes	No	No	Yes
54	FLT54-SB	No	No	Yes	No	No	Yes	No	No	Yes
55	FLT55-3PH	No	No	Yes	No	No	Yes	No	No	Yes
56	FLT56-3PH	No	No	Yes	No	No	Yes	No	No	Yes
57	FLT57-3PH	No	No	Yes	No	No	Yes	No	No	Yes
58	FLT58-3PH	No	No	Yes	No	No	Yes	No	No	Yes
59	FLT59-3PH	No	No	Yes	No	No	Yes	No	No	Yes
60	FLT60-3PH	No	No	Yes	No	No	Yes	No	No	Yes
61	FLT61-3PH	No	No	Yes	No	No	Yes	No	No	Yes
107	FLT107-SB	No	No	Yes	No	No	Yes	No	No	Yes
108	FLT108-SB	No	No	Yes	No	No	Yes	No	No	Yes
109	FLT109-SB	No	No	Yes	No	No	Yes	No	No	Yes
121	FLT121-SB	No	No	Yes	No	No	Yes	No	No	Yes

Stand Alone Scenario Stability Analysis Results: GEN-2016-071

The Stability Analysis determined that contingency FLT123-PO results in system instability, generation tripping offline, or voltage violations for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions when GEN-2016-071 was at 100% output. These issues are mitigated by curtailment of generation.

Refer to Table 3-27 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-071 Stand Alone Analysis. Table 3-27 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u. If high or low voltages were observed the number of buses failing the voltage criteria was listed.

Refer to Appendix E, Appendix F, and Appendix G for a complete set of plots for all the GEN-2016-071 Stand Alone Scenario contingencies for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions.

Table 3-27
Stand Alone Scenario GEN-2016-071: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
111	FLT111-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
112	FLT112-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
113	FLT113-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
114	FLT114-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
115	FLT115-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
116	FLT116-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
117	FLT117-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
118	FLT118-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
119	FLT119-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
120	FLT120-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
121	FLT121-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
122	FLT122-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
123	FLT123-PO	No	No	Unstable	No[1]	No	No	Unstable	No[1]	No	No	Unstable	No[1]

[1]Voltage instability

Stand Alone Scenario Stability Analysis Results: GEN-2016-072

The Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions when GEN-2016-072 was at 100% output.

Refer to Table 3-28 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-072 Stand Alone Analysis. Table 3-28 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u. If high or low voltages were observed the number of buses failing the voltage criteria was listed.

Refer to Appendix E, Appendix F, and Appendix G for a complete set of plots for all the GEN-2016-072 Stand Alone Scenario contingencies for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions.

Table 3-28
Stand Alone Scenario GEN-2016-072: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
125	FLT125-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
125a	FLT125a-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
126	FLT126-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
127	FLT127-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
128	FLT128-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
129	FLT129-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
130	FLT130-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
131	FLT131-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
132	FLT132-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
133	FLT133-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
134	FLT134-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
135	FLT135-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
136	FLT136-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
137	FLT137-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
138	FLT138-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
139	FLT139-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
140	FLT140-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
141	FLT141-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes

Stand Alone Scenario Stability Analysis Results: GEN-2016-073

The Stability Analysis determined that there were no contingencies that resulted in system instability, generation tripping offline, or voltage violations for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions when GEN-2016-073 was at 100% output.

Refer to Table 3-29 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-073 Stand Alone Analysis. Table 3-29 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u. If high or low voltages were observed the number of buses failing the voltage criteria was listed.

Refer to Appendix E, Appendix F, and Appendix G for a complete set of plots for all the GEN-2016-073 Stand Alone Scenario contingencies for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions.

Table 3-29
Stand Alone Scenario GEN-2016-073: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Cont. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?	Voltage Recovery		Post Fault Steady-State Voltage	Stable?
		Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.			Less than .70 p.u.	Greater than 1.20 p.u.		
127	FLT127-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
128	FLT128-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
129	FLT129-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
142	FLT142-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
143	FLT143-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
144	FLT144-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
145	FLT145-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
146	FLT146-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
147	FLT147-3PH	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
148	FLT148-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
149	FLT149-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
150	FLT150-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
151	FLT151-SB	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
152	FLT152-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
153	FLT153-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
154	FLT154-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
155	FLT155-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
156	FLT156-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes
157	FLT157-PO	No	No	Compliant	Yes	No	No	Compliant	Yes	No	No	Compliant	Yes

SECTION 4: SHORT CIRCUIT ANALYSIS

The objective of this task is to quantify the three-phase to ground fault currents for the 2017 Summer Peak and 2025 Summer Peak seasons for each interconnecting generator.

4.1 Approach

The short-circuit analysis will assess breaker adequacy and fault duties for the generator interconnection bus and five buses away from the point of interconnection. MEPPI will assume no outages to find maximum short-circuit currents that flow through the breaker. The Automatic Sequencing Fault Calculation (ASCC) function in PSS/E was utilized to perform this task. FLAT conditions were applied to pre-fault conditions and the following adjustments were utilized:

- All synchronous and asynchronous machine P and Q output was set to zero
- All transformer tap ratios were set to 1.0 p.u. and all phase shift angles were set to zero
- All generator reactance's were fixed to the subtransient reactance
- All line charging was set to zero
- All shunts were set to zero
- All loads were set to zero
- All pre-fault bus voltages were set to 1.0 p.u. and a phase shift angle of zero

4.2 Short Circuit Results

The maximum fault current for each bus is provided for the 2017 Summer Peak condition. The following tables show the short circuit results for the study generators:

- Table 4-1: Short Circuit Analysis for GEN-2016-009
- Table 4-2: Short Circuit Analysis for GEN-2016-012
- Table 4-3: Short Circuit Analysis for GEN-2016-022 and GEN-2016-031
- Table 4-4: Short Circuit Analysis for GEN-2016-024
- Table 4-5: Short Circuit Analysis for GEN-2016-032
- Table 4-6: Short Circuit Analysis for GEN-2016-049
- Table 4-7: Short Circuit Analysis for GEN-2016-060
- Table 4-8: Short Circuit Analysis for GEN-2016-061
- Table 4-9: Short Circuit Analysis for GEN-2016-068
- Table 4-10: Short Circuit Analysis for GEN-2016-071
- Table 4-11: Short Circuit Analysis for GEN-2016-072
- Table 4-12: Short Circuit Analysis for GEN-2016-073

Table 4-1
Short Circuit Analysis for Study Project GEN-2016-009

Study Generator GEN-2016-009											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
301369	4REMNGTON	138	7.46	514758	STDBEAR4	138	3.74	515635	BLLNGTP4	138	6.54
510374	HARDY 4	138	3.79	514759	NEWKIRK4	138	0.29	520432	FOUNTAIN4	138	5.16
510375	WEBBCTY4	138	4.15	514760	KILDARE4	138	1.64	521007	MARLAND_138	138	7.38
510376	WEBBTAP4	138	7.52	514761	WHEAGLE4	138	5.67	521012	NEWKIRK4	138	1.37
510377	FAIRFXT4	138	7.55	514762	3SANDS 2	69	4.73	529241	OMMORANT	69	9.47
510382	WPAWHSK4	138	5.72	514763	CONBLKS2	69	4.02	529242	OMHUFFYT	69	8.89
510403	SHIDLER4	138	7.84	514764	NWKRKAT4	138	1.37	529243	OMNWESTT	69	8.22
510432	SHIDWFC4	138	5.35	514770	MARLNDT4	138	0.83	529244	OMNEASTT	69	7.90
514704	MILLERT4	138	0.45	514798	SNRPMPT4	138	0.47	529245	OMGONTER	69	8.93
514706	COWCRK 4	138	1.30	514799	SNRPMP 4	138	1.28	529246	OMKAWS	69	9.51
514707	PERRY 4	138	1.00	514802	SOONER 4	138	1.89	529247	OMMCCORD	69	6.97
514737	OTOE 4	138	6.30	514803	SOONER 7	345	5.66	529248	OMPECANT	69	0.27
514742	OSGE 2	69	5.66	514881	SPRNGCK7	345	2.07	529249	OMWW	69	1.83
514743	OSAGE 4	138	6.31	515006	MORRISN4	138	3.69	529251	OMRIGGS	69	8.75
514744	CHILOCO2	69	0.49	515011	STILWTR4	138	3.33	529252	OMKAWH	69	4.32
514745	CHERPLT2	69	1.66	515400	DMANCRK4	138	8.06	560056	G15-066T	345	8.40
514746	CHERKPL2	69	9.21	515402	CONBLKT2	69	4.11	560084	G16-061-TAP	345	6.67
514748	CONTEMP4	138	3.39	515403	FNTANTP4	138	6.80	584690	GEN-2015-030	345	9.34
514750	BRMAN 2	69	8.77	515412	DMNCRKT4	138	3.74	584880	GEN-2015-047	345	1.69
514751	NEWKRKT2	69	5.50	515447	MORISNT4	138	3.72	585050	GEN-2015-067	138	2.07
514752	TONKAWA2	69	4.79	515541	COWBOYH4	138	7.41	587070	GEN-2016-009	69	4.77
514753	CONORTH4	138	3.43	515542	CWBOYHT4	138	7.98	587330	GEN-2016-048	138	1.83
514756	CHIKASI2	69	9.98	515576	RANCHRD7	345	4.12				
514757	CHIKASI4	138	9.30	515581	COYOTE 4	138	8.37				

Table 4-2
Short Circuit Analysis for Study Project GEN-2016-012

Study Generator GEN-2016-012											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
300071	5CLINTN	161	14.62	532986	BENTON 4	138	28.33	542978	CRAIG 5	161	39.28
300739	7BLACKBERRY	345	12.73	532988	BELAIRE4	138	18.82	542979	PFLUMM 5	161	26.88
300740	7SPORTSMAN	345	23.63	532990	MIDIAN 4	138	10.11	542981	LACYGNE7	345	25.28
300741	5SPORTSMAN	161	39.02	532991	WEAVER 4	138	22.02	542993	STHTOWN5	161	32.52
300949	7JASPER	345	10.92	533005	NEPARSN4	138	12.07	542994	HICKMAN5	161	18.43
300950	5JASPER	161	11.91	533008	TV1MNDV4	138	6.84	542995	MONTROS5	161	17.47
509807	ONETA--7	345	29.63	533020	NEOSHOS4	138	24.09	543002	MARTCIT5	161	23.94
509852	T.NO.--7	345	23.52	533021	NEOSHO 4	138	24.09	543031	SHWNMSN5	161	31.02
510379	DELWARE4	138	10.91	533022	NEOSHON4	138	24.09	543038	LENEXAS5	161	26.17
510380	DELWARE7	345	11.68	533024	29TH 4	138	19.60	543039	LENEXAN5	161	27.19
510406	N.E.S.-7	345	18.88	533035	CHISHLM4	138	22.03	543042	SPRGHL 5	161	10.85
512650	GRDA1 7	345	26.08	533039	ELPASO 4	138	24.73	543044	MOONLT 5	161	16.52
512734	FARML 4	138	7.78	533040	EVANS N4	138	37.71	543046	OXFORD 5	161	20.03
515621	OPENSKY7	345	13.00	533062	ROSEHIL4	138	31.47	543048	COLLEGE5	161	27.90
532768	EMPEC 7	345	17.39	533068	STEARMN4	138	19.57	543049	CEDRCRK5	161	27.50
532769	LANG 7	345	17.18	533283	87TH 3	115	26.00	543050	ANTIOCH5	161	21.97
532770	MORRIS 7	345	12.76	533624	BURLING2	69	3.32	543053	REDEL 5	161	23.87
532771	RENO 7	345	10.82	533626	BURLJCT2	69	4.79	543054	CEDARNL5	161	13.63
532772	STRANGR7	345	22.14	533629	CC2SHAR2	69	4.53	543055	SEOTTWA5	161	6.71
532774	SWISVAL7	345	16.40	533630	CC3WEST2	69	4.40	543057	BUCYRUS5	161	19.18
532775	87TH 7	345	19.94	533639	MARMATN2	69	8.24	543058	NLOUISB5	161	8.72
532780	CANEYRV7	345	9.98	533653	WOLFCRK2	69	5.84	543068	WAGSTAF5	161	13.37
532781	CANEYWF7	345	9.71	533696	LABETTS2	69	5.80	543077	PLSTVAL5	161	9.75
532791	BENTON 7	345	19.56	533703	ORDNJCT2	69	7.79	543105	BULLCRK5	161	25.00
532793	NEOSHO 7	345	18.60	533758	CRAWFOR2	69	6.73	543126	LACKMAN5	161	13.05
532794	ROSEHIL7	345	19.20	533768	NEOSHO 2	69	18.98	543131	CLARE 5	161	13.99
532796	WICHITA7	345	25.02	541198	PECULR 7	345	20.16	543132	BNSF 5	161	19.94
532797	WOLFCRK7	345	18.65	541200	PHILL 7	345	18.18	547467	ORO110 5	161	19.20
532798	VIOLA 7	345	11.41	541201	SIBLEY 7	345	20.30	547469	RIV4525	161	23.49
532799	WAVERLY7	345	16.63	541207	ARCHIE 5	161	16.86	547487	HOC404 5	161	12.87
532800	LATHAMS7	345	10.54	541225	PHILL 5	161	31.05	547498	STL439 5	161	24.17
532801	ELKRVR17	345	9.30	541245	KCSOUTH5	161	16.72	547503	RIV452T 5	161	23.08
532802	WAVERTX7	345	13.90	541317	NRAYMORE	161	7.79	547541	RIV167 2	69	16.93
532851	AUBURN 6	230	13.44	541340	BELTONS5	161	19.90	560029	G15-016-TAP	161	7.28
532853	LAWHILL6	230	13.54	541341	S.HARP 5	161	25.07	560033	G1524&G1525T	345	20.74
532856	SWISVAL6	230	21.61	541342	PECULR 5	161	24.44	560053	G15-052T	345	13.29
532857	TECHILL6	230	11.26	541343	S.HARP 2	69	4.52	560073	G16-012-TAP	345	14.13
532863	MORRIS 6	230	13.80	541344	PECULRS5	161	23.67	562476	G14-001-TAP	345	11.07
532926	BAKER 5	161	8.50	542965	W.GRDNR7	345	25.34	584900	GEN-2015-052	345	13.24
532932	LITCH 5	161	11.14	542966	WGARDNR5	161	27.28	585100	GEN-2015-073	345	14.27
532934	MARMTNE5	161	7.96	542968	STILWEL7	345	24.35	587080	GEN-2016-012	345	11.13
532937	NEOSHO 5	161	23.09	542969	STILWEL5	161	39.08				
532938	FRANKLIN5	161	8.52	542977	CRAIG 7	345	21.54				

Table 4-3
Short Circuit Analysis for Study Projects GEN-2016-022 and GEN-2016-031

Study Generators GEN-2016-022 and GEN-2016-031											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
509755	WEKIWA-7	345	18.64	514854	BRADEN 4	138	31.02	532796	WICHITA7	345	25.02
509852	T.NO.--7	345	23.52	514873	LNEOAK 4	138	26.63	532797	WOLFCRK7	345	18.65
509895	T.NO.2-4	138	34.26	514879	NORTWST4	138	43.11	532799	WAVERLY7	345	16.63
510376	WEBBTAP4	138	7.52	514880	NORTWST7	345	30.79	532800	LATHAMS7	345	10.54
510406	N.E.S.-7	345	18.88	514881	SPRNGCK7	345	22.07	532801	ELKRVR17	345	9.30
512694	CLEVLND7	345	14.95	514898	CIMARON4	138	42.49	532986	BENTON 4	138	28.33
512729	CLEVLND 4	138	16.71	514901	CIMARON7	345	31.52	532991	WEAVER 4	138	22.02
512865	GREC TAP5	345	25.64	514907	ARCADIA4	138	41.10	533039	ELPASO 4	138	24.73
514704	MILLERT4	138	20.45	514908	ARCADIA7	345	25.16	533062	ROSEHIL4	138	31.47
514705	COWCRK 2	69	4.05	514909	REDBUD 7	345	24.06	533068	STEARMN4	138	19.57
514706	COWCRK 4	138	11.30	514934	DRAPER 7	345	20.59	533653	WOLFCRK2	69	5.84
514707	PERRY 4	138	11.00	515006	MORRISN4	138	13.69	560053	G15-052T	345	13.29
514708	OTTER 4	138	9.58	515011	STILWTR4	138	13.33	560055	G15-063T	345	17.85
514709	FRMNTAP4	138	17.76	515045	SEMINOL7	345	26.10	560056	G15-066T	345	18.40
514711	WAUKOTP4	138	15.14	515181	UNVRSTY4	138	13.45	560084	G16-061-TAP	345	16.67
514713	WRVALLY4	138	8.69	515400	DMANCRK4	138	8.06	560086	G16-072-TAP	345	11.51
514714	WOODRNG4	138	18.99	515407	TATONGA7	345	10.83	584450	G1501-G1631	345	11.29
514715	WOODRNG7	345	18.95	515412	DMNCRKT4	138	13.74	584690	GEN-2015-030	345	19.34
514733	MARSHL 4	138	7.82	515447	MORISNT4	138	13.72	584770	GEN-2015-034	345	11.28
514737	OTOE 4	138	16.30	515471	NW164TH4	138	35.27	584880	GEN-2015-047	345	11.69
514742	OSGE 2	69	15.66	515476	HUNTERS7	345	12.67	584900	GEN-2015-052	345	13.24
514743	OSAGE 4	138	16.31	515477	CHSHLMV7	345	12.65	585010	GEN-2015-063	345	17.78
514758	STDBEAR4	138	13.74	515497	MATHWSN7	345	29.95	585040	GEN-2015-066	345	18.23
514761	WHEAGLE4	138	15.67	515512	SPVALLY4	138	8.68	585050	GEN-2015-067	138	22.07
514770	MARLNDT4	138	10.83	515576	RANCHRD7	345	14.12	587160	GEN-2016-022	345	11.25
514798	SNRPMPT4	138	20.47	515610	FSHRTAP7	345	16.82	587300	GEN-2016-045	345	4.46
514799	SNRPMP 4	138	11.28	515621	OPENSKY7	345	13.00	587330	GEN-2016-048	138	21.83
514801	MINCO 7	345	16.45	529200	OMCDLEC7	345	14.10	587380	GEN-2016-057	345	4.36
514802	SOONER 4	138	31.89	532780	CANEYRV7	345	9.98	587410	GEN-2016-061	345	16.35
514803	SOONER 7	345	25.66	532791	BENTON 7	345	19.56	587460	GEN-2016-068	345	7.26
514825	KAYWIND7	345	12.96	532793	NEOSHO 7	345	18.60				
514828	KETCHTP4	138	26.15	532794	ROSEHIL7	345	19.20				

Table 4-4
Short Circuit Analysis for Study Project GEN-2016-024

Study Generators GEN-2016-024											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
300739	7BLACKBERRY	345	12.73	533043	FOWLER 4	138	16.24	533608	POTWNTP2	69	5.22
510380	DELWARE7	345	11.68	533054	MAIZE 4	138	22.44	533626	BURLJCT2	69	4.79
515543	RENFROW7	345	11.50	533060	NOEASTE4	138	20.50	533629	CC2SHAR2	69	4.53
515621	OPENSKY7	345	13.00	533062	ROSEHIL4	138	31.47	533633	COALCRK2	69	4.97
532768	EMPEC 7	345	17.39	533064	17TH 4	138	17.69	533646	TIOGA 2	69	6.14
532771	RENO 7	345	10.82	533065	SG12COL4	138	20.34	533649	UN7ROSE2	69	4.18
532773	SUMMIT 7	345	10.30	533067	SPRNGDL4	138	14.42	533653	WOLFCRK2	69	5.84
532780	CANEYRV7	345	9.98	533068	STEARMN4	138	19.57	533660	ASHGRJ22	69	5.26
532791	BENTON 7	345	19.56	533069	TCBURNS4	138	3.24	533666	CHANTAP2	69	5.08
532792	FR2EAST7	345	5.96	533153	COLINE 3	115	23.24	533673	ALTOO E2	69	4.02
532793	NEOSHO 7	345	18.60	533157	FORBES 3	115	9.67	533674	ALTOO W2	69	2.95
532794	ROSEHIL7	345	19.20	533176	SHAWNEE3	115	12.21	533675	ARGO 2	69	2.87
532796	WICHITA7	345	25.02	533177	6 GOLDN3	115	16.26	533684	CONSOL 2	69	1.64
532797	WOLFCRK7	345	18.65	533180	TEC E 3	115	29.61	533698	MONTGOM2	69	7.05
532798	VIOLA 7	345	11.41	533182	TECHILE3	115	30.02	533700	NEODJCT2	69	3.48
532799	WAVERLY7	345	16.63	533183	WM BROS3	115	4.64	533705	RA1FRED2	69	1.77
532800	LATHAMS7	345	10.54	533187	27CROCO3	115	20.25	533706	RA5HIPR2	69	4.00
532801	ELKRVR17	345	9.30	533189	UNDERPN3	115	18.56	533707	RA6BROO2	69	2.23
532802	WAVERTX7	345	13.90	533197	HARTLND3	115	4.72	533768	NEOSHO 2	69	18.98
532857	TECHILL6	230	11.26	533270	STULL T3	115	11.95	533786	CHISHLM2	69	18.59
532920	TECHILL5	161	5.77	533390	MAIZEW 4	138	26.26	533789	CRESTVW2	69	12.77
532937	NEOSHO 5	161	23.09	533391	MAIZEE 4	138	21.16	533799	GRANT 2	69	10.68
532986	BENTON 4	138	28.33	533416	RENO 3	115	21.78	533800	GRANT J2	69	9.43
532987	BUTLER 4	138	9.92	533581	ADA 2	69	7.80	533811	KENMAR 2	69	18.45
532988	BELAIRE4	138	18.82	533582	AUGUSTA2	69	7.19	533814	MASCOT 2	69	19.51
532989	BUTLERS4	138	9.92	533583	BUTLER 2	69	12.52	533815	MEAD 2	69	26.72
532990	MIDIAN 4	138	10.11	533584	BU6DEGR2	69	1.92	533817	MINNEHA2	69	15.96
532991	WEAVER 4	138	22.02	533587	CHASJCT2	69	9.86	533820	MOSSMAN2	69	17.30
532993	TALLGRS4	138	10.02	533588	CHASE 2	69	7.41	533822	NOEASTE2	69	25.01
532996	TIOGA 4	138	4.11	533589	CHESNEY2	69	8.33	533831	RENEW 2	69	16.58
533001	ALTOONA4	138	7.67	533590	ELDORAD2	69	7.95	533832	RIPLEYM2	69	21.60
533002	DEARING4	138	8.93	533592	GETTY 2	69	10.81	533835	17TH TP2	69	25.03
533004	MONTGOM4	138	6.62	533593	FRNTIER2	69	10.97	533840	17TH 2	69	27.25
533005	NEPARSN4	138	12.07	533594	LEON 2	69	2.67	533846	21ST 2	69	15.81
533006	TAYLOR 4	138	6.44	533595	MAGNA 2	69	2.03	533861	BU5FURL2	69	4.45
533021	NEOSHO 4	138	24.09	533596	MAG JCT2	69	3.57	539801	THISTLE7	345	16.21
533022	NEOSHON4	138	24.09	533597	MIDIAN 2	69	12.24	542981	LACYGNE7	345	25.28
533024	29TH 4	138	19.60	533598	MOBIL 2	69	7.47	560033	G1524&G1525T	345	20.74
533026	ANDOVER4	138	17.78	533599	PEABODY2	69	1.44	560053	G15-052T	345	13.29
533031	BURNSTP4	138	4.48	533600	PESTER 2	69	8.12	560073	G16-012-TAP	345	14.13
533032	BU11PON4	138	14.99	533601	POTWIN 2	69	2.54	560087	G16-073-TAP	345	12.23
533033	CANAL 4	138	16.50	533602	SKELLY 2	69	11.39	562476	G14-001-TAP	345	11.07
533035	CHISHLM4	138	22.03	533603	TOWANDA2	69	5.52	583850	GEN-2014-001	345	7.56
533037	COMOTAR4	138	18.58	533604	WEAVER 2	69	11.67	584659	G15024G15025	345	10.48
533039	ELPASO 4	138	24.73	533605	WHITE J2	69	7.18	584900	GEN-2015-052	345	13.24
533040	EVANS N4	138	37.71	533606	TOWTAPW2	69	1.84	587100	GEN-2016-024	138	8.21
533041	EVANS S4	138	37.71	533607	TOWTAPE2	69	5.66				

Table 4-5
Short Circuit Analysis for Study Project GEN-2016-032

Study Generators GEN-2016-032											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
300135	4LUTHER	138	8.18	514833	DANFRTH4	138	25.71	515461	RNDBARN4	138	39.08
300136	4MEMORAL	138	20.43	514840	JONESTP4	138	28.84	515464	SHDWLKE4	138	17.29
509782	R.S.S.-7	345	30.87	514842	CHTWOOD4	138	20.81	515465	LGARBER4	138	21.08
510907	PITTSB-7	345	13.23	514879	NORTWST4	138	43.11	515467	WHITESB4	138	15.21
512710	KINZEGR4	138	14.29	514880	NORTWST7	345	30.79	515476	HUNTERS7	345	12.67
514510	BURGETT4	138	22.17	514881	SPRNGCK7	345	22.07	515477	CHSHLMV7	345	12.65
514706	COWCRK 4	138	11.30	514884	DUNJEE 4	138	21.21	515497	MATHWSN7	345	29.95
514708	OTTER 4	138	9.58	514901	CIMARON7	345	31.52	515641	PLNSMEN4	138	13.66
514709	FRMNTAP4	138	17.76	514906	JNSKAMO4	138	20.57	520847	CASHION4	138	5.03
514710	WAUKOMI4	138	9.59	514907	ARCADIA4	138	41.10	520879	DOVER 4	138	5.77
514711	WAUKOTP4	138	15.14	514908	ARCADIA7	345	25.16	520882	DOVERSW4	138	7.41
514712	FAIRMON4	138	13.81	514909	REDBUD 7	345	24.06	521006	MARSHAL4	138	7.79
514713	WRVALLY4	138	8.69	514934	DRAPER 7	345	20.59	521037	REEDING2	138	4.25
514714	WOODRNG4	138	18.99	514937	HSLWEST2	69	12.22	521073	TWNLAKE4	138	6.54
514715	WOODRNG7	345	18.95	514941	HSL 4	138	43.00	521100	WARREN 4	138	8.69
514730	SO4TH 2	69	13.63	514966	MIDWAY 4	138	18.32	560055	G15-063T	345	17.85
514731	SO4TH 4	138	15.01	514987	DALE 4	138	13.76	560077	G16-032-TAP	345	3.38
514733	MARSHL 4	138	7.82	514993	SE15TH 4	138	15.08	560084	G16-061-TAP	345	16.67
514774	HENESEY4	138	7.35	515008	KINZE 4	138	14.30	560086	G16-072-TAP	345	11.51
514790	IMO 4	138	11.74	515009	MCELROY4	138	13.56	584170	GEN-2014-064	138	9.51
514803	SOONER 7	345	25.66	515044	SEMINOL4	138	39.24	585010	GEN-2015-063	345	17.78
514815	BRECKNR4	138	13.65	515045	SEMINOL7	345	26.10	587210	GEN-2016-032	138	7.81
514827	CTNWOOD4	138	16.62	515046	HAMMTAP4	138	14.70	587410	GEN-2016-061	345	16.35
514829	PINE ST4	138	11.75	515224	MUSKOGE7	345	28.83	587460	GEN-2016-068	345	7.26
514830	FITZGRD4	138	9.01	515373	LBRTYLK4	138	13.56				
514831	WATRLOO4	138	14.08	515377	CRESENT4	138	7.4294				

Table 4-6
Short Circuit Analysis for Study Project GEN-2016-048

Study Generator GEN-2016-048											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
300138	4CLEVLND	138	16.71	514798	SNRPMPT4	138	20.47	515514	KNIPE 4	138	5.02
509755	WEKIWA-7	345	18.64	514799	SNRPMP 4	138	11.28	515541	COWBOYH4	138	7.41
509852	T.NO.--7	345	23.52	514800	BRRDTP 2	69	1.79	515542	CWBOYHT4	138	7.98
509895	T.NO.2-4	138	34.26	514801	MINCO 7	345	16.45	515576	RANCHRD7	345	14.12
510375	WEBBCTY4	138	4.15	514802	SOONER 4	138	31.89	515610	FSHRTAP7	345	16.82
510376	WEBBTAP4	138	7.52	514803	SOONER 7	345	25.66	515621	OPENSKY7	345	13.00
510377	FAIRFXT4	138	7.55	514825	KAYWIND7	345	12.96	521007	MARLAND_138	138	7.38
510403	SHIDLER4	138	7.84	514828	KETCHTP4	138	26.15	521034	PERRY 2	69	2.70
510406	N.E.S.-7	345	18.88	514854	BRADEN 4	138	31.02	521100	WARREN 4	138	8.69
510432	SHIDWFC4	138	5.35	514873	LNEOAK 4	138	26.63	529200	OMCDLEC7	345	14.10
512694	CLEVLND7	345	14.95	514879	NORTWST4	138	43.11	529241	OMMORANT	69	9.47
512729	CLEVLND 4	138	16.71	514880	NORTWST7	345	30.79	529242	OMHUFFYT	69	8.89
512865	GREC TAP5	345	25.64	514881	SPRNGCK7	345	22.07	529248	OMPECANT	69	10.27
514704	MILLERT4	138	20.45	514898	CIMARON4	138	42.49	529249	OMWW	69	11.83
514705	COWCRK 2	69	4.05	514901	CIMARON7	345	31.52	532794	ROSEHIL7	345	19.20
514706	COWCRK 4	138	11.30	514907	ARCADIA4	138	41.10	560053	G15-052T	345	13.29
514707	PERRY 4	138	11.00	514908	ARCADIA7	345	25.16	560055	G15-063T	345	17.85
514708	OTTER 4	138	9.58	514909	REDBUD 7	345	24.06	560056	G15-066T	345	18.40
514709	FRMNTAP4	138	17.76	514934	DRAPER 7	345	20.59	560084	G16-061-TAP	345	16.67
514711	WAUKOTP4	138	15.14	515006	MORRISN4	138	13.69	560086	G16-072-TAP	345	11.51
514713	WRVALLY4	138	8.69	515008	KINZE 4	138	14.30	584170	GEN-2014-064	138	9.51
514714	WOODRNG4	138	18.99	515009	MCELROY4	138	13.56	584450	G1501-G1631	345	11.29
514715	WOODRNG7	345	18.95	515011	STILWTR4	138	13.33	584690	GEN-2015-030	345	19.34
514733	MARSHL 4	138	7.82	515033	CUSHING4	138	6.04	584770	GEN-2015-034	345	11.28
514737	OTOE 4	138	16.30	515039	PAYNESB4	138	7.63	584880	GEN-2015-047	345	11.69
514742	OSGE 2	69	15.66	515045	SEMINOL7	345	26.10	584900	GEN-2015-052	345	13.24
514743	OSAGE 4	138	16.31	515181	UNVRSTY4	138	13.45	585010	GEN-2015-063	345	17.78
514745	CHERPLT2	69	11.66	515400	DMANCRK4	138	8.06	585040	GEN-2015-066	345	18.23
514748	CONTEMP4	138	13.39	515402	CONBLKT2	69	14.11	585050	GEN-2015-067	138	22.07
514753	CONORTH4	138	13.43	515403	FNTANTP4	138	6.80	587070	GEN-2016-009	69	14.77
514757	CHIKASI4	138	9.30	515407	TATONGA7	345	10.83	587160	GEN-2016-022	345	11.25
514758	STDBEAR4	138	13.74	515412	DMNCRKT4	138	13.74	587300	GEN-2016-045	345	4.46
514760	KILDARE4	138	11.64	515447	MORISNT4	138	13.72	587330	GEN-2016-048	138	21.83
514761	WHEAGLE4	138	15.67	515471	NW164TH4	138	35.27	587380	GEN-2016-057	345	4.36
514763	CONBLKS2	69	14.02	515476	HUNTERS7	345	12.67	587410	GEN-2016-061	345	16.35
514764	NWKRKAT4	138	11.37	515477	CHSHLMV7	345	12.65	587460	GEN-2016-068	345	7.26
514768	WF KAY 2	69	2.95	515497	MATHWSN7	345	29.95				
514770	MARLNDT4	138	10.83	515512	SPVALLY4	138	8.68				

Table 4-7
Short Circuit Analysis for Study Project GEN-2016-060

Study Generator GEN-2016-060											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
514804	MIDLTNT4	138	10.27	533033	CANAL 4	138	16.50	533553	SC4ROME2	69	5.44
515381	PECKHMT4	138	10.14	533039	ELPASO 4	138	24.73	533555	SC7CRES2	69	10.77
521198	CHILOCCO4	138	8.98	533042	FARBER 4	138	15.80	533556	STROTHR2	69	5.88
532791	BENTON 7	345	19.56	533045	GILL W 4	138	22.14	533558	TIMBJCT2	69	7.67
532794	ROSEHIL7	345	19.20	533046	GILL S 4	138	22.14	533559	UDALL 2	69	6.80
532797	WOLFCRK7	345	18.65	533048	HARRY 4	138	13.51	533561	WINFLD 2	69	6.22
532800	LATHAMS7	345	10.54	533062	ROSEHIL4	138	31.47	533604	WEAVER 2	69	11.67
532981	CRESWLN4	138	8.46	533063	SC10BEL4	138	8.99	533792	EASTBOR2	69	14.50
532982	OXFORD 4	138	7.49	533066	64TH 4	138	14.26	533793	ELPASO 2	69	11.73
532984	SUMNER 4	138	7.81	533067	SPRNGDL4	138	14.42	533795	GILL E 2	69	30.59
532985	TCROCK 4	138	4.73	533068	STEARMN4	138	19.57	533796	GILL W 2	69	30.59
532991	WEAVER 4	138	22.02	533070	SLATECRK4	138	4.64	533808	HYDRJN2	69	15.78
532992	TIMBJCT4	138	5.02	533541	AKRON 2	69	6.39	533821	MULVANE2	69	5.34
532993	TALLGRS4	138	10.02	533543	CRESWLN2	69	10.91	533824	OAKLAWN2	69	15.48
533026	ANDOVER4	138	17.78	533547	OAK 2	69	7.62	533826	OLIVER 2	69	14.02
533028	BEECHTP4	138	13.52	533548	PARIS 2	69	6.61	533842	64TH 2	69	14.63
533029	59TH ST4	138	17.43	533549	RAINBOW2	69	5.67	560053	G15-052T	345	13.29
533030	BOEING 4	138	16.96	533550	RICHLAN2	69	5.80	585200	GEN-2015-083	138	6.52
533032	BU11PON4	138	14.99	533551	SC1KING2	69	3.21				

Table 4-8
Short Circuit Analysis for Study Project GEN-2016-061

Study Generator GEN-2016-061											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
300138	4CLEVLND	138	16.71	514803	SOONER 7	345	25.66	515621	OPENSKY7	345	13.00
509755	WEKIWA-7	345	18.64	514815	BRECKNR4	138	13.65	515641	PLNSMEN4	138	13.66
509852	T.NO.--7	345	23.52	514825	KAYWIND7	345	12.96	521006	MARSHAL4	138	7.79
509895	T.NO.2-4	138	34.26	514827	CTNWOOD4	138	16.62	521100	WARREN 4	138	8.69
510376	WEBBTAP4	138	7.52	514828	KETCHTP4	138	26.15	529200	OMCDLEC7	345	14.10
510406	N.E.S.-7	345	18.88	514854	BRADEN 4	138	31.02	532794	ROSEHIL7	345	19.20
512694	CLEVLND7	345	14.95	514873	LNEOAK 4	138	26.63	532798	VIOLA 7	345	11.41
512729	CLEVLND 4	138	16.71	514879	NORTWST4	138	43.11	560053	G15-052T	345	13.29
512865	GREC TAP5	345	25.64	514880	NORTWST7	345	30.79	560055	G15-063T	345	17.85
514704	MILLERT4	138	20.45	514881	SPRNGCK7	345	22.07	560056	G15-066T	345	18.40
514705	COWCRK 2	69	4.05	514898	CIMARON4	138	42.49	560077	G16-032-TAP	345	3.38
514706	COWCRK 4	138	11.30	514901	CIMARON7	345	31.52	560084	G16-061-TAP	345	16.67
514707	PERRY 4	138	11.00	514907	ARCADIA4	138	41.10	560086	G16-072-TAP	345	11.51
514708	OTTER 4	138	9.58	514908	ARCADIA7	345	25.16	562075	G11-051-TAP	345	12.08
514709	FRMNTAP4	138	17.76	514909	REDBUD 7	345	24.06	583750	GEN-2013-029	345	10.22
514710	WAUKOMI4	138	9.59	514934	DRAPER 7	345	20.59	584170	GEN-2014-064	138	9.51
514711	WAUKOTP4	138	15.14	515006	MORRISN4	138	13.69	584450	G1501-G1631	345	11.29
514712	FAIRMON4	138	13.81	515011	STILWTR4	138	13.33	584690	GEN-2015-030	345	19.34
514713	WRVALLY4	138	8.69	515045	SEMINOL7	345	26.10	584700	GEN-2015-029	345	7.52
514714	WOODRNG4	138	18.99	515181	UNVRSTY4	138	13.45	584770	GEN-2015-034	345	11.28
514715	WOODRNG7	345	18.95	515400	DMANCRK4	138	8.06	584880	GEN-2015-047	345	11.69
514730	SO4TH 2	69	13.63	515407	TATONGA7	345	10.83	584900	GEN-2015-052	345	13.24
514731	SO4TH 4	138	15.01	515412	DMNCRKT4	138	13.74	585010	GEN-2015-063	345	17.78
514733	MARSHL 4	138	7.82	515447	MORISNT4	138	13.72	585040	GEN-2015-066	345	18.23
514737	OTOE 4	138	16.30	515448	CRSRDSW7	345	8.36	585050	GEN-2015-067	138	22.07
514742	OSGE 2	69	15.66	515471	NW164TH4	138	35.27	587160	GEN-2016-022	345	11.25
514743	OSAGE 4	138	16.31	515476	HUNTERS7	345	12.67	587210	GEN-2016-032	138	7.81
514758	STDBEAR4	138	13.74	515477	CHSHLMV7	345	12.65	587300	GEN-2016-045	345	4.46
514761	WHEAGLE4	138	15.67	515497	MATHWSN7	345	29.95	587304	GEN-2016-045	345	4.30
514770	MARLNDT4	138	10.83	515512	SPVALLY4	138	8.68	587330	GEN-2016-048	138	21.83
514774	HENESEY4	138	7.35	515543	RENFROW7	345	11.50	587380	GEN-2016-057	345	4.36
514790	IMO 4	138	11.74	515544	RENFROW4	138	13.62	587384	GEN-2016-057	345	4.10
514798	SNRPMPT4	138	20.47	515576	RANCHRD7	345	14.12	587410	GEN-2016-061	345	16.35
514799	SNRPMP 4	138	11.28	515582	SLNGWND7	345	7.19	587460	GEN-2016-068	345	7.26
514801	MINCO 7	345	16.45	515585	MAMTHPW7	345	9.55	587490	GEN-2016-072	345	8.66
514802	SOONER 4	138	31.89	515610	FSHRTAP7	345	16.82				

Table 4-9
Short Circuit Analysis for Study Project GEN-2016-068

Study Generator GEN-2016-068											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
509852	T.NO.--7	345	23.52	514854	BRADEN 4	138	31.02	515641	PLNSMEN4	138	13.66
511425	TUTCONT4	138	10.62	514863	HAYMAKR4	138	26.11	515800	GRACMNT7	345	14.91
512694	CLEVLND7	345	14.95	514873	LNEOAK 4	138	26.63	520409	RENFROW4	138	10.06
512729	CLEVLND 4	138	16.71	514879	NORTWST4	138	43.11	520882	DOVERSW4	138	7.41
514642	BRCKWND4	138	7.36	514880	NORTWST7	345	30.79	521006	MARSHAL4	138	7.79
514701	BUNCHCK4	138	6.55	514881	SPRNGCK7	345	22.07	521100	WARREN 4	138	8.69
514704	MILLERT4	138	20.45	514894	CZECHAL4	138	27.81	529200	OMCDLEC7	345	14.10
514705	COWCRK 2	69	4.05	514895	SARA 4	138	18.63	532792	FR2EAST7	345	5.96
514706	COWCRK 4	138	11.30	514898	CIMARON4	138	42.49	532796	WICHITA7	345	25.02
514707	PERRY 4	138	11.00	514901	CIMARON7	345	31.52	532798	VIOLA 7	345	11.41
514708	OTTER 4	138	9.58	514907	ARCADIA4	138	41.10	560053	G15-052T	345	13.29
514709	FRMNTAP4	138	17.76	514908	ARCADIA7	345	25.16	560055	G15-063T	345	17.85
514710	WAUKOMI4	138	9.59	514909	REDBUD 7	345	24.06	560056	G15-066T	345	18.40
514711	WAUKOTP4	138	15.14	514933	DRAPER 4	138	38.75	560077	G16-032-TAP	345	3.38
514712	FAIRMON4	138	13.81	514934	DRAPER 7	345	20.59	560084	G16-061-TAP	345	16.67
514713	WRVALLY4	138	8.69	515006	MORRISN4	138	13.69	560086	G16-072-TAP	345	11.51
514714	WOODRNG4	138	18.99	515011	STILWTR4	138	13.33	562075	G11-051-TAP	345	12.08
514715	WOODRNG7	345	18.95	515045	SEMINOL7	345	26.10	562790	G15-038T	345	14.05
514718	VANCE 2	69	6.97	515373	LBRTYLK4	138	13.56	579272	G0744&1403HV	345	7.19
514721	IMO 2	69	11.84	515375	WWRDEHV7	345	17.78	583110	GEN-2011-051	345	12.08
514722	CLEVETP2	69	11.62	515377	CRESENT4	138	7.43	583750	GEN-2013-029	345	10.22
514727	ENID 2	69	11.89	515383	ENIDINT4	138	12.79	584170	GEN-2014-064	138	9.51
514730	SO4TH 2	69	13.63	515407	TATONGA7	345	10.83	584450	G1501-G1631	345	11.29
514731	SO4TH 4	138	15.01	515412	DMNCRKT4	138	13.74	584690	GEN-2015-030	345	19.34
514733	MARSHL 4	138	7.82	515444	MCNOWND7	345	16.40	584700	GEN-2015-029	345	7.52
514734	GLENWD 4	138	10.16	515447	MORISNT4	138	13.72	584770	GEN-2015-034	345	11.28
514737	OTOE 4	138	16.30	515448	CRSRDSW7	345	8.36	584880	GEN-2015-047	345	11.69
514743	OSAGE 4	138	16.31	515456	CHSTNTT2	69	11.53	585010	GEN-2015-063	345	17.78
514774	HENESEY4	138	7.35	515471	NW164TH4	138	35.27	585040	GEN-2015-066	345	18.23
514789	MENOTAP4	138	7.06	515476	HUNTERS7	345	12.67	585050	GEN-2015-067	138	22.07
514790	IMO 4	138	11.74	515477	CHSHLMV7	345	12.65	585180	GEN-2015-081	345	10.54
514798	SNRPMPT4	138	20.47	515497	MATHWSN7	345	29.95	587160	GEN-2016-022	345	11.25
514799	SNRPMP 4	138	11.28	515543	RENFROW7	345	11.50	587210	GEN-2016-032	138	7.81
514801	MINCO 7	345	16.45	515544	RENFROW4	138	13.62	587300	GEN-2016-045	345	4.46
514802	SOONER 4	138	31.89	515546	GRANTCO4	138	6.28	587304	GEN-2016-045	345	4.30
514803	SOONER 7	345	25.66	515549	MNCWND37	345	11.40	587330	GEN-2016-048	138	21.83
514815	BRECKNR4	138	13.65	515569	MDFRDTP4	138	11.04	587380	GEN-2016-057	345	4.36
514819	EL-RENO4	138	15.27	515576	RANCHRD7	345	14.12	587384	GEN-2016-057	345	4.10
514820	JENSENT4	138	15.04	515582	SLNGWND7	345	7.19	587410	GEN-2016-061	345	16.35
514825	KAYWIND7	345	12.96	515585	MAMTHPW7	345	9.55	587460	GEN-2016-068	345	7.26
514827	CTNWOOD4	138	16.62	515600	KNGFSHR7	345	11.40	587490	GEN-2016-072	345	8.66
514828	KETCHTP4	138	26.15	515610	FSHRTAP7	345	16.82				
514829	PINE ST4	138	11.75	515621	OPENSKY7	345	13.00				

Table 4-10
Short Circuit Analysis for Study Project GEN-2016-071

Study Generator GEN-2016-071											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
514759	NEWKIRK4	138	10.29	532982	OXFORD 4	138	7.49	533549	RAINBOW2	69	5.67
514760	KILDARE4	138	11.64	532984	SUMNER 4	138	7.81	533553	SC4ROME2	69	5.44
514764	NWKRKAT4	138	11.37	532992	TIMBJCT4	138	5.02	533555	SC7CRES2	69	10.77
514804	MIDLTNT4	138	10.27	533063	SC10BEL4	138	8.99	533556	STROTHR2	69	5.88
515381	PECKHMT4	138	10.14	533070	SLATECRK4	138	4.64	533560	WELLING2	69	4.79
521012	NEWKIRK4	138	11.37	533542	ARKCITY2	69	6.28	533563	PRAIRIJ2	69	6.75
521198	CHILOCCO4	138	8.98	533543	CRESWLN2	69	10.91	587480	GEN-2016-071	138	8.82
529290	OMNUKRK4	138	10.16	533547	OAK 2	69	7.62				
532981	CRESWLN4	138	8.46	533548	PARIS 2	69	6.61				

Table 4-11
Short Circuit Analysis for Study Project GEN-2016-072

Study Generator GEN-2016-072											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
514708	OTTER 4	138	9.58	532768	EMPEC 7	345	17.39	533413	CIRCLE 3	115	18.27
514709	FRMNTAP4	138	17.76	532769	LANG 7	345	17.18	533415	DAVIS 3	115	8.14
514711	WAUKOTP4	138	15.14	532770	MORRIS 7	345	12.76	533416	RENO 3	115	21.78
514714	WOODRNG4	138	18.99	532771	RENO 7	345	10.82	533429	MOUNDRG3	115	7.03
514715	WOODRNG7	345	18.95	532773	SUMMIT 7	345	10.30	533438	WMCPHER3	115	10.88
514719	CLYDE 2	69	4.33	532774	SWISVAL7	345	16.40	533653	WOLFCRK2	69	5.84
514733	MARSHL 4	138	7.82	532791	BENTON 7	345	19.56	539801	THISTLE7	345	16.21
514736	4CORNER2	69	3.64	532792	FR2EAST7	345	5.96	539804	THISTLE4	138	16.67
514739	MEDFORD2	69	5.26	532793	NEOSHO 7	345	18.60	539805	ELMCREEK7	345	5.26
514740	NUMAOGE2	69	4.41	532794	ROSEHIL7	345	19.20	560031	G15-015-TAP	138	8.33
514757	CHIKASI4	138	9.30	532795	FR2WEST7	345	4.87	560033	G1524&G1525T	345	20.74
514803	SOONER 7	345	25.66	532796	WICHITA7	345	25.02	560053	G15-052T	345	13.29
515375	WWRDEHV7	345	17.78	532797	WOLFCRK7	345	18.65	560055	G15-063T	345	17.85
515476	HUNTERS7	345	12.67	532798	VIOLA 7	345	11.41	560072	G16-005-TAP	345	13.48
515477	CHSHLMV7	345	12.65	532799	WAVERLY7	345	16.63	560084	G16-061-TAP	345	16.67
515497	MATHWSN7	345	29.95	532800	LATHAMS7	345	10.54	560086	G16-072-TAP	345	11.51
515543	RENFROW7	345	11.50	532873	SUMMIT 6	230	12.98	560087	G16-073-TAP	345	12.23
515544	RENFROW4	138	13.62	532986	BENTON 4	138	28.33	562476	G14-001-TAP	345	11.07
515546	GRANTCO4	138	6.28	532988	BELAIRE4	138	18.82	583750	GEN-2013-029	345	10.22
515547	GRANTCO2	69	7.18	532990	MIDIAN 4	138	10.11	583850	GEN-2014-001	345	7.56
515569	MDFRDTP4	138	11.04	533015	BENTLEY4	138	9.87	584570	GEN-2015-015	138	5.80
515581	COYOTE 4	138	8.37	533024	29TH 4	138	19.60	584659	G15024G15025	345	10.48
520204	SANDY_CN_138	138	5.56	533035	CHISHLM4	138	22.03	584660	GEN-2015-024	345	7.78
520205	WAKITAS4	138	5.67	533040	EVANS N4	138	37.71	584670	GEN-2015-025	345	10.48
520212	WAKITA4	138	5.63	533041	EVANS S4	138	37.71	585010	GEN-2015-063	345	17.78
520409	RENFROW4	138	10.06	533053	LAKERDG4	138	18.15	585100	GEN-2015-073	345	14.27
521008	NASH 2	69	2.63	533054	MAIZE 4	138	22.44	587410	GEN-2016-061	345	16.35
521085	WAKITA 2	69	4.82	533062	ROSEHIL4	138	31.47	587460	GEN-2016-068	345	7.26
522397	MDFRDJCT	138	7.23	533065	SG12COL4	138	20.34	587490	GEN-2016-072	345	8.66
522398	PONDCREEK	138	5.38	533074	45TH ST4	138	26.27	587500	GEN-2016-073	345	12.23
532767	BLUSTEM7	345	9.63	533390	MAIZEW 4	138	26.26				

Table 4-12
Short Circuit Analysis for Study Project GEN-2016-073

Study Generator GEN-2016-073											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
300739	7BLACKBERRY	345	12.73	532874	UNIONRG6	230	8.78	539638	FLATRDG4	138	14.92
510380	DELWARE7	345	11.68	532937	NEOSHO 5	161	23.09	539639	ELMCREK6	230	7.29
514782	WODWRD 2	69	10.69	532986	BENTON 4	138	28.30	539668	HARPER 4	138	5.69
514785	WOODWRD4	138	12.28	532987	BUTLER 4	138	9.92	539674	BARBER 4	138	8.10
514787	DEWEY 4	138	7.21	532988	BELAIRE4	138	18.81	539675	MILANTP4	138	6.06
514796	IODINE-4	138	7.20	532990	MIDIAN 4	138	10.11	539760	BARBER 3	115	8.00
515363	CENT 4	138	3.05	532991	WEAVER 4	138	22.01	539800	CLARKCOUNTY7	345	14.65
515375	WWRDEHV7	345	17.78	533012	HALSTDS4	138	4.22	539801	THISTLE7	345	16.19
515376	WWRDEHV4	138	22.82	533013	MOUND 4	138	4.81	539803	IRONWOOD7	345	14.76
515394	KEENAN 4	138	8.00	533015	BENTLEY4	138	9.87	539804	THISTLE4	138	16.66
515398	OUSPRT 4	138	8.79	533016	WWUPLNT4	138	7.61	539805	ELMCREEK7	345	5.26
515407	TATONGA7	345	10.83	533021	NEOSHO 4	138	24.09	542965	W.GRDNR7	345	25.34
515448	CRSRDSW7	345	8.36	533024	29TH 4	138	19.59	542981	LACYGNE7	345	25.28
515458	BORDER 7	345	5.01	533031	BURNSTP4	138	4.48	560000	G11-14-TAP	345	13.88
515476	HUNTERS7	345	12.66	533035	CHISHLM4	138	22.01	560002	IRONWOOD7	345	14.75
515497	MATHWSN7	345	29.95	533037	COMOTAR4	138	18.57	560027	G14-074-TAP	345	6.70
515543	RENFROW7	345	11.49	533038	COWSKIN4	138	18.48	560033	G1524&G1525T	345	20.59
515544	RENFROW4	138	13.62	533039	ELPASO 4	138	24.72	560053	G15-052T	345	13.29
515546	GRANTCO4	138	6.28	533040	EVANS N4	138	37.67	560070	G16-001-TAP	345	13.58
515569	MDFRDTP4	138	11.04	533041	EVANS S4	138	37.67	560071	G16-003-TAP	345	14.50
515582	SLNGWND7	345	7.19	533049	HOOVERN4	138	17.79	560072	G16-005-TAP	345	13.48
515585	MAMTHPW7	345	9.55	533053	LAKERDG4	138	18.14	560073	G16-012-TAP	345	14.13
515599	G07621119-20	345	12.37	533054	MAIZE 4	138	22.43	560080	G16-046-TAP	345	12.95
515621	OPENSKY7	345	13.00	533060	NOEASTE4	138	20.49	560086	G16-072-TAP	345	11.50
515785	WINDFRM4	138	19.97	533062	ROSEHIL4	138	31.45	560087	G16-073-TAP	345	11.22
515997	WWPAR4	138	16.79	533064	17TH 4	138	17.69	562075	G11-051-TAP	345	12.08
520409	RENFROW4	138	10.06	533065	SG12COL4	138	20.33	562476	G14-001-TAP	345	11.06
525830	TUCO_INT 6	230	20.34	533068	STEARMN4	138	19.56	582008	GEN-2011-008	345	11.67
525832	TUCO_INT 7	345	10.65	533074	45TH ST4	138	26.25	582016	GEN-2011-016	345	7.83
530592	SMOKYHL6	230	6.94	533304	LANG 3	115	14.46	582708	G-2011-008-1	345	9.61
531469	SPERVIL7	345	15.27	533336	BLUSTEM3	115	16.98	583090	G1149&G1504	345	4.58
532766	JEC N 7	345	23.33	533372	PHILIPS3	115	12.05	583110	GEN-2011-051	345	12.08
532767	BLUSTEM7	345	9.63	533380	SPRGCRK3	115	3.59	583370	GEN-2012-024	345	12.30
532768	EMPEC 7	345	17.39	533381	SUMMIT 3	115	16.87	583750	GEN-2013-029	345	10.21
532769	LANG 7	345	17.18	533390	MAIZEW 4	138	26.24	583850	GEN-2014-001	345	7.55
532770	MORRIS 7	345	12.76	533391	MAIZEE 4	138	21.15	584659	G15024G15025	345	7.32
532771	RENO 7	345	10.81	533412	ARKVALJ3	115	9.87	584660	GEN-2015-024	345	5.97
532773	SUMMIT 7	345	10.29	533413	CIRCLE 3	115	18.27	584670	GEN-2015-025	345	7.32
532774	SWISVAL7	345	16.39	533414	CITIES 3	115	8.14	584700	GEN-2015-029	345	7.52
532780	CANEYRV7	345	9.97	533415	DAVIS 3	115	8.14	584900	GEN-2015-052	345	13.23
532791	BENTON 7	345	19.53	533416	RENO 3	115	21.77	584980	GEN-2015-060	138	5.64
532792	FR2EAST7	345	5.96	533419	HEC 3	115	17.09	585060	GEN-2015-068	345	8.88
532793	NEOSHO 7	345	18.60	533421	HEC GT 3	115	17.77	585100	GEN-2015-073	345	14.27
532794	ROSEHIL7	345	19.18	533422	HEC U4 3	115	17.31	585180	GEN-2015-081	345	10.54
532795	FR2WEST7	345	4.87	533426	MANVILE3	115	8.30	585250	GEN-2015-090	345	3.28
532796	WICHITA7	345	24.91	533428	MCPHER 3	115	10.51	585410	GREAT_WESTRN	345	9.50
532797	WOLFCRK7	345	18.64	533429	MOUNDRG3	115	7.03	585420	COWBOY_RIDGE	345	7.42
532798	VIOLA 7	345	11.40	533438	WMCPHER3	115	10.88	585430	PRSIMN_CRK1	345	10.98
532799	WAVERLY7	345	16.63	533439	WHEATLD3	115	7.32	585440	PRSIMN_CRK2	345	10.08
532800	LATHAMS7	345	10.54	533506	DAVIS 2	69	7.25	587000	GEN-2016-001	345	11.48
532801	ELKRVR17	345	9.30	533597	MIDIAN 2	69	12.24	587020	GEN-2016-003	345	14.50
532802	WAVERTX7	345	13.90	533626	BURLJCT2	69	4.79	587040	GEN-2016-005	345	11.00
532856	SWISVAL6	230	21.61	533629	CC2SHAR2	69	4.53	587100	GEN-2016-024	138	8.21
532863	MORRIS 6	230	13.80	533653	WOLFCRK2	69	5.84	587310	GEN-2016-046	345	11.31
532871	CIRCLE 6	230	8.60	533786	CHISHLM2	69	18.59	587490	GEN-2016-072	345	8.66
532872	EMCPHER6	230	7.76	539001	ANTHONY4	138	3.48	587500	GEN-2016-073	345	11.22
532873	SUMMIT 6	230	12.98	539631	FLATRWD4	138	9.81				

The maximum fault current for each bus is provided for the 2025 Summer Peak condition. The following tables show the short circuit results for the study generators:

- Table 4-13: Short Circuit Analysis for GEN-2016-009
- Table 4-14: Short Circuit Analysis for GEN-2016-012
- Table 4-15: Short Circuit Analysis for GEN-2016-022 and GEN-2016-031
- Table 4-16: Short Circuit Analysis for GEN-2016-024
- Table 4-17: Short Circuit Analysis for GEN-2016-032
- Table 4-18: Short Circuit Analysis for GEN-2016-048
- Table 4-19: Short Circuit Analysis for GEN-2016-060
- Table 4-20 Short Circuit Analysis for GEN-2016-061
- Table 4-21: Short Circuit Analysis for GEN-2016-068
- Table 4-22: Short Circuit Analysis for GEN-2016-071
- Table 4-23: Short Circuit Analysis for GEN-2016-072
- Table 4-24: Short Circuit Analysis for GEN-2016-073

Table 4-13
Short Circuit Analysis for Study Project GEN-2016-009

Study Generator GEN-2016-009											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
301369	4REMNGTON	138	7.52	514758	STDBEAR4	138	14.33	515635	BLLNGTP4	138	6.59
510374	HARDY 4	138	3.81	514759	NEWKIRK4	138	10.57	520432	FOUNTAIN4	138	5.21
510375	WEBBCTY4	138	4.18	514760	KILDARE4	138	11.94	521007	MARLAND_138	138	7.53
510376	WEBBTAP4	138	7.61	514761	WHEAGLE4	138	16.32	521012	NEWKIRK4	138	11.65
510377	FAIRFXT4	138	7.64	514762	3SANDS 2	69	4.82	529241	OMMORANT	69	12.62
510382	WPAWHSK4	138	5.84	514763	CONBLKS2	69	16.18	529242	OMHUFFYT	69	12.81
510403	SHIDLER4	138	7.93	514764	NWKRKAT4	138	11.65	529243	OMNWESTT	69	11.61
510432	SHIDWFC4	138	5.40	514770	MARLNDT4	138	11.16	529244	OMNEASTT	69	9.95
514704	MILLERT4	138	20.70	514798	SNRPMPT4	138	20.75	529245	OMGONTER	69	10.63
514706	COWCRK 4	138	11.37	514799	SNRPMP 4	138	11.36	529246	OMKAWS	69	11.23
514707	PERRY 4	138	11.06	514802	SOONER 4	138	32.32	529247	OMMCCORD	69	7.79
514737	OTOE 4	138	16.46	514803	SOONER 7	345	25.82	529248	OMPECANT	69	12.04
514742	OSGE 2	69	18.54	514881	SPRNGCK7	345	22.52	529249	OMWW	69	13.84
514743	OSAGE 4	138	17.20	515006	MORRISN4	138	13.90	529251	OMRIGGS	69	13.42
514744	CHILOCO2	69	11.46	515011	STILWTR4	138	13.91	529252	OMKAWH	69	4.56
514745	CHERPLT2	69	12.98	515400	DMANCRK4	138	8.13	560056	G15-066T	345	18.48
514746	CHERKPL2	69	10.01	515402	CONBLKT2	69	16.31	560084	G16-061-TAP	345	16.80
514748	CONTEMP4	138	13.92	515403	FNTANTP4	138	6.87	584690	GEN-2015-030	345	19.43
514750	BRMAN 2	69	8.91	515412	DMNCRKT4	138	13.96	584880	GEN-2015-047	345	11.72
514751	NEWKRKT2	69	5.61	515447	MORISNT4	138	13.93	585050	GEN-2015-067	138	22.27
514752	TONKAWA2	69	4.87	515541	COWBOYH4	138	7.53	587070	GEN-2016-009	69	17.28
514753	CONORTH4	138	13.97	515542	CWBOYHT4	138	8.12	587330	GEN-2016-048	138	22.03
514756	CHIKASI2	69	10.14	515576	RANCHRD7	345	14.15				
514757	CHIKASI4	138	9.46	515581	COYOTE 4	138	8.46				

Table 4-14
Short Circuit Analysis for Study Project GEN-2016-012

Study Generator GEN-2016-012											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
300045	7MORGAN	345	10.90	532991	WEAVER 4	138	22.53	542969	STILWEL5	161	38.96
300071	5CLINTN	161	13.28	532998	MARMATN4	138	7.41	542977	CRAIG 7	345	21.97
300739	7BLACKBERRY	345	12.74	533005	NEPARSN4	138	12.38	542978	CRAIG 5	161	39.87
300740	7SPORTSMAN	345	23.89	533008	TV1MNDV4	138	6.93	542979	PFLUMM 5	161	27.17
300741	5SPORTSMAN	161	39.25	533020	NEOSHOS4	138	24.29	542981	LACYGNE7	345	25.40
300949	7JASPER	345	10.89	533021	NEOSHO 4	138	24.29	542993	STHTOWN5	161	32.81
300950	5JASPER	161	11.76	533022	NEOSHON4	138	24.29	542994	HICKMAN5	161	18.48
509807	ONETA--7	345	30.02	533024	29TH 4	138	19.87	542995	MONTROS5	161	13.33
509852	T.NO.--7	345	23.71	533035	CHISHLM4	138	22.68	543002	MARTCIT5	161	23.90
510379	DELWARE4	138	11.12	533039	ELPASO 4	138	25.97	543031	SHWNMSN5	161	31.58
510380	DELWARE7	345	11.78	533040	EVANS N4	138	42.78	543038	LENEXAS5	161	26.43
510406	N.E.S.-7	345	19.00	533062	ROSEHIL4	138	32.21	543039	LENEXAN5	161	27.52
512650	GRDA1 7	345	26.42	533068	STEARMN4	138	20.10	543042	SPRGHL 5	161	10.84
512734	FARML 4	138	8.46	533236	FAIRGDS3	115	21.66	543044	MOONLT 5	161	16.59
515621	OPENSKY7	345	13.03	533271	SWLWRNC3	115	21.41	543046	OXFORD 5	161	20.09
532768	EMPEC 7	345	17.50	533283	87TH 3	115	26.38	543048	COLLEGE5	161	28.16
532771	RENO 7	345	11.60	533285	DOUGLAS3	115	23.74	543049	CEDRCRK5	161	27.79
532772	STRANGR7	345	24.25	533624	BURLING2	69	3.50	543050	ANTIOCH5	161	21.99
532774	SWISVAL7	345	16.68	533626	BURLJCT2	69	5.04	543053	REDEL 5	161	23.82
532775	87TH 7	345	20.41	533629	CC2SHAR2	69	4.66	543054	CEDARNL5	161	13.68
532776	DOUGLAS7	345	18.22	533630	CC3WEST2	69	4.64	543055	SEOTTWA5	161	6.72
532780	CANEYRV7	345	10.02	533639	MARMATN2	69	8.77	543057	BUCYRUS5	161	19.18
532781	CANEYWF7	345	9.75	533653	WOLFCRK2	69	6.05	543058	NLOUISB5	161	8.72
532791	BENTON 7	345	19.90	533696	LABETTS2	69	7.09	543068	WAGSTAF5	161	13.39
532793	NEOSHO 7	345	18.71	533703	ORDNJCT2	69	8.80	543077	PLSTVAL5	161	9.77
532794	ROSEHIL7	345	19.48	533758	CRAWFOR2	69	6.75	543105	BULLCRK5	161	25.15
532796	WICHITA7	345	25.99	533768	NEOSHO 2	69	19.05	543126	LACKMAN5	161	13.04
532797	WOLFCRK7	345	18.72	541198	PECULR 7	345	20.19	543131	CLARE 5	161	14.04
532798	VIOLA 7	345	13.57	541200	PHILL 7	345	18.20	543132	BNSF 5	161	20.04
532799	WAVERLY7	345	16.69	541201	SIBLEY 7	345	20.31	547467	ORO110 5	161	19.12
532800	LATHAMS7	345	10.59	541207	ARCHIE 5	161	16.42	547469	RIV4525	161	23.49
532801	ELKRVR17	345	9.34	541225	PHILL 5	161	31.28	547487	HOC404 5	161	12.89
532802	WAVERTX7	345	13.93	541245	KCSOUTH5	161	16.60	547498	STL439 5	161	24.13
532856	SWISVAL6	230	21.70	541317	NRAYMORE	161	7.66	547503	RIV452T 5	161	23.08
532926	BAKER 5	161	8.52	541340	BELTONS5	161	19.84	547541	RIV167 2	69	17.94
532932	LITCH 5	161	11.22	541341	S.HARP 5	161	24.88	560029	G15-016-TAP	161	7.71
532934	MARMTNE5	161	8.91	541342	PECULR 5	161	24.33	560033	G1524&G1525T	345	21.26
532937	NEOSHO 5	161	23.20	541343	S.HARP 2	69	4.52	560053	G15-052T	345	13.35
532938	FRANKLIN5	161	8.63	541344	PECULRS5	161	23.54	560073	G16-012-TAP	345	14.16
532986	BENTON 4	138	28.84	542965	W.GRDNR7	345	26.02	562476	G14-001-TAP	345	11.16
532988	BELAIRE4	138	19.08	542966	WGARDNR5	161	27.47	584900	GEN-2015-052	345	13.30
532990	MIDIAN 4	138	10.20	542968	STILWEL7	345	24.49	587080	GEN-2016-012	345	11.15

Table 4-15
Short Circuit Analysis for Study Projects GEN-2016-022 and GEN-2016-031

Study Generators GEN-2016-022 and GEN-2016-031											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
300138	4CLEVLND	138	16.71	514799	SNRPMP 4	138	11.19	515476	HUNTERS7	345	12.04
300140	4SILVCTY	138	15.78	514801	MINCO 7	345	16.19	515477	CHSHLMV7	345	12.02
300996	4JAVINE	138	6.53	514802	SOONER 4	138	31.36	515497	MATHWSN7	345	27.77
301429	4CLEVLNDXFMR	138	16.71	514803	SOONER 7	345	24.53	515512	SPVALLY4	138	8.67
509755	WEKIWA-7	345	18.60	514815	BRECKNR4	138	13.48	515514	KNIPE 4	138	5.02
509757	WEKIWA-4	138	31.26	514819	EL-RENO4	138	15.17	515542	CWBOYHT4	138	7.86
509782	R.S.S.-7	345	30.81	514820	JENSENT4	138	14.97	515543	RENFROW7	345	11.14
509807	ONETA--7	345	29.57	514825	KAYWIND7	345	12.64	515544	RENFROW4	138	13.37
509817	T.NO.--4	138	34.27	514827	CTNWOOD4	138	16.54	515546	GRANTCO4	138	6.23
509852	T.NO.--7	345	23.41	514828	KETCHTP4	138	25.93	515549	MNCWND37	345	11.29
509870	SAPLPRD7	345	21.08	514829	PINE ST4	138	11.72	515569	MDFRDTP4	138	10.84
509895	T.NO.2-4	138	34.21	514834	KETCH 4	138	26.39	515576	RANCHRD7	345	13.62
510376	WEBBTAP4	138	7.99	514851	QUAILCK4	138	28.77	515582	SLNGWND7	345	7.18
510377	FAIRFXT4	138	8.04	514852	SLVRLAK4	138	31.93	515585	MAMTHPW7	345	9.53
510380	DELWARE7	345	11.40	514854	BRADEN 4	138	30.63	515600	KNGFSHR7	345	11.25
510406	N.E.S.-7	345	18.72	514863	HAYMAKR4	138	25.85	515610	FSHRTAP7	345	16.48
510432	SHIDWFC4	138	5.59	514864	PIEDMNT4	138	21.98	515621	OPENSKY7	345	12.68
510907	PITTSB-7	345	13.21	514873	LNEOAK 4	138	26.34	515641	PLNSMEN4	138	13.49
511425	TUTCONT4	138	10.60	514879	NORTWST4	138	42.31	515800	GRACMNT7	345	14.70
512650	GRDA1 7	345	25.99	514880	NORTWST7	345	29.49	520409	RENFROW4	138	9.93
512694	CLEVLND7	345	14.83	514881	SPRNGCK7	345	21.46	521006	MARSHAL4	138	7.75
512729	CLEVLND 4	138	16.71	514894	CZECHAL4	138	27.57	521007	MARLAND_138	138	7.26
512749	PAWNSW4	138	10.01	514895	SARA 4	138	18.53	521100	WARREN 4	138	8.66
512865	GREC TAP5	345	25.56	514898	CIMARON4	138	41.81	529200	OMCDLEC7	345	13.59
514704	MILLERT4	138	20.15	514901	CIMARON7	345	30.11	529241	OMMORANT	69	9.15
514705	COWCRK 2	69	4.04	514906	JNSKAMO4	138	20.51	529249	OMWW	69	11.28
514706	COWCRK 4	138	11.24	514907	ARCADIA4	138	40.78	532791	BENTON 7	345	18.98
514707	PERRY 4	138	10.94	514908	ARCADIA7	345	24.88	532792	FR2EAST7	345	5.91
514708	OTTER 4	138	9.52	514909	REDBUD 7	345	23.85	532794	ROSEHIL7	345	18.79
514709	FRMNTAP4	138	17.46	514933	DRAPER 4	138	38.42	532796	WICHITA7	345	23.57
514710	WAUKOMI4	138	9.52	514934	DRAPER 7	345	20.38	532797	WOLFCRK7	345	15.97
514711	WAUKOTP4	138	14.94	515006	MORRISN4	138	13.63	532798	VIOLA 7	345	11.16
514712	FAIRMON4	138	13.64	515009	MCELROY4	138	13.54	532800	LATHAMS7	345	10.45
514713	WRVALLY4	138	8.66	515011	STILWTR4	138	13.30	533062	ROSEHIL4	138	30.93
514714	WOODRNG4	138	18.63	515039	PAYNESB4	138	7.62	560053	G15-052T	345	13.08
514715	WOODRNG7	345	16.95	515044	SEMINOL4	138	39.14	560055	G15-063T	345	16.85
514730	SO4TH 2	69	13.55	515045	SEMINOL7	345	25.96	560056	G15-066T	345	17.95
514731	SO4TH 4	138	14.81	515181	UNVRSTY4	138	13.42	562075	G11-051-TAP	345	12.16
514733	MARSHL 4	138	7.78	515224	MUSKOGE7	345	28.79	562790	G15-038T	345	13.81
514737	OTOE 4	138	16.11	515373	LBRTYLK4	138	13.51	583750	GEN-2013-029	345	9.93
514742	OSGE 2	69	14.67	515377	CRESENT4	138	7.41	584170	GEN-2014-064	138	9.45
514743	OSAGE 4	138	15.67	515400	DMANCRK4	138	7.97	584450	GEN-2015-001	345	13.62
514748	CONTEMP4	138	12.91	515402	CONBLKT2	69	13.32	584690	GEN-2015-030	345	18.69
514753	CONORTH4	138	12.95	515407	TATONGA7	345	10.80	584700	GEN-2015-029	345	7.51
514758	STDBEAR4	138	13.25	515412	DMNCRKT4	138	13.48	584770	GEN-2015-034	345	10.96
514760	KILDARE4	138	10.15	515444	MCNOWND7	345	16.15	584880	GEN-2015-047	345	11.48
514761	WHEAGLE4	138	14.95	515447	MORISNT4	138	13.66	584900	GEN-2015-052	345	13.03
514768	WF KAY 2	69	2.95	515448	CRSRDSW7	345	8.34	585010	GEN-2015-063	345	16.80
514770	MARLNDT4	138	10.57	515461	RNDBARN4	138	38.79	585040	GEN-2015-066	345	17.79
514774	HENESEY4	138	7.32	515465	LGARBER4	138	21.00	585050	GEN-2015-067	138	21.81
514790	IMO 4	138	11.63	515466	MITCHSB4	138	21.01				
514798	SNRPMPT4	138	20.17	515471	NW164TH4	138	34.74				

Table 4-16
Short Circuit Analysis for Study Project GEN-2016-024

Study Generators GEN-2016-024											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
300739	7BLACKBERRY	345	12.74	533041	EVANS S4	138	42.78	533607	TOWTAPE2	69	5.68
510380	DELWARE7	345	11.78	533043	FOWLER 4	138	16.62	533608	POTWNTP2	69	5.24
515543	RENFROW7	345	12.15	533054	MAIZE 4	138	23.61	533621	ALLEN 2	69	10.75
515621	OPENSKY7	345	13.03	533060	NOEASTE4	138	20.84	533626	BURLJCT2	69	5.04
532768	EMPEC 7	345	17.50	533062	ROSEHIL4	138	32.21	533629	CC2SHAR2	69	4.66
532771	RENO 7	345	11.60	533064	17TH 4	138	18.14	533633	COALCRK2	69	6.94
532773	SUMMIT 7	345	10.65	533065	SG12COL4	138	21.69	533646	TIOGA 2	69	7.47
532780	CANEYRV7	345	10.02	533067	SPRNGDL4	138	14.67	533649	UN7ROSE2	69	4.75
532791	BENTON 7	345	19.90	533068	STEARMN4	138	20.10	533653	WOLFCRK2	69	6.05
532792	FR2EAST7	345	6.40	533069	TCBURNS4	138	3.25	533660	ASHGRJ22	69	6.22
532793	NEOSHO 7	345	18.71	533075	VIOLA 4	138	22.27	533666	CHANTAP2	69	5.98
532794	ROSEHIL7	345	19.48	533153	COLINE 3	115	23.44	533673	ALTOO E2	69	4.15
532796	WICHITA7	345	25.99	533157	FORBES 3	115	14.89	533674	ALTOO W2	69	3.01
532797	WOLFCRK7	345	18.72	533176	SHAWNEE3	115	12.27	533675	ARGO 2	69	2.94
532798	VIOLA 7	345	13.57	533177	6 GOLDN3	115	16.34	533684	CONSOL 2	69	1.66
532799	WAVERLY7	345	16.69	533180	TEC E 3	115	30.06	533698	MONTGOM2	69	7.17
532800	LATHAMS7	345	10.59	533182	TECHILE3	115	30.50	533700	NEODJCT2	69	3.57
532801	ELKRVR17	345	9.34	533183	WM BROS3	115	12.39	533705	RA1FRED2	69	1.79
532802	WAVERTX7	345	13.93	533187	27CROCO3	115	20.49	533706	RA5HIPR2	69	4.13
532857	TECHILL6	230	11.30	533189	UNDERPN3	115	19.71	533707	RA6BROO2	69	2.24
532920	TECHILL5	161	5.79	533197	HARTLND3	115	13.02	533768	NEOSHO 2	69	19.05
532937	NEOSHO 5	161	23.20	533270	STULL T3	115	12.55	533786	CHISHLM2	69	18.87
532986	BENTON 4	138	28.84	533390	MAIZEW 4	138	28.18	533789	CRESTVW2	69	12.89
532987	BUTLER 4	138	10.02	533391	MAIZEE 4	138	22.09	533799	GRANT 2	69	10.77
532988	BELAIRE4	138	19.08	533416	RENO 3	115	25.27	533800	GRANT J2	69	9.50
532989	BUTLERS4	138	10.02	533581	ADA 2	69	7.83	533811	KENMAR 2	69	18.67
532990	MIDIAN 4	138	10.20	533582	AUGUSTA2	69	7.24	533814	MASCOT 2	69	19.87
532991	WEAVER 4	138	22.53	533583	BUTLER 2	69	12.59	533815	MEAD 2	69	27.60
532993	TALLGRS4	138	10.12	533584	BU6DEGR2	69	1.92	533817	MINNEHA2	69	16.27
532996	TIOGA 4	138	6.10	533587	CHASJCT2	69	9.92	533820	MOSSMAN2	69	17.54
532997	ALLEN 4	138	6.30	533588	CHASE 2	69	7.44	533822	NOEASTE2	69	25.37
532998	MARMATN4	138	7.41	533589	CHESNEY2	69	8.37	533831	RENEW 2	69	16.80
533001	ALTOONA4	138	8.74	533590	ELDORAD2	69	7.98	533832	RIPLEYM2	69	22.01
533002	DEARING4	138	9.25	533592	GETTY 2	69	10.87	533835	17TH TP2	69	25.74
533004	MONTGOM4	138	6.88	533593	FRNTIER2	69	11.03	533840	17TH 2	69	28.02
533005	NEPARSN4	138	12.38	533594	LEON 2	69	2.68	533846	21ST 2	69	16.09
533006	TAYLOR 4	138	6.71	533595	MAGNA 2	69	2.03	533861	BU5FURL2	69	4.47
533021	NEOSHO 4	138	24.29	533596	MAG JCT2	69	3.58	539801	THISTLE7	345	16.55
533022	NEOSHON4	138	24.29	533597	MIDIAN 2	69	12.32	542981	LACYGNE7	345	25.40
533024	29TH 4	138	19.87	533598	MOBIL 2	69	7.52	560033	G1524&G1525T	345	21.26
533026	ANDOVER4	138	18.07	533599	PEABODY2	69	1.44	560053	G15-052T	345	13.35
533031	BURNSTP4	138	4.50	533600	PESTER 2	69	8.15	560073	G16-012-TAP	345	14.16
533032	BU11PON4	138	15.29	533601	POTWIN 2	69	2.55	560087	G16-073-TAP	345	12.38
533033	CANAL 4	138	16.90	533602	SKELLY 2	69	11.45	562476	G14-001-TAP	345	11.16
533035	CHISHLM4	138	22.68	533603	TOWANDA2	69	5.53	583850	GEN-2014-001	345	7.60
533037	COMOTAR4	138	18.83	533604	WEAVER 2	69	11.80	584659	G15024G15025	345	10.58
533039	ELPASO 4	138	25.97	533605	WHITE J2	69	7.23	584900	GEN-2015-052	345	13.30
533040	EVANS N4	138	42.78	533606	TOWTAPW2	69	1.84	587100	GEN-2016-024	138	8.27

Table 4-17
Short Circuit Analysis for Study Project GEN-2016-032

Study Generators GEN-2016-032											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
300135	4LUTHER	138	8.16	514833	DANFRTH4	138	25.71	515464	SHDWLKE4	138	17.31
300136	4MEMORAL	138	20.22	514842	CHTWOOD4	138	20.59	515465	LGARBER4	138	21.05
509782	R.S.S.-7	345	31.55	514879	NORTWST4	138	43.52	515467	WHITESB4	138	15.23
510907	PITTSB-7	345	13.27	514880	NORTWST7	345	31.91	515476	HUNTERS7	345	13.03
512710	KINZEGR4	138	14.32	514881	SPRNGCK7	345	22.52	515477	CHSHLMV7	345	13.01
514510	BURGETT4	138	22.21	514884	DUNJEE 4	138	20.67	515480	JONESSB4	138	28.22
514706	COWCRK 4	138	11.37	514901	CIMARON7	345	32.92	515497	MATHWSN7	345	32.17
514708	OTTER 4	138	9.60	514906	JNSKAMO4	138	20.36	515641	PLNSMEN4	138	13.72
514709	FRMNTAP4	138	17.86	514907	ARCADIA4	138	41.50	520847	CASHION4	138	5.05
514710	WAUKOMI4	138	9.63	514908	ARCADIA7	345	26.32	520879	DOVER 4	138	5.80
514711	WAUKOTP4	138	15.21	514909	REDBUD 7	345	25.59	520882	DOVERSW4	138	7.49
514712	FAIRMON4	138	13.87	514934	DRAPER 7	345	20.73	521006	MARSHAL4	138	7.80
514713	WRVALLY4	138	8.73	514937	HSLWEST2	69	12.13	521037	REEDING2	138	4.26
514714	WOODRNG4	138	19.09	514941	HSL 4	138	39.65	521073	TWNLAKE4	138	6.57
514715	WOODRNG7	345	19.29	514966	MIDWAY 4	138	17.83	521100	WARREN 4	138	8.73
514730	SO4TH 2	69	13.66	514987	DALE 4	138	13.56	560055	G15-063T	345	18.25
514731	SO4TH 4	138	15.08	514993	SE15TH 4	138	14.95	560077	G16-032-TAP	345	3.38
514733	MARSHL 4	138	7.84	515008	KINZE 4	138	14.33	560084	G16-061-TAP	345	16.80
514774	HENESEY4	138	7.40	515009	MCELROY4	138	13.76	560086	G16-072-TAP	345	12.03
514790	IMO 4	138	11.78	515044	SEMINOL4	138	39.36	584170	GEN-2014-064	138	9.53
514803	SOONER 7	345	25.82	515045	SEMINOL7	345	26.26	585010	GEN-2015-063	345	18.18
514815	BRECKNR4	138	13.71	515046	HAMMTAP4	138	14.37	587210	GEN-2016-032	138	7.82
514827	CTNWOOD4	138	16.67	515224	MUSKOGE7	345	28.93	587410	GEN-2016-061	345	16.48
514829	PINE ST4	138	11.77	515373	LBRTYLK4	138	13.58	587460	GEN-2016-068	345	7.30
514830	FITZGRD4	138	9.02	515377	CRESENT4	138	7.45				
514831	WATRLOO4	138	14.10	515461	RNDBARN4	138	39.4336				

Table 4-18
Short Circuit Analysis for Study Project GEN-2016-048

Study Generator GEN-2016-048											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
300138	4CLEVLND	138	16.76	514768	WF KAY 2	69	2.95	515512	SPVALLY4	138	8.87
509755	WEKIWA-7	345	18.82	514770	MARLNDT4	138	11.16	515514	KNIPE 4	138	5.08
509852	T.NO.--7	345	23.71	514798	SNRPMPT4	138	20.75	515541	COWBOYH4	138	7.53
509895	T.NO.2-4	138	34.44	514799	SNRPMP 4	138	11.36	515542	CWBOYHT4	138	8.12
510375	WEBBCTY4	138	4.18	514800	BRRDTP 2	69	1.79	515576	RANCHRD7	345	14.15
510376	WEBBTAP4	138	7.61	514801	MINCO 7	345	16.80	515610	FSHRTAP7	345	17.16
510377	FAIRFXT4	138	7.64	514802	SOONER 4	138	32.32	515621	OPENSKY7	345	13.03
510403	SHIDLER4	138	7.93	514803	SOONER 7	345	25.82	515644	STLWTR2	69	16.29
510406	N.E.S.-7	345	19.00	514825	KAYWIND7	345	12.99	521007	MARLAND_138	138	7.53
510432	SHIDWFC4	138	5.40	514828	KETCHTP4	138	26.18	521034	PERRY 2	69	2.70
512653	CENTRL 2	69	14.46	514854	BRADEN 4	138	31.16	521100	WARREN 4	138	8.73
512662	STILWTP2	69	16.30	514873	LNEOAK 4	138	26.73	529200	OMCDLEC7	345	14.13
512663	BOOMER 2	69	15.18	514879	NORTWST4	138	43.52	529241	OMMORANT	69	12.62
512694	CLEVLND7	345	15.01	514880	NORTWST7	345	31.91	529242	OMHUFFYT	69	12.81
512729	CLEVLND 4	138	16.76	514881	SPRNGCK7	345	22.52	529248	OMPECANT	69	12.04
512865	GREC TAP5	345	25.96	514898	CIMARON4	138	42.79	529249	OMWW	69	13.84
514704	MILLERT4	138	20.70	514901	CIMARON7	345	32.92	532794	ROSEHIL7	345	19.48
514705	COWCRK 2	69	4.05	514907	ARCADIA4	138	41.50	560053	G15-052T	345	13.35
514706	COWCRK 4	138	11.37	514908	ARCADIA7	345	26.32	560055	G15-063T	345	18.25
514707	PERRY 4	138	11.06	514909	REDBUD 7	345	25.59	560056	G15-066T	345	18.48
514708	OTTER 4	138	9.60	514934	DRAPER 7	345	20.73	560084	G16-061-TAP	345	16.80
514709	FRMNTAP4	138	17.86	515006	MORRISN4	138	13.90	560086	G16-072-TAP	345	12.03
514711	WAUKOTP4	138	15.21	515008	KINZE 4	138	14.33	584170	GEN-2014-064	138	9.53
514713	WRVALLY4	138	8.73	515009	MCELROY4	138	13.76	584450	G1501-G1631	345	11.31
514714	WOODRNG4	138	19.09	515011	STILWTR4	138	13.91	584690	GEN-2015-030	345	19.43
514715	WOODRNG7	345	19.29	515033	CUSHING4	138	6.08	584770	GEN-2015-034	345	11.30
514733	MARSHL 4	138	7.84	515039	PAYNESB4	138	7.76	584880	GEN-2015-047	345	11.72
514737	OTOE 4	138	16.46	515045	SEMINOL7	345	26.26	584900	GEN-2015-052	345	13.30
514742	OSGE 2	69	18.54	515181	UNVRSTY4	138	13.74	585010	GEN-2015-063	345	18.18
514743	OSAGE 4	138	17.20	515400	DMANCRK4	138	8.13	585040	GEN-2015-066	345	18.30
514745	CHERPLT2	69	12.98	515402	CONBLKT2	69	16.31	585050	GEN-2015-067	138	22.27
514748	CONTEMP4	138	13.92	515403	FNTANTP4	138	6.87	587070	GEN-2016-009	69	17.28
514753	CONORTH4	138	13.97	515407	TATONGA7	345	16.59	587160	GEN-2016-022	345	11.27
514757	CHIKASI4	138	9.46	515412	DMNCRKT4	138	13.96	587300	GEN-2016-045	345	4.46
514758	STDBEAR4	138	14.33	515447	MORISNT4	138	13.93	587330	GEN-2016-048	138	22.03
514760	KILDARE4	138	11.94	515471	NW164TH4	138	35.54	587380	GEN-2016-057	345	4.37
514761	WHEAGLE4	138	16.32	515476	HUNTERS7	345	13.03	587410	GEN-2016-061	345	16.48
514763	CONBLKS2	69	16.18	515477	CHSHLMV7	345	13.01	587460	GEN-2016-068	345	7.30
514764	NWKRKAT4	138	11.65	515497	MATHWSN7	345	32.17				

Table 4-19
Short Circuit Analysis for Study Project GEN-2016-060

Study Generator GEN-2016-060											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
514804	MIDLTNT4	138	10.66	533040	EVANS N4	138	42.78	533792	EASTBOR2	69	14.73
515381	PECKHMT4	138	10.44	533041	EVANS S4	138	42.78	533793	ELPASO 2	69	11.88
515543	RENFROW7	345	12.15	533042	FARBER 4	138	16.62	533795	GILL E 2	69	34.09
515544	RENFROW4	138	13.84	533044	GILL E 4	138	28.69	533796	GILL W 2	69	34.09
521198	CHILOCCO4	138	9.22	533045	GILL W 4	138	28.69	533798	GILLJCT2	69	22.02
532771	RENO 7	345	11.60	533046	GILL S 4	138	28.69	533804	HAYSVLJ2	69	14.33
532791	BENTON 7	345	19.90	533048	HARRY 4	138	13.76	533808	HYDRJN2	69	16.17
532792	FR2EAST7	345	6.40	533062	ROSEHIL4	138	32.21	533813	MACARTH2	69	22.61
532794	ROSEHIL7	345	19.48	533063	SC10BEL4	138	10.44	533821	MULVANE2	69	5.37
532795	FR2WEST7	345	5.15	533066	64TH 4	138	14.56	533824	OAKLAWN2	69	15.76
532796	WICHITA7	345	25.99	533067	SPRNGDL4	138	14.67	533826	OLIVER 2	69	14.16
532797	WOLFCRK7	345	18.72	533068	STEARMN4	138	20.10	533830	PECK 2	69	6.63
532798	VIOLA 7	345	13.57	533070	SLATECRK4	138	4.82	533842	64TH 2	69	14.82
532800	LATHAMS7	345	10.59	533072	WACO 4	138	23.64	533850	VULCAN 2	69	20.61
532981	CRESWLN4	138	9.18	533075	VIOLA 4	138	22.27	533851	VULCTP 2	69	24.67
532982	OXFORD 4	138	9.69	533541	AKRON 2	69	6.75	533879	GODDTAP2	69	8.19
532984	SUMNER 4	138	10.64	533543	CRESWLN2	69	11.46	533880	GODDARD2	138	19.08
532985	TCROCK 4	138	5.44	533547	OAK 2	69	7.90	539668	HARPER 4	138	5.98
532991	WEAVER 4	138	22.53	533548	PARIS 2	69	6.81	539675	MILANTP4	138	7.11
532992	TIMBJCT4	138	5.83	533549	RAINBOW2	69	5.84	539676	MILAN 4	138	4.22
532993	TALLGRS4	138	10.12	533550	RICHLAN2	69	5.94	560033	G1524&G1525T	345	21.26
533026	ANDOVER4	138	18.07	533551	SC1KING2	69	3.29	560053	G15-052T	345	13.35
533028	BEECHTP4	138	13.76	533553	SC4ROME2	69	5.54	560086	G16-072-TAP	345	12.03
533029	59TH ST4	138	19.13	533555	SC7CRES2	69	11.30	562476	G14-001-TAP	345	11.16
533030	BOEING 4	138	17.36	533556	STROTHR2	69	6.06	583750	GEN-2013-029	345	10.72
533032	BU11PON4	138	15.29	533558	TIMBJCT2	69	8.19	585200	GEN-2015-083	138	7.20
533033	CANAL 4	138	16.90	533559	UDALL 2	69	7.16	587490	GEN-2016-072	345	9.03
533036	CLEARWT4	138	21.97	533561	WINFLD 2	69	6.43				
533039	ELPASO 4	138	25.97	533604	WEAVER 2	69	11.80				

Table 4-20
Short Circuit Analysis for Study Project GEN-2016-061

Study Generator GEN-2016-061											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
300138	4CLEVLND	138	16.76	514803	SOONER 7	345	25.82	515621	OPENSKY7	345	13.03
509755	WEKIWA-7	345	18.82	514815	BRECKNR4	138	13.71	515641	PLNSMEN4	138	13.72
509852	T.NO.--7	345	23.71	514825	KAYWIND7	345	12.99	515644	STLWTR2	69	16.29
509895	T.NO.2-4	138	34.44	514827	CTNWOOD4	138	16.67	521006	MARSHAL4	138	7.80
510376	WEBBTAP4	138	7.61	514828	KETCHTP4	138	26.18	521100	WARREN 4	138	8.73
510406	N.E.S.-7	345	19.00	514854	BRADEN 4	138	31.16	529200	OMCDLEC7	345	14.13
512694	CLEVLND7	345	15.01	514873	LNEOAK 4	138	26.73	532794	ROSEHIL7	345	19.48
512729	CLEVLND 4	138	16.76	514879	NORTWST4	138	43.52	532798	VIOLA 7	345	13.57
512865	GREC TAP5	345	25.96	514880	NORTWST7	345	31.91	560053	G15-052T	345	13.35
514704	MILLERT4	138	20.70	514881	SPRNGCK7	345	22.52	560055	G15-063T	345	18.25
514705	COWCRK 2	69	4.05	514898	CIMARON4	138	42.79	560056	G15-066T	345	18.48
514706	COWCRK 4	138	11.37	514901	CIMARON7	345	32.92	560077	G16-032-TAP	345	3.38
514707	PERRY 4	138	11.06	514907	ARCADIA4	138	41.50	560084	G16-061-TAP	345	16.80
514708	OTTER 4	138	9.60	514908	ARCADIA7	345	26.32	560086	G16-072-TAP	345	12.03
514709	FRMNTAP4	138	17.86	514909	REDBUD 7	345	25.59	562075	G11-051-TAP	345	17.17
514710	WAUKOMI4	138	9.63	514934	DRAPER 7	345	20.73	583750	GEN-2013-029	345	10.72
514711	WAUKOTP4	138	15.21	515006	MORRISN4	138	13.90	584170	GEN-2014-064	138	9.53
514712	FAIRMON4	138	13.87	515011	STILWTR4	138	13.91	584450	G1501-G1631	345	11.31
514713	WRVALLY4	138	8.73	515045	SEMINOL7	345	26.26	584690	GEN-2015-030	345	19.43
514714	WOODRNG4	138	19.09	515181	UNVRSTY4	138	13.74	584700	GEN-2015-029	345	9.83
514715	WOODRNG7	345	19.29	515400	DMANCRK4	138	8.13	584770	GEN-2015-034	345	11.30
514730	SO4TH 2	69	13.66	515407	TATONGA7	345	16.59	584880	GEN-2015-047	345	11.72
514731	SO4TH 4	138	15.08	515412	DMNCRKT4	138	13.96	584900	GEN-2015-052	345	13.30
514733	MARSHL 4	138	7.84	515447	MORISNT4	138	13.93	585010	GEN-2015-063	345	18.18
514737	OTOE 4	138	16.46	515448	CRSRDSW7	345	11.42	585040	GEN-2015-066	345	18.30
514742	OSGE 2	69	18.54	515471	NW164TH4	138	35.54	585050	GEN-2015-067	138	22.27
514743	OSAGE 4	138	17.20	515476	HUNTERS7	345	13.03	587160	GEN-2016-022	345	11.27
514758	STDBEAR4	138	14.33	515477	CHSHLMV7	345	13.01	587210	GEN-2016-032	138	7.82
514761	WHEAGLE4	138	16.32	515497	MATHWSN7	345	32.17	587300	GEN-2016-045	345	4.46
514770	MARLNDT4	138	11.16	515512	SPVALLY4	138	8.87	587304	GEN-2016-045	345	4.30
514774	HENESEY4	138	7.40	515543	RENFROW7	345	12.15	587330	GEN-2016-048	138	22.03
514790	IMO 4	138	11.78	515544	RENFROW4	138	13.84	587380	GEN-2016-057	345	4.37
514798	SNRPMPT4	138	20.75	515576	RANCHRD7	345	14.15	587384	GEN-2016-057	345	4.11
514799	SNRPMP 4	138	11.36	515582	SLNGWND7	345	9.18	587410	GEN-2016-061	345	16.48
514801	MINCO 7	345	16.80	515585	MAMTHPW7	345	13.70	587460	GEN-2016-068	345	7.30
514802	SOONER 4	138	32.32	515610	FSHRTAP7	345	17.16	587490	GEN-2016-072	345	9.03

Table 4-21
Short Circuit Analysis for Study Project GEN-2016-068

Study Generator GEN-2016-068											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
509852	T.NO.--7	345	23.71	514854	BRADEN 4	138	31.16	515641	PLNSMEN4	138	13.72
511425	TUTCONT4	138	10.69	514863	HAYMAKR4	138	26.14	515800	GRACMNT7	345	15.34
512694	CLEVLND7	345	15.01	514873	LNEOAK 4	138	26.73	520409	RENFROW4	138	10.17
512729	CLEVLND 4	138	16.76	514879	NORTWST4	138	43.52	520882	DOVERSW4	138	7.49
514642	BRCKWND4	138	7.38	514880	NORTWST7	345	31.91	521006	MARSHAL4	138	7.80
514701	BUNCHCK4	138	6.60	514881	SPRNGCK7	345	22.52	521100	WARREN 4	138	8.73
514704	MILLERT4	138	20.70	514894	CZECHAL4	138	27.46	529200	OMCDLEC7	345	14.13
514705	COWCRK 2	69	4.05	514895	SARA 4	138	18.65	532792	FR2EAST7	345	6.40
514706	COWCRK 4	138	11.37	514898	CIMARON4	138	42.79	532796	WICHITA7	345	25.99
514707	PERRY 4	138	11.06	514901	CIMARON7	345	32.92	532798	VIOLA 7	345	13.57
514708	OTTER 4	138	9.60	514907	ARCADIA4	138	41.50	533075	VIOLA 4	138	22.27
514709	FRMNTAP4	138	17.86	514908	ARCADIA7	345	26.32	560053	G15-052T	345	13.35
514710	WAUKOMI4	138	9.63	514909	REDBUD 7	345	25.59	560055	G15-063T	345	18.25
514711	WAUKOTP4	138	15.21	514933	DRAPER 4	138	38.78	560056	G15-066T	345	18.48
514712	FAIRMON4	138	13.87	514934	DRAPER 7	345	20.73	560077	G16-032-TAP	345	3.38
514713	WRVALLY4	138	8.73	515006	MORRISN4	138	13.90	560084	G16-061-TAP	345	16.80
514714	WOODRNG4	138	19.09	515011	STILWTR4	138	13.91	560086	G16-072-TAP	345	12.03
514715	WOODRNG7	345	19.29	515045	SEMINOL7	345	26.26	562075	G11-051-TAP	345	17.17
514718	VANCE 2	69	6.98	515373	LBRTYLK4	138	13.58	562790	G15-038T	345	14.28
514721	IMO 2	69	11.86	515375	WWRDEHV7	345	20.16	579272	G0744&1403HV	345	9.18
514722	CLEVETP2	69	11.64	515377	CRESENT4	138	7.45	583110	GEN-2011-051	345	17.17
514727	ENID 2	69	11.91	515383	ENIDINT4	138	12.84	583750	GEN-2013-029	345	10.72
514730	SO4TH 2	69	13.66	515407	TATONGA7	345	16.59	584170	GEN-2014-064	138	9.53
514731	SO4TH 4	138	15.08	515412	DMNCRKT4	138	13.96	584450	G1501-G1631	345	11.31
514733	MARSHL 4	138	7.84	515444	MCNOWND7	345	16.75	584690	GEN-2015-030	345	19.43
514734	GLENWD 4	138	10.19	515447	MORISNT4	138	13.93	584700	GEN-2015-029	345	9.83
514737	OTOE 4	138	16.46	515448	CRSRDSW7	345	11.42	584770	GEN-2015-034	345	11.30
514743	OSAGE 4	138	17.20	515456	CHSTNTT2	69	11.55	584880	GEN-2015-047	345	11.72
514774	HENESEY4	138	7.40	515471	NW164TH4	138	35.54	585010	GEN-2015-063	345	18.18
514789	MENOTAP4	138	7.07	515476	HUNTERS7	345	13.03	585040	GEN-2015-066	345	18.30
514790	IMO 4	138	11.78	515477	CHSHLMV7	345	13.01	585050	GEN-2015-067	138	22.27
514798	SNRPMPT4	138	20.75	515497	MATHWSN7	345	32.17	585180	GEN-2015-081	345	14.12
514799	SNRPMP 4	138	11.36	515543	RENFROW7	345	12.15	587160	GEN-2016-022	345	11.27
514801	MINCO 7	345	16.80	515544	RENFROW4	138	13.84	587210	GEN-2016-032	138	7.82
514802	SOONER 4	138	32.32	515546	GRANTCO4	138	6.33	587300	GEN-2016-045	345	4.46
514803	SOONER 7	345	25.82	515549	MNCWND37	345	11.56	587304	GEN-2016-045	345	4.30
514815	BRECKNR4	138	13.71	515569	MDFRDTP4	138	11.17	587330	GEN-2016-048	138	22.03
514819	EL-RENO4	138	15.32	515576	RANCHRD7	345	14.15	587380	GEN-2016-057	345	4.37
514820	JENSENT4	138	15.10	515582	SLNGWND7	345	9.18	587384	GEN-2016-057	345	4.11
514825	KAYWIND7	345	12.99	515585	MAMTHPW7	345	13.70	587410	GEN-2016-061	345	16.48
514827	CTNWOOD4	138	16.67	515600	KNGFSHR7	345	11.53	587460	GEN-2016-068	345	7.30
514828	KETCHTP4	138	26.18	515610	FSHRTAP7	345	17.16	587490	GEN-2016-072	345	9.03
514829	PINE ST4	138	11.77	515621	OPENSKY7	345	13.03				

Table 4-22
Short Circuit Analysis for Study Project GEN-2016-071

Study Generator GEN-2016-071											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
514759	NEWKIRK4	138	10.57	532982	OXFORD 4	138	9.69	533548	PARIS 2	69	6.81
514760	KILDARE4	138	11.94	532984	SUMNER 4	138	10.64	533549	RAINBOW2	69	5.84
514764	NWKRKAT4	138	11.65	532992	TIMBJCT4	138	5.83	533553	SC4ROME2	69	5.54
514804	MIDLTNT4	138	10.66	533063	SC10BEL4	138	10.44	533555	SC7CRES2	69	11.30
515381	PECKHMT4	138	10.44	533070	SLATECRK4	138	4.82	533556	STROTHR2	69	6.06
521012	NEWKIRK4	138	11.65	533075	VIOLA 4	138	22.27	533560	WELLING2	69	4.87
521198	CHILOCCO4	138	9.22	533542	ARKCITY2	69	6.47	533563	PRAIRIJ2	69	6.98
529290	OMNUKRK4	138	10.43	533543	CRESWLN2	69	11.46	587480	GEN-2016-071	138	9.05
532981	CRESWLN4	138	9.18	533547	OAK 2	69	7.90				

Table 4-23
Short Circuit Analysis for Study Project GEN-2016-072

Study Generator GEN-2016-072											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
514708	OTTER 4	138	9.60	532795	FR2WEST7	345	5.15	533558	TIMBJCT2	69	8.19
514709	FRMNTAP4	138	17.86	532796	WICHITA7	345	25.99	533653	WOLFCRK2	69	6.05
514711	WAUKOTP4	138	15.21	532797	WOLFCRK7	345	18.72	533795	GILL E 2	69	34.09
514714	WOODRNG4	138	19.09	532798	VIOLA 7	345	13.57	533796	GILL W 2	69	34.09
514715	WOODRNG7	345	19.29	532799	WAVERLY7	345	16.69	533798	GILLJCT2	69	22.02
514719	CLYDE 2	69	4.34	532800	LATHAMS7	345	10.59	533804	HAYSVLJ2	69	14.33
514733	MARSHL 4	138	7.84	532873	SUMMIT 6	230	13.54	533813	MACARTH2	69	22.61
514736	4CORNER2	69	3.64	532981	CRESWLN4	138	9.18	533830	PECK 2	69	6.63
514739	MEDFORD2	69	5.27	532982	OXFORD 4	138	9.69	533850	VULCAN 2	69	20.61
514740	NUMAOGE2	69	4.42	532984	SUMNER 4	138	10.64	533851	VULCTP 2	69	24.67
514757	CHIKASI4	138	9.46	532985	TCROCK 4	138	5.44	533879	GODDTAP2	69	8.19
514803	SOONER 7	345	25.82	532986	BENTON 4	138	28.84	533880	GODDARD2	138	19.08
515375	WWRDEHV7	345	20.16	532988	BELAIRE4	138	19.08	539668	HARPER 4	138	5.98
515476	HUNTERS7	345	13.03	532990	MIDIAN 4	138	10.20	539675	MILANTP4	138	7.11
515477	CHSHLMV7	345	13.01	532992	TIMBJCT4	138	5.83	539676	MILAN 4	138	4.22
515497	MATHWSN7	345	32.17	533015	BENTLEY4	138	10.16	539801	THISTLE7	345	16.55
515543	RENFROW7	345	12.15	533024	29TH 4	138	19.87	539804	THISTLE4	138	16.88
515544	RENFROW4	138	13.84	533029	59TH ST4	138	19.13	539805	ELMCREEK7	345	5.32
515546	GRANTCO4	138	6.33	533035	CHISHLM4	138	22.68	560031	G15-015-TAP	138	8.41
515547	GRANTCO2	69	7.21	533036	CLEARWT4	138	21.97	560033	G1524&G1525T	345	21.26
515569	MDFRDTP4	138	11.17	533039	ELPASO 4	138	25.97	560053	G15-052T	345	13.35
515581	COYOTE 4	138	8.46	533040	EVANS N4	138	42.78	560055	G15-063T	345	18.25
520204	SANDY_CN_138	138	5.58	533041	EVANS S4	138	42.78	560072	G16-005-TAP	345	13.57
520205	WAKITAS4	138	5.69	533042	FARBER 4	138	16.62	560084	G16-061-TAP	345	16.80
520212	WAKITA4	138	5.65	533044	GILL E 4	138	28.69	560086	G16-072-TAP	345	12.03
520409	RENFROW4	138	10.17	533045	GILL W 4	138	28.69	560087	G16-073-TAP	345	12.38
521008	NASH 2	69	2.63	533046	GILL S 4	138	28.69	562476	G14-001-TAP	345	11.16
521085	WAKITA 2	69	4.83	533053	LAKERDG4	138	19.11	583750	GEN-2013-029	345	10.72
522397	MDFRDJCT	138	7.29	533054	MAIZE 4	138	23.61	583850	GEN-2014-001	345	7.60
522398	PONDCREEK	138	5.41	533062	ROSEHIL4	138	32.21	584570	GEN-2015-015	138	5.83
532767	BLUSTEM7	345	9.76	533063	SC10BEL4	138	10.44	584659	G15024G15025	345	10.58
532768	EMPEC 7	345	17.50	533065	SG12COL4	138	21.69	584660	GEN-2015-024	345	7.83
532769	LANG 7	345	17.29	533072	WACO 4	138	23.64	584670	GEN-2015-025	345	10.58
532770	MORRIS 7	345	12.83	533074	45TH ST4	138	29.56	585010	GEN-2015-063	345	18.18
532771	RENO 7	345	11.60	533075	VIOLA 4	138	22.27	585100	GEN-2015-073	345	14.35
532773	SUMMIT 7	345	10.65	533390	MAIZEW 4	138	28.18	585200	GEN-2015-083	138	7.20
532774	SWISVAL7	345	16.68	533413	CIRCLE 3	115	22.92	587410	GEN-2016-061	345	16.48
532791	BENTON 7	345	19.90	533415	DAVIS 3	115	8.77	587460	GEN-2016-068	345	7.30
532792	FR2EAST7	345	6.40	533416	RENO 3	115	25.27	587490	GEN-2016-072	345	9.03
532793	NEOSHO 7	345	18.71	533429	MOUNDRG3	115	7.20	587500	GEN-2016-073	345	12.38
532794	ROSEHIL7	345	19.48	533438	WMCPHER3	115	12.46				

Table 4-24
Short Circuit Analysis for Study Project GEN-2016-073

Study Generator GEN-2016-073											
Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
300739	7BLACKBERRY	345	12.74	532984	SUMNER 4	138	10.64	533879	GODDTAP2	69	8.19
510380	DELWARE7	345	11.78	532986	BENTON 4	138	28.82	533880	GODDARD2	138	19.07
514782	WODWRD 2	69	10.73	532987	BUTLER 4	138	10.01	539000	RAGO 4	138	3.61
514785	WOODWRD4	138	12.39	532988	BELAIRE4	138	19.07	539001	ANTHONY4	138	3.63
514787	DEWEY 4	138	7.24	532990	MIDIAN 4	138	10.20	539631	FLATRWD4	138	9.89
514796	IODINE-4	138	7.25	532991	WEAVER 4	138	22.52	539638	FLATRDG4	138	15.11
515363	CENT 4	138	3.06	532992	TIMBJCT4	138	5.83	539639	ELMCREK6	230	7.35
515375	WWRDEHV7	345	20.16	533012	HALSTDS4	138	4.27	539668	HARPER 4	138	5.98
515376	WWRDEHV4	138	23.80	533013	MOUND 4	138	4.88	539674	BARBER 4	138	8.15
515394	KEENAN 4	138	8.12	533015	BENTLEY4	138	10.16	539675	MILANTP4	138	7.11
515398	OUSPRT 4	138	8.93	533016	WWUPLNT4	138	7.78	539760	BARBER 3	115	8.03
515407	TATONGA7	345	16.59	533021	NEOSHO 4	138	24.29	539800	CLARKCOUNTY7	345	14.72
515448	CRSRDSW7	345	11.42	533024	29TH 4	138	19.86	539801	THISTLE7	345	16.52
515458	BORDER 7	345	5.12	533029	59TH ST4	138	19.12	539803	IRONWOOD7	345	14.82
515476	HUNTERS7	345	13.03	533031	BURNSTP4	138	4.50	539804	THISTLE4	138	16.87
515497	MATHWSN7	345	32.17	533035	CHISHLM4	138	22.67	539805	ELMCREEK7	345	5.32
515543	RENFROW7	345	12.15	533036	CLEARWT4	138	21.95	542981	LACYGNE7	345	25.40
515544	RENFROW4	138	13.84	533037	COMOTAR4	138	18.82	560000	G11-14-TAP	345	14.22
515546	GRANTCO4	138	6.33	533038	COWSKIN4	138	20.47	560002	IRONWOOD7	345	14.80
515569	MDFRDTP4	138	11.17	533039	ELPASO 4	138	25.95	560027	G14-074-TAP	345	7.12
515582	SLNGWND7	345	9.18	533040	EVANS N4	138	42.73	560033	G1524&G1525T	345	21.11
515585	MAMTHPW7	345	13.70	533041	EVANS S4	138	42.73	560053	G15-052T	345	13.35
515599	G07621119-20	345	13.34	533045	GILL W 4	138	28.67	560070	G16-001-TAP	345	14.17
515621	OPENSKY7	345	13.03	533046	GILL S 4	138	28.67	560071	G16-003-TAP	345	15.51
515785	WINDFRM4	138	20.07	533049	HOOVERN4	138	18.98	560072	G16-005-TAP	345	13.56
515997	WWPAR4	138	17.22	533053	LAKERDG4	138	19.10	560073	G16-012-TAP	345	14.16
520409	RENFROW4	138	10.17	533054	MAIZE 4	138	23.59	560080	G16-046-TAP	345	12.99
525830	TUCO_INT 6	230	23.26	533060	NOEASTE4	138	20.83	560086	G16-072-TAP	345	12.03
525832	TUCO_INT 7	345	12.83	533062	ROSEHIL4	138	32.20	560087	G16-073-TAP	345	11.34
526936	YOAKUM_345	345	8.63	533063	SC10BEL4	138	10.44	562075	G11-051-TAP	345	17.17
530592	SMOKYHL6	230	6.99	533064	17TH 4	138	18.13	562476	G14-001-TAP	345	11.15
531469	SPERVIL7	345	15.33	533065	SG12COL4	138	21.67	582008	GEN-2011-008	345	11.71
532766	JEC N 7	345	23.54	533068	STEARMN4	138	20.09	582016	GEN-2011-016	345	7.84
532767	BLUSTEM7	345	9.75	533074	45TH ST4	138	29.54	582708	G-2011-008-1	345	9.63
532768	EMPEC 7	345	17.50	533075	VIOLA 4	138	22.26	583090	G1149&G1504	345	4.68
532769	LANG 7	345	17.28	533304	LANG 3	115	14.49	583110	GEN-2011-051	345	17.17
532770	MORRIS 7	345	12.82	533336	BLUSTEM3	115	17.09	583370	GEN-2012-024	345	12.35
532771	RENO 7	345	11.59	533372	PHILIPS3	115	12.39	583750	GEN-2013-029	345	10.72
532773	SUMMIT 7	345	10.65	533380	SPRGCRK3	115	3.62	583850	GEN-2014-001	345	7.59
532774	SWISVAL7	345	16.68	533381	SUMMIT 3	115	17.41	584659	G15024G15025	345	7.36
532776	DOUGLAS7	345	18.21	533390	MAIZEW 4	138	28.16	584660	GEN-2015-024	345	6.00
532780	CANEYRV7	345	10.01	533391	MAIZEE 4	138	22.08	584670	GEN-2015-025	345	7.36
532791	BENTON 7	345	19.87	533412	ARKVALJ3	115	10.95	584700	GEN-2015-029	345	9.83
532792	FR2EAST7	345	6.40	533413	CIRCLE 3	115	22.91	584900	GEN-2015-052	345	13.30
532793	NEOSHO 7	345	18.70	533414	CITIES 3	115	8.91	584980	GEN-2015-060	138	5.68
532794	ROSEHIL7	345	19.46	533415	DAVIS 3	115	8.77	585060	GEN-2015-068	345	10.31
532795	FR2WEST7	345	5.15	533416	RENO 3	115	25.27	585100	GEN-2015-073	345	14.34
532796	WICHITA7	345	25.88	533419	HEC 3	115	22.37	585180	GEN-2015-081	345	14.12
532797	WOLFCRK7	345	18.72	533422	HEC U4 3	115	21.96	585250	GEN-2015-090	345	3.29
532798	VIOLA 7	345	13.56	533426	MANVILE3	115	10.23	585410	GREAT_WESTRN	345	10.02
532799	WAVERLY7	345	16.68	533428	MCPHER 3	115	11.98	585420	COWBOY_RIDGE	345	7.71
532800	LATHAMS7	345	10.59	533429	MOUNDRG3	115	7.20	585430	PRSIMN_CRK1	345	11.73
532801	ELKRVR17	345	9.34	533438	WMCPHER3	115	12.46	585440	PRSIMN_CRK2	345	10.70
532802	WAVERTX7	345	13.93	533439	WHEATLD3	115	7.92	587000	GEN-2016-001	345	11.89
532856	SWISVAL6	230	21.70	533506	DAVIS 2	69	7.57	587020	GEN-2016-003	345	15.51
532863	MORRIS 6	230	13.87	533597	MIDIAN 2	69	12.31	587040	GEN-2016-005	345	11.05
532871	CIRCLE 6	230	9.59	533626	BURLJCT2	69	5.04	587100	GEN-2016-024	138	8.27
532872	EMCPHER6	230	8.56	533629	CC2SHAR2	69	4.66	587310	GEN-2016-046	345	11.34
532873	SUMMIT 6	230	13.54	533653	WOLFCRK2	69	6.05	587490	GEN-2016-072	345	9.03
532874	UNIONRG6	230	8.87	533786	CHISHLM2	69	18.86	587500	GEN-2016-073	345	11.34
532937	NEOSHO 5	161	23.20	533795	GILL E 2	69	34.08				
532982	OXFORD 4	138	9.69	533796	GILL W 2	69	34.08				

SECTION 5: POWER FACTOR ANALYSIS

The objective of this task is to quantify the power factor at the point of interconnection for the wind farms during base case and system contingencies. SPP transmission planning practice requires interconnecting generation projects to maintain the power factor (pf) at the Point of Interconnection (POI) within +/- 0.95 pf for system intact conditions and for post-contingency conditions. This is analyzed by having the wind farm maintain a prescribed voltage schedule at the point of interconnection of 1.0 p.u. voltage, or if the pre-project voltage is higher than 1.0 p.u., to maintain the pre-project voltage schedule.

The 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak power flows provided by SPP, including any updates, were examined prior to the Power Factor Analysis to ensure they contained the proposed study project modeled at 100% of the nameplate rating and any previously queued projects listed in Table 2-2. There was no suspect power flow data in the study area. The proposed study project and any previously queued projects at the same point of interconnection were turned off during the power factor analysis. The wind farm(s) were then replaced by a generator modeled at the high side bus with the same real power (MW) capability as the wind farm(s) and open limits for the reactive power set points (Mvar). The generator was set to hold the POI scheduled bus voltage or 1.0 p.u., whichever was greater. All N-1, three-phase fault contingencies from Table 2-3 were then applied and the reactive power required to maintain the bus voltage was recorded.

5.1 Approach

GEN-2016-009 was disabled and a generator was placed at the study project's high side voltage bus. The generator was modeled with PGEN = 29 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. All buses, transformers, and equivalent lines connected from the study project's high side voltage bus to GEN-2016-0009 were disabled. The scheduled voltage was set to 1.0 p.u. for the 2016 Winter Peak case, 1.007 p.u. for the 2017 Summer Peak case, and 1.005 p.u. for the 2025 Summer Peak case.

GEN-2016-012 was disabled and a generator was placed at the study project's high side voltage bus. The generator was modeled with PGEN = 200 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. All buses, transformers, and equivalent lines connected from the study project's high side voltage bus to GEN-2016-012 were disabled. The scheduled voltage was set to 1.0 p.u. for the 2016 Winter Peak case, 1.0 p.u. for the 2017 Summer Peak case, and 1.0 p.u. for the 2025 Summer Peak case.

GEN-2015-033 and GEN-2014-074 were disabled in the power flow case. A generator was placed at the high side bus of GEN-2015-033 and modeled with PGEN = 152 MW, Qmin = -

9999 Mvar, Qmax = 9999 Mvar. A second generator was placed at the high side bus of GEN-2014-074 and modeled with PGEN = 152 MW, Qmin = -9999 Mvar, Qmax = 9999 Mvar. All buses and transformers connected from the high side bus of each project to the corresponding generator were disabled.

GEN-2016-022, GEN-2016-031, and GEN-2015-034 were all disabled in the power flow case. A generator was placed at the high side bus of GEN-2016-022 and modeled with PGEN = 151.8 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. A second study generator was placed at the high side bus of GEN-2016-031 and modeled with PGEN = 201.3 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. A third generator was placed at the high side bus of GEN-2015-034 and modeled with PGEN = 200.0 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. All buses, transformers, and equivalent lines connected from the high side bus of each project to the corresponding generator were disabled. Note the Power Factor Analysis was performed separately for GEN-2016-022 and GEN-2016-031. The scheduled voltage for each project was set to hold the voltage at the Ranch Road 345 kV POI. That is, the scheduled voltage was set to 1.0 p.u. for the 2016 Winter Peak case, 1.0 p.u. for the 2017 Summer Peak case, and 1.0 p.u. for the 2025 Summer Peak case.

GEN-2016-024 was disabled and a generator was placed at the study project's high side voltage bus. The generator was modeled with PGEN = 55.86 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. All buses, transformers, and equivalent lines connected from the study project's high side voltage bus to GEN-2016-024 were disabled. The scheduled voltage was set to 1.0 p.u. for the 2016 Winter Peak case, 1.0 p.u. for the 2017 Summer Peak case, and 1.0 p.u. for the 2025 Summer Peak case.

GEN-2016-032 was disabled and a generator was placed at the study project's high side voltage bus. The generator was modeled with PGEN = 200 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. All buses, transformers, and equivalent lines connected from the study project's high side voltage bus to GEN-2016-032 were disabled. The scheduled voltage was set to 1.013 p.u. for the 2016 Winter Peak case, 1.015 p.u. for the 2017 Summer Peak case, and 1.013 p.u. for the 2025 Summer Peak case.

GEN-2016-048 and GEN-2015-067 were disabled in the power flow case. A generator was placed at the high side bus of GEN-2016-048 and modeled with PGEN = 82.32 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. A second generator was placed at the high side bus of GEN-2015-067 and modeled with PGEN = 150.0 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. All buses, transformers, and equivalent lines connected from the high side bus of each project to the corresponding generator was disabled. The scheduled voltage was set to 1.017 p.u. for the 2016 Winter Peak case, 1.022 p.u. for the 2017 Summer Peak case, and 1.022 p.u. for the 2025 Summer Peak case.

GEN-2016-060 was disabled and a generator was placed at the study project's high side voltage bus. The generator was modeled with PGEN = 149.5 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. All buses, transformers, and equivalent lines connected from the study project's high side voltage bus to GEN-2016-060 were disabled. The scheduled voltage was set to 1.0 p.u. for the 2016 Winter Peak case, 1.002 p.u. for the 2017 Summer Peak case, and 1.008 p.u. for the 2025 Summer Peak case.

GEN-2016-061 was disabled and a generator was placed at the study project's high side voltage bus. The generator was modeled with PGEN = 1.0 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. All buses, transformers, and equivalent lines connected from the study project's high side voltage bus to GEN-2016-061 were disabled. The scheduled voltage was set to 1.0 p.u. for the 2016 Winter Peak case, 1.0 p.u. for the 2017 Summer Peak case, and 1.001 p.u. for the 2025 Summer Peak case.

GEN-2016-068 was disabled and a generator was placed at the study project's high side voltage bus. The generator was modeled with PGEN = 200 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. All buses, transformers, and equivalent lines connected from the study project's high side voltage bus to GEN-2016-068 were disabled. The scheduled voltage was set to 1.0 p.u. for the 2016 Winter Peak case, 1.0 p.u. for the 2017 Summer Peak case, and 1.001 p.u. for the 2025 Summer Peak case.

GEN-2016-071 was disabled and a generator was placed at the study project's high side voltage bus. The generator was modeled with PGEN = 200.1 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. All buses, transformers, and equivalent lines connected from the study project's high side voltage bus to GEN-2016-071 were disabled. The scheduled voltage was set to 1.0 p.u. for the 2016 Winter Peak case, 1.004 p.u. for the 2017 Summer Peak case, and 1.003 p.u. for the 2025 Summer Peak case.

GEN-2016-072 and GEN-2013-029 were disabled in the power flow case. A generator was placed at the high side bus of GEN-2016-072 and modeled with PGEN = 300.0 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. A second generator was placed at the high side bus of GEN-2013-029 and modeled with PGEN = 299.0 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. All buses, transformers, and equivalent lines connected from the high side bus of each project to the corresponding generator was disabled. The scheduled voltage was set to 1.002 p.u. for the 2016 Winter Peak case, 1.007 p.u. for the 2017 Summer Peak case, and 1.006 p.u. for the 2025 Summer Peak case.

GEN-2016-073, GEN-2015-024, GEN-2015-025, and GEN-2015-090 were all disabled in the power flow case. A generator was placed at the high side bus of GEN-2016-073 and modeled with PGEN = 220.0 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. A second study generator

was placed at the high side bus of GEN-2015-024 and modeled with PGEN = 220.0 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. A third generator was placed at the high side bus of GEN-2015-025 and modeled with PGEN = 220.0 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. A fourth generator was placed at the high side bus of GEN-2015-090 and modeled with PGEN = 220.0 MW, Qmin = -999 Mvar, and Qmax = 999 Mvar. All buses, transformers, and equivalent lines connected from the high side bus of each project to the corresponding generator were disabled. The scheduled voltage was set to 1.0 p.u. for the 2016 Winter Peak case, 1.004 p.u. for the 2017 Summer Peak case, and 1.006 p.u. for the 2025 Summer Peak case.

5.2 Power Factor Analysis Results

The power factor was calculated for the 2016 Summer Peak, 2017 Summer Peak, and 2025 Summer Peak condition. The following tables show the power factor results for the study generators:

- Table 5-1: Power Factor Analysis for GEN-2016-009
- Table 5-2: Power Factor Analysis for GEN-2016-012
- Table 5-3: Power Factor Analysis for GEN-2016-022
- Table 5-4: Power Factor Analysis for GEN-2016-024
- Table 5-5: Power Factor Analysis for GEN-2016-031
- Table 5-6: Power Factor Analysis for GEN-2016-032
- Table 5-7: Power Factor Analysis for GEN-2016-048
- Table 5-8: Power Factor Analysis for GEN-2016-060
- Table 5-9: Power Factor Analysis for GEN-2016-061
- Table 5-10: Power Factor Analysis for GEN-2016-068
- Table 5-11: Power Factor Analysis for GEN-2016-071
- Table 5-12: Power Factor Analysis for GEN-2016-072
- Table 5-13: Power Factor Analysis for GEN-2016-073

Note that a positive Q (Mvar) output illustrates that the generator is absorbing reactive power from the system, implying a leading power factor; a negative Q (Mvar) illustrates that the generator is supplying reactive power to the system, implying a lagging power factor.

Table 5-1
Power Factor Analysis: GEN-2016-009

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.998	Lagging	-1.95	0.999	Leading	1.14	1.000	Lagging	-0.72
1	FLT01-3PH	0.938	Leading	10.69	0.938	Leading	10.73	0.941	Leading	10.38
2	FLT02-3PH	0.999	Leading	1.28	0.988	Leading	4.47	0.994	Leading	3.17
3	FLT03-3PH	0.983	Lagging	-5.44	0.999	Lagging	-1.44	0.989	Lagging	-4.42
4	FLT04-3PH	0.998	Lagging	-1.60	1.000	Leading	0.87	1.000	Lagging	-0.39
5	FLT05-3PH	0.830	Lagging	-19.50	0.856	Lagging	-17.53	0.828	Lagging	-19.60
6	FLT06-3PH	0.998	Lagging	-1.96	0.995	Leading	2.87	0.998	Leading	1.73
7	FLT07-3PH	0.976	Leading	6.44	0.929	Leading	11.54	0.964	Leading	7.97
8	FLT08-3PH	1.000	Leading	0.50	0.993	Leading	3.51	0.997	Leading	2.10
9	FLT15-3PH	0.945	Lagging	-10.03	0.990	Lagging	-4.06	0.985	Lagging	-5.04
10	FLT16-3PH	0.965	Lagging	-7.90	0.996	Lagging	-2.55	0.992	Lagging	-3.79
11	FLT17-3PH	0.978	Lagging	-6.13	0.999	Lagging	-1.37	0.994	Lagging	-3.07
12	FLT18-3PH	0.986	Lagging	-4.87	1.000	Lagging	-0.23	0.999	Lagging	-1.59
13	FLT19-3PH	0.990	Lagging	-4.15	1.000	Leading	0.34	0.999	Lagging	-1.00
14	FLT20-3PH	0.996	Lagging	-2.74	1.000	Leading	0.37	0.999	Lagging	-1.23
15	FLT21-3PH	0.995	Lagging	-2.81	0.999	Leading	1.01	0.999	Lagging	-0.93
16	FLT22-3PH	0.988	Lagging	-4.53	1.000	Lagging	-0.06	0.998	Lagging	-1.91
17	FLT23-3PH	0.996	Lagging	-2.51	1.000	Leading	0.72	0.999	Lagging	-1.12
18	FLT33-3PH	0.989	Lagging	-4.25	0.998	Lagging	-1.88	0.994	Lagging	-3.31
19	FLT34-3PH	0.937	Lagging	-10.83	0.965	Lagging	-7.91	0.952	Lagging	-9.36
20	FLT35-3PH	0.998	Lagging	-1.95	0.999	Leading	1.14	1.000	Lagging	-0.72
21	FLT36-3PH	0.693	Lagging	-30.14	0.845	Lagging	-18.39	0.836	Lagging	-19.03
22	FLT37-3PH	0.945	Lagging	-10.02	0.978	Lagging	-6.14	0.969	Lagging	-7.42
23	FLT38-3PH	0.773	Lagging	-23.77	0.911	Lagging	-13.12	0.924	Lagging	-12.00
24	FLT39-3PH	0.988	Lagging	-4.46	1.000	Lagging	-0.67	0.997	Lagging	-2.19
25	FLT40-3PH	0.988	Lagging	-4.46	1.000	Lagging	-0.67	0.997	Lagging	-2.19
26	FLT41-3PH	1.000	Lagging	-0.66	1.000	Leading	0.38	0.996	Lagging	-2.75
27	FLT50-3PH	0.997	Lagging	-2.16	0.999	Leading	1.00	1.000	Lagging	-0.85
28	FLT51-3PH	0.997	Lagging	-2.19	1.000	Leading	0.80	0.999	Lagging	-1.04
29	FLT52-3PH	0.997	Lagging	-2.06	0.999	Leading	1.07	1.000	Lagging	-0.79
30	FLT53-3PH	0.998	Lagging	-1.95	0.999	Leading	1.14	1.000	Lagging	-0.72
31	FLT54-3PH	0.995	Lagging	-3.04	1.000	Leading	0.31	0.999	Lagging	-1.42
32	FLT55-3PH	0.998	Lagging	-1.98	0.999	Leading	1.12	1.000	Lagging	-0.74
33	FLT56-3PH	0.997	Lagging	-2.11	0.999	Leading	1.21	1.000	Lagging	-0.64
34	FLT57-3PH	0.997	Lagging	-2.08	0.999	Leading	1.05	1.000	Lagging	-0.82
35	FLT58-3PH	0.998	Lagging	-1.95	0.999	Leading	1.04	1.000	Lagging	-0.83
36	FLT59-3PH	0.997	Lagging	-2.23	0.999	Leading	1.03	1.000	Lagging	-0.79
37	FLT66-3PH	0.993	Lagging	-3.53	1.000	Lagging	-0.07	0.998	Lagging	-1.74
38	FLT67-3PH	0.949	Lagging	-9.64	0.984	Lagging	-5.32	0.976	Lagging	-6.51
39	FLT68-3PH	0.997	Lagging	-2.22	0.999	Leading	0.94	1.000	Lagging	-0.88
40	FLT69-3PH	0.991	Lagging	-3.82	0.999	Lagging	-1.29	0.995	Lagging	-2.95
41	FLT70-3PH	0.994	Lagging	-3.31	1.000	Lagging	-0.17	0.998	Lagging	-2.02
42	FLT71-3PH	0.997	Lagging	-2.36	1.000	Leading	0.92	1.000	Lagging	-0.82
43	FLT72-3PH	0.992	Lagging	-3.60	1.000	Lagging	-0.10	0.998	Lagging	-1.77
44	FLT80-3PH	Case Diverged			0.999	Leading	1.32	1.000	Leading	0.24
45	FLT81-3PH	0.968	Lagging	-7.50	0.982	Lagging	-5.52	0.965	Lagging	-7.83

Table 5-1 (Continued)
Power Factor Analysis: GEN-2016-009

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
46	FLT82-3PH	Case Diverged			0.773	Lagging	-23.82	0.800	Lagging	-21.73
47	FLT83-3PH	0.996	Lagging	-2.64	1.000	Leading	0.47	0.998	Lagging	-1.65
48	FLT88-3PH	0.998	Lagging	-1.95	0.999	Leading	1.14	1.000	Lagging	-0.72
49	FLT89-3PH	0.799	Lagging	-21.81	0.917	Lagging	-12.61	0.983	Lagging	-5.37
50	FLT90-3PH	0.826	Lagging	-19.77	0.941	Lagging	-10.41	0.987	Lagging	-4.69
51	FLT91-3PH	0.998	Lagging	-1.95	0.999	Leading	1.14	0.999	Lagging	-1.48
52	FLT92-3PH	0.922	Lagging	-12.14	0.975	Lagging	-6.66	0.950	Lagging	-9.54
53	FLT93-3PH	0.995	Lagging	-2.93	1.000	Leading	0.47	0.999	Lagging	-1.16
54	FLT99-3PH	0.734	Lagging	-26.82	0.931	Lagging	-11.39	0.954	Lagging	-9.07
55	FLT100-3PH	0.858	Lagging	-17.33	0.936	Lagging	-10.94	0.930	Lagging	-11.43
56	FLT101-3PH	1.000	Lagging	-0.44	0.999	Leading	1.15	0.999	Lagging	-1.46
57	FLT104-3PH	0.625	Lagging	-36.26	0.841	Lagging	-18.62	0.854	Lagging	-17.67
58	FLT105-3PH	0.987	Leading	4.77	0.974	Leading	6.75	0.989	Leading	4.33
59	FLT106-3PH	0.997	Lagging	-2.26	1.000	Leading	0.29	0.998	Lagging	-1.88
60	FLT111-3PH	0.957	Leading	8.76	0.970	Leading	7.29	0.992	Leading	3.60
61	FLT112-3PH	0.977	Lagging	-6.26	0.967	Lagging	-7.59	0.952	Lagging	-9.34
62	FLT113-3PH	0.955	Leading	8.98	0.968	Leading	7.50	0.991	Leading	3.86
63	FLT114-3PH	0.915	Lagging	-12.83	0.972	Lagging	-6.97	0.940	Lagging	-10.56
64	FLT115-3PH	0.994	Lagging	-3.10	1.000	Leading	0.42	0.998	Lagging	-1.84
65	FLT116-3PH	0.966	Leading	7.82	0.963	Leading	8.15	0.979	Leading	6.08
66	FLT117-3PH	0.983	Lagging	-5.46	0.997	Lagging	-2.24	0.996	Lagging	-2.62
67	FLT125-3PH	0.998	Lagging	-1.95	0.999	Leading	1.14	1.000	Lagging	-0.72
68	FLT125a-3PH	0.974	Lagging	-6.81	0.998	Lagging	-1.87	0.998	Lagging	-1.86
69	FLT126-3PH	0.938	Lagging	-10.71	0.965	Lagging	-7.89	0.935	Lagging	-11.00
70	FLT127-3PH	0.620	Lagging	-36.74	0.676	Lagging	-31.60	0.939	Lagging	-10.63
71	FLT128-3PH	0.995	Lagging	-2.86	1.000	Leading	0.16	0.999	Lagging	-1.20
72	FLT129-3PH	0.986	Lagging	-4.97	1.000	Lagging	-0.85	0.997	Lagging	-2.35
73	FLT130-3PH	0.973	Lagging	-6.92	0.997	Lagging	-2.22	0.993	Lagging	-3.55
74	FLT131-3PH	0.996	Lagging	-2.57	0.999	Leading	0.99	1.000	Lagging	-0.81
75	FLT132-3PH	0.998	Lagging	-1.95	0.999	Leading	1.14	0.997	Lagging	-2.26
76	FLT133-3PH	1.000	Leading	0.25	0.996	Leading	2.48	0.996	Lagging	-2.74
77	FLT134-3PH	0.970	Lagging	-7.22	0.992	Lagging	-3.71	0.985	Lagging	-5.09
78	FLT142-3PH	0.996	Lagging	-2.57	0.999	Leading	0.99	1.000	Lagging	-0.81
79	FLT143-3PH	0.995	Lagging	-2.89	1.000	Leading	0.64	0.999	Lagging	-1.30
80	FLT144-3PH	0.974	Lagging	-6.79	0.997	Lagging	-2.30	0.991	Lagging	-3.98
81	FLT145-3PH	0.998	Lagging	-1.92	0.999	Leading	1.15	1.000	Lagging	-0.83
82	FLT146-3PH	0.997	Lagging	-2.33	0.999	Leading	0.98	1.000	Lagging	-0.89
83	FLT147-3PH	0.998	Lagging	-2.05	0.999	Leading	1.17	1.000	Lagging	-0.65

Table 5-2
Power Factor Analysis: GEN-2016-012

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.870	Lagging	-113.49	0.996	Lagging	-17.36	0.998	Lagging	-12.41
1	FLT01-3PH	0.869	Lagging	-113.63	0.996	Lagging	-17.47	0.998	Lagging	-12.50
2	FLT02-3PH	0.870	Lagging	-113.52	0.996	Lagging	-17.38	0.998	Lagging	-12.45
3	FLT03-3PH	0.870	Lagging	-113.53	0.996	Lagging	-17.36	0.998	Lagging	-12.43
4	FLT04-3PH	0.869	Lagging	-113.73	0.996	Lagging	-17.51	0.998	Lagging	-12.54
5	FLT05-3PH	0.869	Lagging	-113.63	0.996	Lagging	-17.49	0.998	Lagging	-12.52
6	FLT06-3PH	0.869	Lagging	-113.81	0.996	Lagging	-17.63	0.998	Lagging	-12.75
7	FLT07-3PH	0.863	Lagging	-117.20	0.995	Lagging	-19.87	0.997	Lagging	-14.61
8	FLT08-3PH	0.870	Lagging	-113.54	0.996	Lagging	-17.39	0.998	Lagging	-12.45
9	FLT15-3PH	0.988	Leading	30.79	0.837	Leading	131.00	0.837	Leading	131.00
10	FLT16-3PH	0.973	Lagging	-47.69	0.995	Leading	19.46	0.993	Leading	23.45
11	FLT17-3PH	0.971	Lagging	-48.87	0.996	Leading	17.72	0.995	Leading	19.86
12	FLT18-3PH	0.873	Lagging	-111.85	0.996	Lagging	-18.42	0.997	Lagging	-14.52
13	FLT19-3PH	0.867	Lagging	-115.18	0.994	Lagging	-22.38	0.995	Lagging	-19.64
14	FLT20-3PH	0.843	Lagging	-127.88	0.988	Lagging	-31.88	0.993	Lagging	-24.01
15	FLT21-3PH	0.831	Lagging	-134.03	0.987	Lagging	-32.34	0.989	Lagging	-29.36
16	FLT22-3PH	0.825	Lagging	-136.85	0.986	Lagging	-34.17	0.991	Lagging	-27.26
17	FLT23-3PH	0.856	Lagging	-120.59	0.988	Lagging	-31.88	0.993	Lagging	-23.03
18	FLT33-3PH	0.900	Lagging	-97.07	1.000	Lagging	-1.86	1.000	Leading	1.35
19	FLT34-3PH	0.928	Lagging	-80.41	0.998	Leading	12.61	0.997	Leading	15.25
20	FLT35-3PH	0.870	Lagging	-113.49	0.996	Lagging	-17.36	0.998	Lagging	-12.41
21	FLT36-3PH	0.943	Lagging	-70.35	0.992	Leading	24.95	0.991	Leading	27.23
22	FLT37-3PH	0.842	Lagging	-128.23	0.990	Lagging	-27.85	0.994	Lagging	-22.21
23	FLT38-3PH	0.813	Lagging	-143.16	0.983	Lagging	-36.98	0.990	Lagging	-29.09
24	FLT39-3PH	0.871	Lagging	-113.06	0.996	Lagging	-16.93	0.998	Lagging	-12.67
25	FLT40-3PH	0.871	Lagging	-113.06	0.996	Lagging	-16.93	0.998	Lagging	-12.67
26	FLT41-3PH	0.872	Lagging	-112.18	0.997	Lagging	-16.57	0.998	Lagging	-11.66
27	FLT50-3PH	0.869	Lagging	-113.99	0.996	Lagging	-17.68	0.998	Lagging	-12.77
28	FLT51-3PH	0.868	Lagging	-114.22	0.996	Lagging	-18.16	0.998	Lagging	-13.36
29	FLT52-3PH	0.869	Lagging	-113.71	0.996	Lagging	-17.48	0.998	Lagging	-12.58
30	FLT53-3PH	0.870	Lagging	-113.49	0.996	Lagging	-17.36	0.998	Lagging	-12.41
31	FLT54-3PH	0.866	Lagging	-115.63	0.995	Lagging	-19.21	0.998	Lagging	-14.02
32	FLT55-3PH	0.870	Lagging	-113.57	0.996	Lagging	-17.42	0.998	Lagging	-12.49
33	FLT56-3PH	0.867	Lagging	-115.06	0.996	Lagging	-18.24	0.998	Lagging	-12.98
34	FLT57-3PH	0.869	Lagging	-113.78	0.996	Lagging	-17.63	0.998	Lagging	-12.76
35	FLT58-3PH	0.870	Lagging	-113.49	0.996	Lagging	-17.67	0.998	Lagging	-12.80
36	FLT59-3PH	0.867	Lagging	-115.15	0.996	Lagging	-18.94	0.998	Lagging	-13.91
37	FLT66-3PH	0.868	Lagging	-114.46	0.996	Lagging	-17.87	0.998	Lagging	-12.84
38	FLT67-3PH	0.864	Lagging	-116.47	0.995	Lagging	-19.23	0.997	Lagging	-14.22
39	FLT68-3PH	0.869	Lagging	-113.77	0.996	Lagging	-17.48	0.998	Lagging	-12.50
40	FLT69-3PH	0.869	Lagging	-113.91	0.996	Lagging	-17.78	0.998	Lagging	-12.80
41	FLT70-3PH	0.868	Lagging	-114.47	0.996	Lagging	-17.91	0.998	Lagging	-12.95
42	FLT71-3PH	0.869	Lagging	-113.83	0.996	Lagging	-17.58	0.998	Lagging	-12.65
43	FLT72-3PH	0.868	Lagging	-114.48	0.996	Lagging	-17.89	0.998	Lagging	-12.87
44	FLT80-3PH	0.801	Lagging	-149.34	0.980	Lagging	-40.09	0.985	Lagging	-34.63
45	FLT81-3PH	0.844	Lagging	-127.32	0.989	Lagging	-29.85	0.992	Lagging	-24.69

Table 5-2 (Continued)
Power Factor Analysis: GEN-2016-012

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
46	FLT82-3PH	0.704	Lagging	-201.88	0.977	Lagging	-44.12	0.985	Lagging	-35.61
47	FLT83-3PH	0.867	Lagging	-115.09	0.996	Lagging	-18.99	0.997	Lagging	-14.50
48	FLT88-3PH	0.870	Lagging	-113.49	0.996	Lagging	-17.36	0.998	Lagging	-12.41
49	FLT89-3PH	0.878	Lagging	-108.79	0.998	Lagging	-13.83	0.999	Lagging	-9.93
50	FLT90-3PH	0.878	Lagging	-108.96	0.998	Lagging	-14.16	0.999	Lagging	-10.18
51	FLT91-3PH	0.870	Lagging	-113.49	0.996	Lagging	-17.36	0.998	Lagging	-12.66
52	FLT92-3PH	0.875	Lagging	-110.58	0.997	Lagging	-15.08	0.999	Lagging	-10.80
53	FLT93-3PH	0.869	Lagging	-113.92	0.996	Lagging	-17.29	0.998	Lagging	-12.25
54	FLT99-3PH	0.837	Lagging	-130.83	0.993	Lagging	-23.42	0.996	Lagging	-17.67
55	FLT100-3PH	0.839	Lagging	-129.67	0.990	Lagging	-27.96	0.994	Lagging	-22.53
56	FLT101-3PH	0.868	Lagging	-114.26	0.996	Lagging	-18.09	0.998	Lagging	-13.25
57	FLT104-3PH	Case Diverged			0.987	Lagging	-32.72	0.991	Lagging	-26.61
58	FLT105-3PH	0.910	Lagging	-91.37	1.000	Lagging	-0.65	1.000	Leading	4.69
59	FLT106-3PH	0.870	Lagging	-113.51	0.996	Lagging	-17.39	0.998	Lagging	-12.48
60	FLT111-3PH	0.863	Lagging	-117.11	0.995	Lagging	-19.23	0.998	Lagging	-13.74
61	FLT112-3PH	0.875	Lagging	-110.39	0.998	Lagging	-14.05	0.999	Lagging	-9.96
62	FLT113-3PH	0.863	Lagging	-117.11	0.995	Lagging	-19.14	0.998	Lagging	-13.65
63	FLT114-3PH	0.875	Lagging	-110.57	0.997	Lagging	-15.03	0.999	Lagging	-10.76
64	FLT115-3PH	0.870	Lagging	-113.50	0.996	Lagging	-17.33	0.998	Lagging	-12.38
65	FLT116-3PH	0.895	Lagging	-99.94	0.999	Lagging	-7.30	1.000	Lagging	-2.51
66	FLT117-3PH	0.870	Lagging	-113.13	0.996	Lagging	-17.07	0.998	Lagging	-12.24
67	FLT125-3PH	0.870	Lagging	-113.49	0.996	Lagging	-17.36	0.998	Lagging	-12.41
68	FLT125a-3PH	0.861	Lagging	-118.09	0.995	Lagging	-19.33	0.998	Lagging	-13.39
69	FLT126-3PH	0.881	Lagging	-107.31	0.998	Lagging	-13.55	0.999	Lagging	-6.92
70	FLT127-3PH	0.894	Lagging	-100.05	0.999	Lagging	-7.64	0.999	Lagging	-10.95
71	FLT128-3PH	0.886	Lagging	-104.83	1.000	Lagging	-6.19	0.999	Lagging	-7.89
72	FLT129-3PH	0.826	Lagging	-136.59	0.983	Lagging	-37.45	0.988	Lagging	-30.73
73	FLT130-3PH	0.786	Lagging	-157.15	0.963	Lagging	-56.05	0.971	Lagging	-49.00
74	FLT131-3PH	0.870	Lagging	-113.21	0.997	Lagging	-16.48	0.998	Lagging	-11.74
75	FLT132-3PH	0.870	Lagging	-113.49	0.996	Lagging	-17.36	0.999	Lagging	-9.06
76	FLT133-3PH	0.868	Lagging	-114.25	0.996	Lagging	-18.06	0.998	Lagging	-13.39
77	FLT134-3PH	0.866	Lagging	-115.66	0.995	Lagging	-19.08	0.997	Lagging	-14.34
78	FLT142-3PH	0.870	Lagging	-113.21	0.997	Lagging	-16.48	0.998	Lagging	-11.74
79	FLT143-3PH	0.863	Lagging	-116.92	0.995	Lagging	-19.68	0.997	Lagging	-15.48
80	FLT144-3PH	0.770	Lagging	-165.75	0.947	Lagging	-68.14	0.959	Lagging	-59.10
81	FLT145-3PH	0.870	Lagging	-113.23	0.996	Lagging	-17.40	0.998	Lagging	-12.73
82	FLT146-3PH	0.866	Lagging	-115.37	0.996	Lagging	-18.05	0.998	Lagging	-13.16
83	FLT147-3PH	0.870	Lagging	-113.23	0.997	Lagging	-16.66	0.998	Lagging	-12.21

Table 5-3
Power Factor Analysis: GEN-2016-022

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.985	Lagging	-26.92	1.000	Lagging	-0.61	1.000	Leading	3.03
1	FLT01-3PH	0.985	Lagging	-26.90	1.000	Lagging	-0.68	1.000	Leading	2.98
2	FLT02-3PH	0.985	Lagging	-26.99	1.000	Lagging	-0.74	1.000	Leading	2.90
3	FLT03-3PH	0.984	Lagging	-27.05	1.000	Lagging	-0.66	1.000	Leading	2.93
4	FLT04-3PH	0.984	Lagging	-27.19	1.000	Lagging	-0.78	1.000	Leading	2.89
5	FLT05-3PH	0.984	Lagging	-27.31	1.000	Lagging	-1.35	1.000	Leading	2.60
6	FLT06-3PH	0.984	Lagging	-27.31	1.000	Lagging	-0.90	1.000	Leading	2.60
7	FLT07-3PH	0.978	Lagging	-32.69	0.999	Lagging	-4.85	1.000	Lagging	-0.70
8	FLT08-3PH	0.985	Lagging	-26.98	1.000	Lagging	-0.67	1.000	Leading	2.96
9	FLT15-3PH	0.956	Lagging	-46.74	0.997	Lagging	-11.21	0.999	Lagging	-7.24
10	FLT16-3PH	0.967	Lagging	-39.88	0.999	Lagging	-7.53	1.000	Lagging	-3.72
11	FLT17-3PH	0.974	Lagging	-35.53	0.999	Lagging	-4.87	1.000	Lagging	-1.26
12	FLT18-3PH	0.964	Lagging	-41.60	0.998	Lagging	-8.94	0.999	Lagging	-4.90
13	FLT19-3PH	0.974	Lagging	-35.54	0.999	Lagging	-5.14	1.000	Lagging	-1.32
14	FLT20-3PH	0.983	Lagging	-28.13	1.000	Lagging	-1.68	1.000	Leading	2.36
15	FLT21-3PH	0.981	Lagging	-29.71	1.000	Lagging	-1.68	1.000	Leading	1.76
16	FLT22-3PH	0.977	Lagging	-33.15	1.000	Lagging	-3.50	1.000	Leading	0.13
17	FLT23-3PH	0.983	Lagging	-28.23	1.000	Lagging	-1.53	1.000	Leading	2.02
18	FLT33-3PH	0.994	Lagging	-16.01	1.000	Lagging	-2.37	1.000	Leading	1.43
19	FLT34-3PH	0.969	Lagging	-38.56	0.988	Lagging	-23.29	0.992	Lagging	-19.12
20	FLT35-3PH	0.985	Lagging	-26.92	1.000	Lagging	-0.61	1.000	Leading	3.03
21	FLT36-3PH	Case Diverged			0.950	Lagging	-49.74	0.959	Lagging	-45.00
22	FLT37-3PH	0.958	Lagging	-45.20	0.992	Lagging	-19.04	0.995	Lagging	-14.90
23	FLT38-3PH	0.972	Lagging	-36.75	1.000	Leading	1.08	0.999	Leading	6.81
24	FLT39-3PH	0.982	Lagging	-29.26	1.000	Lagging	-3.22	1.000	Lagging	-1.84
25	FLT40-3PH	0.982	Lagging	-29.26	1.000	Lagging	-3.22	1.000	Lagging	-1.84
26	FLT41-3PH	0.986	Lagging	-25.85	1.000	Leading	0.81	0.999	Leading	5.02
27	FLT50-3PH	0.984	Lagging	-27.35	1.000	Lagging	-0.89	1.000	Leading	2.77
28	FLT51-3PH	0.985	Lagging	-26.98	1.000	Lagging	-1.12	1.000	Leading	2.54
29	FLT52-3PH	0.984	Lagging	-27.11	1.000	Lagging	-0.81	1.000	Leading	2.80
30	FLT53-3PH	0.985	Lagging	-26.92	1.000	Lagging	-0.61	1.000	Leading	3.03
31	FLT54-3PH	0.984	Lagging	-27.89	1.000	Lagging	-1.02	1.000	Leading	2.55
32	FLT55-3PH	0.985	Lagging	-26.97	1.000	Lagging	-0.67	1.000	Leading	2.96
33	FLT56-3PH	0.985	Lagging	-26.71	1.000	Lagging	-0.38	1.000	Leading	3.37
34	FLT57-3PH	0.984	Lagging	-27.22	1.000	Lagging	-0.93	1.000	Leading	2.70
35	FLT58-3PH	0.985	Lagging	-26.92	1.000	Lagging	-0.97	1.000	Leading	2.66
36	FLT59-3PH	0.984	Lagging	-27.43	1.000	Lagging	-0.85	1.000	Leading	2.56
37	FLT66-3PH	0.983	Lagging	-28.39	1.000	Lagging	-1.58	1.000	Leading	2.24
38	FLT67-3PH	0.976	Lagging	-33.64	0.999	Lagging	-5.76	1.000	Lagging	-1.65
39	FLT68-3PH	0.984	Lagging	-27.25	1.000	Lagging	-0.78	1.000	Leading	2.92
40	FLT69-3PH	0.984	Lagging	-27.65	1.000	Lagging	-1.59	1.000	Leading	2.15
41	FLT70-3PH	0.983	Lagging	-28.40	1.000	Lagging	-1.62	1.000	Leading	2.08
42	FLT71-3PH	0.984	Lagging	-27.60	1.000	Lagging	-1.16	1.000	Leading	2.49
43	FLT72-3PH	0.983	Lagging	-28.44	1.000	Lagging	-1.62	1.000	Leading	2.20
44	FLT80-3PH	0.942	Lagging	-54.19	0.983	Lagging	-28.53	0.982	Lagging	-28.86
45	FLT81-3PH	0.971	Lagging	-37.30	0.994	Lagging	-16.52	0.996	Lagging	-14.35

Table 5-3 (Continued)
Power Factor Analysis: GEN-2016-022

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
46	FLT82-3PH	0.886	Lagging	-79.49	0.995	Lagging	-14.72	0.999	Lagging	-8.00
47	FLT83-3PH	0.977	Lagging	-33.31	0.999	Lagging	-8.29	0.999	Lagging	-7.28
48	FLT88-3PH	0.985	Lagging	-26.92	1.000	Lagging	-0.61	1.000	Leading	3.03
49	FLT89-3PH	0.980	Lagging	-31.10	0.999	Lagging	-4.81	1.000	Leading	0.94
50	FLT90-3PH	0.981	Lagging	-30.15	1.000	Lagging	-3.59	1.000	Leading	1.74
51	FLT91-3PH	0.985	Lagging	-26.92	1.000	Lagging	-0.61	1.000	Leading	2.78
52	FLT92-3PH	0.983	Lagging	-28.41	1.000	Lagging	-2.21	1.000	Leading	1.55
53	FLT93-3PH	0.984	Lagging	-27.75	1.000	Lagging	-1.08	1.000	Leading	2.63
54	FLT99-3PH	0.970	Lagging	-37.96	1.000	Leading	2.49	0.999	Leading	5.52
55	FLT100-3PH	0.950	Lagging	-50.15	0.993	Lagging	-18.55	0.997	Lagging	-12.70
56	FLT101-3PH	0.982	Lagging	-28.87	1.000	Lagging	-2.49	1.000	Leading	1.59
57	FLT104-3PH	0.919	Lagging	-65.13	0.980	Lagging	-30.78	0.988	Lagging	-23.56
58	FLT105-3PH	0.994	Lagging	-16.71	0.999	Leading	7.47	0.998	Leading	10.13
59	FLT106-3PH	0.985	Lagging	-26.98	1.000	Lagging	-0.71	1.000	Leading	2.96
60	FLT111-3PH	0.984	Lagging	-27.82	1.000	Leading	0.20	1.000	Leading	3.75
61	FLT112-3PH	0.981	Lagging	-30.41	1.000	Lagging	-3.87	1.000	Leading	0.48
62	FLT113-3PH	0.984	Lagging	-27.56	1.000	Leading	0.22	1.000	Leading	3.76
63	FLT114-3PH	0.983	Lagging	-28.53	1.000	Lagging	-2.36	1.000	Leading	1.48
64	FLT115-3PH	0.984	Lagging	-27.42	1.000	Lagging	-0.93	1.000	Leading	2.68
65	FLT116-3PH	0.990	Lagging	-21.62	1.000	Leading	2.54	0.999	Leading	6.06
66	FLT117-3PH	0.985	Lagging	-26.80	1.000	Lagging	-0.58	1.000	Leading	3.25
67	FLT125-3PH	0.985	Lagging	-26.92	1.000	Lagging	-0.61	1.000	Leading	3.03
68	FLT125a-3PH	0.986	Lagging	-25.50	1.000	Leading	1.54	1.000	Leading	3.86
69	FLT126-3PH	0.974	Lagging	-35.04	0.998	Lagging	-10.13	0.998	Lagging	-8.70
70	FLT127-3PH	0.913	Lagging	-67.94	0.966	Lagging	-40.40	0.998	Lagging	-8.58
71	FLT128-3PH	0.975	Lagging	-34.75	0.999	Lagging	-6.43	1.000	Lagging	-4.47
72	FLT129-3PH	0.979	Lagging	-31.81	1.000	Lagging	-3.40	1.000	Leading	0.76
73	FLT130-3PH	0.974	Lagging	-35.18	0.999	Lagging	-5.24	1.000	Lagging	-0.73
74	FLT131-3PH	0.982	Lagging	-29.00	1.000	Lagging	-1.49	1.000	Leading	2.32
75	FLT132-3PH	0.985	Lagging	-26.92	1.000	Lagging	-0.61	1.000	Lagging	-0.41
76	FLT133-3PH	0.984	Lagging	-27.24	1.000	Lagging	-1.26	1.000	Leading	2.86
77	FLT134-3PH	0.981	Lagging	-29.85	1.000	Lagging	-2.94	1.000	Leading	0.95
78	FLT142-3PH	0.982	Lagging	-29.00	1.000	Lagging	-1.49	1.000	Leading	2.32
79	FLT143-3PH	0.982	Lagging	-29.12	1.000	Lagging	-1.57	1.000	Leading	2.14
80	FLT144-3PH	0.974	Lagging	-35.08	1.000	Lagging	-4.58	1.000	Lagging	-1.16
81	FLT145-3PH	0.985	Lagging	-27.01	1.000	Lagging	-0.52	1.000	Leading	3.25
82	FLT146-3PH	0.984	Lagging	-27.75	1.000	Lagging	-0.97	1.000	Leading	2.65
83	FLT147-3PH	0.984	Lagging	-27.48	1.000	Lagging	-1.05	1.000	Leading	2.84

Table 5-4
Power Factor Analysis: GEN-2016-024

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.904	Lagging	-26.39	0.987	Lagging	-9.02	0.941	Lagging	-20.10
1	FLT01-3PH	0.902	Lagging	-26.73	0.987	Lagging	-9.18	0.940	Lagging	-20.25
2	FLT02-3PH	0.904	Lagging	-26.45	0.987	Lagging	-9.05	0.941	Lagging	-20.15
3	FLT03-3PH	0.904	Lagging	-26.48	0.987	Lagging	-9.04	0.941	Lagging	-20.14
4	FLT04-3PH	0.901	Lagging	-26.90	0.987	Lagging	-9.27	0.940	Lagging	-20.29
5	FLT05-3PH	0.904	Lagging	-26.47	0.987	Lagging	-9.13	0.941	Lagging	-20.18
6	FLT06-3PH	0.901	Lagging	-26.83	0.987	Lagging	-9.27	0.939	Lagging	-20.42
7	FLT07-3PH	0.872	Lagging	-31.41	0.979	Lagging	-11.57	0.929	Lagging	-22.21
8	FLT08-3PH	0.903	Lagging	-26.53	0.987	Lagging	-9.09	0.941	Lagging	-20.18
9	FLT15-3PH	0.703	Lagging	-56.57	0.906	Lagging	-26.09	0.883	Lagging	-29.75
10	FLT16-3PH	0.746	Lagging	-49.92	0.938	Lagging	-20.66	0.870	Lagging	-31.63
11	FLT17-3PH	0.799	Lagging	-41.98	0.960	Lagging	-16.23	0.898	Lagging	-27.40
12	FLT18-3PH	0.765	Lagging	-46.96	0.936	Lagging	-21.02	0.913	Lagging	-25.02
13	FLT19-3PH	0.757	Lagging	-48.26	0.940	Lagging	-20.28	0.875	Lagging	-30.92
14	FLT20-3PH	0.872	Lagging	-31.32	0.967	Lagging	-14.73	0.927	Lagging	-22.57
15	FLT21-3PH	0.851	Lagging	-34.50	0.975	Lagging	-12.67	0.918	Lagging	-24.13
16	FLT22-3PH	0.808	Lagging	-40.73	0.963	Lagging	-15.55	0.899	Lagging	-27.24
17	FLT23-3PH	0.890	Lagging	-28.68	0.983	Lagging	-10.54	0.931	Lagging	-21.83
18	FLT33-3PH	0.937	Lagging	-20.79	0.999	Lagging	-2.97	0.966	Lagging	-14.94
19	FLT34-3PH	0.915	Lagging	-24.66	0.998	Lagging	-3.28	0.967	Lagging	-14.64
20	FLT35-3PH	0.904	Lagging	-26.39	0.987	Lagging	-9.02	0.941	Lagging	-20.10
21	FLT36-3PH	0.753	Lagging	-48.77	0.980	Lagging	-11.36	0.931	Lagging	-21.97
22	FLT37-3PH	0.819	Lagging	-39.19	0.958	Lagging	-16.68	0.896	Lagging	-27.70
23	FLT38-3PH	0.705	Lagging	-56.21	0.911	Lagging	-25.21	0.903	Lagging	-26.63
24	FLT39-3PH	0.898	Lagging	-27.32	0.986	Lagging	-9.30	0.937	Lagging	-20.75
25	FLT40-3PH	0.898	Lagging	-27.32	0.986	Lagging	-9.30	0.937	Lagging	-20.75
26	FLT41-3PH	0.898	Lagging	-27.41	0.987	Lagging	-9.15	0.941	Lagging	-20.00
27	FLT50-3PH	0.978	Lagging	-11.90	0.999	Lagging	-2.17	0.985	Lagging	-9.69
28	FLT51-3PH	0.741	Lagging	-50.56	0.858	Lagging	-33.37	0.795	Lagging	-42.64
29	FLT52-3PH	0.930	Lagging	-22.02	0.983	Lagging	-10.42	0.936	Lagging	-21.07
30	FLT53-3PH	0.904	Lagging	-26.39	0.987	Lagging	-9.02	0.941	Lagging	-20.10
31	FLT54-3PH	0.893	Lagging	-28.11	0.981	Lagging	-11.11	0.914	Lagging	-24.74
32	FLT55-3PH	0.899	Lagging	-27.16	0.983	Lagging	-10.54	0.931	Lagging	-21.87
33	FLT56-3PH	0.945	Lagging	-19.37	0.991	Lagging	-7.45	0.956	Lagging	-17.19
34	FLT57-3PH	0.902	Lagging	-26.81	0.985	Lagging	-9.91	0.937	Lagging	-20.89
35	FLT58-3PH	0.904	Lagging	-26.39	0.984	Lagging	-10.12	0.935	Lagging	-21.15
36	FLT59-3PH	0.784	Lagging	-44.21	0.937	Lagging	-20.89	0.855	Lagging	-33.83
37	FLT66-3PH	0.898	Lagging	-27.39	0.986	Lagging	-9.42	0.939	Lagging	-20.44
38	FLT67-3PH	0.878	Lagging	-30.40	0.981	Lagging	-10.96	0.931	Lagging	-21.87
39	FLT68-3PH	0.903	Lagging	-26.64	0.987	Lagging	-9.10	0.941	Lagging	-20.15
40	FLT69-3PH	0.902	Lagging	-26.76	0.986	Lagging	-9.31	0.940	Lagging	-20.34
41	FLT70-3PH	0.898	Lagging	-27.30	0.986	Lagging	-9.37	0.939	Lagging	-20.43
42	FLT71-3PH	0.902	Lagging	-26.79	0.987	Lagging	-9.21	0.940	Lagging	-20.31
43	FLT72-3PH	0.898	Lagging	-27.43	0.986	Lagging	-9.44	0.939	Lagging	-20.45
44	FLT80-3PH	0.703	Lagging	-56.51	0.888	Lagging	-28.88	0.854	Lagging	-34.08
45	FLT81-3PH	0.832	Lagging	-37.19	0.955	Lagging	-17.40	0.887	Lagging	-29.04

Table 5-4 (Continued)
Power Factor Analysis: GEN-2016-024

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
46	FLT82-3PH	0.681	Lagging	-60.15	0.859	Lagging	-33.37	0.859	Lagging	-33.27
47	FLT83-3PH	0.895	Lagging	-27.83	0.983	Lagging	-10.51	0.930	Lagging	-22.10
48	FLT88-3PH	0.904	Lagging	-26.39	0.987	Lagging	-9.02	0.941	Lagging	-20.10
49	FLT89-3PH	0.906	Lagging	-26.09	0.982	Lagging	-10.85	0.938	Lagging	-20.71
50	FLT90-3PH	0.919	Lagging	-23.94	0.989	Lagging	-8.34	0.948	Lagging	-18.85
51	FLT91-3PH	0.904	Lagging	-26.39	0.987	Lagging	-9.02	0.936	Lagging	-21.05
52	FLT92-3PH	0.928	Lagging	-22.35	0.994	Lagging	-6.03	0.952	Lagging	-18.00
53	FLT93-3PH	0.878	Lagging	-30.48	0.984	Lagging	-10.18	0.936	Lagging	-21.09
54	FLT99-3PH	0.741	Lagging	-50.55	0.966	Lagging	-14.98	0.917	Lagging	-24.26
55	FLT100-3PH	0.791	Lagging	-43.20	0.956	Lagging	-17.11	0.897	Lagging	-27.51
56	FLT101-3PH	0.898	Lagging	-27.32	0.986	Lagging	-9.61	0.938	Lagging	-20.62
57	FLT104-3PH	0.696	Lagging	-57.64	0.931	Lagging	-21.83	0.870	Lagging	-31.65
58	FLT105-3PH	0.959	Lagging	-16.45	0.997	Lagging	-4.04	0.964	Lagging	-15.42
59	FLT106-3PH	0.904	Lagging	-26.38	0.987	Lagging	-9.03	0.941	Lagging	-20.12
60	FLT111-3PH	0.822	Lagging	-38.72	0.971	Lagging	-13.83	0.926	Lagging	-22.77
61	FLT112-3PH	0.890	Lagging	-28.59	0.991	Lagging	-7.47	0.948	Lagging	-18.68
62	FLT113-3PH	0.829	Lagging	-37.68	0.972	Lagging	-13.59	0.927	Lagging	-22.56
63	FLT114-3PH	0.929	Lagging	-22.30	0.994	Lagging	-6.30	0.953	Lagging	-17.82
64	FLT115-3PH	0.899	Lagging	-27.22	0.986	Lagging	-9.55	0.938	Lagging	-20.57
65	FLT116-3PH	0.952	Lagging	-17.95	0.996	Lagging	-5.01	0.959	Lagging	-16.47
66	FLT117-3PH	0.909	Lagging	-25.69	0.988	Lagging	-8.69	0.943	Lagging	-19.72
67	FLT125-3PH	0.904	Lagging	-26.39	0.987	Lagging	-9.02	0.941	Lagging	-20.10
68	FLT125a-3PH	0.870	Lagging	-31.60	0.984	Lagging	-10.21	0.939	Lagging	-20.55
69	FLT126-3PH	0.920	Lagging	-23.75	0.987	Lagging	-9.19	0.940	Lagging	-20.35
70	FLT127-3PH	0.796	Lagging	-42.52	0.927	Lagging	-22.55	0.899	Lagging	-27.28
71	FLT128-3PH	0.776	Lagging	-45.45	0.931	Lagging	-21.89	0.877	Lagging	-30.66
72	FLT129-3PH	0.848	Lagging	-34.93	0.974	Lagging	-12.88	0.922	Lagging	-23.38
73	FLT130-3PH	0.808	Lagging	-40.74	0.965	Lagging	-15.27	0.911	Lagging	-25.22
74	FLT131-3PH	0.867	Lagging	-32.10	0.981	Lagging	-10.99	0.932	Lagging	-21.79
75	FLT132-3PH	0.904	Lagging	-26.39	0.987	Lagging	-9.02	0.925	Lagging	-22.99
76	FLT133-3PH	0.905	Lagging	-26.32	0.987	Lagging	-9.00	0.942	Lagging	-19.88
77	FLT134-3PH	0.884	Lagging	-29.47	0.983	Lagging	-10.55	0.934	Lagging	-21.42
78	FLT142-3PH	0.867	Lagging	-32.10	0.981	Lagging	-10.99	0.932	Lagging	-21.79
79	FLT143-3PH	0.869	Lagging	-31.87	0.981	Lagging	-11.00	0.931	Lagging	-21.89
80	FLT144-3PH	0.803	Lagging	-41.43	0.969	Lagging	-14.16	0.905	Lagging	-26.33
81	FLT145-3PH	0.902	Lagging	-26.74	0.988	Lagging	-8.89	0.943	Lagging	-19.63
82	FLT146-3PH	0.892	Lagging	-28.33	0.985	Lagging	-9.73	0.937	Lagging	-20.81
83	FLT147-3PH	0.898	Lagging	-27.38	0.986	Lagging	-9.49	0.938	Lagging	-20.62

Table 5-5
Power Factor Analysis: GEN-2015-031

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.991	Lagging	-26.92	1.000	Lagging	-0.61	1.000	Leading	3.03
1	FLT01-3PH	0.991	Lagging	-26.90	1.000	Lagging	-0.68	1.000	Leading	2.98
2	FLT02-3PH	0.991	Lagging	-26.99	1.000	Lagging	-0.74	1.000	Leading	2.90
3	FLT03-3PH	0.991	Lagging	-27.05	1.000	Lagging	-0.66	1.000	Leading	2.93
4	FLT04-3PH	0.991	Lagging	-27.19	1.000	Lagging	-0.78	1.000	Leading	2.89
5	FLT05-3PH	0.991	Lagging	-27.31	1.000	Lagging	-1.35	1.000	Leading	2.60
6	FLT06-3PH	0.991	Lagging	-27.31	1.000	Lagging	-0.90	1.000	Leading	2.60
7	FLT07-3PH	0.987	Lagging	-32.69	1.000	Lagging	-4.85	1.000	Lagging	-0.70
8	FLT08-3PH	0.991	Lagging	-26.98	1.000	Lagging	-0.67	1.000	Leading	2.96
9	FLT15-3PH	0.974	Lagging	-46.74	0.998	Lagging	-11.21	0.999	Lagging	-7.24
10	FLT16-3PH	0.981	Lagging	-39.88	0.999	Lagging	-7.53	1.000	Lagging	-3.72
11	FLT17-3PH	0.985	Lagging	-35.53	1.000	Lagging	-4.87	1.000	Lagging	-1.26
12	FLT18-3PH	0.979	Lagging	-41.60	0.999	Lagging	-8.94	1.000	Lagging	-4.90
13	FLT19-3PH	0.985	Lagging	-35.54	1.000	Lagging	-5.14	1.000	Lagging	-1.32
14	FLT20-3PH	0.990	Lagging	-28.13	1.000	Lagging	-1.68	1.000	Leading	2.36
15	FLT21-3PH	0.989	Lagging	-29.71	1.000	Lagging	-1.68	1.000	Leading	1.76
16	FLT22-3PH	0.987	Lagging	-33.15	1.000	Lagging	-3.50	1.000	Leading	0.13
17	FLT23-3PH	0.990	Lagging	-28.23	1.000	Lagging	-1.53	1.000	Leading	2.02
18	FLT33-3PH	0.997	Lagging	-16.01	1.000	Lagging	-2.37	1.000	Leading	1.43
19	FLT34-3PH	0.982	Lagging	-38.56	0.993	Lagging	-23.29	0.996	Lagging	-19.12
20	FLT35-3PH	0.991	Lagging	-26.92	1.000	Lagging	-0.61	1.000	Leading	3.03
21	FLT36-3PH	Case Diverged			0.971	Lagging	-49.74	0.976	Lagging	-45.00
22	FLT37-3PH	0.976	Lagging	-45.20	0.996	Lagging	-19.04	0.997	Lagging	-14.90
23	FLT38-3PH	0.984	Lagging	-36.75	1.000	Leading	1.08	0.999	Leading	6.81
24	FLT39-3PH	0.990	Lagging	-29.26	1.000	Lagging	-3.22	1.000	Lagging	-1.84
25	FLT40-3PH	0.990	Lagging	-29.26	1.000	Lagging	-3.22	1.000	Lagging	-1.84
26	FLT41-3PH	0.992	Lagging	-25.85	1.000	Leading	0.81	1.000	Leading	5.02
27	FLT50-3PH	0.991	Lagging	-27.35	1.000	Lagging	-0.89	1.000	Leading	2.77
28	FLT51-3PH	0.991	Lagging	-26.98	1.000	Lagging	-1.12	1.000	Leading	2.54
29	FLT52-3PH	0.991	Lagging	-27.11	1.000	Lagging	-0.81	1.000	Leading	2.80
30	FLT53-3PH	0.991	Lagging	-26.92	1.000	Lagging	-0.61	1.000	Leading	3.03
31	FLT54-3PH	0.991	Lagging	-27.89	1.000	Lagging	-1.02	1.000	Leading	2.55
32	FLT55-3PH	0.991	Lagging	-26.97	1.000	Lagging	-0.67	1.000	Leading	2.96
33	FLT56-3PH	0.991	Lagging	-26.71	1.000	Lagging	-0.38	1.000	Leading	3.37
34	FLT57-3PH	0.991	Lagging	-27.22	1.000	Lagging	-0.93	1.000	Leading	2.70
35	FLT58-3PH	0.991	Lagging	-26.92	1.000	Lagging	-0.97	1.000	Leading	2.66
36	FLT59-3PH	0.991	Lagging	-27.43	1.000	Lagging	-0.85	1.000	Leading	2.56
37	FLT66-3PH	0.990	Lagging	-28.39	1.000	Lagging	-1.58	1.000	Leading	2.24
38	FLT67-3PH	0.986	Lagging	-33.64	1.000	Lagging	-5.76	1.000	Lagging	-1.65
39	FLT68-3PH	0.991	Lagging	-27.25	1.000	Lagging	-0.78	1.000	Leading	2.92
40	FLT69-3PH	0.991	Lagging	-27.65	1.000	Lagging	-1.59	1.000	Leading	2.15
41	FLT70-3PH	0.990	Lagging	-28.40	1.000	Lagging	-1.62	1.000	Leading	2.08
42	FLT71-3PH	0.991	Lagging	-27.60	1.000	Lagging	-1.16	1.000	Leading	2.49
43	FLT72-3PH	0.990	Lagging	-28.44	1.000	Lagging	-1.62	1.000	Leading	2.20
44	FLT80-3PH	0.966	Lagging	-54.19	0.990	Lagging	-28.53	0.990	Lagging	-28.86
45	FLT81-3PH	0.983	Lagging	-37.30	0.997	Lagging	-16.52	0.997	Lagging	-14.35

Table 5-5 (Continued)
Power Factor Analysis: GEN-2016-031

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
46	FLT82-3PH	0.930	Lagging	-79.49	0.997	Lagging	-14.72	0.999	Lagging	-8.00
47	FLT83-3PH	0.987	Lagging	-33.31	0.999	Lagging	-8.29	0.999	Lagging	-7.28
48	FLT88-3PH	0.991	Lagging	-26.92	1.000	Lagging	-0.61	1.000	Leading	3.03
49	FLT89-3PH	0.988	Lagging	-31.10	1.000	Lagging	-4.81	1.000	Leading	0.94
50	FLT90-3PH	0.989	Lagging	-30.15	1.000	Lagging	-3.59	1.000	Leading	1.74
51	FLT91-3PH	0.991	Lagging	-26.92	1.000	Lagging	-0.61	1.000	Leading	2.78
52	FLT92-3PH	0.990	Lagging	-28.41	1.000	Lagging	-2.21	1.000	Leading	1.55
53	FLT93-3PH	0.991	Lagging	-27.75	1.000	Lagging	-1.08	1.000	Leading	2.63
54	FLT99-3PH	0.983	Lagging	-37.96	1.000	Leading	2.49	1.000	Leading	5.52
55	FLT100-3PH	0.970	Lagging	-50.15	0.996	Lagging	-18.55	0.998	Lagging	-12.70
56	FLT101-3PH	0.990	Lagging	-28.87	1.000	Lagging	-2.49	1.000	Leading	1.59
57	FLT104-3PH	0.951	Lagging	-65.13	0.989	Lagging	-30.78	0.993	Lagging	-23.56
58	FLT105-3PH	0.997	Lagging	-16.71	0.999	Leading	7.47	0.999	Leading	10.13
59	FLT106-3PH	0.991	Lagging	-26.98	1.000	Lagging	-0.71	1.000	Leading	2.96
60	FLT111-3PH	0.991	Lagging	-27.82	1.000	Leading	0.20	1.000	Leading	3.75
61	FLT112-3PH	0.989	Lagging	-30.41	1.000	Lagging	-3.87	1.000	Leading	0.48
62	FLT113-3PH	0.991	Lagging	-27.56	1.000	Leading	0.22	1.000	Leading	3.76
63	FLT114-3PH	0.990	Lagging	-28.53	1.000	Lagging	-2.36	1.000	Leading	1.48
64	FLT115-3PH	0.991	Lagging	-27.42	1.000	Lagging	-0.93	1.000	Leading	2.68
65	FLT116-3PH	0.994	Lagging	-21.62	1.000	Leading	2.54	1.000	Leading	6.06
66	FLT117-3PH	0.991	Lagging	-26.80	1.000	Lagging	-0.58	1.000	Leading	3.25
67	FLT125-3PH	0.991	Lagging	-26.92	1.000	Lagging	-0.61	1.000	Leading	3.03
68	FLT125a-3PH	0.992	Lagging	-25.50	1.000	Leading	1.54	1.000	Leading	3.86
69	FLT126-3PH	0.985	Lagging	-35.04	0.999	Lagging	-10.13	0.999	Lagging	-8.70
70	FLT127-3PH	0.947	Lagging	-67.94	0.980	Lagging	-40.40	0.999	Lagging	-8.58
71	FLT128-3PH	0.985	Lagging	-34.75	0.999	Lagging	-6.43	1.000	Lagging	-4.47
72	FLT129-3PH	0.988	Lagging	-31.81	1.000	Lagging	-3.40	1.000	Leading	0.76
73	FLT130-3PH	0.985	Lagging	-35.18	1.000	Lagging	-5.24	1.000	Lagging	-0.73
74	FLT131-3PH	0.990	Lagging	-29.00	1.000	Lagging	-1.49	1.000	Leading	2.32
75	FLT132-3PH	0.991	Lagging	-26.92	1.000	Lagging	-0.61	1.000	Lagging	-0.41
76	FLT133-3PH	0.991	Lagging	-27.24	1.000	Lagging	-1.26	1.000	Leading	2.86
77	FLT134-3PH	0.989	Lagging	-29.85	1.000	Lagging	-2.94	1.000	Leading	0.95
78	FLT142-3PH	0.990	Lagging	-29.00	1.000	Lagging	-1.49	1.000	Leading	2.32
79	FLT143-3PH	0.990	Lagging	-29.12	1.000	Lagging	-1.57	1.000	Leading	2.14
80	FLT144-3PH	0.985	Lagging	-35.08	1.000	Lagging	-4.58	1.000	Lagging	-1.16
81	FLT145-3PH	0.991	Lagging	-27.01	1.000	Lagging	-0.52	1.000	Leading	3.25
82	FLT146-3PH	0.991	Lagging	-27.75	1.000	Lagging	-0.97	1.000	Leading	2.65
83	FLT147-3PH	0.991	Lagging	-27.48	1.000	Lagging	-1.05	1.000	Leading	2.84

Table 5-6
Power Factor Analysis: GEN-2016-032

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.999	Lagging	-7.21	0.999	Lagging	-7.54	0.999	Lagging	-7.21
1	FLT01-3PH	0.999	Lagging	-7.13	0.999	Lagging	-7.59	0.999	Lagging	-7.13
2	FLT02-3PH	0.999	Lagging	-7.27	0.999	Lagging	-7.67	0.999	Lagging	-7.27
3	FLT03-3PH	0.999	Lagging	-7.33	0.999	Lagging	-7.59	0.999	Lagging	-7.33
4	FLT04-3PH	0.999	Lagging	-7.01	0.999	Lagging	-7.37	0.999	Lagging	-7.01
5	FLT05-3PH	0.999	Lagging	-7.50	0.999	Lagging	-7.92	0.999	Lagging	-7.50
6	FLT06-3PH	1.000	Lagging	-6.16	0.999	Lagging	-7.18	1.000	Lagging	-6.16
7	FLT07-3PH	0.998	Lagging	-12.91	0.998	Lagging	-12.05	0.998	Lagging	-12.91
8	FLT08-3PH	0.999	Lagging	-7.11	0.999	Lagging	-7.47	0.999	Lagging	-7.11
9	FLT15-3PH	0.997	Lagging	-14.23	0.998	Lagging	-11.87	0.997	Lagging	-14.23
10	FLT16-3PH	0.998	Lagging	-12.32	0.999	Lagging	-10.68	0.998	Lagging	-12.32
11	FLT17-3PH	0.999	Lagging	-10.86	0.999	Lagging	-9.71	0.999	Lagging	-10.86
12	FLT18-3PH	0.999	Lagging	-9.17	0.999	Lagging	-8.31	0.999	Lagging	-9.17
13	FLT19-3PH	0.999	Lagging	-8.64	0.999	Lagging	-7.98	0.999	Lagging	-8.64
14	FLT20-3PH	0.999	Lagging	-7.72	0.999	Lagging	-7.97	0.999	Lagging	-7.72
15	FLT21-3PH	0.999	Lagging	-8.14	0.999	Lagging	-7.99	0.999	Lagging	-8.14
16	FLT22-3PH	0.999	Lagging	-9.82	0.999	Lagging	-9.12	0.999	Lagging	-9.82
17	FLT23-3PH	0.999	Lagging	-7.61	0.999	Lagging	-7.82	0.999	Lagging	-7.61
18	FLT33-3PH	0.999	Lagging	-10.65	0.998	Lagging	-11.37	0.999	Lagging	-10.65
19	FLT34-3PH	0.996	Lagging	-16.91	0.996	Lagging	-17.08	0.996	Lagging	-16.91
20	FLT35-3PH	0.999	Lagging	-7.21	0.999	Lagging	-7.54	0.999	Lagging	-7.21
21	FLT36-3PH	0.987	Lagging	-33.05	0.992	Lagging	-25.30	0.987	Lagging	-33.05
22	FLT37-3PH	0.992	Lagging	-25.36	0.994	Lagging	-22.10	0.992	Lagging	-25.36
23	FLT38-3PH	0.986	Lagging	-33.65	0.992	Lagging	-25.26	0.986	Lagging	-33.65
24	FLT39-3PH	0.999	Lagging	-7.81	0.999	Lagging	-8.09	0.999	Lagging	-7.81
25	FLT40-3PH	0.999	Lagging	-7.81	0.999	Lagging	-8.09	0.999	Lagging	-7.81
26	FLT41-3PH	0.998	Lagging	-13.95	0.998	Lagging	-11.97	0.998	Lagging	-13.95
27	FLT50-3PH	0.999	Lagging	-7.32	0.999	Lagging	-7.61	0.999	Lagging	-7.32
28	FLT51-3PH	0.999	Lagging	-7.29	0.999	Lagging	-7.67	0.999	Lagging	-7.29
29	FLT52-3PH	0.999	Lagging	-7.24	0.999	Lagging	-7.55	0.999	Lagging	-7.24
30	FLT53-3PH	0.999	Lagging	-7.21	0.999	Lagging	-7.54	0.999	Lagging	-7.21
31	FLT54-3PH	0.999	Lagging	-7.95	0.999	Lagging	-8.05	0.999	Lagging	-7.95
32	FLT55-3PH	0.999	Lagging	-7.22	0.999	Lagging	-7.54	0.999	Lagging	-7.22
33	FLT56-3PH	0.999	Lagging	-7.27	0.999	Lagging	-7.50	0.999	Lagging	-7.27
34	FLT57-3PH	0.999	Lagging	-7.24	0.999	Lagging	-7.55	0.999	Lagging	-7.24
35	FLT58-3PH	0.999	Lagging	-7.21	0.999	Lagging	-7.56	0.999	Lagging	-7.21
36	FLT59-3PH	0.999	Lagging	-7.32	0.999	Lagging	-7.55	0.999	Lagging	-7.32
37	FLT66-3PH	0.998	Leading	12.13	0.999	Leading	9.75	0.998	Leading	12.13
38	FLT67-3PH	1.000	Lagging	-3.54	1.000	Lagging	-4.05	1.000	Lagging	-3.54
39	FLT68-3PH	0.999	Lagging	-7.26	0.999	Lagging	-6.72	0.999	Lagging	-7.26
40	FLT69-3PH	1.000	Leading	3.93	1.000	Leading	6.16	1.000	Leading	3.93
41	FLT70-3PH	0.996	Lagging	-18.48	0.993	Lagging	-24.60	0.996	Lagging	-18.48
42	FLT71-3PH	0.999	Lagging	-7.89	1.000	Lagging	-5.88	0.999	Lagging	-7.89
43	FLT72-3PH	0.998	Leading	12.56	0.999	Leading	9.45	0.998	Leading	12.56
44	FLT80-3PH	Case Diverged			1.000	Lagging	-4.85	1.000	Leading	2.46
45	FLT81-3PH	0.993	Lagging	-23.95	0.991	Lagging	-26.88	0.993	Lagging	-23.95

Table 5-6 (Continued)
Power Factor Analysis: GEN-2016-032

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
46	FLT82-3PH	0.957	Lagging	-60.76	0.986	Lagging	-33.91	0.957	Lagging	-60.76
47	FLT83-3PH	0.999	Lagging	-6.34	0.999	Lagging	-6.95	0.999	Lagging	-6.34
48	FLT88-3PH	0.999	Lagging	-7.21	0.999	Lagging	-7.54	0.999	Lagging	-7.21
49	FLT89-3PH	0.998	Lagging	-11.93	0.998	Lagging	-11.22	0.998	Lagging	-11.93
50	FLT90-3PH	0.998	Lagging	-11.47	0.999	Lagging	-10.64	0.998	Lagging	-11.47
51	FLT91-3PH	0.999	Lagging	-7.21	0.999	Lagging	-7.54	0.999	Lagging	-7.21
52	FLT92-3PH	0.999	Lagging	-9.67	0.999	Lagging	-9.53	0.999	Lagging	-9.67
53	FLT93-3PH	0.999	Lagging	-7.45	0.999	Lagging	-7.65	0.999	Lagging	-7.45
54	FLT99-3PH	0.999	Lagging	-10.86	0.999	Lagging	-7.69	0.999	Lagging	-10.86
55	FLT100-3PH	0.986	Lagging	-33.85	0.990	Lagging	-28.58	0.986	Lagging	-33.85
56	FLT101-3PH	1.000	Leading	4.71	1.000	Lagging	-0.39	1.000	Leading	4.71
57	FLT104-3PH	Case Diverged			0.978	Lagging	-43.05	0.984	Leading	36.61
58	FLT105-3PH	1.000	Lagging	-0.37	1.000	Lagging	-1.87	1.000	Lagging	-0.37
59	FLT106-3PH	0.999	Lagging	-7.90	0.999	Lagging	-8.32	0.999	Lagging	-7.90
60	FLT111-3PH	1.000	Lagging	-4.87	1.000	Lagging	-5.88	1.000	Lagging	-4.87
61	FLT112-3PH	0.999	Lagging	-10.09	0.999	Lagging	-10.65	0.999	Lagging	-10.09
62	FLT113-3PH	1.000	Lagging	-4.89	1.000	Lagging	-5.92	1.000	Lagging	-4.89
63	FLT114-3PH	0.999	Lagging	-9.74	0.999	Lagging	-9.62	0.999	Lagging	-9.74
64	FLT115-3PH	0.999	Lagging	-7.50	0.999	Lagging	-7.74	0.999	Lagging	-7.50
65	FLT116-3PH	1.000	Lagging	-3.15	1.000	Lagging	-4.58	1.000	Lagging	-3.15
66	FLT117-3PH	0.999	Lagging	-7.17	0.999	Lagging	-7.48	0.999	Lagging	-7.17
67	FLT125-3PH	0.999	Lagging	-7.21	0.999	Lagging	-7.54	0.999	Lagging	-7.21
68	FLT125a-3PH	0.999	Lagging	-6.44	0.999	Lagging	-6.87	0.999	Lagging	-6.44
69	FLT126-3PH	0.997	Lagging	-14.97	0.997	Lagging	-15.02	0.997	Lagging	-14.97
70	FLT127-3PH	0.984	Lagging	-36.64	0.986	Lagging	-34.07	0.984	Lagging	-36.64
71	FLT128-3PH	0.999	Lagging	-7.49	0.999	Lagging	-7.83	0.999	Lagging	-7.49
72	FLT129-3PH	0.999	Lagging	-9.63	0.999	Lagging	-9.12	0.999	Lagging	-9.63
73	FLT130-3PH	0.998	Lagging	-11.22	0.999	Lagging	-10.23	0.998	Lagging	-11.22
74	FLT131-3PH	0.999	Lagging	-7.47	0.999	Lagging	-7.53	0.999	Lagging	-7.47
75	FLT132-3PH	0.999	Lagging	-7.21	0.999	Lagging	-7.54	0.999	Lagging	-7.21
76	FLT133-3PH	0.999	Lagging	-6.54	0.999	Lagging	-7.29	0.999	Lagging	-6.54
77	FLT134-3PH	0.999	Lagging	-9.09	0.999	Lagging	-10.32	0.999	Lagging	-9.09
78	FLT142-3PH	0.999	Lagging	-7.47	0.999	Lagging	-7.53	0.999	Lagging	-7.47
79	FLT143-3PH	0.999	Lagging	-7.91	0.999	Lagging	-8.01	0.999	Lagging	-7.91
80	FLT144-3PH	0.998	Lagging	-11.37	0.999	Lagging	-10.50	0.998	Lagging	-11.37
81	FLT145-3PH	0.999	Lagging	-7.08	0.999	Lagging	-7.53	0.999	Lagging	-7.08
82	FLT146-3PH	0.999	Lagging	-7.51	0.999	Lagging	-7.68	0.999	Lagging	-7.51
83	FLT147-3PH	0.999	Lagging	-7.23	0.999	Lagging	-7.43	0.999	Lagging	-7.23

Table 5-7
Power Factor Analysis: GEN-2016-048

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.798	Lagging	-62.15	0.811	Lagging	-59.39	0.810	Lagging	-59.59
1	FLT01-3PH	0.802	Lagging	-61.32	0.811	Lagging	-59.32	0.811	Lagging	-59.28
2	FLT02-3PH	0.797	Lagging	-62.45	0.808	Lagging	-60.03	0.807	Lagging	-60.18
3	FLT03-3PH	0.796	Lagging	-62.70	0.810	Lagging	-59.65	0.808	Lagging	-60.01
4	FLT04-3PH	0.795	Lagging	-62.81	0.808	Lagging	-59.98	0.808	Lagging	-60.10
5	FLT05-3PH	0.810	Lagging	-59.68	0.818	Lagging	-57.82	0.823	Lagging	-56.77
6	FLT06-3PH	0.794	Lagging	-62.98	0.810	Lagging	-59.52	0.809	Lagging	-59.77
7	FLT07-3PH	0.776	Lagging	-66.81	0.798	Lagging	-62.10	0.797	Lagging	-62.35
8	FLT08-3PH	0.797	Lagging	-62.34	0.810	Lagging	-59.69	0.808	Lagging	-59.94
9	FLT15-3PH	0.747	Lagging	-73.23	0.779	Lagging	-66.32	0.781	Lagging	-65.85
10	FLT16-3PH	0.761	Lagging	-70.21	0.788	Lagging	-64.32	0.789	Lagging	-64.05
11	FLT17-3PH	0.772	Lagging	-67.81	0.795	Lagging	-62.74	0.795	Lagging	-62.80
12	FLT18-3PH	0.778	Lagging	-66.47	0.802	Lagging	-61.36	0.803	Lagging	-61.16
13	FLT19-3PH	0.785	Lagging	-65.01	0.806	Lagging	-60.43	0.807	Lagging	-60.27
14	FLT20-3PH	0.794	Lagging	-63.05	0.807	Lagging	-60.23	0.807	Lagging	-60.16
15	FLT21-3PH	0.792	Lagging	-63.35	0.809	Lagging	-59.78	0.808	Lagging	-60.09
16	FLT22-3PH	0.782	Lagging	-65.66	0.802	Lagging	-61.28	0.801	Lagging	-61.49
17	FLT23-3PH	0.795	Lagging	-62.88	0.808	Lagging	-59.93	0.808	Lagging	-60.12
18	FLT33-3PH	0.769	Lagging	-68.41	0.776	Lagging	-66.93	0.779	Lagging	-66.20
19	FLT34-3PH	0.712	Lagging	-81.10	0.719	Lagging	-79.50	0.723	Lagging	-78.56
20	FLT35-3PH	0.798	Lagging	-62.15	0.811	Lagging	-59.39	0.810	Lagging	-59.59
21	FLT36-3PH	Case Diverged			0.644	Lagging	-97.74	0.649	Lagging	-96.41
22	FLT37-3PH	0.731	Lagging	-76.84	0.748	Lagging	-73.13	0.749	Lagging	-72.75
23	FLT38-3PH	0.718	Lagging	-79.86	0.770	Lagging	-68.12	0.781	Lagging	-65.75
24	FLT39-3PH	0.780	Lagging	-66.09	0.798	Lagging	-62.16	0.794	Lagging	-63.13
25	FLT40-3PH	0.780	Lagging	-66.09	0.798	Lagging	-62.16	0.794	Lagging	-63.13
26	FLT41-3PH	0.803	Lagging	-61.04	0.802	Lagging	-61.30	0.792	Lagging	-63.41
27	FLT50-3PH	0.797	Lagging	-62.37	0.810	Lagging	-59.53	0.809	Lagging	-59.72
28	FLT51-3PH	0.797	Lagging	-62.33	0.810	Lagging	-59.69	0.809	Lagging	-59.88
29	FLT52-3PH	0.798	Lagging	-62.23	0.811	Lagging	-59.45	0.810	Lagging	-59.65
30	FLT53-3PH	0.798	Lagging	-62.15	0.811	Lagging	-59.39	0.810	Lagging	-59.59
31	FLT54-3PH	0.793	Lagging	-63.34	0.807	Lagging	-60.25	0.807	Lagging	-60.34
32	FLT55-3PH	0.798	Lagging	-62.17	0.811	Lagging	-59.41	0.810	Lagging	-59.61
33	FLT56-3PH	0.798	Lagging	-62.23	0.811	Lagging	-59.33	0.810	Lagging	-59.50
34	FLT57-3PH	0.798	Lagging	-62.25	0.811	Lagging	-59.47	0.810	Lagging	-59.67
35	FLT58-3PH	0.798	Lagging	-62.15	0.811	Lagging	-59.48	0.810	Lagging	-59.69
36	FLT59-3PH	0.797	Lagging	-62.40	0.811	Lagging	-59.48	0.810	Lagging	-59.68
37	FLT66-3PH	0.790	Lagging	-63.97	0.805	Lagging	-60.67	0.805	Lagging	-60.65
38	FLT67-3PH	0.753	Lagging	-71.96	0.773	Lagging	-67.46	0.775	Lagging	-67.09
39	FLT68-3PH	0.796	Lagging	-62.56	0.810	Lagging	-59.62	0.809	Lagging	-59.74
40	FLT69-3PH	0.781	Lagging	-65.87	0.788	Lagging	-64.28	0.788	Lagging	-64.23
41	FLT70-3PH	0.788	Lagging	-64.22	0.802	Lagging	-61.30	0.801	Lagging	-61.50
42	FLT71-3PH	0.795	Lagging	-62.87	0.809	Lagging	-59.83	0.809	Lagging	-59.85
43	FLT72-3PH	0.789	Lagging	-64.04	0.805	Lagging	-60.73	0.805	Lagging	-60.70
44	FLT80-3PH	Case Diverged			0.831	Lagging	-55.18	0.834	Lagging	-54.46
45	FLT81-3PH	0.755	Lagging	-71.57	0.756	Lagging	-71.23	0.751	Lagging	-72.46

Table 5-7 (Continued)
Power Factor Analysis: GEN-2016-048

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
46	FLT82-3PH	0.601	Lagging	-109.41	0.707	Lagging	-82.29	0.723	Lagging	-78.72
47	FLT83-3PH	0.778	Lagging	-66.40	0.791	Lagging	-63.74	0.783	Lagging	-65.31
48	FLT88-3PH	0.798	Lagging	-62.15	0.811	Lagging	-59.39	0.810	Lagging	-59.59
49	FLT89-3PH	0.744	Lagging	-73.92	0.773	Lagging	-67.57	0.797	Lagging	-62.45
50	FLT90-3PH	0.750	Lagging	-72.67	0.779	Lagging	-66.17	0.799	Lagging	-61.94
51	FLT91-3PH	0.798	Lagging	-62.15	0.811	Lagging	-59.39	0.808	Lagging	-60.00
52	FLT92-3PH	0.771	Lagging	-68.10	0.791	Lagging	-63.78	0.788	Lagging	-64.30
53	FLT93-3PH	0.795	Lagging	-62.79	0.809	Lagging	-59.76	0.809	Lagging	-59.83
54	FLT99-3PH	0.750	Lagging	-72.65	0.801	Lagging	-61.60	0.804	Lagging	-60.88
55	FLT100-3PH	0.704	Lagging	-82.99	0.736	Lagging	-75.66	0.745	Lagging	-73.82
56	FLT101-3PH	0.806	Lagging	-60.46	0.814	Lagging	-58.83	0.810	Lagging	-59.59
57	FLT104-3PH	0.613	Lagging	-106.02	0.690	Lagging	-86.41	0.703	Lagging	-83.16
58	FLT105-3PH	0.836	Lagging	-54.04	0.842	Lagging	-52.71	0.838	Lagging	-53.55
59	FLT106-3PH	0.798	Lagging	-62.24	0.810	Lagging	-59.67	0.808	Lagging	-59.92
60	FLT111-3PH	0.824	Lagging	-56.52	0.826	Lagging	-56.10	0.822	Lagging	-57.11
61	FLT112-3PH	0.779	Lagging	-66.33	0.784	Lagging	-65.08	0.785	Lagging	-64.91
62	FLT113-3PH	0.825	Lagging	-56.41	0.827	Lagging	-56.03	0.822	Lagging	-57.03
63	FLT114-3PH	0.769	Lagging	-68.44	0.790	Lagging	-63.98	0.786	Lagging	-64.75
64	FLT115-3PH	0.795	Lagging	-62.86	0.809	Lagging	-59.82	0.807	Lagging	-60.19
65	FLT116-3PH	0.832	Lagging	-54.84	0.834	Lagging	-54.46	0.832	Lagging	-54.83
66	FLT117-3PH	0.803	Lagging	-61.07	0.816	Lagging	-58.34	0.818	Lagging	-57.95
67	FLT125-3PH	0.798	Lagging	-62.15	0.811	Lagging	-59.39	0.810	Lagging	-59.59
68	FLT125a-3PH	0.796	Lagging	-62.63	0.812	Lagging	-59.13	0.810	Lagging	-59.55
69	FLT126-3PH	0.760	Lagging	-70.30	0.773	Lagging	-67.47	0.767	Lagging	-68.88
70	FLT127-3PH	0.654	Lagging	-95.16	0.677	Lagging	-89.55	0.769	Lagging	-68.49
71	FLT128-3PH	0.791	Lagging	-63.78	0.806	Lagging	-60.50	0.805	Lagging	-60.70
72	FLT129-3PH	0.782	Lagging	-65.65	0.800	Lagging	-61.66	0.801	Lagging	-61.47
73	FLT130-3PH	0.771	Lagging	-67.92	0.793	Lagging	-63.23	0.795	Lagging	-62.87
74	FLT131-3PH	0.795	Lagging	-62.77	0.810	Lagging	-59.54	0.810	Lagging	-59.67
75	FLT132-3PH	0.798	Lagging	-62.15	0.811	Lagging	-59.39	0.803	Lagging	-61.03
76	FLT133-3PH	0.802	Lagging	-61.34	0.811	Lagging	-59.45	0.806	Lagging	-60.38
77	FLT134-3PH	0.783	Lagging	-65.41	0.798	Lagging	-62.24	0.797	Lagging	-62.32
78	FLT142-3PH	0.795	Lagging	-62.77	0.810	Lagging	-59.54	0.810	Lagging	-59.67
79	FLT143-3PH	0.793	Lagging	-63.17	0.808	Lagging	-59.93	0.807	Lagging	-60.24
80	FLT144-3PH	0.771	Lagging	-67.92	0.792	Lagging	-63.37	0.792	Lagging	-63.39
81	FLT145-3PH	0.798	Lagging	-62.09	0.811	Lagging	-59.37	0.810	Lagging	-59.70
82	FLT146-3PH	0.796	Lagging	-62.57	0.810	Lagging	-59.56	0.809	Lagging	-59.78
83	FLT147-3PH	0.798	Lagging	-62.25	0.811	Lagging	-59.36	0.810	Lagging	-59.51

Table 5-8
Power Factor Analysis: GEN-2016-060

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.976	Lagging	-33.33	1.000	Leading	1.81	0.997	Lagging	-11.97
1	FLT01-3PH	0.975	Lagging	-34.31	1.000	Leading	1.02	0.996	Lagging	-12.69
2	FLT02-3PH	0.976	Lagging	-33.44	1.000	Leading	1.70	0.997	Lagging	-12.14
3	FLT03-3PH	0.976	Lagging	-33.54	1.000	Leading	1.73	0.997	Lagging	-12.10
4	FLT04-3PH	0.974	Lagging	-34.82	1.000	Leading	0.64	0.996	Lagging	-12.89
5	FLT05-3PH	0.976	Lagging	-33.40	1.000	Leading	2.00	0.997	Lagging	-11.73
6	FLT06-3PH	0.974	Lagging	-34.48	1.000	Leading	0.89	0.996	Lagging	-13.03
7	FLT07-3PH	0.965	Lagging	-40.93	1.000	Lagging	-3.27	0.994	Lagging	-16.29
8	FLT08-3PH	0.975	Lagging	-33.89	1.000	Leading	1.30	0.997	Lagging	-12.46
9	FLT15-3PH	0.954	Lagging	-46.95	0.999	Lagging	-5.04	0.997	Lagging	-11.38
10	FLT16-3PH	0.955	Lagging	-46.25	1.000	Lagging	-2.36	0.994	Lagging	-16.82
11	FLT17-3PH	0.964	Lagging	-41.49	1.000	Lagging	-0.50	0.995	Lagging	-14.84
12	FLT18-3PH	0.954	Lagging	-47.03	0.999	Lagging	-6.62	0.996	Lagging	-13.25
13	FLT19-3PH	0.956	Lagging	-45.65	1.000	Lagging	-3.94	0.993	Lagging	-17.98
14	FLT20-3PH	0.974	Lagging	-34.55	1.000	Leading	0.85	0.997	Lagging	-12.45
15	FLT21-3PH	0.969	Lagging	-38.28	1.000	Leading	0.39	0.996	Lagging	-13.89
16	FLT22-3PH	0.964	Lagging	-41.53	1.000	Lagging	-0.44	0.995	Lagging	-14.82
17	FLT23-3PH	0.974	Lagging	-34.52	1.000	Leading	1.20	0.996	Lagging	-12.73
18	FLT33-3PH	0.974	Lagging	-34.88	1.000	Lagging	-0.08	0.996	Lagging	-13.44
19	FLT34-3PH	0.956	Lagging	-45.91	0.999	Lagging	-7.53	0.990	Lagging	-20.78
20	FLT35-3PH	0.976	Lagging	-33.33	1.000	Leading	1.81	0.997	Lagging	-11.97
21	FLT36-3PH	Case Diverged			0.989	Lagging	-22.44	0.973	Lagging	-35.80
22	FLT37-3PH	0.958	Lagging	-44.70	0.999	Lagging	-5.13	0.992	Lagging	-19.52
23	FLT38-3PH	0.941	Lagging	-53.99	0.997	Lagging	-11.22	0.994	Lagging	-16.00
24	FLT39-3PH	0.975	Lagging	-34.28	1.000	Leading	1.45	0.997	Lagging	-12.52
25	FLT40-3PH	0.975	Lagging	-34.28	1.000	Leading	1.45	0.997	Lagging	-12.52
26	FLT41-3PH	0.968	Lagging	-38.86	1.000	Lagging	-1.75	0.995	Lagging	-14.71
27	FLT50-3PH	0.974	Lagging	-34.72	1.000	Leading	0.85	0.996	Lagging	-12.91
28	FLT51-3PH	0.973	Lagging	-35.59	1.000	Lagging	-1.37	0.995	Lagging	-15.10
29	FLT52-3PH	0.974	Lagging	-34.52	1.000	Leading	0.79	0.996	Lagging	-13.09
30	FLT53-3PH	0.976	Lagging	-33.33	1.000	Leading	1.81	0.997	Lagging	-11.97
31	FLT54-3PH	0.976	Lagging	-33.60	1.000	Leading	2.12	0.997	Lagging	-12.09
32	FLT55-3PH	0.976	Lagging	-33.57	1.000	Leading	1.56	0.997	Lagging	-12.25
33	FLT56-3PH	0.972	Lagging	-35.83	1.000	Leading	1.43	0.997	Lagging	-12.07
34	FLT57-3PH	0.973	Lagging	-35.34	1.000	Lagging	-0.25	0.995	Lagging	-14.34
35	FLT58-3PH	0.976	Lagging	-33.33	1.000	Lagging	-0.31	0.995	Lagging	-14.39
36	FLT59-3PH	0.968	Lagging	-38.63	1.000	Lagging	-2.25	0.995	Lagging	-14.81
37	FLT66-3PH	0.974	Lagging	-34.48	1.000	Leading	1.23	0.997	Lagging	-12.49
38	FLT67-3PH	0.969	Lagging	-38.01	1.000	Lagging	-0.91	0.995	Lagging	-14.64
39	FLT68-3PH	0.976	Lagging	-33.59	1.000	Leading	1.70	0.997	Lagging	-12.05
40	FLT69-3PH	0.976	Lagging	-33.71	1.000	Leading	1.49	0.997	Lagging	-12.24
41	FLT70-3PH	0.975	Lagging	-34.41	1.000	Leading	1.29	0.997	Lagging	-12.47
42	FLT71-3PH	0.975	Lagging	-33.89	1.000	Leading	1.41	0.997	Lagging	-12.36
43	FLT72-3PH	0.974	Lagging	-34.52	1.000	Leading	1.21	0.997	Lagging	-12.51
44	FLT80-3PH	0.965	Lagging	-40.90	1.000	Lagging	-3.91	0.997	Lagging	-11.24
45	FLT81-3PH	0.961	Lagging	-42.84	0.999	Lagging	-5.73	0.990	Lagging	-20.90

Table 5-8 (Continued)
Power Factor Analysis: GEN-2016-060

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
46	FLT82-3PH	0.914	Lagging	-66.16	0.995	Lagging	-14.45	0.990	Lagging	-21.33
47	FLT83-3PH	0.974	Lagging	-34.53	1.000	Leading	0.61	0.996	Lagging	-13.24
48	FLT88-3PH	0.976	Lagging	-33.33	1.000	Leading	1.81	0.997	Lagging	-11.97
49	FLT89-3PH	0.943	Lagging	-52.76	0.993	Lagging	-17.57	0.997	Lagging	-12.04
50	FLT90-3PH	0.946	Lagging	-51.08	0.992	Lagging	-18.60	0.994	Lagging	-16.22
51	FLT91-3PH	0.976	Lagging	-33.33	1.000	Leading	1.81	0.994	Lagging	-16.26
52	FLT92-3PH	0.998	Lagging	-10.51	0.992	Leading	19.18	1.000	Leading	4.56
53	FLT93-3PH	0.984	Lagging	-27.42	1.000	Lagging	-4.46	0.994	Lagging	-17.01
54	FLT99-3PH	Case Diverged			1.000	Lagging	-2.48	0.993	Lagging	-17.91
55	FLT100-3PH	0.950	Lagging	-49.02	0.999	Lagging	-6.34	0.991	Lagging	-20.73
56	FLT101-3PH	0.977	Lagging	-32.92	1.000	Leading	2.45	0.997	Lagging	-11.63
57	FLT104-3PH	0.925	Lagging	-61.52	0.997	Lagging	-11.11	0.992	Lagging	-18.67
58	FLT105-3PH	0.987	Lagging	-24.73	0.999	Leading	5.96	0.999	Lagging	-6.97
59	FLT106-3PH	0.976	Lagging	-33.16	1.000	Leading	1.99	0.997	Lagging	-11.86
60	FLT111-3PH	0.888	Lagging	-77.26	0.985	Lagging	-26.63	0.977	Lagging	-32.40
61	FLT112-3PH	0.973	Lagging	-35.18	0.998	Leading	9.56	1.000	Lagging	-2.17
62	FLT113-3PH	0.892	Lagging	-75.57	0.986	Lagging	-25.52	0.979	Lagging	-31.49
63	FLT114-3PH	0.997	Lagging	-10.73	0.993	Leading	17.46	0.999	Leading	5.95
64	FLT115-3PH	0.972	Lagging	-36.33	1.000	Lagging	-0.50	0.995	Lagging	-14.51
65	FLT116-3PH	0.995	Lagging	-14.52	0.996	Leading	13.78	1.000	Lagging	-1.06
66	FLT117-3PH	0.981	Lagging	-29.40	1.000	Leading	4.39	0.998	Lagging	-9.00
67	FLT125-3PH	0.976	Lagging	-33.33	1.000	Leading	1.81	0.997	Lagging	-11.97
68	FLT125a-3PH	0.971	Lagging	-37.10	1.000	Leading	1.17	0.997	Lagging	-12.53
69	FLT126-3PH	0.967	Lagging	-39.63	0.999	Lagging	-6.27	0.992	Lagging	-18.82
70	FLT127-3PH	0.885	Lagging	-78.51	0.973	Lagging	-35.30	0.981	Lagging	-29.95
71	FLT128-3PH	0.961	Lagging	-42.93	0.999	Lagging	-5.93	0.996	Lagging	-12.71
72	FLT129-3PH	0.969	Lagging	-38.42	1.000	Leading	0.37	0.996	Lagging	-13.51
73	FLT130-3PH	0.963	Lagging	-41.87	1.000	Lagging	-0.45	0.996	Lagging	-14.16
74	FLT131-3PH	0.970	Lagging	-37.49	1.000	Leading	0.57	0.996	Lagging	-13.31
75	FLT132-3PH	0.976	Lagging	-33.33	1.000	Leading	1.81	0.993	Lagging	-18.39
76	FLT133-3PH	0.980	Lagging	-30.70	1.000	Leading	4.34	0.998	Lagging	-10.53
77	FLT134-3PH	0.970	Lagging	-37.46	1.000	Lagging	-0.89	0.995	Lagging	-14.32
78	FLT142-3PH	0.970	Lagging	-37.49	1.000	Leading	0.57	0.996	Lagging	-13.31
79	FLT143-3PH	0.971	Lagging	-36.72	1.000	Leading	1.12	0.996	Lagging	-12.71
80	FLT144-3PH	0.962	Lagging	-42.59	1.000	Leading	0.07	0.995	Lagging	-14.74
81	FLT145-3PH	0.975	Lagging	-33.74	1.000	Leading	1.95	0.997	Lagging	-11.29
82	FLT146-3PH	0.974	Lagging	-34.69	1.000	Leading	1.39	0.997	Lagging	-12.51
83	FLT147-3PH	0.974	Lagging	-34.58	1.000	Leading	0.94	0.996	Lagging	-13.23

Table 5-9
Power Factor Analysis: GEN-2016-061

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.966	Lagging	-67.36	1.000	Leading	4.46	1.000	Leading	7.78
1	FLT01-3PH	0.965	Lagging	-67.70	1.000	Leading	3.70	1.000	Leading	7.23
2	FLT02-3PH	0.965	Lagging	-67.66	1.000	Leading	3.90	1.000	Leading	7.19
3	FLT03-3PH	0.965	Lagging	-67.91	1.000	Leading	4.21	1.000	Leading	7.36
4	FLT04-3PH	0.965	Lagging	-68.27	1.000	Leading	3.72	1.000	Leading	7.19
5	FLT05-3PH	0.964	Lagging	-68.65	1.000	Leading	2.09	1.000	Leading	6.40
6	FLT06-3PH	0.964	Lagging	-69.17	1.000	Leading	1.87	1.000	Leading	3.94
7	FLT07-3PH	0.942	Lagging	-89.48	0.999	Lagging	-12.08	1.000	Lagging	-7.05
8	FLT08-3PH	0.966	Lagging	-67.45	1.000	Leading	4.28	1.000	Leading	7.59
9	FLT15-3PH	0.899	Lagging	-121.91	0.994	Lagging	-28.68	0.996	Lagging	-22.62
10	FLT16-3PH	0.920	Lagging	-106.91	0.997	Lagging	-19.01	0.999	Lagging	-13.63
11	FLT17-3PH	0.936	Lagging	-94.48	0.999	Lagging	-11.35	1.000	Lagging	-7.46
12	FLT18-3PH	0.941	Lagging	-90.18	1.000	Lagging	-5.83	1.000	Lagging	-1.02
13	FLT19-3PH	0.949	Lagging	-83.20	1.000	Lagging	-1.64	1.000	Leading	2.92
14	FLT20-3PH	0.962	Lagging	-71.07	1.000	Leading	1.16	1.000	Leading	5.56
15	FLT21-3PH	0.958	Lagging	-75.35	1.000	Leading	0.81	1.000	Leading	3.43
16	FLT22-3PH	0.945	Lagging	-86.82	1.000	Lagging	-6.50	1.000	Lagging	-3.21
17	FLT23-3PH	0.963	Lagging	-70.50	1.000	Leading	2.20	1.000	Leading	5.54
18	FLT33-3PH	0.933	Lagging	-96.59	0.991	Lagging	-34.00	0.994	Lagging	-27.72
19	FLT34-3PH	0.837	Lagging	-163.89	0.929	Lagging	-99.54	0.936	Lagging	-94.67
20	FLT35-3PH	0.966	Lagging	-67.36	1.000	Leading	4.46	1.000	Leading	7.78
21	FLT36-3PH	0.686	Lagging	-265.62	0.792	Lagging	-193.38	0.800	Lagging	-187.77
22	FLT37-3PH	0.854	Lagging	-152.52	0.957	Lagging	-75.75	0.960	Lagging	-72.95
23	FLT38-3PH	0.941	Lagging	-90.32	0.997	Leading	18.13	0.996	Leading	23.01
24	FLT39-3PH	1.000	Lagging	-4.98	0.996	Leading	23.50	0.994	Leading	26.88
25	FLT40-3PH	1.000	Lagging	-4.98	0.996	Leading	23.50	0.994	Leading	26.88
26	FLT41-3PH	0.963	Lagging	-70.00	1.000	Leading	5.02	0.999	Leading	11.68
27	FLT50-3PH	0.965	Lagging	-68.29	1.000	Leading	3.87	1.000	Leading	7.23
28	FLT51-3PH	0.965	Lagging	-67.77	1.000	Leading	3.35	1.000	Leading	6.69
29	FLT52-3PH	0.965	Lagging	-67.69	1.000	Leading	4.20	1.000	Leading	7.47
30	FLT53-3PH	0.966	Lagging	-67.36	1.000	Leading	4.46	1.000	Leading	7.78
31	FLT54-3PH	0.961	Lagging	-72.03	1.000	Leading	1.30	1.000	Leading	5.01
32	FLT55-3PH	0.966	Lagging	-67.45	1.000	Leading	4.37	1.000	Leading	7.68
33	FLT56-3PH	0.965	Lagging	-67.88	1.000	Leading	4.70	0.999	Leading	8.15
34	FLT57-3PH	0.965	Lagging	-67.75	1.000	Leading	4.13	1.000	Leading	7.37
35	FLT58-3PH	0.966	Lagging	-67.36	1.000	Leading	4.07	1.000	Leading	7.30
36	FLT59-3PH	0.965	Lagging	-68.58	1.000	Leading	4.11	1.000	Leading	7.06
37	FLT66-3PH	0.959	Lagging	-74.03	1.000	Lagging	-0.47	1.000	Leading	3.54
38	FLT67-3PH	0.928	Lagging	-100.81	0.996	Lagging	-21.85	0.998	Lagging	-16.05
39	FLT68-3PH	0.965	Lagging	-67.96	1.000	Leading	3.97	1.000	Leading	7.25
40	FLT69-3PH	0.965	Lagging	-67.98	1.000	Leading	3.49	1.000	Leading	7.06
41	FLT70-3PH	0.959	Lagging	-74.24	1.000	Lagging	-1.21	1.000	Leading	2.15
42	FLT71-3PH	0.963	Lagging	-70.39	1.000	Leading	2.05	1.000	Leading	5.63
43	FLT72-3PH	0.959	Lagging	-74.31	1.000	Lagging	-0.54	1.000	Leading	3.56
44	FLT80-3PH	0.976	Lagging	-56.14	0.995	Leading	25.47	0.990	Leading	35.05
45	FLT81-3PH	0.895	Lagging	-124.63	0.954	Lagging	-78.62	0.948	Lagging	-84.07

Table 5-9 (Continued)
Power Factor Analysis: GEN-2016-061

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
46	FLT82-3PH	Case Diverged			0.990	Lagging	-36.39	0.994	Lagging	-27.83
47	FLT83-3PH	0.964	Lagging	-68.72	0.996	Lagging	-22.21	0.996	Lagging	-23.02
48	FLT88-3PH	0.966	Lagging	-67.36	1.000	Leading	4.46	1.000	Leading	7.78
49	FLT89-3PH	0.946	Lagging	-86.08	0.999	Lagging	-10.08	1.000	Leading	1.20
50	FLT90-3PH	0.949	Lagging	-83.52	1.000	Lagging	-7.19	1.000	Leading	2.77
51	FLT91-3PH	0.966	Lagging	-67.36	1.000	Leading	4.46	1.000	Leading	7.36
52	FLT92-3PH	0.957	Lagging	-76.12	1.000	Lagging	-2.74	1.000	Leading	1.07
53	FLT93-3PH	0.964	Lagging	-69.07	1.000	Leading	3.64	1.000	Leading	7.02
54	FLT99-3PH	0.951	Lagging	-81.41	1.000	Leading	6.87	1.000	Leading	5.68
55	FLT100-3PH	0.916	Lagging	-109.64	0.989	Lagging	-37.21	0.994	Lagging	-26.96
56	FLT101-3PH	0.950	Lagging	-82.21	1.000	Lagging	-5.00	1.000	Leading	3.82
57	FLT104-3PH	0.839	Lagging	-162.53	0.953	Lagging	-79.61	0.972	Lagging	-61.16
58	FLT105-3PH	0.996	Lagging	-23.22	0.987	Leading	41.61	0.988	Leading	39.85
59	FLT106-3PH	0.966	Lagging	-66.96	1.000	Leading	5.19	0.999	Leading	9.04
60	FLT111-3PH	0.971	Lagging	-61.81	0.999	Leading	9.71	0.999	Leading	11.40
61	FLT112-3PH	0.955	Lagging	-78.02	1.000	Lagging	-6.81	1.000	Lagging	-1.72
62	FLT113-3PH	0.971	Lagging	-61.42	0.999	Leading	9.72	0.999	Leading	11.45
63	FLT114-3PH	0.956	Lagging	-76.54	1.000	Lagging	-3.13	1.000	Leading	0.62
64	FLT115-3PH	0.964	Lagging	-68.79	1.000	Leading	3.56	1.000	Leading	6.65
65	FLT116-3PH	0.983	Lagging	-47.32	0.997	Leading	18.03	0.997	Leading	20.89
66	FLT117-3PH	0.964	Lagging	-69.17	1.000	Leading	2.90	1.000	Leading	7.00
67	FLT125-3PH	0.966	Lagging	-67.36	1.000	Leading	4.46	1.000	Leading	7.78
68	FLT125a-3PH	0.978	Lagging	-53.77	0.999	Leading	11.44	0.999	Leading	8.84
69	FLT126-3PH	0.904	Lagging	-118.58	0.980	Lagging	-50.92	0.975	Lagging	-57.64
70	FLT127-3PH	0.677	Lagging	-272.41	0.794	Lagging	-192.16	0.983	Lagging	-46.58
71	FLT128-3PH	0.960	Lagging	-72.76	1.000	Leading	0.60	1.000	Leading	3.66
72	FLT129-3PH	0.948	Lagging	-84.35	1.000	Lagging	-6.48	1.000	Lagging	-0.85
73	FLT130-3PH	0.935	Lagging	-95.30	0.998	Lagging	-13.83	1.000	Lagging	-6.91
74	FLT131-3PH	0.962	Lagging	-71.08	1.000	Leading	3.35	1.000	Leading	7.19
75	FLT132-3PH	0.966	Lagging	-67.36	1.000	Leading	4.46	1.000	Lagging	-1.59
76	FLT133-3PH	0.962	Lagging	-70.75	1.000	Lagging	-1.19	1.000	Leading	7.43
77	FLT134-3PH	0.947	Lagging	-85.14	0.999	Lagging	-11.50	1.000	Lagging	-6.77
78	FLT142-3PH	0.962	Lagging	-71.08	1.000	Leading	3.35	1.000	Leading	7.19
79	FLT143-3PH	0.959	Lagging	-73.85	1.000	Leading	0.41	1.000	Leading	3.10
80	FLT144-3PH	0.934	Lagging	-95.68	0.998	Lagging	-14.10	0.999	Lagging	-10.36
81	FLT145-3PH	0.966	Lagging	-66.67	1.000	Leading	4.53	1.000	Leading	6.55
82	FLT146-3PH	0.963	Lagging	-69.72	1.000	Leading	3.32	1.000	Leading	6.50
83	FLT147-3PH	0.965	Lagging	-67.95	1.000	Leading	4.66	0.999	Leading	8.24

Table 5-10
Power Factor Analysis: GEN-2016-068

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.952	Lagging	-80.43	1.000	Lagging	-3.65	1.000	Lagging	-3.78
1	FLT01-3PH	0.951	Lagging	-81.68	1.000	Lagging	-5.06	1.000	Lagging	-4.96
2	FLT02-3PH	0.952	Lagging	-80.78	1.000	Lagging	-4.17	1.000	Lagging	-4.41
3	FLT03-3PH	0.951	Lagging	-81.03	1.000	Lagging	-3.91	1.000	Lagging	-4.24
4	FLT04-3PH	0.951	Lagging	-81.40	1.000	Lagging	-4.44	1.000	Lagging	-4.40
5	FLT05-3PH	0.950	Lagging	-82.45	1.000	Lagging	-6.56	1.000	Lagging	-5.83
6	FLT06-3PH	0.949	Lagging	-82.65	0.999	Lagging	-8.07	0.999	Lagging	-10.16
7	FLT07-3PH	0.922	Lagging	-104.91	0.996	Lagging	-21.04	0.997	Lagging	-19.63
8	FLT08-3PH	0.952	Lagging	-80.46	1.000	Lagging	-3.76	1.000	Lagging	-3.90
9	FLT15-3PH	0.872	Lagging	-140.60	0.988	Lagging	-38.80	0.990	Lagging	-35.53
10	FLT16-3PH	0.895	Lagging	-124.25	0.993	Lagging	-28.67	0.995	Lagging	-26.03
11	FLT17-3PH	0.914	Lagging	-110.79	0.997	Lagging	-20.55	0.997	Lagging	-20.04
12	FLT18-3PH	0.924	Lagging	-103.08	0.999	Lagging	-12.97	0.999	Lagging	-11.40
13	FLT19-3PH	0.931	Lagging	-98.18	0.999	Lagging	-10.10	0.999	Lagging	-8.63
14	FLT20-3PH	0.948	Lagging	-84.22	1.000	Lagging	-6.76	1.000	Lagging	-5.89
15	FLT21-3PH	0.940	Lagging	-91.08	0.999	Lagging	-8.82	0.999	Lagging	-9.67
16	FLT22-3PH	0.923	Lagging	-104.47	0.998	Lagging	-17.02	0.998	Lagging	-17.06
17	FLT23-3PH	0.949	Lagging	-83.48	1.000	Lagging	-5.67	1.000	Lagging	-5.76
18	FLT33-3PH	0.917	Lagging	-108.40	0.989	Lagging	-38.17	0.989	Lagging	-36.65
19	FLT34-3PH	0.827	Lagging	-170.25	0.932	Lagging	-96.97	0.932	Lagging	-97.36
20	FLT35-3PH	0.952	Lagging	-80.43	1.000	Lagging	-3.65	1.000	Lagging	-3.78
21	FLT36-3PH	0.681	Lagging	-268.83	0.805	Lagging	-184.57	0.803	Lagging	-185.37
22	FLT37-3PH	0.783	Lagging	-198.54	0.924	Lagging	-103.23	0.924	Lagging	-103.71
23	FLT38-3PH	0.821	Lagging	-173.86	0.982	Lagging	-47.85	0.986	Lagging	-41.75
24	FLT39-3PH	0.982	Lagging	-48.57	1.000	Leading	4.06	0.999	Leading	10.26
25	FLT40-3PH	0.982	Lagging	-48.57	1.000	Leading	4.06	0.999	Leading	10.26
26	FLT41-3PH	0.946	Lagging	-85.91	1.000	Lagging	-4.51	1.000	Lagging	-2.23
27	FLT50-3PH	0.951	Lagging	-81.38	1.000	Lagging	-4.20	1.000	Lagging	-4.31
28	FLT51-3PH	0.952	Lagging	-80.66	1.000	Lagging	-4.64	1.000	Lagging	-4.82
29	FLT52-3PH	0.952	Lagging	-80.77	1.000	Lagging	-3.89	1.000	Lagging	-4.11
30	FLT53-3PH	0.952	Lagging	-80.43	1.000	Lagging	-3.65	1.000	Lagging	-3.78
31	FLT54-3PH	0.946	Lagging	-85.37	1.000	Lagging	-6.82	1.000	Lagging	-6.55
32	FLT55-3PH	0.952	Lagging	-80.54	1.000	Lagging	-3.74	1.000	Lagging	-3.90
33	FLT56-3PH	0.951	Lagging	-81.47	1.000	Lagging	-3.41	1.000	Lagging	-3.45
34	FLT57-3PH	0.952	Lagging	-80.80	1.000	Lagging	-3.90	1.000	Lagging	-4.19
35	FLT58-3PH	0.952	Lagging	-80.43	1.000	Lagging	-3.96	1.000	Lagging	-4.26
36	FLT59-3PH	0.950	Lagging	-81.83	1.000	Lagging	-3.84	1.000	Lagging	-4.54
37	FLT66-3PH	0.943	Lagging	-88.45	0.999	Lagging	-9.93	0.999	Lagging	-9.58
38	FLT67-3PH	0.897	Lagging	-123.16	0.989	Lagging	-36.62	0.991	Lagging	-34.39
39	FLT68-3PH	0.952	Lagging	-80.10	1.000	Lagging	-3.87	1.000	Lagging	-4.44
40	FLT69-3PH	0.955	Lagging	-77.75	1.000	Lagging	-0.58	1.000	Lagging	-0.71
41	FLT70-3PH	0.942	Lagging	-88.89	0.999	Lagging	-11.31	0.999	Lagging	-11.71
42	FLT71-3PH	0.948	Lagging	-83.94	1.000	Lagging	-6.20	1.000	Lagging	-5.94
43	FLT72-3PH	0.942	Lagging	-88.80	0.999	Lagging	-9.88	0.999	Lagging	-9.39
44	FLT80-3PH	0.942	Lagging	-89.15	0.999	Leading	13.01	0.997	Leading	19.85
45	FLT81-3PH	0.815	Lagging	-177.68	0.889	Lagging	-128.90	0.877	Lagging	-136.99

Table 5-10 (Continued)
Power Factor Analysis: GEN-2016-068

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
46	FLT82-3PH	0.697	Lagging	-257.25	0.918	Lagging	-108.25	0.931	Lagging	-98.05
47	FLT83-3PH	0.986	Lagging	-42.30	1.000	Leading	7.81	0.999	Leading	11.86
48	FLT88-3PH	0.952	Lagging	-80.43	1.000	Lagging	-3.65	1.000	Lagging	-3.78
49	FLT89-3PH	0.924	Lagging	-103.74	0.996	Lagging	-21.09	0.999	Lagging	-12.40
50	FLT90-3PH	0.928	Lagging	-100.67	0.997	Lagging	-17.81	0.999	Lagging	-10.54
51	FLT91-3PH	0.952	Lagging	-80.43	1.000	Lagging	-3.65	1.000	Lagging	-3.99
52	FLT92-3PH	0.939	Lagging	-91.47	0.999	Lagging	-12.52	0.999	Lagging	-11.78
53	FLT93-3PH	0.950	Lagging	-82.38	1.000	Lagging	-4.52	1.000	Lagging	-4.75
54	FLT99-3PH	0.947	Lagging	-84.45	1.000	Lagging	-4.47	0.999	Lagging	-8.47
55	FLT100-3PH	0.975	Lagging	-57.35	1.000	Lagging	-6.80	1.000	Lagging	-6.92
56	FLT101-3PH	0.928	Lagging	-100.68	0.998	Lagging	-15.08	1.000	Lagging	-6.46
57	FLT104-3PH	0.941	Lagging	-89.62	0.993	Lagging	-29.93	0.996	Lagging	-23.31
58	FLT105-3PH	0.996	Lagging	-22.38	0.985	Leading	44.19	0.988	Leading	38.65
59	FLT106-3PH	0.953	Lagging	-79.11	1.000	Lagging	-1.67	1.000	Lagging	-0.84
60	FLT111-3PH	0.960	Lagging	-72.87	1.000	Leading	3.00	1.000	Leading	0.39
61	FLT112-3PH	0.937	Lagging	-93.47	0.998	Lagging	-17.27	0.998	Lagging	-15.31
62	FLT113-3PH	0.960	Lagging	-72.45	1.000	Leading	2.99	1.000	Leading	0.45
63	FLT114-3PH	0.938	Lagging	-91.99	0.999	Lagging	-12.97	0.999	Lagging	-12.32
64	FLT115-3PH	0.950	Lagging	-82.14	1.000	Lagging	-4.69	1.000	Lagging	-5.18
65	FLT116-3PH	0.975	Lagging	-56.95	0.999	Leading	11.81	0.999	Leading	11.49
66	FLT117-3PH	0.947	Lagging	-84.83	1.000	Lagging	-7.38	1.000	Lagging	-6.74
67	FLT125-3PH	0.952	Lagging	-80.43	1.000	Lagging	-3.65	1.000	Lagging	-3.78
68	FLT125a-3PH	0.975	Lagging	-56.60	1.000	Leading	4.21	1.000	Lagging	-2.85
69	FLT126-3PH	0.851	Lagging	-154.42	0.946	Lagging	-85.54	0.925	Lagging	-102.49
70	FLT127-3PH	0.552	Lagging	-377.32	0.654	Lagging	-288.84	0.947	Lagging	-84.68
71	FLT128-3PH	0.953	Lagging	-79.90	1.000	Lagging	-4.98	1.000	Lagging	-3.80
72	FLT129-3PH	0.928	Lagging	-100.54	0.998	Lagging	-16.55	0.998	Lagging	-13.87
73	FLT130-3PH	0.910	Lagging	-114.15	0.995	Lagging	-25.05	0.997	Lagging	-20.69
74	FLT131-3PH	0.946	Lagging	-85.37	1.000	Lagging	-5.15	1.000	Lagging	-4.51
75	FLT132-3PH	0.952	Lagging	-80.43	1.000	Lagging	-3.65	0.998	Lagging	-17.08
76	FLT133-3PH	0.946	Lagging	-85.85	0.999	Lagging	-12.52	1.000	Lagging	-3.14
77	FLT134-3PH	0.918	Lagging	-107.94	0.994	Lagging	-28.14	0.995	Lagging	-26.14
78	FLT142-3PH	0.946	Lagging	-85.37	1.000	Lagging	-5.15	1.000	Lagging	-4.51
79	FLT143-3PH	0.942	Lagging	-89.44	0.999	Lagging	-9.54	0.999	Lagging	-10.58
80	FLT144-3PH	0.908	Lagging	-115.11	0.995	Lagging	-25.10	0.995	Lagging	-25.55
81	FLT145-3PH	0.953	Lagging	-79.23	1.000	Lagging	-3.59	1.000	Lagging	-5.88
82	FLT146-3PH	0.948	Lagging	-83.54	1.000	Lagging	-5.21	1.000	Lagging	-5.58
83	FLT147-3PH	0.951	Lagging	-81.08	1.000	Lagging	-3.15	1.000	Lagging	-3.08

Table 5-11
Power Factor Analysis: GEN-2016-071

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.999	Lagging	-8.99	0.997	Leading	14.31	0.998	Leading	11.60
1	FLT01-3PH	0.998	Lagging	-11.05	0.998	Leading	12.30	0.999	Leading	9.19
2	FLT02-3PH	0.999	Lagging	-9.19	0.998	Leading	13.95	0.998	Leading	11.15
3	FLT03-3PH	0.999	Lagging	-9.48	0.998	Leading	14.06	0.998	Leading	11.20
4	FLT04-3PH	0.998	Lagging	-11.20	0.998	Leading	12.39	0.999	Leading	9.71
5	FLT05-3PH	0.998	Lagging	-13.14	0.999	Leading	10.20	0.999	Leading	8.24
6	FLT06-3PH	0.999	Lagging	-10.08	0.998	Leading	13.67	0.999	Leading	10.72
7	FLT07-3PH	0.998	Lagging	-13.03	0.998	Leading	11.67	0.999	Leading	8.77
8	FLT08-3PH	0.999	Lagging	-10.50	0.998	Leading	12.73	0.999	Leading	9.81
9	FLT15-3PH	0.998	Lagging	-12.81	0.998	Leading	12.84	0.998	Leading	11.41
10	FLT16-3PH	0.998	Lagging	-11.96	0.998	Leading	13.62	0.998	Leading	11.89
11	FLT17-3PH	0.998	Lagging	-11.72	0.998	Leading	14.06	0.998	Leading	11.08
12	FLT18-3PH	0.998	Lagging	-12.61	0.998	Leading	12.09	0.999	Leading	10.89
13	FLT19-3PH	0.998	Lagging	-12.33	0.998	Leading	12.71	0.998	Leading	11.52
14	FLT20-3PH	0.999	Lagging	-9.47	0.998	Leading	14.00	0.998	Leading	11.47
15	FLT21-3PH	0.999	Lagging	-10.61	0.998	Leading	14.05	0.998	Leading	11.10
16	FLT22-3PH	0.998	Lagging	-11.72	0.998	Leading	13.92	0.999	Leading	10.92
17	FLT23-3PH	0.999	Lagging	-9.44	0.998	Leading	14.12	0.998	Leading	11.39
18	FLT33-3PH	0.997	Lagging	-14.34	0.999	Leading	7.96	1.000	Leading	6.30
19	FLT34-3PH	0.992	Lagging	-25.33	1.000	Lagging	-1.79	1.000	Lagging	-3.89
20	FLT35-3PH	0.999	Lagging	-8.99	0.997	Leading	14.31	0.998	Leading	11.60
21	FLT36-3PH	0.968	Lagging	-51.93	0.997	Lagging	-15.53	0.996	Lagging	-17.32
22	FLT37-3PH	0.996	Lagging	-17.12	0.999	Leading	8.35	0.999	Leading	6.75
23	FLT38-3PH	0.992	Lagging	-24.95	1.000	Leading	3.83	1.000	Leading	4.84
24	FLT39-3PH	0.999	Lagging	-10.13	0.998	Leading	13.63	0.998	Leading	11.01
25	FLT40-3PH	0.999	Lagging	-10.13	0.998	Leading	13.63	0.998	Leading	11.01
26	FLT41-3PH	0.997	Lagging	-14.18	0.999	Leading	10.00	0.999	Leading	7.08
27	FLT50-3PH	0.999	Lagging	-9.50	0.998	Leading	13.98	0.998	Leading	11.34
28	FLT51-3PH	0.999	Lagging	-10.01	0.998	Leading	12.98	0.999	Leading	10.53
29	FLT52-3PH	0.999	Lagging	-9.54	0.998	Leading	13.88	0.998	Leading	11.20
30	FLT53-3PH	0.999	Lagging	-8.99	0.997	Leading	14.31	0.998	Leading	11.60
31	FLT54-3PH	0.999	Lagging	-8.80	0.997	Leading	14.80	0.998	Leading	11.86
32	FLT55-3PH	0.999	Lagging	-9.10	0.997	Leading	14.21	0.998	Leading	11.50
33	FLT56-3PH	0.999	Lagging	-9.89	0.998	Leading	14.17	0.998	Leading	11.54
34	FLT57-3PH	0.999	Lagging	-9.66	0.998	Leading	13.65	0.998	Leading	11.01
35	FLT58-3PH	0.999	Lagging	-8.99	0.998	Leading	13.64	0.998	Leading	11.00
36	FLT59-3PH	0.999	Lagging	-10.72	0.998	Leading	12.82	0.999	Leading	10.59
37	FLT66-3PH	0.999	Lagging	-10.16	0.998	Leading	13.56	0.999	Leading	10.96
38	FLT67-3PH	0.997	Lagging	-14.20	0.999	Leading	10.45	0.999	Leading	8.19
39	FLT68-3PH	0.999	Lagging	-9.20	0.997	Leading	14.19	0.998	Leading	11.51
40	FLT69-3PH	0.999	Lagging	-9.72	0.998	Leading	13.49	0.999	Leading	10.87
41	FLT70-3PH	0.999	Lagging	-10.09	0.998	Leading	13.55	0.999	Leading	10.88
42	FLT71-3PH	0.999	Lagging	-9.51	0.998	Leading	13.92	0.998	Leading	11.23
43	FLT72-3PH	0.999	Lagging	-10.20	0.998	Leading	13.53	0.999	Leading	10.94
44	FLT80-3PH	Case Diverged			0.996	Leading	18.58	0.997	Leading	16.57
45	FLT81-3PH	0.997	Lagging	-15.42	0.999	Leading	8.11	1.000	Leading	5.89

Table 5-11 (Continued)
Power Factor Analysis: GEN-2016-071

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
46	FLT82-3PH	Case Diverged			1.000	Lagging	-2.02	1.000	Lagging	-2.17
47	FLT83-3PH	0.999	Lagging	-9.63	0.998	Leading	13.70	0.999	Leading	10.56
48	FLT88-3PH	0.999	Lagging	-8.99	0.997	Leading	14.31	0.998	Leading	11.60
49	FLT89-3PH	0.985	Lagging	-35.42	1.000	Leading	4.62	0.998	Leading	11.31
50	FLT90-3PH	0.988	Lagging	-31.46	1.000	Leading	6.24	0.999	Leading	10.68
51	FLT91-3PH	0.999	Lagging	-8.99	0.997	Leading	14.31	0.999	Leading	9.98
52	FLT92-3PH	0.995	Lagging	-19.20	0.999	Leading	6.34	1.000	Leading	0.97
53	FLT93-3PH	0.998	Lagging	-11.38	0.998	Leading	11.66	0.999	Leading	8.92
54	FLT99-3PH	0.990	Lagging	-28.99	0.999	Leading	7.14	0.999	Leading	7.85
55	FLT100-3PH	0.995	Lagging	-20.34	1.000	Leading	5.89	1.000	Leading	4.50
56	FLT101-3PH	0.999	Lagging	-7.69	0.997	Leading	15.40	0.998	Leading	12.51
57	FLT104-3PH	Case Diverged			1.000	Leading	0.57	1.000	Lagging	-0.25
58	FLT105-3PH	1.000	Lagging	-1.82	0.996	Leading	18.28	0.997	Leading	15.20
59	FLT106-3PH	0.999	Lagging	-8.90	0.997	Leading	14.30	0.998	Leading	11.51
60	FLT111-3PH	0.968	Lagging	-51.75	0.997	Lagging	-16.29	0.998	Lagging	-12.99
61	FLT112-3PH	0.992	Leading	24.86	0.992	Leading	26.26	0.995	Leading	21.03
62	FLT113-3PH	0.969	Lagging	-50.82	0.998	Lagging	-13.97	0.998	Lagging	-12.65
63	FLT114-3PH	0.995	Lagging	-20.11	1.000	Leading	6.04	1.000	Lagging	-3.79
64	FLT115-3PH	0.999	Lagging	-10.62	0.998	Leading	13.46	0.999	Leading	8.21
65	FLT116-3PH	0.999	Leading	6.57	0.995	Leading	21.07	0.995	Leading	19.82
66	FLT117-3PH	1.000	Lagging	-3.51	0.996	Leading	16.91	0.996	Leading	17.95
67	FLT125-3PH	0.999	Lagging	-8.99	0.997	Leading	14.31	0.998	Leading	11.60
68	FLT125a-3PH	0.998	Lagging	-11.82	0.998	Leading	13.20	0.998	Leading	11.40
69	FLT126-3PH	0.995	Lagging	-19.07	1.000	Leading	3.74	1.000	Lagging	-3.04
70	FLT127-3PH	0.965	Lagging	-54.27	0.991	Lagging	-26.97	1.000	Leading	1.40
71	FLT128-3PH	0.998	Lagging	-11.00	0.998	Leading	11.81	0.998	Leading	11.28
72	FLT129-3PH	0.998	Lagging	-11.20	0.998	Leading	13.72	0.998	Leading	11.21
73	FLT130-3PH	0.998	Lagging	-12.55	0.998	Leading	13.33	0.998	Leading	11.06
74	FLT131-3PH	0.999	Lagging	-10.61	0.998	Leading	13.78	0.998	Leading	11.11
75	FLT132-3PH	0.999	Lagging	-8.99	0.997	Leading	14.31	1.000	Leading	4.89
76	FLT133-3PH	0.999	Lagging	-8.17	0.998	Leading	11.63	1.000	Leading	5.82
77	FLT134-3PH	0.998	Lagging	-13.25	0.998	Leading	11.22	0.999	Leading	9.42
78	FLT142-3PH	0.999	Lagging	-10.61	0.998	Leading	13.78	0.998	Leading	11.11
79	FLT143-3PH	0.999	Lagging	-10.20	0.998	Leading	14.10	0.998	Leading	11.53
80	FLT144-3PH	0.998	Lagging	-12.80	0.998	Leading	13.70	0.998	Leading	11.00
81	FLT145-3PH	0.999	Lagging	-9.20	0.997	Leading	14.40	0.998	Leading	11.98
82	FLT146-3PH	0.999	Lagging	-9.51	0.998	Leading	14.16	0.998	Leading	11.42
83	FLT147-3PH	0.999	Lagging	-9.91	0.998	Leading	13.46	0.999	Leading	10.97

Table 5-12
Power Factor Analysis: GEN-2016-072

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	1.000	Leading	4.74	1.000	Leading	7.04	1.000	Leading	6.87
1	FLT01-3PH	1.000	Leading	3.26	1.000	Leading	5.81	1.000	Leading	5.46
2	FLT02-3PH	1.000	Leading	4.63	1.000	Leading	6.94	1.000	Leading	6.67
3	FLT03-3PH	1.000	Leading	4.51	1.000	Leading	6.94	1.000	Leading	6.70
4	FLT04-3PH	1.000	Leading	4.15	1.000	Leading	6.62	1.000	Leading	6.46
5	FLT05-3PH	1.000	Leading	3.99	1.000	Leading	6.06	1.000	Leading	6.23
6	FLT06-3PH	1.000	Leading	4.04	1.000	Leading	6.12	1.000	Leading	5.52
7	FLT07-3PH	1.000	Lagging	-2.29	1.000	Leading	2.34	1.000	Leading	2.30
8	FLT08-3PH	1.000	Leading	4.53	1.000	Leading	6.82	1.000	Leading	6.60
9	FLT15-3PH	0.998	Lagging	-17.89	1.000	Lagging	-4.85	1.000	Lagging	-2.44
10	FLT16-3PH	0.999	Lagging	-11.33	1.000	Lagging	-1.13	1.000	Leading	0.77
11	FLT17-3PH	1.000	Lagging	-6.25	1.000	Leading	1.78	1.000	Leading	2.21
12	FLT18-3PH	1.000	Lagging	-5.03	1.000	Leading	3.34	1.000	Leading	3.94
13	FLT19-3PH	1.000	Lagging	-5.09	1.000	Leading	3.11	1.000	Leading	3.69
14	FLT20-3PH	1.000	Leading	3.81	1.000	Leading	6.43	1.000	Leading	6.49
15	FLT21-3PH	1.000	Lagging	-2.22	1.000	Leading	3.22	1.000	Leading	3.40
16	FLT22-3PH	1.000	Lagging	-6.79	1.000	Leading	0.94	1.000	Leading	1.68
17	FLT23-3PH	1.000	Leading	3.96	1.000	Leading	6.69	1.000	Leading	6.44
18	FLT33-3PH	1.000	Lagging	-3.10	1.000	Lagging	-3.03	1.000	Lagging	-2.85
19	FLT34-3PH	0.998	Lagging	-20.84	0.998	Lagging	-19.78	0.998	Lagging	-20.20
20	FLT35-3PH	1.000	Leading	4.74	1.000	Leading	7.04	1.000	Leading	6.87
21	FLT36-3PH	0.987	Lagging	-49.48	0.989	Lagging	-44.60	0.989	Lagging	-45.24
22	FLT37-3PH	0.998	Lagging	-18.84	0.999	Lagging	-11.94	0.999	Lagging	-11.75
23	FLT38-3PH	0.995	Lagging	-29.74	0.999	Lagging	-10.66	1.000	Lagging	-8.37
24	FLT39-3PH	1.000	Leading	5.92	1.000	Leading	6.94	1.000	Leading	8.81
25	FLT40-3PH	1.000	Leading	5.92	1.000	Leading	6.94	1.000	Leading	8.81
26	FLT41-3PH	1.000	Leading	1.87	1.000	Leading	5.84	1.000	Leading	5.92
27	FLT50-3PH	1.000	Leading	4.53	1.000	Leading	6.99	1.000	Leading	6.76
28	FLT51-3PH	1.000	Leading	5.22	1.000	Leading	7.09	1.000	Leading	6.71
29	FLT52-3PH	1.000	Leading	4.61	1.000	Leading	6.94	1.000	Leading	6.69
30	FLT53-3PH	1.000	Leading	4.74	1.000	Leading	7.04	1.000	Leading	6.87
31	FLT54-3PH	1.000	Leading	3.92	1.000	Leading	6.78	1.000	Leading	6.67
32	FLT55-3PH	1.000	Leading	4.69	1.000	Leading	7.00	1.000	Leading	6.81
33	FLT56-3PH	1.000	Leading	3.69	1.000	Leading	7.04	1.000	Leading	6.86
34	FLT57-3PH	1.000	Leading	4.65	1.000	Leading	7.04	1.000	Leading	6.64
35	FLT58-3PH	1.000	Leading	4.74	1.000	Leading	7.01	1.000	Leading	6.60
36	FLT59-3PH	1.000	Leading	4.06	1.000	Leading	7.24	1.000	Leading	6.20
37	FLT66-3PH	1.000	Leading	2.62	1.000	Leading	5.54	1.000	Leading	5.46
38	FLT67-3PH	1.000	Lagging	-5.30	1.000	Lagging	-0.52	1.000	Lagging	-0.41
39	FLT68-3PH	1.000	Leading	4.74	1.000	Leading	6.99	1.000	Leading	6.72
40	FLT69-3PH	1.000	Leading	4.98	1.000	Leading	7.38	1.000	Leading	7.23
41	FLT70-3PH	1.000	Leading	2.80	1.000	Leading	5.45	1.000	Leading	5.23
42	FLT71-3PH	1.000	Leading	3.95	1.000	Leading	6.51	1.000	Leading	6.36
43	FLT72-3PH	1.000	Leading	2.53	1.000	Leading	5.53	1.000	Leading	5.47
44	FLT80-3PH	0.998	Lagging	-19.50	0.999	Leading	9.59	0.999	Leading	11.88
45	FLT81-3PH	0.999	Lagging	-15.01	0.999	Lagging	-15.98	0.998	Lagging	-17.35

Table 5-12 (Continued)
Power Factor Analysis: GEN-2016-072

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
46	FLT82-3PH	0.984	Lagging	-54.02	0.996	Lagging	-25.20	0.998	Lagging	-21.23
47	FLT83-3PH	1.000	Leading	8.78	0.999	Leading	10.51	0.999	Leading	11.88
48	FLT88-3PH	1.000	Leading	4.74	1.000	Leading	7.04	1.000	Leading	6.87
49	FLT89-3PH	1.000	Lagging	-6.34	1.000	Lagging	-1.49	1.000	Leading	2.29
50	FLT90-3PH	1.000	Lagging	-4.78	1.000	Leading	0.11	1.000	Leading	3.27
51	FLT91-3PH	1.000	Leading	4.74	1.000	Leading	7.04	1.000	Leading	6.92
52	FLT92-3PH	1.000	Lagging	-0.40	1.000	Leading	2.67	1.000	Leading	2.77
53	FLT93-3PH	1.000	Leading	3.78	1.000	Leading	6.59	1.000	Leading	6.27
54	FLT99-3PH	0.925	Lagging	-123.14	0.995	Lagging	-30.54	0.998	Lagging	-20.52
55	FLT100-3PH	0.999	Lagging	-14.52	0.999	Lagging	-9.72	0.999	Lagging	-11.18
56	FLT101-3PH	1.000	Lagging	-1.00	1.000	Leading	2.60	1.000	Leading	3.57
57	FLT104-3PH	0.994	Lagging	-32.78	0.997	Lagging	-24.20	0.997	Lagging	-24.33
58	FLT105-3PH	0.998	Leading	20.51	0.997	Leading	22.00	0.998	Leading	20.94
59	FLT106-3PH	1.000	Leading	4.62	1.000	Leading	6.79	1.000	Leading	6.66
60	FLT111-3PH	1.000	Leading	7.77	0.999	Leading	10.21	1.000	Leading	8.39
61	FLT112-3PH	1.000	Lagging	-1.09	1.000	Leading	0.53	1.000	Leading	0.66
62	FLT113-3PH	1.000	Leading	8.05	0.999	Leading	10.24	1.000	Leading	8.46
63	FLT114-3PH	1.000	Lagging	-0.62	1.000	Leading	2.45	1.000	Leading	2.49
64	FLT115-3PH	1.000	Leading	3.91	1.000	Leading	6.55	1.000	Leading	6.04
65	FLT116-3PH	0.999	Leading	12.63	0.999	Leading	11.59	0.999	Leading	11.61
66	FLT117-3PH	1.000	Leading	1.70	1.000	Leading	4.37	1.000	Leading	3.45
67	FLT125-3PH	1.000	Leading	4.74	1.000	Leading	7.04	1.000	Leading	6.87
68	FLT125a-3PH	1.000	Lagging	-3.28	1.000	Leading	2.35	1.000	Leading	5.06
69	FLT126-3PH	0.998	Lagging	-16.75	0.998	Lagging	-19.40	0.997	Lagging	-23.92
70	FLT127-3PH	0.981	Lagging	-59.68	0.980	Lagging	-60.33	0.999	Lagging	-16.21
71	FLT128-3PH	0.999	Leading	12.39	0.999	Leading	10.98	0.999	Leading	11.33
72	FLT129-3PH	1.000	Lagging	-2.62	1.000	Leading	3.08	1.000	Leading	3.88
73	FLT130-3PH	1.000	Lagging	-6.84	1.000	Leading	0.68	1.000	Leading	2.64
74	FLT131-3PH	1.000	Lagging	-0.49	1.000	Leading	4.18	1.000	Leading	4.74
75	FLT132-3PH	1.000	Leading	4.74	1.000	Leading	7.04	1.000	Leading	5.49
76	FLT133-3PH	1.000	Leading	9.21	0.999	Leading	14.57	0.997	Leading	22.57
77	FLT134-3PH	1.000	Lagging	-2.53	1.000	Leading	4.86	1.000	Leading	7.74
78	FLT142-3PH	1.000	Lagging	-0.49	1.000	Leading	4.18	1.000	Leading	4.74
79	FLT143-3PH	1.000	Lagging	-0.51	1.000	Leading	4.01	1.000	Leading	4.44
80	FLT144-3PH	1.000	Lagging	-5.85	1.000	Leading	5.07	1.000	Leading	2.52
81	FLT145-3PH	1.000	Leading	4.56	1.000	Leading	7.22	1.000	Leading	7.33
82	FLT146-3PH	1.000	Leading	3.04	1.000	Leading	6.10	1.000	Leading	5.89
83	FLT147-3PH	1.000	Leading	3.87	1.000	Leading	6.69	1.000	Leading	5.98

Table 5-13
Power Factor Analysis: GEN-2016-073

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.998	Lagging	-13.21	0.999	Leading	9.27	0.998	Leading	12.17
1	FLT01-3PH	0.998	Lagging	-13.64	0.999	Leading	8.99	0.999	Leading	11.96
2	FLT02-3PH	0.998	Lagging	-13.26	0.999	Leading	9.24	0.998	Leading	12.11
3	FLT03-3PH	0.998	Lagging	-13.29	0.999	Leading	9.25	0.998	Leading	12.13
4	FLT04-3PH	0.998	Lagging	-13.59	0.999	Leading	9.11	0.999	Leading	12.01
5	FLT05-3PH	0.998	Lagging	-13.36	0.999	Leading	9.08	0.998	Leading	12.12
6	FLT06-3PH	0.998	Lagging	-13.42	0.999	Leading	9.18	0.999	Leading	11.92
7	FLT07-3PH	0.996	Lagging	-18.57	1.000	Leading	6.35	0.999	Leading	9.67
8	FLT08-3PH	0.998	Lagging	-13.32	0.999	Leading	9.21	0.998	Leading	12.10
9	FLT15-3PH	0.967	Lagging	-57.84	0.997	Lagging	-17.98	0.998	Lagging	-14.31
10	FLT16-3PH	0.979	Lagging	-45.45	0.999	Lagging	-10.01	1.000	Lagging	-5.25
11	FLT17-3PH	0.988	Lagging	-34.40	1.000	Lagging	-2.72	1.000	Lagging	-0.09
12	FLT18-3PH	0.989	Lagging	-32.81	1.000	Leading	0.47	1.000	Leading	4.74
13	FLT19-3PH	0.987	Lagging	-35.19	1.000	Lagging	-2.20	1.000	Leading	2.45
14	FLT20-3PH	0.998	Lagging	-14.74	0.999	Leading	8.23	0.999	Leading	11.42
15	FLT21-3PH	0.992	Lagging	-28.58	1.000	Lagging	-0.97	1.000	Leading	2.29
16	FLT22-3PH	0.985	Lagging	-38.30	1.000	Lagging	-6.38	1.000	Lagging	-2.06
17	FLT23-3PH	0.998	Lagging	-14.44	0.999	Leading	8.80	0.999	Leading	11.47
18	FLT33-3PH	0.998	Lagging	-12.36	0.999	Leading	8.96	0.998	Leading	14.05
19	FLT34-3PH	0.995	Lagging	-21.48	1.000	Leading	2.72	0.999	Leading	10.88
20	FLT35-3PH	0.998	Lagging	-13.21	0.999	Leading	9.27	0.998	Leading	12.17
21	FLT36-3PH	0.984	Lagging	-39.75	0.999	Lagging	-10.86	1.000	Leading	1.05
22	FLT37-3PH	0.993	Lagging	-26.46	1.000	Leading	0.93	1.000	Leading	3.60
23	FLT38-3PH	0.975	Lagging	-50.36	0.999	Lagging	-9.79	1.000	Lagging	-2.03
24	FLT39-3PH	0.998	Lagging	-15.21	0.999	Leading	7.93	0.999	Leading	11.79
25	FLT40-3PH	0.998	Lagging	-15.21	0.999	Leading	7.93	0.999	Leading	11.79
26	FLT41-3PH	0.998	Lagging	-13.96	0.999	Leading	9.25	0.998	Leading	12.27
27	FLT50-3PH	0.998	Lagging	-13.62	0.999	Leading	9.17	0.999	Leading	12.04
28	FLT51-3PH	0.999	Lagging	-11.71	0.999	Leading	9.58	0.998	Leading	12.41
29	FLT52-3PH	0.998	Lagging	-13.46	0.999	Leading	9.00	0.999	Leading	11.86
30	FLT53-3PH	0.998	Lagging	-13.21	0.999	Leading	9.27	0.998	Leading	12.17
31	FLT54-3PH	0.998	Lagging	-14.17	0.999	Leading	9.21	0.999	Leading	11.59
32	FLT55-3PH	0.998	Lagging	-13.32	0.999	Leading	9.16	0.999	Leading	12.05
33	FLT56-3PH	0.997	Lagging	-15.96	0.999	Leading	9.40	0.998	Leading	12.81
34	FLT57-3PH	0.998	Lagging	-13.35	0.999	Leading	9.33	0.998	Leading	12.30
35	FLT58-3PH	0.998	Lagging	-13.21	0.999	Leading	9.25	0.998	Leading	12.20
36	FLT59-3PH	0.998	Lagging	-14.57	0.999	Leading	10.03	0.999	Leading	11.60
37	FLT66-3PH	0.998	Lagging	-14.59	0.999	Leading	8.50	0.999	Leading	11.55
38	FLT67-3PH	0.996	Lagging	-18.71	1.000	Leading	5.78	0.999	Leading	9.12
39	FLT68-3PH	0.998	Lagging	-13.54	0.999	Leading	9.12	0.998	Leading	12.07
40	FLT69-3PH	0.998	Lagging	-13.58	0.999	Leading	9.00	0.999	Leading	12.06
41	FLT70-3PH	0.998	Lagging	-14.37	0.999	Leading	8.66	0.999	Leading	11.63
42	FLT71-3PH	0.998	Lagging	-13.71	0.999	Leading	8.92	0.999	Leading	11.74
43	FLT72-3PH	0.998	Lagging	-14.64	0.999	Leading	8.47	0.999	Leading	11.52
44	FLT80-3PH	0.972	Lagging	-52.71	1.000	Lagging	-5.12	1.000	Lagging	-4.70
45	FLT81-3PH	0.994	Lagging	-24.44	1.000	Lagging	-0.52	1.000	Leading	0.87

Table 5-13 (Continued)
Power Factor Analysis: GEN-2016-073

Reference Number	Case	16 Winter Peak			17 Summer Peak			25 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
46	FLT82-3PH	0.951	Lagging	-71.88	0.996	Lagging	-18.98	0.999	Lagging	-10.80
47	FLT83-3PH	0.998	Lagging	-12.32	0.999	Leading	10.58	0.998	Leading	13.00
48	FLT88-3PH	0.998	Lagging	-13.21	0.999	Leading	9.27	0.998	Leading	12.17
49	FLT89-3PH	0.997	Lagging	-16.22	1.000	Leading	5.38	0.999	Leading	9.45
50	FLT90-3PH	0.998	Lagging	-14.63	1.000	Leading	6.73	0.999	Leading	10.50
51	FLT91-3PH	0.998	Lagging	-13.21	0.999	Leading	9.27	0.998	Leading	12.29
52	FLT92-3PH	0.998	Lagging	-13.19	0.999	Leading	8.10	0.998	Leading	12.20
53	FLT93-3PH	0.998	Lagging	-14.81	0.999	Leading	8.69	0.999	Leading	11.49
54	FLT99-3PH	Case Diverged			0.994	Lagging	-23.83	0.999	Lagging	-7.10
55	FLT100-3PH	0.985	Lagging	-38.61	0.999	Lagging	-8.33	1.000	Lagging	-3.66
56	FLT101-3PH	0.998	Lagging	-15.35	0.999	Leading	7.15	0.999	Leading	10.51
57	FLT104-3PH	0.972	Lagging	-52.83	0.996	Lagging	-18.89	0.998	Lagging	-12.35
58	FLT105-3PH	1.000	Leading	2.58	0.996	Leading	20.58	0.995	Leading	21.56
59	FLT106-3PH	0.998	Lagging	-13.25	0.999	Leading	9.16	0.998	Leading	12.08
60	FLT111-3PH	0.996	Lagging	-18.97	0.999	Leading	9.68	0.999	Leading	11.55
61	FLT112-3PH	0.997	Lagging	-17.79	1.000	Leading	6.07	0.999	Leading	11.03
62	FLT113-3PH	0.997	Lagging	-18.34	0.999	Leading	9.71	0.999	Leading	11.60
63	FLT114-3PH	0.998	Lagging	-13.21	0.999	Leading	7.94	0.998	Leading	12.24
64	FLT115-3PH	0.998	Lagging	-13.96	0.999	Leading	8.88	0.999	Leading	11.78
65	FLT116-3PH	1.000	Lagging	-5.86	0.998	Leading	12.47	0.997	Leading	15.85
66	FLT117-3PH	0.998	Lagging	-14.07	0.999	Leading	8.22	0.999	Leading	11.64
67	FLT125-3PH	0.998	Lagging	-13.21	0.999	Leading	9.27	0.998	Leading	12.17
68	FLT125a-3PH	0.993	Lagging	-26.65	1.000	Leading	0.56	0.999	Leading	9.33
69	FLT126-3PH	1.000	Leading	3.62	0.993	Leading	25.93	0.993	Leading	26.23
70	FLT127-3PH	0.996	Lagging	-20.67	0.999	Leading	11.03	0.997	Leading	15.59
71	FLT128-3PH	0.999	Leading	10.11	0.996	Leading	19.73	0.991	Leading	29.88
72	FLT129-3PH	0.992	Lagging	-28.08	1.000	Lagging	-3.33	1.000	Leading	0.91
73	FLT130-3PH	0.986	Lagging	-36.90	0.999	Lagging	-9.37	1.000	Lagging	-3.38
74	FLT131-3PH	1.000	Lagging	-3.61	0.997	Leading	18.06	0.996	Leading	18.81
75	FLT132-3PH	0.998	Lagging	-13.21	0.999	Leading	9.27	1.000	Leading	2.09
76	FLT133-3PH	0.998	Lagging	-15.24	1.000	Leading	6.22	0.999	Leading	11.14
77	FLT134-3PH	0.997	Lagging	-18.22	1.000	Leading	5.35	0.999	Leading	8.79
78	FLT142-3PH	1.000	Lagging	-3.61	0.997	Leading	18.06	0.996	Leading	18.81
79	FLT143-3PH	0.989	Lagging	-32.74	0.999	Lagging	-8.64	1.000	Lagging	-3.91
80	FLT144-3PH	0.987	Lagging	-36.48	1.000	Leading	2.61	1.000	Lagging	-3.72
81	FLT145-3PH	0.998	Lagging	-13.93	0.999	Leading	10.07	0.998	Leading	15.07
82	FLT146-3PH	0.996	Lagging	-19.10	1.000	Leading	3.85	1.000	Leading	6.51
83	FLT147-3PH	0.997	Lagging	-16.43	0.999	Leading	7.50	0.999	Leading	11.82

Study Generator GEN-2016-009

The Power Factor Analysis shows that GEN-2016-009 has a power factor range of 0.620 lagging (supplying) to 0.938 leading (absorbing) for the 2016 Winter Peak conditions, a power factor range of 0.676 lagging (supplying) to 0.929 leading (absorbing) for the 2017 Summer Peak conditions, and a power factor range of 0.800 lagging (supplying) to 0.941 leading (absorbing) for the 2025 Summer Peak conditions.

Study Generator GEN-2016-012

The Power Factor Analysis shows that GEN-2016-012 has a power factor range of 0.704 lagging (supplying) to 0.998 leading (absorbing) for the 2016 Winter Peak conditions, a power factor range of 0.963 lagging (supplying) to 0.837 leading (absorbing) for the 2017 Summer Peak conditions, and a power factor range of 0.959 lagging (supplying) to 0.837 leading (absorbing) for the 2025 Summer Peak conditions.

Study Generator GEN-2016-022

The Power Factor Analysis shows that GEN-2016-022 has a power factor range of 0.886 to 0.994 lagging (supplying) for the 2016 Winter Peak conditions, a power factor range of 0.950 lagging (supplying) to 0.999 leading (absorbing) for the 2017 Summer Peak conditions, and a power factor range of 0.959 lagging (supplying) to 0.998 leading (absorbing) for the 2025 Summer Peak conditions.

Study Generator GEN-2016-024

The Power Factor Analysis shows that GEN-2016-024 has a power factor range of 0.681 to 0.978 lagging (supplying) for the 2016 Winter Peak conditions, a power factor range of 0.858 to 0.999 lagging (supplying) for the 2017 Summer Peak conditions, and a power factor range of 0.795 to 0.985 lagging (supplying) for the 2025 Summer Peak conditions.

Study Generator GEN-2016-031

The Power Factor Analysis shows that GEN-2016-031 has a power factor range of 0.930 to 0.997 lagging (supplying) for the 2016 Winter Peak conditions, a power factor range of 0.971 lagging (supplying) to 0.999 leading (absorbing) for the 2017 Summer Peak conditions, and a power factor range of 0.976 lagging (supplying) to 0.999 leading (absorbing) to for the 2025 Summer Peak conditions.

Study Generator GEN-2016-032

The Power Factor Analysis shows that GEN-2016-032 has a power factor range of 0.957 to lagging (supplying) to 0.998 leading (absorbing) for the 2016 Winter Peak conditions, a power factor range of 0.978 lagging (supplying) to 0.999 leading (absorbing) for the 2017 Summer Peak conditions, and a power factor range of 0.957 lagging (supplying) to 0.984 leading (absorbing) for the 2025 Summer Peak conditions.

Study Generator GEN-2016-048

The Power Factor Analysis shows that GEN-2016-048 has a power factor range of 0.601 to 0.836 lagging (supplying) for the 2016 Winter Peak conditions, a power factor range of 0.644 to 0.842 lagging (supplying) for the 2017 Summer Peak conditions, and a power factor range of 0.649 to 838 lagging (supplying) for the 2025 Summer Peak conditions.

Study Generator GEN-2016-060

The Power Factor Analysis shows that GEN-2016-060 has a power factor range of 0.885 to 0.998 lagging (supplying) for the 2016 Winter Peak conditions, a power factor range of 0.973 lagging (supplying) to 0.992 leading (absorbing) for the 2017 Summer Peak conditions, and a power factor range of 0.973 lagging (supplying) to 0.999 leading (absorbing) for the 2025 Summer Peak conditions.

Study Generator GEN-2016-061

The Power Factor Analysis shows that GEN-2016-061 has a power factor range of 0.667 lagging (supplying) to 1.00 (unity) for the 2016 Winter Peak conditions, a power factor range of 0.792 lagging (supplying) to 0.987 leading (absorbing) for the 2017 Summer Peak conditions, and a power factor range of 0.8 lagging (supplying) to 0.988 leading (absorbing) for the 2025 Summer Peak conditions.

Study Generator GEN-2016-068

The Power Factor Analysis shows that GEN-2016-068 has a power factor range of 0.552 to 996 lagging (supplying) for the 2016 Winter Peak conditions, a power factor range of 0.658 lagging (supplying) to 0.985 leading (absorbing) for the 2017 Summer Peak conditions, and a power factor range of 0.803 lagging (supplying) to 0.988 leading (absorbing) for the 2025 Summer Peak conditions.

Study Generator GEN-2016-071

The Power Factor Analysis shows that GEN-2016-071 has a power factor range of 0.962 lagging (supplying) to 0.992 leading (absorbing) for the 2016 Winter Peak conditions, a power factor range of 0.991 lagging (supplying) to 0.992 leading (absorbing) for the 2017 Summer Peak conditions, and a power factor range of 0.996 leading (absorbing) to 0.995 leading (absorbing) for the 2025 Summer Peak conditions.

Study Generator GEN-2016-072

The Power Factor Analysis shows that GEN-2016-072 has a power factor range of 0.925 lagging (supplying) to 0.998 leading (absorbing) for the 2016 Winter Peak conditions, a power factor range of 0.980 lagging (supplying) to 0.997 leading (absorbing) for the 2017 Summer Peak conditions, and a power factor range of 0.989 lagging (supplying) to 0.997 leading (absorbing) for the 2025 Summer Peak conditions.

Study Generator GEN-2016-073

The Power Factor Analysis shows that GEN-2016-073 has a power factor range of 0.835 to 0.995 lagging (supplying) for the 2016 Winter Peak conditions, a power factor range of 0.978 0.999 lagging (supplying) to 1.00 (unity) for the 2017 Summer Peak conditions, and a power

factor range of 0.998 lagging (supplying) to 0.991 leading (absorbing) for the 2025 Summer Peak conditions.

SECTION 6: LOW WIND/NO WIND ANALYSIS

The objective of this task is to determine the impact of low wind or no wind conditions on all wind farms and solar farms. The 2015 Summer Peak, 2017 Summer Peak, and 2025 Summer Peak power flows provided by SPP, and corresponding updates, were examined for this analysis.

6.1 Approach

Low wind or no wind conditions were examined for all wind farms and solar farms. Generators were disabled (independently), but the collector systems remained in-service. In order to maintain generation and load balance in the SPP area, the generation was scaled after disabling the respective generator. The amount of reactive power injected into the transmission network was recorded at the respective point of interconnection. This reactive power comes from the capacitance of the project's transmission lines and collector cables. A shunt reactor was added at the high side bus to bring the Mvar flow into the POI down to approximately zero.

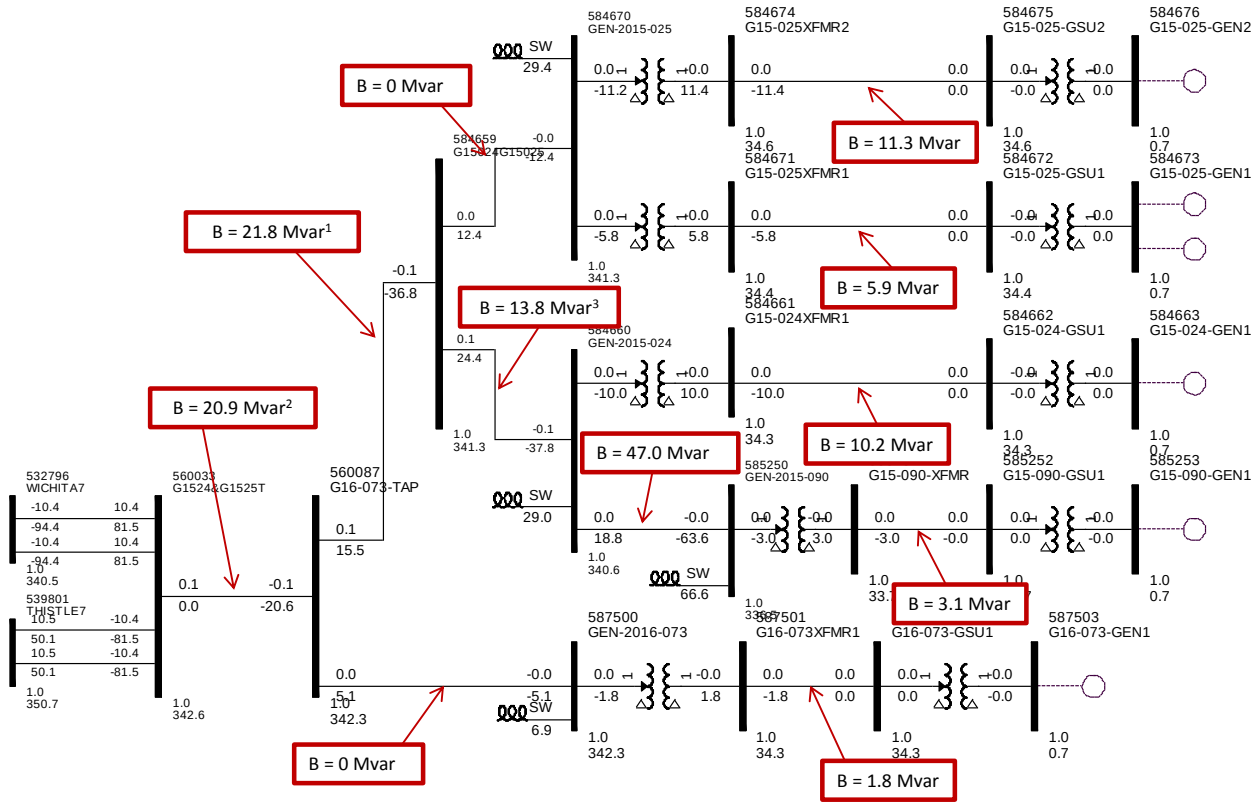
6.2 Low Wind/No Wind Analysis Results

The reactance needed to bring the Mvar flow into the point of interconnect to zero Mvar was recorded for each season. Refer to Table 6-1 for the Low Wind/No Wind Analysis results. The table lists the generators examined and the amount of reactive power needed for zero Mvar flow into the POI for each season.

Table 6-1
Low Wind/No Wind Analysis

Request	Size (MW)	Point of Interconnection	Reactor Size (Mvar)		
			16WP	17SP	25SP
GEN-2016-009	29	Osage 69 kV	0.1	0.1	0.1
GEN-2016-012	200	Tap on Waverly to LaCygne 345 kV	18.1	18.1	18.1
GEN-2016-022	151.8	Ranch Road 345 kV	9.6	9.6	9.6
GEN-2016-024	50	Midian 138 kV	0.7	0.7	0.7
GEN-2016-031	201.3	Ranch Road 345 kV	9.7	9.7	9.7
GEN-2016-032	200	Tap on Marshall to Cottonwood 138 kV	18.0	18.0	18.0
GEN-2016-048	74	Sooner 138 kV	0.8	0.8	0.8
GEN-2016-060	25.3	Belle Plain 138 kV	11.5	11.5	11.5
GEN-2016-061	250.7	Tap on Woodring to Sooner 345 kV	11.7	11.7	11.7
GEN-2016-068	250	Woodring 345 kV	34.7	34.7	34.7
GEN-2016-071	200.1	Chilocco 138 kV	9.6	9.6	9.6
GEN-2016-072	300	Renfrow 345 kV	22.4	22.4	22.4
GEN-2016-073	220	Tap on Thistle to Wichita 345 kV	7.0	7.0	7.0

Note that GEN-2016-073 shares the same POI with GEN-2015-024, GEN-2015-025, and GEN-2015-090. The reactor requirements were determined based on the shared lines from the POI to the high voltage shared buses and their individual contributions. After considering the shared lines, the reactor requirements were calculated independently from the shared high side voltage bus to the collector system for each generator. Refer to Figure 6-1 for a representation of the reactor requirements that was calculated for both current and previous study projects.



GEN-2016-073 requirements = 1.8 Mvar + 5.2 Mvar ≈ 7 Mvar

GEN-2015-024 requirements = 10.2 Mvar + 6.9 Mvar + 7.3 Mvar + 5.2 Mvar ≈ 29.6

GEN-2015-025 requirements = 11.3 Mvar + 5.9 Mvar + 7.3 Mvar + 5.2 Mvar ≈ 29.7

GEN-2015-090 requirements = 3.1 Mvar + 47.0 Mvar + 6.9 Mvar + 7.3 Mvar + 5.2 Mvar ≈ 69.5

[1]Requirement to be shared between prior projects.
[2]Requirement to be shared between prior and current projects.
[3]Requirement to be shared between GEN-2015-024 and GEN-2015-090.

Figure 6-1: Reactor Requirement calculation for GEN-2016-073.

SECTION 7: CONCLUSIONS

SUMMARY OF STABILITY ANALYSIS

The Stability Analysis determined that there were multiple contingencies that resulted in system instability, generation tripping offline, or voltage violations for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions when all generation interconnection requests were at 100% output.

The following system upgrades and adjustments are recommended:

- Addition of Wolf Creek to Neosho 345 kV line circuit #1 to improve voltage stability in the vicinity of Waverly and to mitigate tripping of project generators GEN-2016-012 and GEN-2016-024.
- Reduction of generation at GEN-2016-071 and GEN-2011-057 following prior outage of Middleton Tap to Peckham Tap 345 kV line for FLT123-PO (see Figure 3-15 for the amount of reduction in 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak) to mitigate instability and generator tripping.

SUMMARY OF THE SHORT CIRCUIT ANALYSIS

The Short Circuit Analysis was performed on the 2017 Summer Peak and 2025 Summer Peak power flow for all study projects. Refer to Table 7-1 and 7-2 for a list of maximum fault currents observed for each study project.

Table 7-1
List of Maximum Fault Currents Observed in the 2017 Summer Peak Season for Each Study Project

Study Project	Fault Current at POI (kA)	Maximum Fault Current (kA)	Fault Location	Bus Voltage (kV)
GEN-2016-009	5.66	9.98	CHIKASI2	69
GEN-2016-012	14.13	39.28	CRAIG 5	161
GEN-2016-022	14.12	43.13	NORTWST4	138
GEN-2016-024	10.11	37.71	EVANS N4	139
GEN-2016-031	14.12	43.13	NORTWST4	138
GEN-2016-032	3.38	43.11	NORTWST4	138
GEN-2016-048	31.89	43.11	NORTWST4	138
GEN-2016-060	8.99	31.47	ROSEHIL4	138
GEN-2016-061	16.67	43.11	NORTWST4	138
GEN-2016-068	18.95	43.11	NORTWST4	138
GEN-2016-071	8.98	11.64	KILDARE4	138
GEN-2016-072	11.5	37.71	EVANS N4	138
GEN-2016-073	20.6	37.67	EVANS N4	138

Table 7-2
List of Maximum Fault Currents Observed in the 2025 Summer Peak Season for Each Study Project

Study Project	Fault Current at POI (kA)	Maximum Fault Current (kA)	Fault Location	Bus Voltage (kV)
GEN-2016-009	18.54	32.32	SOONER 4	138
GEN-2016-012	14.16	42.78	EVANS N4	138
GEN-2016-022	14.15	43.52	NORTWST4	138
GEN-2016-024	10.2	42.78	EVANS N4	138
GEN-2016-031	14.15	43.52	NORTWST4	138
GEN-2016-032	3.38	43.52	NORTWST4	138
GEN-2016-048	32.31	43.52	NORTWST4	138
GEN-2016-060	10.44	42.78	EVANS N4	138
GEN-2016-061	16.8	43.52	NORTWST4	138
GEN-2016-068	19.29	43.52	NORTWST4	138
GEN-2016-071	9.22	22.27	VIOLA 4	138
GEN-2016-072	12.15	42.78	EVANS N4	138
GEN-2016-073	21.11	42.73	EVANS N4	138

SUMMARY OF POWER FACTOR ANALYSIS

The Power Factor Analysis was performed on the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak power flow for all study projects. Refer to Table 7-3 for a list of the power factor ranges observed for each study project.

Table 7-3
Power Factor Ranges Observed for Each Study Project in 2016 Winter Peak, 2016 Summer Peak, and 2025 Summer Peak

Generator	Power Factor Range for each study generator[1]					
	16WP		17SP		25SP	
GEN-2016-009	-0.62	0.938	-0.676	0.929	-0.8	0.941
GEN-2016-012	-0.704	0.998	-0.963	0.837	-0.959	0.837
GEN-2016-022	-0.886	-0.994	-0.95	0.999	-0.959	0.998
GEN-2016-024	-0.681	-0.978	-0.858	-0.999	-0.795	-0.985
GEN-2016-031	-0.93	-0.997	-0.971	0.999	-0.976	0.999
GEN-2016-032	-0.957	0.998	-0.978	0.999	-0.957	0.984
GEN-2016-048	-0.601	-0.836	-0.644	-0.842	-0.649	-0.838
GEN-2016-060	-0.885	-0.998	-0.973	0.992	-0.973	0.999
GEN-2016-061	-0.667	Unity	-0.792	0.987	-0.8	0.988
GEN-2016-068	-0.552	-0.996	-0.658	0.985	-0.803	0.988
GEN-2016-071	-0.962	0.992	-0.991	0.992	-0.996	0.995
GEN-2016-072	-0.925	0.998	-0.98	0.997	-0.989	0.997
GEN-2016-073	-0.835	-0.995	-0.968	-0.999	-0.978	Unity

[1]Lagging power factors are negative and leading power factors are positive

SUMMARY OF LOW WIND/NO WIND ANALYSIS

The amount of reactive power injected into the transmission network was recorded at the point of interconnection for all study generators for each Cluster Scenario. The maximum reactance needed for zero Mvar flow was just over 34.7 Mvar for the line connecting GEN-2016-068 to the Woodring 345 kV line. The minimum reactance needed for zero Mvar flow was 0.1 Mvar for for the line connecting GEN-2016-009 to the Osage 69 kV line.

11.17.8 J9: GROUP 9 DYNAMIC STABILITY ANALYSIS REPORT

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Southwest Power Pool, Inc. (SPP)

DISIS-2016-001 (Group 09) Definitive Impact Study

Final Report

REP-0047
Revision #00

February 2017

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Title: **DISIS-2016-001 (Group 09) Definitive Impact Study: Final Report REP-0047**
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EXECUTIVE SUMMARY

SPP requested a Definitive Interconnection System Impact Study (DISIS). The DISIS required a Stability Analysis, Short-circuit Analysis, Power Factor Analysis, and Low Wind/No Wind Analysis detailing the impacts of the interconnecting projects as shown in Table ES-1.

Table ES-1
Interconnection Projects Evaluated

Request	Size (MW)	Generator Model (Gen Bus Number)	Point of Interconnection
GEN-2015-089	200	GE 2.0 MW	Utica 230 kV (652526)
GEN-2016-021	300	Vestas V110 VCSS 2.0MW (wind)	Hoskins 345kV (640226)
GEN-2016-023	150.5	GE 2.0MW and 1.79MW wind (587093, 587095)	Tap Sidney (659426) - Laramie River (659131) 345kV (560075)
GEN-2016-029	150.5	GE 2.3MW and 1.79MW wind	Tap Sidney (659426) - Laramie River (659131) 345kV (560075)
GEN-2016-034	90	GE 2.3MW wind (587223)	Tap Sidney (659426) - Laramie River (659131) 345kV (560090)
GEN-2016-043	230	GE 2.3MW wind (587283)	Hoskins 345kV (640226)
GEN-2016-050	250.7	GE 2.3MW wind (587353)	Axtell (640065)-Post Rock (530583) 345 kV (560082)
GEN-2016-055	126.5	GE 2.3MW wind (587363)	Tap Pauline (640313) -Hildreth (640222) 115 kV (560083)
GEN-2016-064	116	GE 2.0MW wind (587443)	Tap Pauline (640313) – Guide (640206) POI (Rosemont 115 kV, 560134)
GEN-2016-075	50	Vestas V110 VCSS 2.0MW wind	Tap Ft. Thompson-Hope County 345 kV (Grand Prarie, 652532)

SUMMARY OF STABILITY ANALYSIS

Cluster Scenario

The Cluster Scenario Stability Analysis determined there were multiple contingencies that resulted in voltage instability and low post-fault voltage recovery when all generation interconnection requests were at 100% output.

To mitigate the voltage instability and low post-fault steady-state voltages, the following upgrades were provided by SPP and implemented in all seasons:

- Keystone to Banner County (G16-034 Tap) 345 kV circuit #1
- SPP R Plan
    - Cherry County/Thedford 345/115/13.8 kV transformer
    - Gentleman to Cherry County 345 kV circuit #1
    - Holt County to Cherry County 345 kV circuit #1
- Rosemont to Pauline 115 kV circuit #2
- Gentleman to Keystone 345 kV circuit #2

After implementing the above upgrades, voltage instability was still observed for contingencies for all seasonal peak conditions examined. After discussion with SPP, it was determined that for the stuck breaker contingencies, the Sidney DC tie should be blocked and the shunt capacitor near Sidney 230 kV should be taken out of service. For the prior outage contingencies, a total of 350 MW of generation curtailment is necessary to mitigation violations. GEN-2016-075 (50MW) and GEN-2015-023 units 1 and 2 (each 150 MW) should be taken out of service in order to decrease the generation around Cherry County 345 kV.

After implementing these changes, the contingency analysis was re-simulated for all contingencies. With the upgrades, the Stability Analysis determined that there was no wind turbine tripping or system instability observed as a result of interconnecting all study projects at 100% output.

High GGS Sensitivity Scenario

The High GGS Scenario Stability Analysis determined there were multiple contingencies that resulted in voltage instability and low post-fault voltage recovery when all generation interconnection requests were at 100% output.

To mitigate the voltage instability and low post-fault steady-state voltages, the following upgrades were provided by SPP and implemented in all seasons:

- Keystone to Banner County (G16-034 Tap) 345 kV circuit #1
- SPP R Plan
    - Cherry County/Thedford 345/115/13.8 kV transformer
    - Gentleman to Cherry County 345 kV circuit #1
    - Holt County to Cherry County 345 kV circuit #1
- Rosemont to Pauline 115 kV circuit #2
- Gentleman to Keystone 345 kV circuit #2

After implementing the above upgrades, voltage instability was still observed for contingencies for all seasonal peak conditions examined. It was determined that for a three phase fault in the Sidney area, the shunt capacitor near Sidney 230 kV should be taken out of service. For the prior outage contingencies, a total of 350 MW of generation curtailment is necessary to mitigation violations. GEN-2016-075 (50MW) and GEN-2015-023 units 1 and 2 (each 150 MW) should be taken out of service in order to decrease the generation around Cherry County 345 kV.

The implementation of the upgrades eliminated the violations for all but one case when all generations requested were at 100% output. The case was a stuck breaker contingency in the Sidney-Ogallala area (FLT43-SB). After discussion with SPP, it was determined that additional analysis by NPPD and WAPA will be required for this contingency in the High GGS Scenario.

Stand-Alone Scenario

For GEN-2016-023, GEN-2016-029, and GEN-2016-034 voltage instability was observed for all seasonal peak conditions examined. The following mitigation was implemented to mitigate the observed violations:

- Keystone to Banner County (G16-034 Tap) 345 kV circuit #1
- SPP R Plan
    - Cherry County/Thedford 345/115/13.8 kV transformer
    - Gentleman to Cherry County 345 kV circuit #1
    - Holt County to Cherry County 345 kV circuit #1
- Gentleman to Keystone 345 kV circuit #2

For remaining stuck breaker contingencies that resulted in voltage instability, the following mitigation was implemented:

- Block Sidney 230 kV DC tie
- Take shunt capacitor near Sidney 230 kV out of service

After implementing these changes, the observed voltage instability was mitigated.

For GEN-2016-064 voltage instability was observed for all seasonal peak conditions examined. The following mitigation was implemented to mitigate the observed violations:

- Rosemont to Pauline 115 kV circuit #2

After implementing these changes, the observed voltage instability was mitigated.

For GEN-2016-075, voltage instability was observed for all seasonal peak conditions examined. The following mitigation was implemented for prior outage conditions:

- Decrease generation around Cherry County by decreasing G07170718WG generator output by 75 MW (from 200 to 125 MW) and taking GEN-2015-023 units 1 and 2 (each 150 MW) out of service

After implementing this change, the observe voltage instability was mitigated.

SUMMARY OF THE SHORT-CIRCUIT ANALYSIS

The Short-Circuit Analysis was performed on the 2017 Summer Peak and 2025 Summer Peak power flows for all study projects. Refer to Table ES-2 for a list of maximum fault currents observed for each study project for the 2017 Summer Peak case. Refer to Table ES-3 for a list of maximum fault currents observed for each study project for the 2025 Summer Peak case.

Table ES-2
List of Maximum Fault Currents Observed for Each Study Project for the 2017 Summer Peak Case

Study Project	POI Name	Fault Current at POI (kA)	Maximum Fault Current (kA)	Fault Location	Bus Voltage (kV)
GEN-2016-021	Utica 230 kV	7.90	35.07	Split Rock	115 kV
GEN-2016-021	Hoskins 345 kV	11.51	39.66	S1206	161 kV
GEN-2016-023	Tap Sidney to Laramie River (560075)	7.29	19.17	Gentleman	230 kV
GEN-2016-029	Tap Sidney to Laramie River (560075)	7.29	19.17	Gentleman	230 kV
GEN-2016-034	Tap Sidney to Laramie River (560090)	6.79	19.17	Gentleman	230 kV
GEN-2016-043	Hoskins 345 kV	11.51	39.66	S1206	161 kV
GEN-2016-050	Tap Axtell to Post Rock 345 kV	8.05	31.25	Sheldon	115 kV
GEN-2016-055	Tap Pauline to Hildreth 115 kV	8.71	31.25	Sheldon	115 kV
GEN-2016-064	Tap Pauline to Guide 115 kV (Rosemont 115 kV)	12.12	31.25	Sheldon	115 kV
GEN-2016-075	Tap Ft. Thompson to Hope County 345 kV (Grand Prairie 345 kV)	6.45	19.80	Ft. Thompson	230 kV

Table ES-3
List of Maximum Fault Currents Observed for Each Study Project for the 2025 Summer Peak Case

Study Project	POI Name	Fault Current at POI (kA)	Maximum Fault Current (kA)	Fault Location	Bus Voltage (kV)
GEN-2016-021	Utica 230 kV	7.92	35.84	Split Rock	115 kV
GEN-2016-021	Hoskins 345 kV	11.55	41.88	S1206	161 kV
GEN-2016-023	Tap Sidney to Laramie River (560075)	7.29	19.20	Gentleman	230 kV
GEN-2016-029	Tap Sidney to Laramie River (560075)	7.29	19.20	Gentleman	230 kV
GEN-2016-034	Tap Sidney to Laramie River (560090)	6.80	19.20	Gentleman	230 kV
GEN-2016-043	Hoskins 345 kV	11.55	41.88	S1206	161 kV
GEN-2016-050	Tap Axtell to Post Rock 345 kV	8.05	32.67	Sheldon	115 kV
GEN-2016-055	Tap Pauline to Hildreth 115 kV	8.71	32.67	Sheldon	115 kV
GEN-2016-064	Tap Pauline to Guide 115 kV (Rosemont 115 kV)	12.12	32.67	Sheldon	115 kV
GEN-2016-075	Tap Ft. Thompson to Hope County 345 kV (Grand Prairie 345 kV)	6.46	20.20	Ft. Thompson	230 kV

SUMMARY OF POWER FACTOR ANALYSIS

The upgrades identified in the Stability Analysis were implemented in the power flow cases and utilized for the Power Factor Analysis. Refer to Table ES-4 for the power factor analysis results for each study generator. The table lists the range of power factor required for each study project.

Table ES-4
Power Factor Analysis Summary for Study Projects

Study Project	Power Factor Range for Each Study Project[1]					
	16WP		17SP		25SP	
GEN-2015-089	0.989	1.000	0.991	1.000	0.989	1.000
GEN-2016-021	-0.990	0.995	-0.986	0.995	-0.989	0.994
GEN-2016-023	-0.945	0.990	-0.920	0.990	-0.904	0.990
GEN-2016-029	-0.945	0.990	-0.950	0.990	-0.904	0.990
GEN-2016-034	-0.570	0.996	-0.491	0.999	-0.464	0.999
GEN-2016-043	-0.982	0.991	-0.976	0.992	-0.982	0.989
GEN-2016-050	-0.980	0.938	-0.961	0.955	-0.958	0.952
GEN-2016-055	0.976	1.000	0.971	1.000	-0.996	0.965
GEN-2016-064	0.981	0.998	0.980	0.997	0.976	0.998
GEN-2016-075	-0.974	-0.998	-0.979	-0.999	-0.979	-0.999

[1]Lagging power factors are negative and leading power factors are positive

SUMMARY OF LOW WIND/NO WIND ANALYSIS

The amount of reactive power injected into the transmission network was recorded at the high side of the transformer near the point of interconnection for all study projects for each season. The maximum reactance needed for zero Mvar flow was -42.30 Mvar for GEN-2016-021. The minimum reactance needed for zero Mvar flow was -2.35 Mvar for GEN-2016-064.

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SECTION 1: OBJECTIVES

The objective of this report is to provide Southwest Power Pool, Inc. (SPP) with the deliverables for the DISIS-2016-001 (Group 09) Definitive Impact Study. SPP requested an Interconnection System Impact Study for ten (10) generation interconnections for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak, which requires a Stability Analysis, Short-circuit Analysis, Power Factor Analysis, Low Wind/No Wind Analysis, and an Impact Study Report.

SECTION 2: BACKGROUND

The Siemens Power Technologies International PSS/E power system simulation program Version 32.2.0 was used for this study. SPP provided the stability database cases for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and a list of contingencies to be examined. The model includes the study projects shown in Table 2-1 and the previously queued projects listed in Table 2-2. Refer to Appendix A for the steady-state and dynamic model data for the study projects. A power flow one-line diagram for each generation interconnection project is shown in Figures 2-1 through 2-7. Note that the one-line diagrams represent the 2016 Winter Peak case.

The Stability Analysis determined the impacts of the new interconnecting projects on the stability and voltage recovery of the nearby system and the ability of the interconnecting projects to meet FERC Order 661A. If problems with stability or voltage recovery are identified, the need for reactive compensation or system upgrades will be investigated. Three-phase faults and single line-to-ground faults will be examined as listed in Table 2-3. Note that all contingencies listed were examined for the Cluster Scenario.

A Short-circuit Analysis was performed on the 2017 Summer Peak and 2025 Summer Peak study years for each study generator. The study was performed five buses out from the study generator's point of interconnection and results were documented.

The Power Factor Analysis determined the power factor at the high side of the transformer near the point of interconnection for the wind or solar interconnection projects for pre-contingency and post-contingency conditions. The N-1, three phase contingencies listed in Table 2-3 were used in the Power Factor analysis.

The Low Wind/No Wind Analysis was completed for all wind and solar farm interconnections. This analysis determined if reactive support is needed to have a Mvar flow of approximately zero at the point of interconnection (POI).

Table 2-1
Interconnection Projects Evaluated

Request	Size (MW)	Generator Model (Gen Bus Number)	Point of Interconnection
GEN-2015-089	200	GE 2.0 MW	Utica 230 kV (652526)
GEN-2016-021	300	Vestas V110 VCSS 2.0MW (wind)	Hoskins 345kV (640226)
GEN-2016-023	150.5	GE 2.0MW and 1.79MW wind (587093, 587095)	Tap Sidney (659426) - Laramie River (659131) 345kV (560075)
GEN-2016-029	150.5	GE 2.3MW and 1.79MW wind	Tap Sidney (659426) - Laramie River (659131) 345kV (560075)
GEN-2016-034	90	GE 2.3MW wind (587223)	Tap Sidney (659426) - Laramie River (659131) 345kV (560090)
GEN-2016-043	230	GE 2.3MW wind (587283)	Hoskins 345kV (640226)
GEN-2016-050	250.7	GE 2.3MW wind (587353)	Axtell (640065)-Post Rock (530583) 345 kV (560082)
GEN-2016-055	126.5	GE 2.3MW wind (587363)	Tap Pauline (640313) -Hildreth (640222) 115 kV (560083)
GEN-2016-064	116	GE 2.0MW wind (587443)	Tap Pauline (640313) – Guide (640206) POI (Rosemont 115 kV, 560134)
GEN-2016-075	50	Vestas V110 VCSS 2.0MW wind	Tap Ft. Thompson-Hope County 345 kV (Grand Prarie, 652532)

Table 2-2
Previously Queued Nearby Interconnection Projects Included

Request	Size (MW)	Generator Model (Gen Bus Number)	Point of Interconnection
GEN-2003-021N	75	Vestas 1.65 MW (640026)	Tap on the Ainsworth – Calamus 115kV line (640050)
GEN-2004-023N	75	GENROU (640028)	Columbus 115kV (640119)
GEN-2006-020N	42	Vestas V90 VCUS 1.8 & 3.0 MW (640421,640441)	Bloomfield 115kV (640084)
GEN-2006-037N1	75	GE 1.7MW (640449)	Broken Bow 115kV (640089)
GEN-2006-038N005	79.5	GE 1.6MW (640428)	Broken Bow 115kV (640089)
GEN-2006-038N019	79.5	GE 1.5MW (640431)	Petersburg 115kV (640444)
GEN-2006-044N	40.5	GE 1.5MW (645062)	Petersburg 115kV (640444)
GEN-2007-011N08	81	Vestas V90 VCRS 3.0MW (640418)	Bloomfield 115kV (640084)
GEN-2008-086N02/GEN-2014-032	211.22	GE 100m 1.79MW (645063 and 645064)	Meadow Grove 230kV (GEN-2008-086N02 POI) (640540)
GEN-2008-119O	60	GE 1.5MW (645061)	S1399 161kV (646399)
GEN-2008-123N	89.7	GE 100m 1.79MW, GE 103m 1.72MW (572054)	Tap on the Pauline – Guide Rock 115kV (560137)
GEN-2009-040	73.8	Vestas V100 VCSS 2.0MW (532904)	Marshall 115kV (533303)
GEN-2010-041	10.5	GE 1.5MW (580071)	S1399 161kV (646399)
GEN-2010-051	200	GE 100m 1.7MW (580014, 580017, 580020)	Tap on the Twin Church – Hoskins 230kV line (560347)
GEN-2011-018 (replaced by GEN-2013-008)	73.6	GE 100m 1.7MW (640555)	Steele County 115kV (640426)

Request	Size (MW)	Generator Model (Gen Bus Number)	Point of Interconnection
GEN-2011-027	120	GE 1.85MW (580022, 580021, 580023)	Tap Twin Church-Hoskins 230kV (560347)
GEN-2011-056	3.6 MW increase (Pgen=21.6MW)	GENSAL (640013)	Jeffrey 115kV (640238)
GEN-2011-056A	3.6 MW increase (Pgen=21.6MW)	GENSAL (640014)	Johnson 1 115kV (640240)
GEN-2011-056B	4.5 MW increase (Pgen=23.5MW)	GENSAL (640015)	Johnson 2 115kV (640242)
GEN-2012-021	4.8 MW	GENROU (650010)	84th & Bluff 115kV (650275)
GEN-2013-002	50.6	Siemens 108m 2.3MW (583703)	Tap Sheldon - SW7&Bennet - Folsom/Pleasant Hill 115kV (560746)
GEN-2013-008	1.2MW increase to GEN-2011-018 (Pgen=74.8MW)	GE 100m 1.7MW (640555)	Steele City (640426) 115kV
GEN-2013-019	73.6	Siemens 108m 2.3MW (583703)	Tap Sheldon - SW7&Bennet - Folsom/Pleasant Hill 115kV (560746)
GEN-2013-032	204.0	GE 97.4m 1.7MW (583783)	Neligh 115kV (640293)
GEN-2014-004	3.96	GE 97.4m 1.79MW (640555)	Steele City 115kV (GEN-2011-018 POI) (640426)
GEN-2014-013	73.5	GE XLE 97.4m (583833)	Meadow Grove 230kV (GEN-2008-086N02 POI) (640540)
GEN-2014-031	35.8	GE 1.79MW (583836)	Meadow Grove 230kV (GEN-2008-086N02 POI) (640540)
GEN-2014-039	73.39	GE 1.79MW (584093)	Friend 115kV (640174)
GEN-2015-007	160.0	GE 2.0MW (wind; 584513)	Hoskins 345kV (640226)
GEN-2015-023	300.8	GE 1.79MW (wind; 584653, 584656)	Holt County 345kV (640510)
GEN-2015-053	50	GE 1.79 MW (wind; 584913)	Antelope 115kV (640521)

Request	Size (MW)	Generator Model (Gen Bus Number)	Point of Interconnection
GEN-2015-076	158.4	Vestas 3.3-117 3.3 MW (wind; 585133, 585136)	Belden 115kV (640080)
GEN-2015-087	66	Vestas V100 2.0 MW (wind; 585233)	Tap on Fairbury(640169) to Hebron (640218) 115kV
GEN-2015-088	300	Vestas V100 2.0 MW (wind; 585243)	Tap on Moore (640277) to Pauline (640312) 345kV

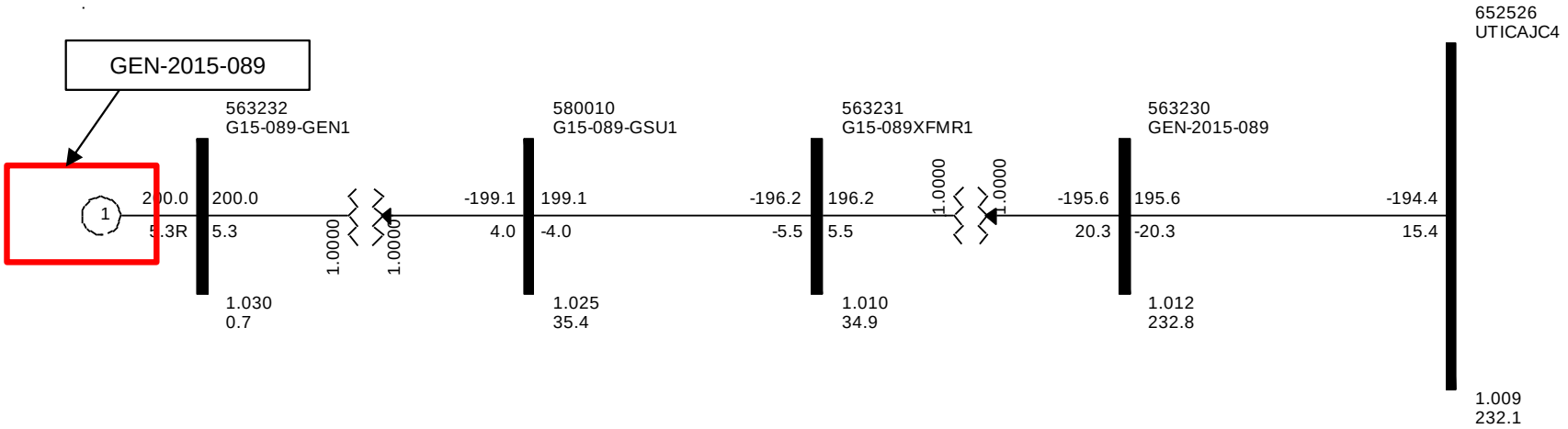

Figure 2-1. Power flow one-line diagram for interconnection project at the Utica 230kV POI (GEN-2015-089).

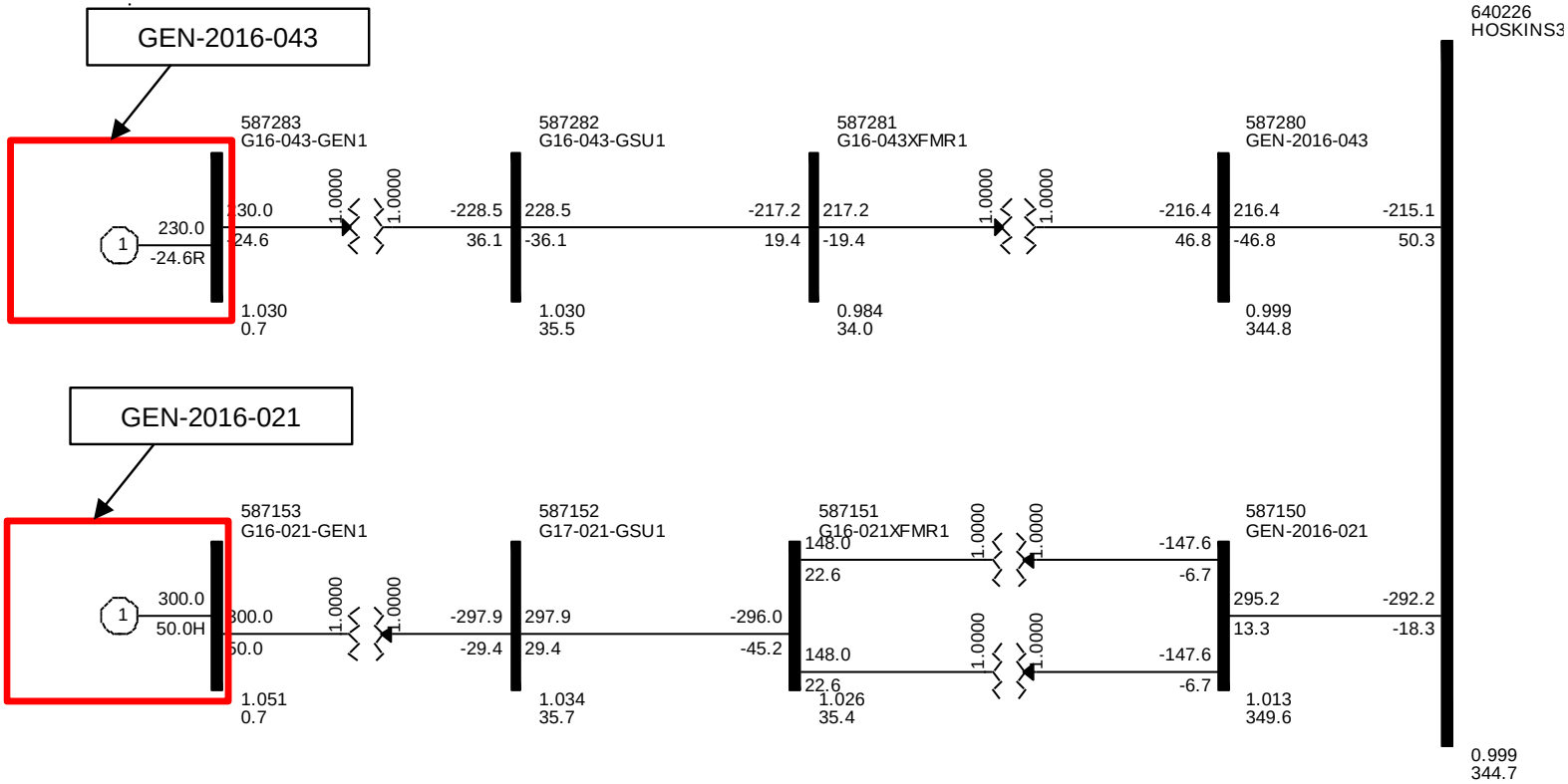

Figure 2-2. Power flow one-line diagram for interconnection project at the Hoskins 345kV POI (GEN-2016-021 and GEN-2016-043).

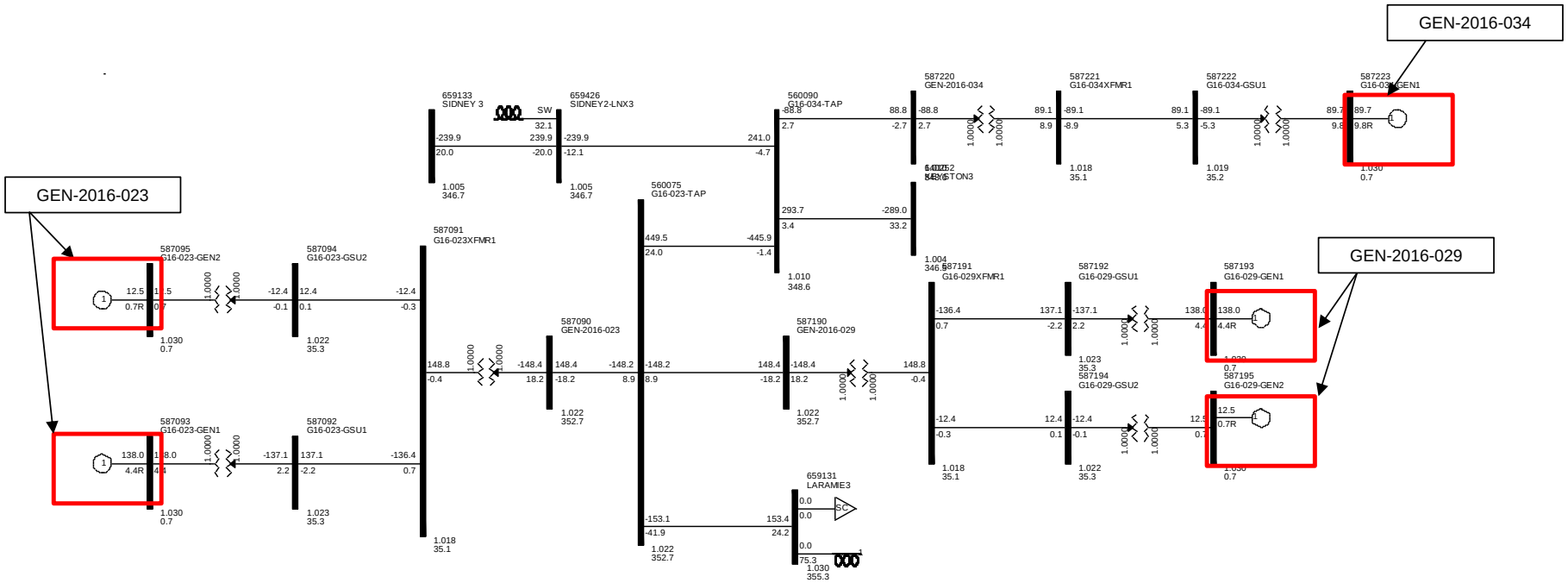

Figure 2-3. Power flow one-line diagram for interconnection project at the Tap Sidney – Laramie River 345kV POI (GEN-2016-023, GEN-2016-029 and GEN-2016-034).

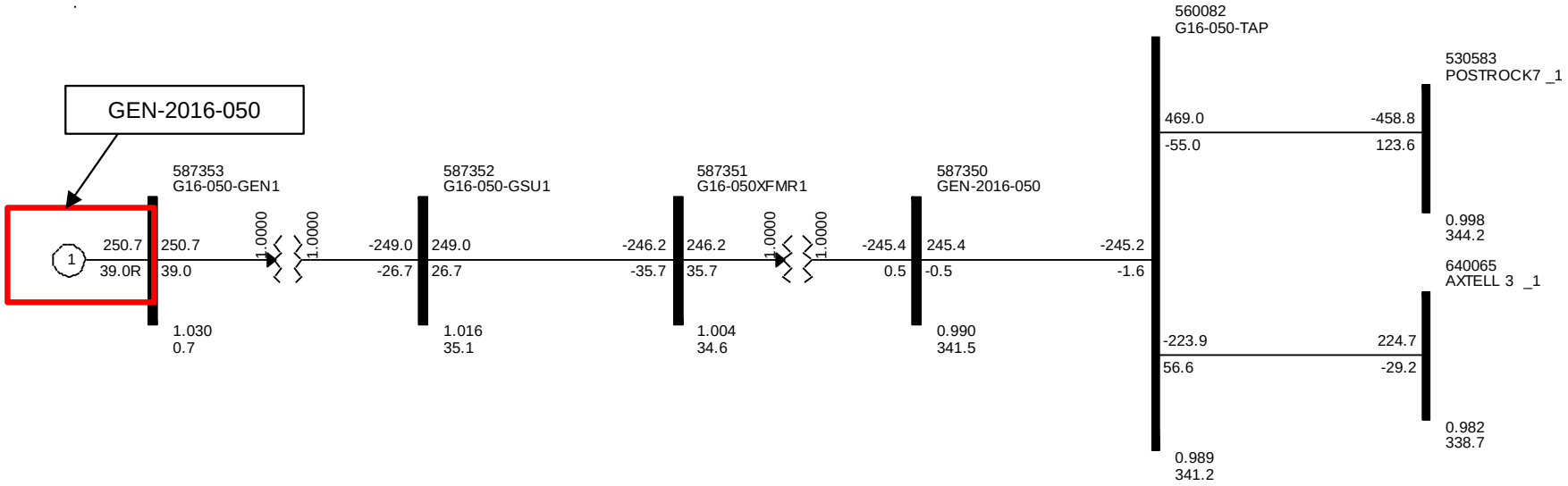

Figure 2-4. Power flow one-line diagram for interconnection project at the Axtell – Post Rock 345kV POI (GEN-2016-050).

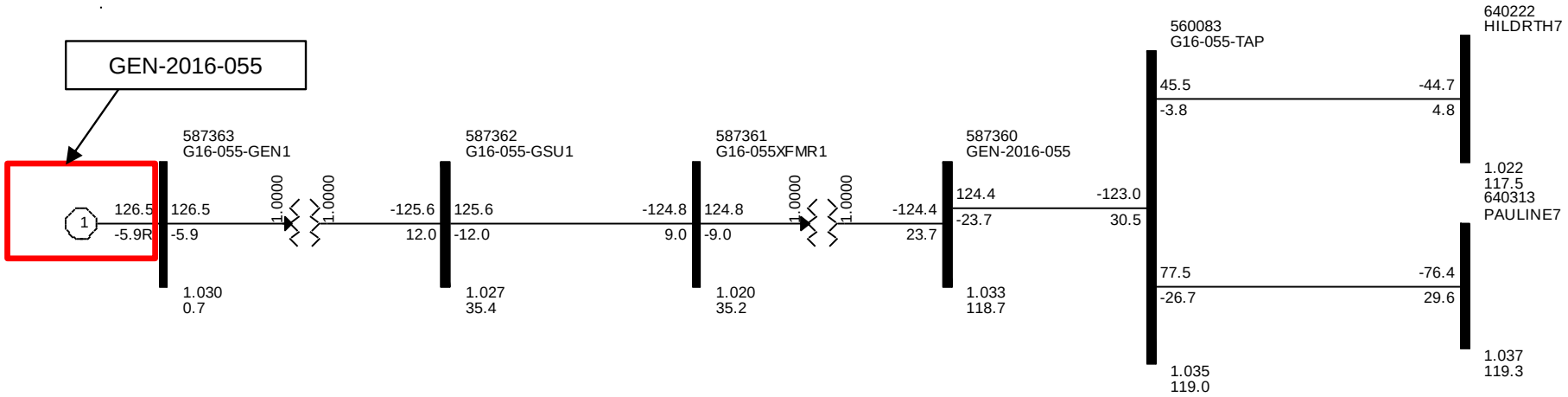

Figure 2-5. Power flow one-line diagram for interconnection project at the Tap Pauline – Hildreth 345kV POI (GEN-2016-055).

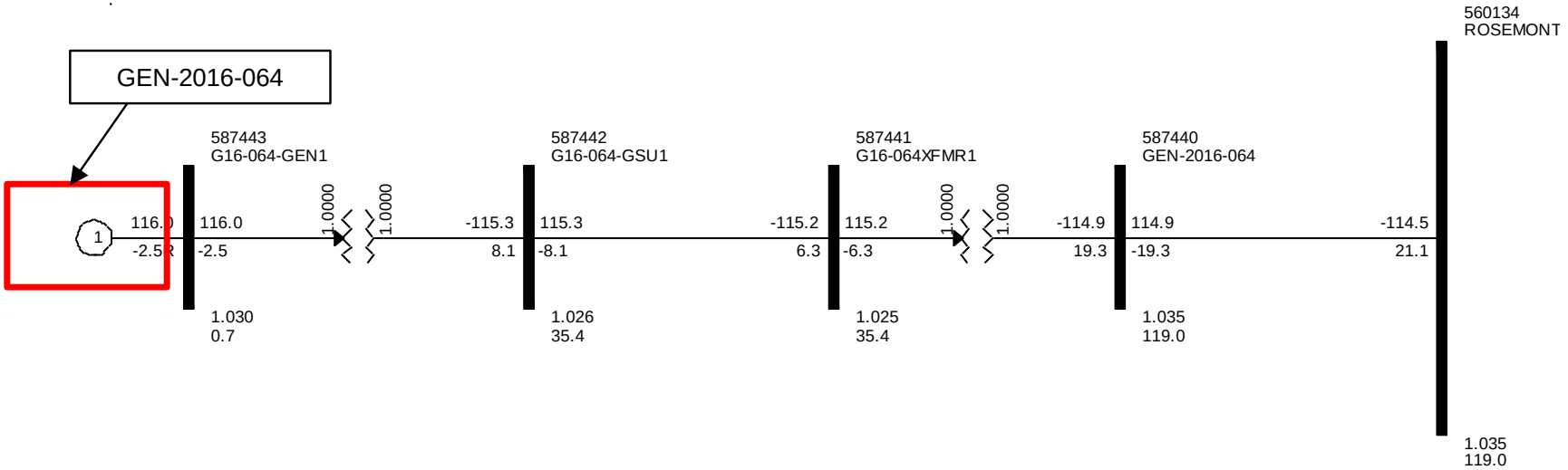

Figure 2-6. Power flow one-line diagram for interconnection project at the Tap Pauline – Guide 345kV POI (GEN-2016-064).

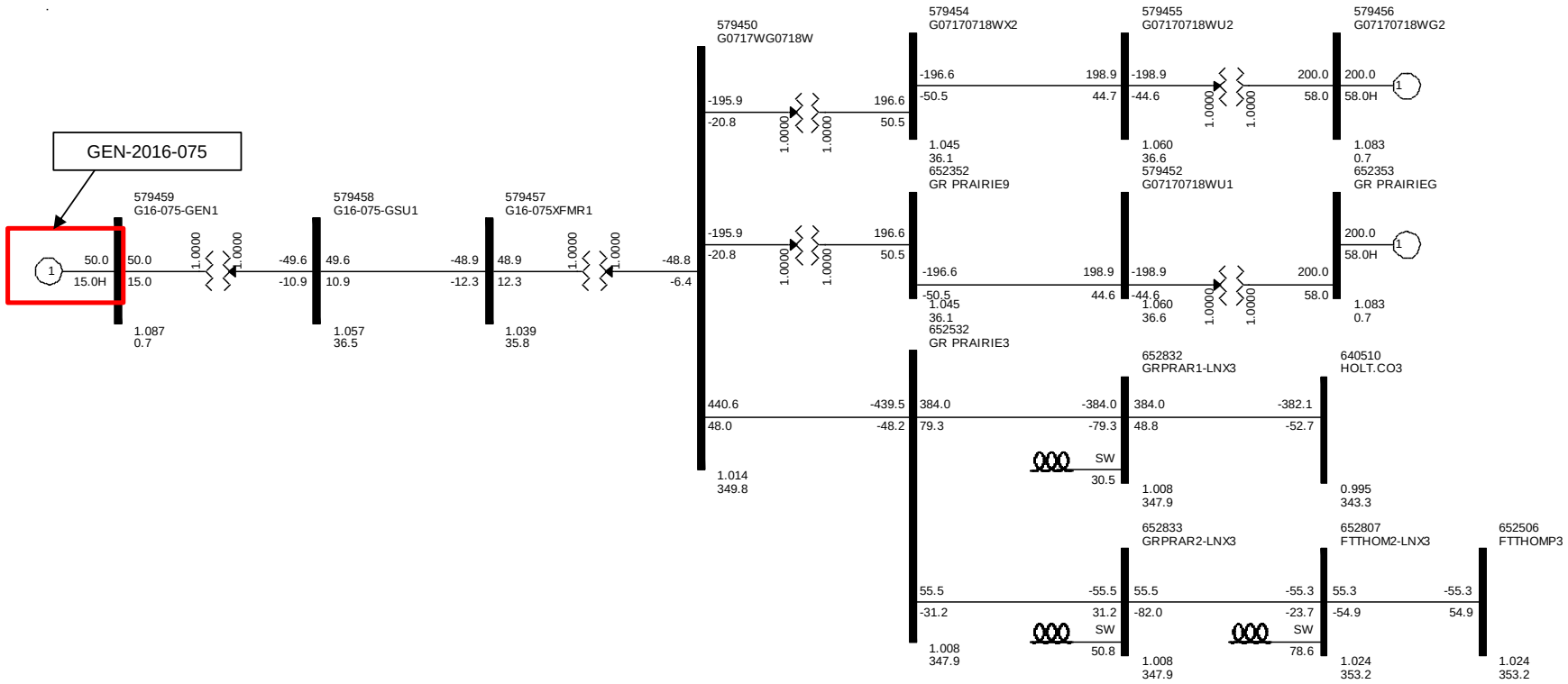

Figure 2-7. Power flow one-line diagram for interconnection project at the Tap Ft. Thompson – Hope County 345kV POI (GEN-2016-075).

Table 2-3
Case List with Contingency Description

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-021	GEN-2016-023	GEN-2016-029	GEN-2016-034	GEN-2016-043	GEN-2016-050	GEN-2016-055	GEN-2016-064	GEN-2016-075
1	FLT01-3PH	3 phase fault on the Hoskins (640226) to Antelope (640520) 345kV line circuit 1, near Hoskins. a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X				X				
2	FLT02-3PH	3 phase fault on the Hoskins (640226) to Shell Creek (640342) 345kV line circuit 1, near Hoskins. a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X				X				
3	FLT03-3PH	3 phase fault on the Hoskins (640226) to Raun (635200) 345kV line circuit 1, near Hoskins. a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X				X				
4	FLT04-3PH	3 phase fault on the Hoskins 345/230/13.8kV (640226/640227/643082) transformer, near Hoskins. a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.		X				X				
5	FLT05-3PH	3 phase fault on the Hoskins 345/115/13.8kV (640226/640228/640231) transformer, near Hoskins. a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 5 cycles by tripping the faulted transformer.		X				X				
6	FLT06-3PH	3 phase fault on the Raun (635200) to Sioux City (652564) 345kV line circuit 1, near Raun. a. Apply fault at the Raun 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				X				
7	FLT07-3PH	3 phase fault on the Raun (635200) to Lehigh (636010) 345kV line circuit 1, near Raun. a. Apply fault at the Raun 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				X				
8	FLT08-3PH	3 phase fault on the Raun (635200) to S3451 (645451) 345kV line circuit 1, near Raun. a. Apply fault at the Raun 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				X				
9	FLT09-3PH	3 phase fault on the Raun (635200) to Highland (635400) 345kV line circuit 1, near Raun. a. Apply fault at the Raun 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				X				
10	FLT10-3PH	3 phase fault on the Raun 345/161kV (635200/635201) transformer circuit 1, near Raun. a. Apply fault at the Raun 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				X				
11	FLT11-3PH	3 phase fault on the Raun (635200) to Highland (635400) 345kV line circuit 1, near Raun. a. Apply fault at the Raun 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				X				
12	FLT12-3PH	3 phase fault on the Shell Creek (640342) to Columbus (640125) 345kV line circuit 1, near Shell Creek. a. Apply fault at the Shell Creek 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X				X				

Table 2-3 (Continued)
Case List with Contingency Description

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-021	GEN-2016-023	GEN-2016-029	GEN-2016-034	GEN-2016-043	GEN-2016-050	GEN-2016-055	GEN-2016-064	GEN-2016-075
13	FLT13-3PH	3 phase fault on the Shell Creek 345/230/13.8kV (640342/640343/643136) transformer, near Shell Creek. a. Apply fault at the Shell Creek 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X				X				
14	FLT14-3PH	3 phase fault on the Antelope 345/115/13.8kV (640520/640521/640524) transformer, near Antelope. a. Apply fault at the Antelope 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X				X				
15	FLT15-3PH	3 phase fault on the Hoskins 230/115/13.8kV (640227/640228/643083) transformer, near Hoskins. a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				X				
16	FLT16-3PH	3 phase fault on the Hoskins (640227) to G10-051-Tap (560347) 230kV line circuit 1, near Hoskins. a. Apply fault at the Hoskins 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				X				
17	FLT17-3PH	3 phase fault on the Hoskins (640228) to Norfolk (640298) 115kV line circuit 1, near Hoskins. a. Apply fault at the Hoskins 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.		X				X				
18	FLT18-3PH	3 phase fault on the Hoskins (640228) to Belden (640080) 115kV line circuit 1, near Hoskins. a. Apply fault at the Hoskins 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.		X				X				
19	FLT19-3PH	3 phase fault on the Hoskins (640228) to Norfolk North (640296) 115kV line circuit 1, near Hoskins. a. Apply fault at the Hoskins 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.		X				X				
20	FLT20-3PH	3 phase fault on the Hoskins (640228) to Stanton West (640363) 115kV line circuit 1, near Hoskins. a. Apply fault at the Hoskins 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.		X				X				
21	FLT21-SB	**Hoskins 345 kV Stuck Breaker Scenario 1** a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 16 cycles and trip the following elements c. Hoskins (640226) – Shell Creek (640342) 345kV d. Hoskins (640226) – Raun (635200) 345kV		X				X				
22	FLT22-SB	**Hoskins 345 kV Stuck Breaker Scenario 2** a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 16 cycles and trip the following elements c. Hoskins (640226) – Shell Creek (640342) 345kV d. Hoskins (640226) – Antelope (640520) 345kV		X				X				
23	FLT23-SB	**Hoskins 345 kV Stuck Breaker Scenario 3** a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 16 cycles and trip the following elements c. Hoskins 345/230/13.8kV (640226/640227/643082) transformer d. Hoskins 345/115/13.8kV (640226/640228/640231) transformer		X				X				

Table 2-3 (Continued)
Case List with Contingency Description

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-021	GEN-2016-023	GEN-2016-029	GEN-2016-034	GEN-2016-043	GEN-2016-050	GEN-2016-055	GEN-2016-064	GEN-2016-075
24	FLT24-PO	**Prior Outage of Hoskins 345 kV (640226) to Raun 345 kV (635200) CKT 1;** 3 phase fault on Hoskins 345kV (640226) to Antelope 345kV (640520), near Hoskins. a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X				X				
25	FLT25-PO	**Prior Outage of Hoskins 345 kV (640226) to Raun 345 kV (635200) CKT 1;** 3 phase fault on Hoskins 345kV (640226) to Shell Creek 345kV (640342), near Hoskins. a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X				X				
26	FLT26-PO	**Prior Outage of Hoskins 345 kV (640226) to Raun 345 kV (635200) CKT 1;** 3 phase fault on Hoskins 345/115/13.8kV (640226/640228/640298) transformer, near Hoskins. a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X				X				
27	FLT27-PO	**Prior Outage of Hoskins 345 kV (640226) to Antelope 345 kV (640520) CKT 1;** 3 phase fault on Hoskins 345kV (640226) to Raun 345kV (635200), near Hoskins. a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X				X				
28	FLT28-PO	**Prior Outage of Hoskins 345 kV (640226) to Antelope 345 kV (640520) CKT 1;** 3 phase fault on Hoskins 345kV (640226) to Shell Creek 345kV (640342), near Hoskins. a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X				X				
29	FLT29-PO	**Prior Outage of Hoskins 345 kV (640226) to Antelope 345 kV (640520) CKT 1;** 3 phase fault on Hoskins 345/115/13.8kV (640226/640228/640298) transformer, near Hoskins. a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X				X				
30	FLT30-PO	**Prior Outage of Hoskins 345/230/13.8 kV (640226/640227/643082) Transformer;** 3 phase fault on Hoskins 345kV (640226) to Antelope 345kV (640520), near Hoskins. a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X				X				
31	FLT31-PO	**Prior Outage of Hoskins 345/230/13.8 kV (640226/640227/643082) Transformer;** 3 phase fault on Hoskins 345kV (640226) to Shell Creek 345kV (640342), near Hoskins. a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X				X				
32	FLT32-PO	**Prior Outage of Hoskins 345/230/13.8 kV (640226/640227/643082) Transformer;** 3 phase fault on Hoskins 345kV (640226) to Raun 345kV (635200), near Hoskins. a. Apply fault at the Hoskins 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.		X				X				
33	FLT33-3PH	**3 phase fault on the G16-034-Tap (560090) to Sidney2-LNX (659426) TO SIDNEY (659133) 345kV line circuit 1, near G16-034-Tap.** a. Apply fault at the G16-034-Tap 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.			X	X	X					

Table 2-3 (Continued)
Case List with Contingency Description

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-021	GEN-2016-023	GEN-2016-029	GEN-2016-034	GEN-2016-043	GEN-2016-050	GEN-2016-055	GEN-2016-064	GEN-2016-075
34	FLT34-3PH	3 phase fault on the G16-034-Tap (560090) to G16-023-Tap (560075) 345kV line circuit 1, near G16-034-Tap. a. Apply fault at the G16-034-Tap 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.			X	X	X					
35	FLT35-3PH	3 phase fault on the G16-023-Tap (560075) to Laramie (659131) 345kV line circuit 1, near G16-023-Tap. a. Apply fault at the G16-023-Tap 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.			X	X	X					
36	FLT36-3PH	3 phase fault on the Laramie (659131) to Stegall (659135) 345kV line circuit 1, near Laramie. a. Apply fault at the Laramie 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.			X	X	X					
37	FLT37-3PH	**3 phase fault on the Sidney (659133) to Sidney2-LNX (659426) TO G16-34-TAP (560090) 345kV line circuit 1, near Sidney.** a. Apply fault at the Sidney 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.			X	X	X					
38	FLT38-3PH	**3 phase fault on the Sidney (659133) to Sidney1-LNX (659425) TO KEYSTONE (640252) 345kV line circuit 1, near Sidney.** a. Apply fault at the Sidney 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.			X	X	X					
39	FLT39-3PH	3 phase fault on the Sidney 345/230/13.8kV (659133/659210/659168) Transformer, near Sidney. a. Apply fault at the Sidney 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.			X	X	X					
40	FLT40-3PH	3 phase fault on the Ogalala 230/115/13.8kV (640302/640304/643115) Transformer circuit 1, near Ogalala 230 kV. a. Apply fault at the Ogalala 230 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.			X	X	X					
41	FLT41-3PH	3 phase fault on the Ogalala (640302) to Gentleman (640184) 230 kV line circuit 1, near Ogalala. a. Apply fault at the Ogalala 230kV bus. b. Clear fault after 5 cycles and trip the faulted line and remove fault.			X	X	X					
42	FLT42-3PH	3 phase fault on the Sidney (659134) to Sidney West (652584) 230kV line circuit 1, near Sidney. a. Apply fault at the Sidney 230 kV bus. b. Clear fault after 5 cycles, trip the faulted line, and remove the fault. c. Block the DC tie at SIDNEY 4.			X	X	X					
43	FLT43-SB	**Sidney 230 kV Stuck Breaker Scenario 1** a. Apply single phase fault at the Sidney (659134) 230kV bus. b. Wait 16 cycles and remove fault. c. Trip Sidney (659134) to Sidney Xfmr (659210) 230kV line circuit 1. d. Trip Sidney (659134) to Ogalala (640302) 230kV line circuit 1.			X	X	X					
44	FLT44-SB	**Sidney 230 kV Stuck Breaker Scenario** a. Apply single phase fault at the Sidney (659134) 230 kV bus. b. Wait 16 cycles and remove fault. c. Trip Sidney (659134) to Sidney Xfmr (659210) 230 kV line circuit 1. d. Trip Sidney (659134) 230 kV / (652572) 115 kV / (659803) 13.8 kV transformer circuit 1.			X	X	X					

Table 2-3 (Continued)
Case List with Contingency Description

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-021	GEN-2016-023	GEN-2016-029	GEN-2016-034	GEN-2016-043	GEN-2016-050	GEN-2016-055	GEN-2016-064	GEN-2016-075
45	FLT45-SB	**Sidney 345 kV Stuck Breaker Scenario 1** **a. Apply single phase fault at the Sidney2-LNX (659426) 345kV bus.** b. Wait 16 cycles and remove fault. **c. Trip Sidney2-LNX (659426) to G16-034-Tap (560090) 345kV line circuit 1.** **d. Trip Sidney2-LNX3 (659426) to Sidney (659133) 345kV line circuit 1**			X	X	X					
46	FLT46-SB	**Stegall 345 kV Stuck Breaker Scenario 1** a. Apply single phase fault at the Stegall (659135) 345kV bus. b. Wait 16 cycles and remove fault. c. Trip Stegall (659135) to Laramie (659131) 345kV line circuit 1. d. Trip Stegall (659135) to Sidney (659133) 345kV line circuit 1			X	X	X					
47	FLT47-SB	**Keystone 345 kV Stuck Breaker 3310** a. Apply single phase fault at the Keystone (640252) 345kV bus on the Keystone to Sidney (659133) ckt1 345kV line. b. Run 16 cycles, remove fault. c. Trip line from Keystone (640252) to Sidney (659133) 345kV. d. Trip line from Keystone (640252) to Gentleman (640183) 345kV.			X	X	X					
48	FLT48-SB	**Keystone 345 kV Stuck Breaker 3312** a. Apply single phase fault at the Keystone (640252) 345kV bus on the Keystone to Sidney (659133) ckt1 345kV line. b. Run 16 cycles, remove fault. c. Trip line from Keystone (640252) to Sidney (659133) 345kV. d. Trip line from Keystone (640252) to Gentleman (640183) 345kV.			X	X	X					
49	FLT49-SB	**Keystone 345 kV Stuck Breaker 3304** a. Apply single phase fault at the Keystone (640252) 345kV bus on the Keystone to Gentleman (640183) ckt1 345kV line. b. Run 16 cycles, remove fault. c. Trip line from Keystone (640252) to Gentleman (640183) 345kV. d. Disconnect three winding transformer at bus 640252/640253/640254.			X	X	X					
50	FLT50-PO	**Prior outage on the Sidney (659134) – Sidney Xfmr (659210) 230 kV line circuit 1** 3 phase fault on the Sidney (659133) to Stegall (659135) 345kV line circuit 1, near Sydney. a. Apply fault at the Sidney 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 16 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X	X	X					
51	FLT51-PO	**Prior outage on the Sidney (659134) – Sidney Xfmr (659210) 230 kV line circuit 1** **3 phase fault on the Sidney (659133) to Sidney2-LNX (659426) TO G16-034-TAP (560090) 345kV line circuit 1, near Sydney.** a. Apply fault at the Sidney 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line. c. Wait 16 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.			X	X	X					

Table 2-3 (Continued)
Case List with Contingency Description

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-021	GEN-2016-023	GEN-2016-029	GEN-2016-034	GEN-2016-043	GEN-2016-050	GEN-2016-055	GEN-2016-064	GEN-2016-075
52	FLT52-3PH	3 phase fault on the G16-050-Tap (560082) to Axtell (640065) 345kV line circuit 1, near G16-050-Tap. a. Apply fault at the G16-050-Tap 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.							X			
53	FLT53-3PH	3 phase fault on the G16-050-Tap (560082) to Post Rock (530583) 345kV line circuit 1, near G16-050-Tap. a. Apply fault at the G16-050-Tap 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.							X			
54	FLT54-3PH	3 phase fault on the Axtell (640065) to Sweetwater (640374) 345kV line circuit 1, near Axtell. a. Apply fault at the Axtell 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.							X			
55	FLT55-3PH	3 phase fault on the Axtell (640065) to Pauline (640312) 345kV line circuit 1, near Axtell. a. Apply fault at the Axtell 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.							X	X	X	
56	FLT56-3PH	3 phase fault on the Axtell 345/115/13.8kV (640065/640066/640067) Transformer, near Axtell. a. Apply fault at the Axtell 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.							X			
57	FLT57-3PH	3 phase fault on the Post Rock (530583) to G13-010-Tap (562334) 345kV line circuit 1, near Post Rock. a. Apply fault at the Post Rock 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.							X			
58	FLT58-3PH	3 phase fault on the Post Rock 345/230/13.8kV (530583530584/530673) Transformer, near Post Rock. a. Apply fault at the Post Rock 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.							X			
59	FLT59-SB	**Axtell 345 kV Stuck Breaker Scenario 1** a. Apply fault at the Axtell 345kV bus. b. Clear fault after 16 cycles and trip the following elements c. Axtell (640065) – G16-050-Tap (560082) 345kV d. Axtell (640065) – Pauline (640312) 345kV							X			
60	FLT60-SB	**Axtell 345 kV Stuck Breaker Scenario 2** a. Apply fault at the Axtell 345kV bus. b. Clear fault after 16 cycles and trip the following elements c. Axtell (640065) – G16-050-Tap (560082) 345kV d. Axtell (640065) – Sweetwater (640374) 345kV							X			
61	FLT61-SB	**Axtell 345 kV Stuck Breaker Scenario 3** a. Apply fault at the Axtell 345kV bus. b. Clear fault after 16 cycles and trip the following elements c. Axtell (640065) – Pauline (640312) 345kV d. Axtell (640065) – Sweetwater (640374) 345kV							X			
62	FLT62-SB	**Post Rock 345 kV Stuck Breaker Scenario 1** a. Apply fault at the Post Rock 345kV bus. b. Clear fault after 16 cycles and trip the following elements c. Post Rock (530583) – G16-050-Tap (560082) 345kV d. Post Rock (530583) – G13-010-Tap (562334) 345kV							X			

Table 2-3 (Continued)
Case List with Contingency Description

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-021	GEN-2016-023	GEN-2016-029	GEN-2016-034	GEN-2016-043	GEN-2016-050	GEN-2016-055	GEN-2016-064	GEN-2016-075
63	FLT63-SB	**Post Rock 345 kV Stuck Breaker Scenario 2** a. Apply fault at the Post Rock 345kV bus. b. Clear fault after 16 cycles and trip the following elements c. Post Rock (530583) – G16-050-Tap (560082) 345kV d. Post Rock 345/230/13.8kV (530583/530584/530673) Transformer							X			
64	FLT64-SB	**Post Rock 345 kV Stuck Breaker Scenario 3** a. Apply fault at the Post Rock 345kV bus. b. Clear fault after 16 cycles and trip the following elements c. Post Rock (530583) – G13-010-Tap (562334) 345kV d. Post Rock 345/230/13.8kV (530583/530584/530673) Transformer							X			
65	FLT65-PO	**Prior Outage of G16-050-Tap 345 kV (560082) to Axtell 345 kV (640065) CKT 1;** 3 phase fault on Post Rock 345kV (530583) to G13-010-Tap 345kV (562334), near Post Rock. a. Apply fault at the Post Rock 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.							X			
66	FLT66-PO	**Prior Outage of G16-050-Tap 345 kV (560082) to Axtell 345 kV (640065) CKT 1;** 3 phase fault on Post Rock 345/230/13.8kV (530583/530584/530673) Transformer, near Post Rock. a. Apply fault at the Post Rock 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.							X			
67	FLT67-PO	**Prior Outage of G16-050-Tap 345 kV (560082) to Post Rock 345 kV (530583) CKT 1;** 3 phase fault on Axtell 345kV (640065) to Sweetwater 345kV (640374), near Axtell. a. Apply fault at the Axtell 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.							X			
68	FLT68-PO	**Prior Outage of G16-050-Tap 345 kV (560082) to Post Rock 345 kV (530583) CKT 1;** 3 phase fault on Axtell 345kV (640065) to Pauline 345kV (640312), near Axtell. a. Apply fault at the Axtell 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.							X			
69	FLT69-PO	**Prior Outage of G16-050-Tap 345 kV (560082) to Post Rock 345 kV (530583) CKT 1;** 3 phase fault on Axtell 345/115/13.8kV (640065/640066/640067) Transformer, near Axtell. a. Apply fault at the Axtell 345kV bus. b. Clear fault after 5 cycles by tripping the faulted line.							X			
70	FLT70-3PH	3 phase fault on the G16-055-Tap (560083) to Pauline (640313) 115kV line circuit 1, near G16-055-Tap. a. Apply fault at the G16-055-Tap 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.								X	X	
71	FLT71-3PH	3 phase fault on the G16-055-Tap (560083) to Hildreth (640222) 115kV line circuit 1, near G16-055-Tap. a. Apply fault at the G16-055-Tap 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.								X		
72	FLT72-3PH	3 phase fault on the Pauline (640313) to Hasting (640215) 115kV line circuit 1, near Pauline. a. Apply fault at the Pauline 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.								X	X	

Table 2-3 (Continued)
Case List with Contingency Description

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-021	GEN-2016-023	GEN-2016-029	GEN-2016-034	GEN-2016-043	GEN-2016-050	GEN-2016-055	GEN-2016-064	GEN-2016-075
73	FLT73-3PH	3 phase fault on the Pauline (640313) to Rosemont (560134) 115kV line circuit 1, near Pauline. a. Apply fault at the Pauline 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.								X		
74	FLT74-3PH	3 phase fault on the Pauline 345/115/13.8 (**640312**/640313/640315) Transformer, near Pauline. a. Apply fault at the Pauline 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.								X	X	
75	FLT75-3PH	3 phase fault on the Hildreth (640222) to Holdredge (640224) 115kV line circuit 1, near Hildreth. a. Apply fault at the Hildreth 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.								X		
76	FLT76-SB	**Pauline 115 kV Stuck Breaker Scenario 1** a. Apply fault at the Pauline 115kV bus. b. Clear fault after 16 cycles and trip the following elements c. Pauline (640313) – G16-055-Tap (560083) 115kV d. Pauline (640313) – Hastings (640215) 115kV, circuit 1								X	X	
77	FLT77-SB	**Pauline 115 kV Stuck Breaker Scenario 2** a. Apply fault at the Pauline 115kV bus. b. Clear fault after 16 cycles and trip the following elements c. Pauline (640313) – G16-055-Tap (560083) 115kV d. Pauline (640313) – Rosemont (560134) 115kV								X	X	
78	FLT78-SB	**Pauline 115 kV Stuck Breaker Scenario 3** a. Apply fault at the Pauline 115kV bus. b. Clear fault after 16 cycles and trip the following elements c. Pauline (640313) – G16-055-Tap (560083) 115kV d. Pauline 345/115/13.8Kv (**640312**/640313/640315) Transformer								X	X	
79	FLT79-SB	**Pauline 115 kV Stuck Breaker Scenario 4** a. Apply fault at the Pauline 115kV bus. b. Clear fault after 16 cycles and trip the following elements c. Pauline (640313) – Rosemont (560134) 115kV d. Pauline 345/115/13.8Kv (**640312**/640313/640315) Transformer								X	X	
80	FLT80-SB	**Pauline 115 kV Stuck Breaker Scenario 5** a. Apply fault at the Pauline 115kV bus. b. Clear fault after 16 cycles and trip the following elements c. Pauline (640313) – Hasting (640215) 115kV, circuit 1 d. Pauline (640313) – Hasting (640215) 115kV, circuit 2								X	X	
81	FLT81-SB	**Holdredge 115 kV Stuck Breaker Scenario 1** a. Apply fault at the Holdredge 115kV bus. b. Clear fault after 16 cycles and trip the following elements c. Holdredge (640224) – Hildreth (640222) 115kV d. Holdredge (640224) – Orleans (640310) 115kV								X		
82	FLT82-PO	**Prior Outage of G16-055-Tap 115 kV (560083) to Hildreth 115 kV (640222) CKT 1;** 3 phase fault on Pauline 115kV (640313) to Rosemont 115kV (560134), near Pauline. a. Apply fault at the Pauline 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.								X		

Table 2-3 (Continued)
Case List with Contingency Description

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-021	GEN-2016-023	GEN-2016-029	GEN-2016-034	GEN-2016-043	GEN-2016-050	GEN-2016-055	GEN-2016-064	GEN-2016-075
83	FLT83-PO	**Prior Outage of G16-055-Tap 115 kV (560083) to Hildreth 115 kV (640222) CKT 1;** 3 phase fault on Pauline 115kV (640313) to Hastings 115kV (640215), near Pauline. a. Apply fault at the Pauline 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.								X		
84	FLT84-PO	**Prior Outage of G16-055-Tap 115 kV (560083) to Hildreth 115 kV (640222) CKT 1;** 3 phase fault on Pauline 345/115/13.8kV (640312/640313/640315) Transformer, near Pauline. a. Apply fault at the Pauline 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.								X		
85	FLT85-PO	**Prior Outage of G16-055-Tap 115 kV (560083) to Pauline 115 kV (640313) CKT 1;** 3 phase fault on Holdredge 115kV (640224) to Orleans 115kV (640310), near Holdredge. a. Apply fault at the Holdredge 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.								X		
86	FLT86-PO	**Prior Outage of G16-055-Tap 115 kV (560083) to Pauline 115 kV (640313) CKT 1;** 3 phase fault on Holdredge 115kV (640224) to Axtell 115kV (640066), near Holdredge. a. Apply fault at the Holdredge 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.								X		
87	FLT87-3PH	3 phase fault on the Rosemont (560134) to Guide Rock (640206) 115kV line circuit 1, near Rosemont. a. Apply fault at the Rosemont 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.									X	
88	FLT88-3PH	3 phase fault on the Rosemont (560134) to Pauline (640313) 115kV line circuit 1, near Rosemont. a. Apply fault at the Rosemont 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.									X	
89	FLT89-3PH	3 phase fault on the Guide Rock (640206) to Superior (640368) 115kV line circuit 1, near Guide Rock. a. Apply fault at the Guide Rock 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.									X	
90	FLT90-SB	**Guide Rock 115 kV Stuck Breaker Scenario 1** a. Apply fault at the Guide Rock 115kV bus. b. Clear fault after 16 cycles and trip the following elements c. Guide Rock (640206) – Rosemont (560134) 115kV d. Guide Rock (640206) – Superior (640368) 115kV									X	
91	FLT91-PO	**Prior Outage of Rosemont 115 kV (560134) to Pauline 115 kV (640313) CKT 1;** 3 phase fault on Hebron North 115kV (640218) to Carlton Junction (640105) 115kV line, near Hebron North. a. Apply fault at the Hebron North 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.									X	
92	FLT92-PO	**Prior Outage of Rosemont 115 kV (560134) to Guide Rock 115 kV (640206) CKT 1;** 3 phase fault on Pauline 115kV (640313) to Hastings 115kV (640215), near Pauline. a. Apply fault at the Pauline 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.									X	

Table 2-3 (Continued)
Case List with Contingency Description

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-021	GEN-2016-023	GEN-2016-029	GEN-2016-034	GEN-2016-043	GEN-2016-050	GEN-2016-055	GEN-2016-064	GEN-2016-075
93	FLT93-PO	**Prior Outage of Rosemont 115 kV (560134) to Guide Rock 115 kV (640206) CKT 1;** 3 phase fault on Pauline 115kV (640313) to G16-055-Tap 115kV (560083), near Pauline. a. Apply fault at the Pauline 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.									X	
94	FLT94-PO	**Prior Outage of Rosemont 115 kV (560134) to Guide Rock 115 kV (640206) CKT 1;** 3 phase fault on Pauline 345/115/13.8kV (640312/640313/640315) Transformer, near Pauline. a. Apply fault at the Pauline 115kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.									X	
95	FLT95-3PH	**3 phase fault on the Grand Prairie (652532) to GRPRAR1-LNX3 (652832) TO HOLT.CO3 (640510) 345kV line circuit 1, near Grand Prairie.** a. Apply fault at the Grand Prairie 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.										X
96	FLT96-3PH	**3 phase fault on the Grand Prairie (652532) to GRPRAR2-LNX3 (652833) TO FTTHOMP-LNX3 (652807) TO FTTHOMP3 (652506) 345kV line circuit 1, near Grand Prairie.** a. Apply fault at the Grand Prairie 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.										X
97	FLT97-3PH	3 phase fault on the Holt County (640510) to Grand Island (652871) 345kV line circuit 1, near Holt County. a. Apply fault at the Holt County 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.										X
98	FLT98-3PH (25SP)	3 phase fault on the Holt County (640510) to CHERRYC3 (640500) 345kV line circuit 1, near Holt County. a. Apply fault at the Holt County 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.										X
99	FLT99-3PH	**3 phase fault on the Ft Thompson (652506) to FTTHOM1-LNX3 (652806) TO G16-17-TAP (560074) 345kV line circuit 1, near Ft Thompson.** a. Apply fault at the Ft Thompson 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.										X
100	FLT100-3PH	3 phase fault on the Ft Thompson 345/230/14.8kV (652506/652507/652273) transformer, near Ft Thompson. a. Apply fault at the Ft Thompson 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.										X
101	FLT101-SB	**Grand Prairie 345 kV Stuck Breaker Scenario 1** **a. Apply fault at the GRPRAR1-LNX3 345kV bus.** b. Clear fault after 16 cycles and trip the following elements **c. GRPRAR1-LNX3 (652832) – Grand Prairie (652532) 345kV** **d. GRPRAR1-LNX3 (652832) – Holt County (640510) 345kV**										X
102	FLT102-SB	**Grand Prairie 345 kV Stuck Breaker Scenario 2** **a. Apply fault at the GRPRAR2-LNX3 345kV bus.** b. Clear fault after 16 cycles and trip the following elements c. GRPRAR2-LNX3 (652833) – Grand Prairie (652532) 345kV d. GRPRAR2-LNX3 (652833) – FTTHOM2-LNX3 (652807) 345kV TO FTTHOMP 3 (652506)										X

Table 2-3 (Continued)
Case List with Contingency Description

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-021	GEN-2016-023	GEN-2016-029	GEN-2016-034	GEN-2016-043	GEN-2016-050	GEN-2016-055	GEN-2016-064	GEN-2016-075
103	FLT103-PO	**Prior Outage of Grand Prairie 345 kV (652532) to GRPRAR1-LNX3 345 kV (652832) CKT 1 to HOLT.CO3 (640510);** **3 phase fault on the Ft Thompson (652506) to FTTHOM1-LNX3 (652806) 345kV line circuit 1, near Ft Thompson.** a. Apply fault at the Ft Thompson 345kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.										X
104	FLT104-PO	**Prior Outage of Grand Prairie 345 kV (652532) to GRPRAR1-LNX3 345 kV (652832) CKT 1 TO HOLTCO3 (640510); 3 phase fault on the Ft Thompson 345/230/14.8kV (652506/652507/652273) transformer, near Ft Thompson.** a. Apply fault at the Ft Thompson 345kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.										X
105	FLT105-PO	**Prior Outage of Grand Prairie 345 kV (652532) to GRPRAR2-LNX3 345 kV (652833) CKT 1 TO FTTHOM3-LNX3 (652807) TO FTTHOMP3 (652506);** **3 phase fault on the Holt County (640510) to Grand Island (652871) TO GR ISLD3 (652571) 345kV line circuit 1, near Holt County.** a. Apply fault at the Holt County 345kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.										X
106	FLT106-PO (25SP)	**Prior Outage of Grand Prairie 345 kV (652532) to GRPRAR2-LNX3 345 kV (652833) CKT 1 TO FTTHOIM2-LNX (652807) TO FTTHOMP3 (652506);** **3 phase fault on the Holt County (640510) to Thedford (640500) 345kV line circuit 1, near Holt County.** a. Apply fault at the Holt County 345kV bus. b. Clear fault after 6.5 cycles by tripping the faulted line.										X
107	FLT107-3PH	3 phase fault on the UticaJ4 (652526) to Rasmusn4 (652536) 230 kV line circuit 1 a. Apply fault at the the UticaJ4 230 kV bus b. Clear fault after 6 cycles by tripping the faulted line.	X									
108	FLT108-3PH	3 phase fault on the UticaJ4 (652526) to VFODNES4 (652398) 230 kV line circuit 1 a. Apply fault at the the UticaJ4 230 kV bus b. Clear fault after 6 cycles by tripping the faulted line.	X									
109	FLT109-3PH	3 phase fault on the UticaJ4 (652526) to FTRANDL4 (652509) 230 kV line circuit 1 a. Apply fault at the the UticaJ4 230 kV bus b. Clear fault after 6 cycles by tripping the faulted line.	X									
110	FLT110-3PH	3 phase fault on the Uticajc4 230/115/13.2kV (652526/652626/652627) Transformer. a. Apply fault at the the UticaJ4 230 kV bus b. Clear fault after 6 cycles by tripping the faulted line Uticajc4 230/115/13.2kV (652526/652626/652627) Transformer	X									
111	FLT111-SB	**RASMUSN4 230 kV Stuck Breaker Scenario 1** a. Apply fault at the Rasmusn4 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. Rasmusn4 (652536) – Uticajc4 (652526) 230kV d. Rasmusn4 (652536) – Siouxcy4 (652565) 230kV	X									

Table 2-3 (Continued)
Case List with Contingency Description

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-021	GEN-2016-023	GEN-2016-029	GEN-2016-034	GEN-2016-043	GEN-2016-050	GEN-2016-055	GEN-2016-064	GEN-2016-075
112	FLT112-SB	**VFODNES4 230 kV Stuck Breaker Scenario 1** a. Apply fault at the VFODNES4 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. VFODNES4 (652398) – Uticajc4 (652526) 230kV d. VFODNES4 (652398) – Siouxcy4 (652523) 230kV	X									
113	FLT113-SB	**FTRANDL4 230 kV Stuck Breaker Scenario 1** a. Apply fault at the VFODNES4 230 kV bus. b. Clear fault after 16 cycles and trip the following elements c. FTRANDL4 (652509) – Uticajc4 (652526) 230kV d. FTRANDL4 (652509) – Meadowgrove4 (640540) 230 kV	X									
114	FLT114-PO	**Prior Outage of Uticajc4 230 kV (652526) to Rasmusn4 230 kV (652536) CKT 1;** 3 phase fault on FTRANDL4 230 kV (652509) a. Apply fault at the FTRANDL4 (652509) 230 kV b. Clear fault after 6 cycles by tripping the faulted line.	X									
115	FLT115-PO	**Prior Outage of Uticajc4 230 kV (652526) to VFODNES4 230 kV (652398) CKT 1; 3 phase fault on RASMUSN4 230 kV (652536)** a. Apply fault at the RASMUSN4 (652536) 230 kV b. Clear fault after 6 cycles by tripping the faulted line.	X									
116	FLT116-PO	**Prior Outage of Uticajc4 230 kV (652526) to FTRANDL4 (652509) CKT 1; 3 phase fault on RASMUSN4 230 kV (652536)** a. Apply fault at the RASMUSN4 (652536) 230 kV b. Clear fault after 6 cycles by tripping the faulted line.	X									

SECTION 3: STABILITY ANALYSIS

The objective of the Stability Analysis was to determine the impacts of the generator interconnections on the stability and voltage recovery on the SPP transmission system. If problems with stability or voltage recovery were identified, the need for reactive compensation or system upgrades was investigated.

3.1 Approach

SPP provided MEPPI with the following three power flow cases:

- MDWG15-16WP_DIS1601_G09
- MDWG15-17SP_DIS1601_G09
- MDWG15-25SP_DIS1601_G09

Each case was examined prior to the Stability Analysis to ensure the case contained the proposed study projects and any previously queued projects listed in Tables 2-1 and 2-2 respectively. There was no suspect power flow data in the study area. The dynamic datasets were also verified and stable initial system conditions (i.e., "flat lines") were achieved. Three-phase and single phase-to-ground faults listed in Table 2-3 were examined. Single-phase fault impedances were calculated for each season to result in a voltage of approximately 60% of the pre-fault voltage. Refer to Table 3-1 for a list of the calculated single-phase fault impedances. Refer to Tables 3-2 through 3-11 for the calculated single-phase fault impedances for the Stand Alone scenarios.

Table 3-1
Calculated Single-Phase Fault Impedances for Cluster Scenario

[1]Ref. No.	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
1	FLT21-SB	-4437.5	-4437.5	-4437.5
2	FLT22-SB	-4437.5	-4437.5	-4437.5
3	FLT23-SB	-4437.5	-4437.5	-4437.5
4	FLT43-SB	-1375.0	-1375.0	-1375.0
5	FLT44-SB	-1375.0	-1375.0	-1375.0
6	FLT45-SB	-2203.1	-2203.1	-2203.1
7	FLT46-SB	-1750.0	-1750.0	-1750.0
8	FLT47-SB	-3218.8	-3218.8	-3218.8
9	FLT48-SB	-3218.8	-3218.8	-3218.8
10	FLT49-SB	-3218.8	-3218.8	-3218.8
11	FLT59-SB	-3421.9	-3421.9	-3421.9
12	FLT60-SB	-3421.9	-3421.9	-3421.9
13	FLT61-SB	-3421.9	-3421.9	-3421.9
14	FLT62-SB	-3421.9	-3421.9	-3421.9
15	FLT63-SB	-3421.9	-3421.9	-3421.9
16	FLT64-SB	-3421.9	-3421.9	-3421.9
17	FLT76-SB	-2203.1	-2203.1	-2203.1
18	FLT77-SB	-2203.1	-2203.1	-2203.1
19	FLT78-SB	-2203.1	-2203.1	-2203.1
20	FLT79-SB	-2203.1	-2203.1	-2203.1
21	FLT80-SB	-2203.1	-2203.1	-2203.1
22	FLT81-SB	-812.5	-875.0	-812.5
23	FLT90-SB	-625.0	-656.3	-656.3
24	FLT101-SB	-2406.3	-2406.3	-2406.3
25	FLT102-SB	-2406.3	-2406.3	-2406.3
26	FLT111-3PH-SB	-1750.0	-1750.0	-1750.0
27	FLT112-3PH-SB	-1750.0	-1875.0	-1750.0
28	FLT113-3PH-SB	-3015.6	-3015.6	-3015.6

(1) Refer to Table 2-3 for a description of the contingency scenario

Table 3-2
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2015-089

[1]Ref. No.	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
1	FLT111-SB	-1750.0	-1750.0	-1750.0
2	FLT112-SB	-1750.0	-1875.0	-1875.0
3	FLT113-SB	-3015.6	-3015.6	-3015.6

(1) Refer to Table 2-3 for a description of the contingency scenario

Table 3-3
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-021

[1]Ref. No.	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
1	FLT21-SB	-4437.5	-4437.5	-4437.5
2	FLT22-SB	-4437.5	-4437.5	-4437.5
3	FLT23-SB	-4437.5	-4437.5	-4437.5

Table 3-4
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-023

[1]Ref. No.	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
1	FLT43-SB	-1500.0	-1375.0	-1375.0
2	FLT44-SB	-1500.0	-1375.0	-1375.0
3	FLT45-SB	-2203.1	-2203.1	-2203.1
4	FLT46-SB	-1875.0	-1875.0	-1875.0
5	FLT47-SB	-3218.8	-3218.8	-3218.8
6	FLT48-SB	-3218.8	-3218.8	-3218.8
7	FLT49-SB	-3218.8	-3218.8	-3218.8

(1) Refer to Table 2-3 for a description of the contingency scenario

Table 3-5
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-029

[1]Ref. No.	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
1	FLT43-SB	-1500.0	-1375.0	-1375.0
2	FLT44-SB	-1500.0	-1375.0	-1375.0
3	FLT45-SB	-2203.1	-2203.1	-2203.1
4	FLT46-SB	-1875.0	-1875.0	-1875.0
5	FLT47-SB	-3218.8	-3218.8	-3218.8
6	FLT48-SB	-3218.8	-3218.8	-3218.8
7	FLT49-SB	-3218.8	-3218.8	-3218.8

(1) Refer to Table 2-3 for a description of the contingency scenario

Table 3-6
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-034

[1]Ref. No.	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
1	FLT43-SB	-1500.0	-1375.0	-1375.0
2	FLT44-SB	-1500.0	-1375.0	-1375.0
3	FLT45-SB	-2304.7	-2203.1	-2203.1
4	FLT46-SB	-1875.0	-1875.0	-1875.0
5	FLT47-SB	-3421.9	-3421.9	-3421.9
6	FLT48-SB	-3421.9	-3421.9	-3421.9
7	FLT49-SB	-3421.9	-3421.9	-3421.9

(1) Refer to Table 2-3 for a description of the contingency scenario

Table 3-7
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-043

[1]Ref. No.	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
1	FLT21-SB	-4031.3	-4031.3	-4031.3
2	FLT22-SB	-4031.3	-4031.3	-4031.3
3	FLT23-SB	-4031.3	-4031.3	-4031.3

(1) Refer to Table 2-3 for a description of the contingency scenario

Table 3-8
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-050

[1]Ref. No.	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
1	FLT59-SB	-3625.0	-3625.0	-3625.0
2	FLT60-SB	-3625.0	-3625.0	-3625.0
3	FLT61-SB	-3625.0	-3625.0	-3625.0
4	FLT62-SB	-3218.8	-3218.8	-3218.8
5	FLT63-SB	-3218.8	-3218.8	-3218.8
6	FLT64-SB	-3218.8	-3218.8	-3218.8

(1) Refer to Table 2-3 for a description of the contingency scenario

Table 3-9
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-055

[1]Ref. No.	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
1	FLT76-SB	-2203.1	-2203.1	-2203.1
2	FLT77-SB	-2203.1	-2203.1	-2203.1
3	FLT78-SB	-2203.1	-2203.1	-2203.1
4	FLT79-SB	-2203.1	-2203.1	-2203.1
5	FLT80-SB	-2203.1	-2203.1	-2203.1
6	FLT81-SB	-843.8	-875.0	-875.0

(1) Refer to Table 2-3 for a description of the contingency scenario

Table 3-10
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-064

[1]Ref. No.	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
1	FLT76-SB	-2203.1	-2203.1	-2203.1
2	FLT77-SB	-2203.1	-2203.1	-2203.1
3	FLT78-SB	-2203.1	-2203.1	-2203.1
4	FLT79-SB	-2203.1	-2203.1	-2203.1
5	FLT80-SB	-2203.1	-2203.1	-2203.1

(1) Refer to Table 2-3 for a description of the contingency scenario

Table 3-11
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-075

[1]Ref. No.	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
1	FLT101-SB	-2609.4	-2406.3	-2406.3
2	FLT102-SB	-2609.4	-2406.3	-2406.3

(1) Refer to Table 2-3 for a description of the contingency scenario

Bus voltages, machine rotor angles, and previously queued generation in the study area were monitored in addition to bus voltages and machine rotor angles in the following areas:

- 640 NPPD
- 645 OPPD
- 650 LES
- 652 WAPA
- 600 XEL
- 608 MP
- 613 SMMPA
- 615 GRE

- 620 OTP
- 661 MDU

Requested and previously queued generation outside the above study area was also monitored.

The results of the analysis determined if reactive compensation or system upgrades were required to obtain acceptable system performance. If additional reactive compensation was required, the size, type, and location were determined. The proposed reactive reinforcements would ensure the wind or solar farm meets FERC Order 661A low voltage requirements and return the wind or solar farm to its pre-disturbance operating voltage. If the results indicated the need for fast responding reactive support, dynamic support such as an SVC or STATCOM was investigated. If tripping of the prior queued projects was observed during the stability analysis (for under/over voltage or under/over frequency) the simulations were re-ran with the prior queued project's voltage and frequency tripping disabled.

3.2 Cluster Scenario Stability Analysis Results

The Cluster Scenario Stability Analysis determined there were no contingencies that resulted in system instability or generation tripping offline for the examined seasonal peak conditions when all generation interconnection requests were at 100% output.

However, voltage instability and low post-fault voltage recovery were observed for all examined seasonal peak conditions. After discussion with SPP, it was determined that the following upgrades should be implemented for all seasons:

- Keystone to Banner County (G16-034 Tap) 345 kV circuit #1
- SPP R Plan
    - Cherry County/Thedford 345/115/13.8 kV transformer
    - Gentleman to Cherry County 345 kV circuit #1
    - Holt County to Cherry County 345 kV circuit #1
- Rosemont to Pauline 115 kV circuit #2
- Gentleman to Keystone 345 kV circuit #2

After implementing the above upgrades, voltage instability was still observed for contingencies FLT43-SB, FLT44-SB, FLT105-PO and FLT106-PO for all seasonal peak conditions examined. After discussion with SPP, it was determined that for the stuck breaker contingencies, FLT43-SB and FLT-44SB, the Sidney DC tie should be blocked and the shunt capacitor near Sidney 230 kV should be taken out of service. For the prior outage contingencies, FLT105-PO and FLT106-PO, 350 MW of generation curtailment was required. GEN-2016-075 (50MW) and GEN-2015-023 units 1 and 2 (each 150 MW) should be taken out of service in order to decrease the generation around Cherry County.

After implementing these changes, observed voltage violations were mitigated. Plots of the bus voltages observed for the FLT43-SB and FLT105-PO with and without mitigation are shown in Figures 3-1 through 3-6.

Refer to Table 3-12 for a summary of the Cluster Scenario Stability Analysis results for the contingencies listed in Table 2-3. Table 3-12 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria include ensuring that the transient voltage recovers to 0.7 p.u. in 2.5 seconds after the fault is cleared and ending in a steady-state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

Table 3-12
Cluster Scenario: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

[1]Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT01-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT02-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
3	FLT03-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
4	FLT04-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
5	FLT05-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
6	FLT06-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
7	FLT07-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
8	FLT08-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
9	FLT09-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
10	FLT10-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
11	FLT11-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
12	FLT12-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
13	FLT13-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
14	FLT14-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
15	FLT15-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
16	FLT16-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
17	FLT17-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
18	FLT18-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
19	FLT19-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
20	FLT20-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
21	FLT21-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
22	FLT22-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
23	FLT23-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
24	FLT24-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
25	FLT25-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
26	FLT26-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
27	FLT27-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
28	FLT28-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
29	FLT29-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
30	FLT30-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
31	FLT31-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
32	FLT32-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
33	FLT33-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
34	FLT34-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
35	FLT35-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
36	FLT36-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
37	FLT37-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
38	FLT38-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
39	FLT39-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
40	FLT40-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
41	FLT41-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
42	FLT42-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
43	FLT43-SB	No	Yes	Not Compliant	Unstable	No	Yes	Not Compliant	Unstable	No	Yes	Not Compliant	Unstable
44	FLT44-SB	No	No	Not Compliant	Unstable	No	No	Not Compliant	Unstable	No	No	Compliant	Stable
45	FLT45-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
46	FLT46-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
47	FLT47-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
48	FLT48-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
49	FLT49-SB	No	No	Not Compliant	Unstable	No	No	Compliant	Stable	No	No	Not Compliant	Unstable
50	FLT50-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
51	FLT51-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
52	FLT52-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
53	FLT53-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
54	FLT54-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
55	FLT55-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
56	FLT56-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
57	FLT57-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
58	FLT58-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
59	FLT59-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
60	FLT60-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable

Table 3-12 (Continued)
Cluster Scenario: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

[1]Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
61	FLT61-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
62	FLT62-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
63	FLT63-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
64	FLT64-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
65	FLT65-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
66	FLT66-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
67	FLT67-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
68	FLT68-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
69	FLT69-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
70	FLT70-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
71	FLT71-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
72	FLT72-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
73	FLT73-3PH	Yes	No	Not Compliant	Unstable	No	No	Compliant	Stable	Yes	No	Not Compliant	Unstable
74	FLT74-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
75	FLT75-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
76	FLT76-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
77	FLT77-SB	No	No	Compliant	Stable	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable
78	FLT78-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
79	FLT79-SB	No	No	Compliant	Stable	No	No	Not Compliant	Unstable	No	No	Not Compliant	Unstable
80	FLT80-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
81	FLT81-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
82	FLT82-PO	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable	No	No	Not Compliant	Unstable
83	FLT83-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
84	FLT84-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
85	FLT85-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
86	FLT86-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
87	FLT87-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
88	FLT88-3PH	Yes	No	Compliant	Stable	No	No	Not Compliant	Unstable	No	No	Not Compliant	Unstable
89	FLT89-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
90	FLT90-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
91	FLT91-PO	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable
92	FLT92-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
93	FLT93-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
94	FLT94-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
95	FLT95-3PH	No	No	Not Compliant	Unstable	No	No	Not Compliant	Unstable	No	No	Not Compliant	Unstable
96	FLT96-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
97	FLT97-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
98	FLT98-3PH									No	No	Compliant	Stable
99	FLT99-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
100	FLT100-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
101	FLT101-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
102	FLT102-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
103	FLT103-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
104	FLT104-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
105	FLT105-PO	No	No	Not Compliant	Unstable	No	No	Not Compliant	Unstable	No	No	Not Compliant	Unstable
106	FLT106-PO									No	No	Not Compliant	Unstable
107	FLT107-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
108	FLT108-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
109	FLT109-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
110	FLT110-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
111	FLT111-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
112	FLT112-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
113	FLT113-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
114	FLT114-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
115	FLT115-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
116	FLT116-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable

(1) Refer to Tabel 2-3 for a description of the contingency scenario

(2) The highlighted cases were observed to have violations. These violations were eliminated by the mitigation recommendations provided by SPP.

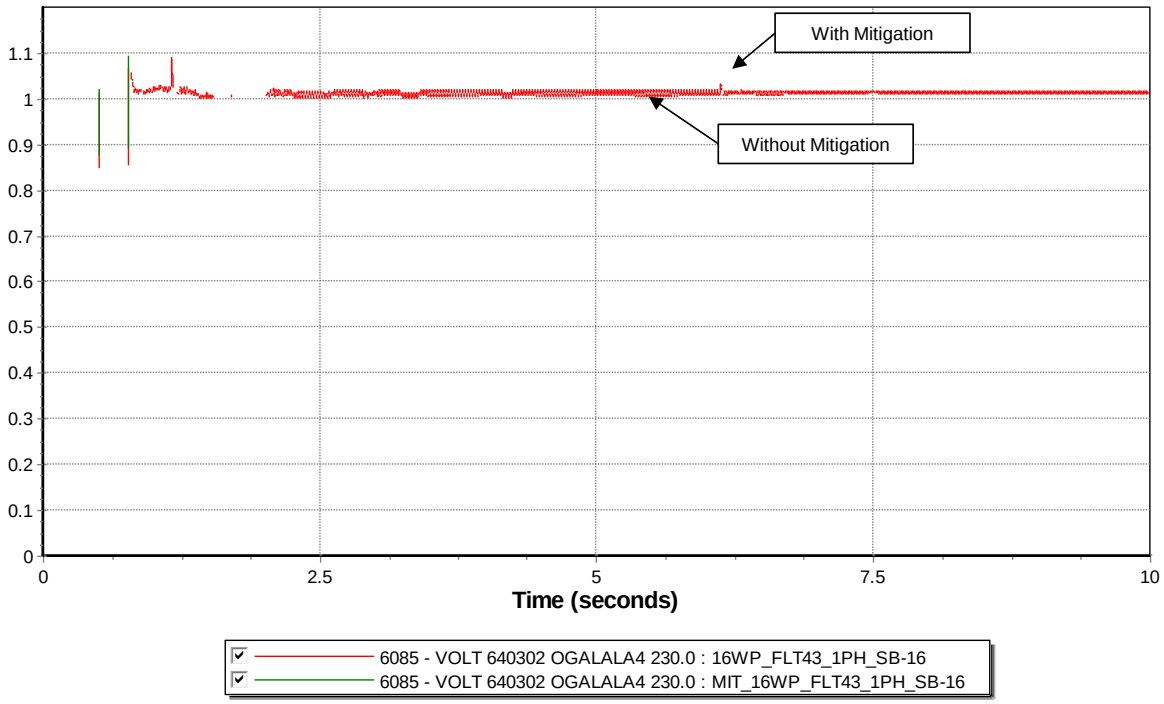

Figure 3-1. Plot of the voltage at OGALALA4 for FLT43-SB for 2016 Winter Peak case with and without mitigation.

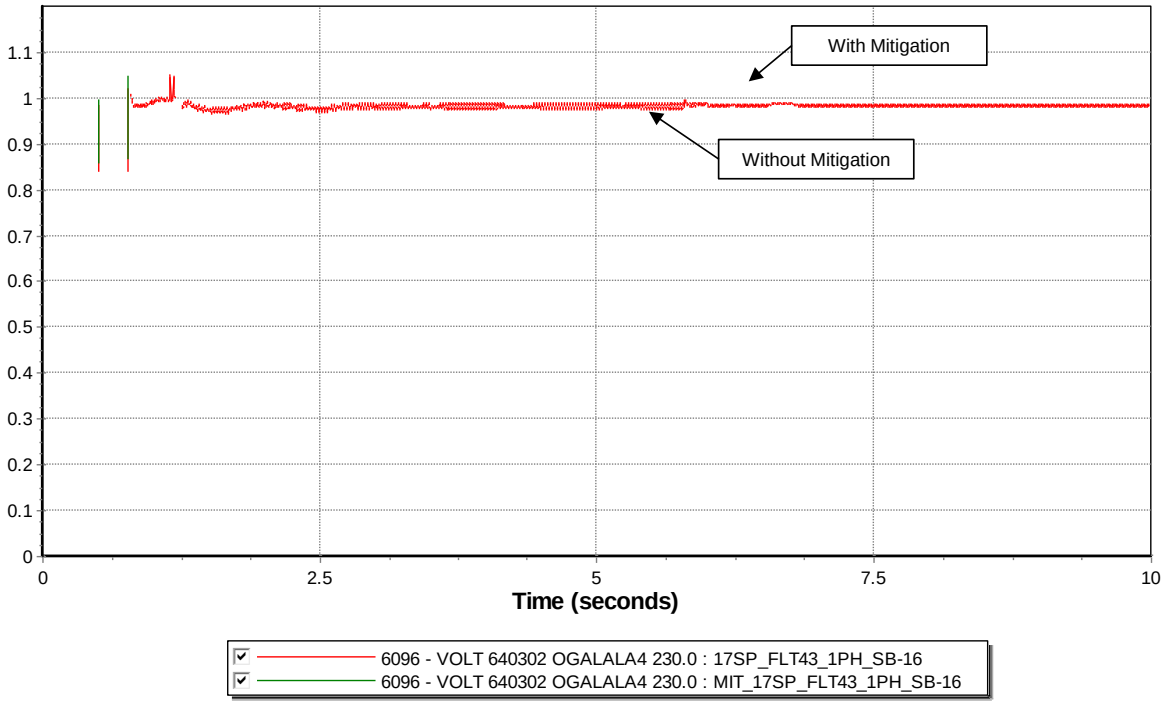

Figure 3-2. Plot of the voltage at OGALALA4 for FLT43-SB for 2017 Summer Peak case with and without mitigation.

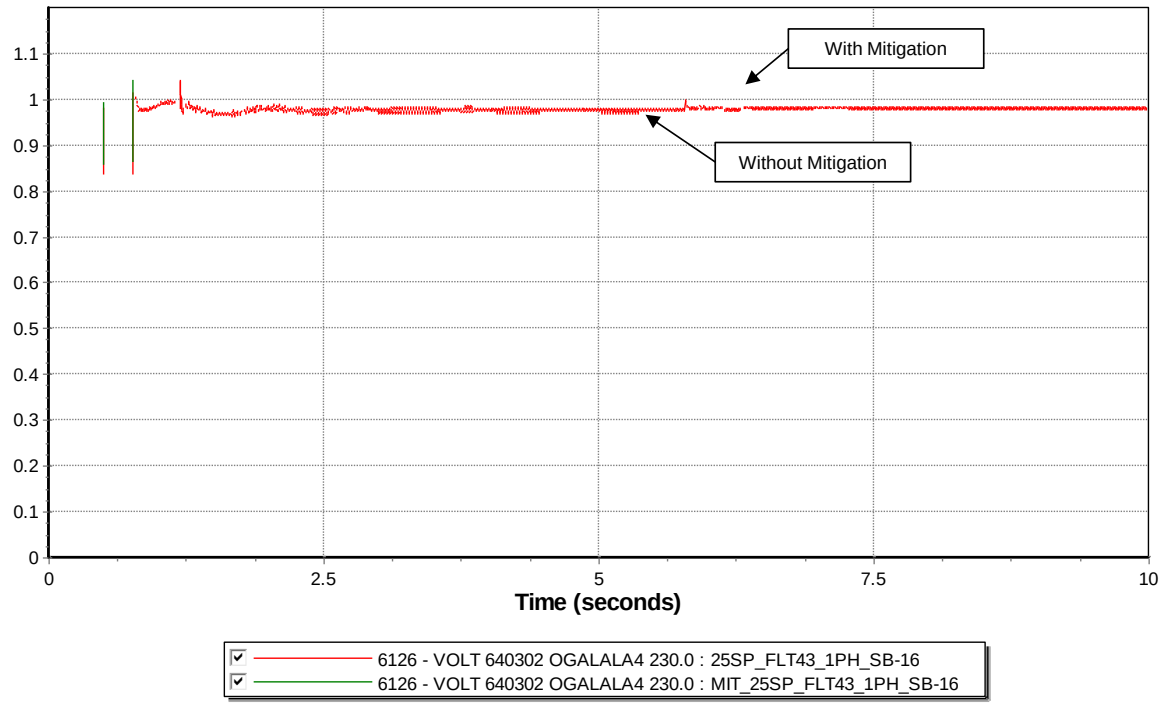

Figure 3-3. Plot of the voltage at OGALALA4 for FLT43-SB for 2025 Summer Peak case with and without mitigation.

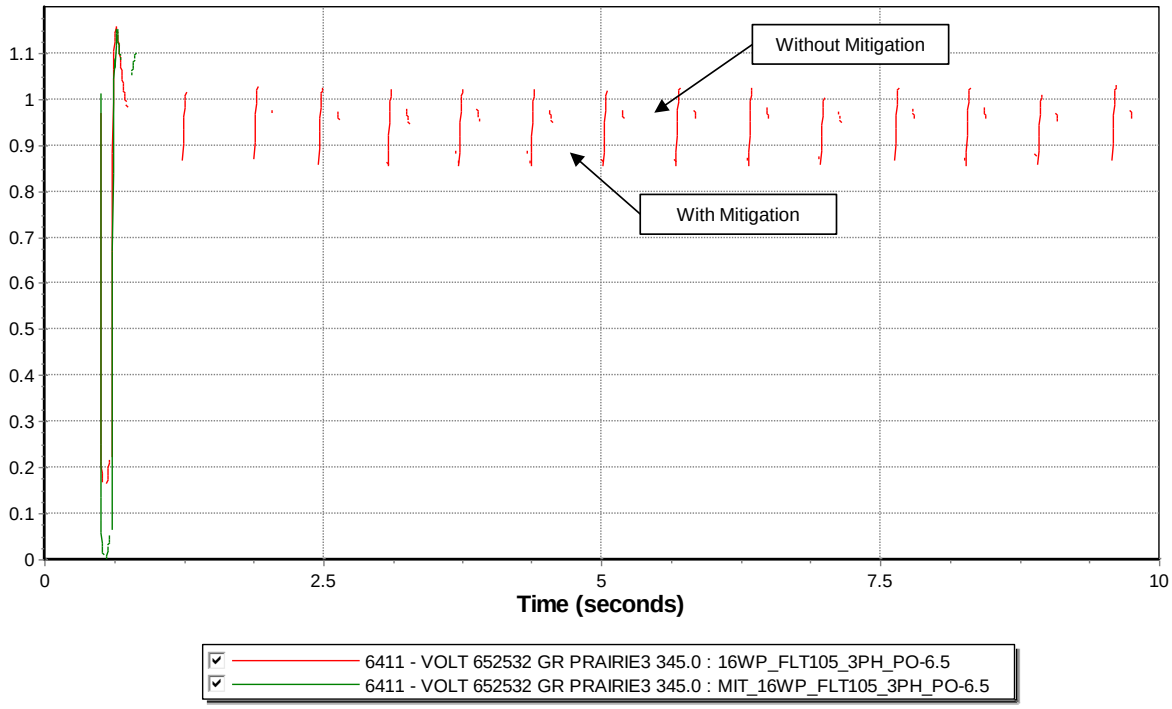

Figure 3-4. Plot of the voltage at GR PRAIRIE3 for FLT105-PO for 2016 Winter Peak case with and without mitigation.

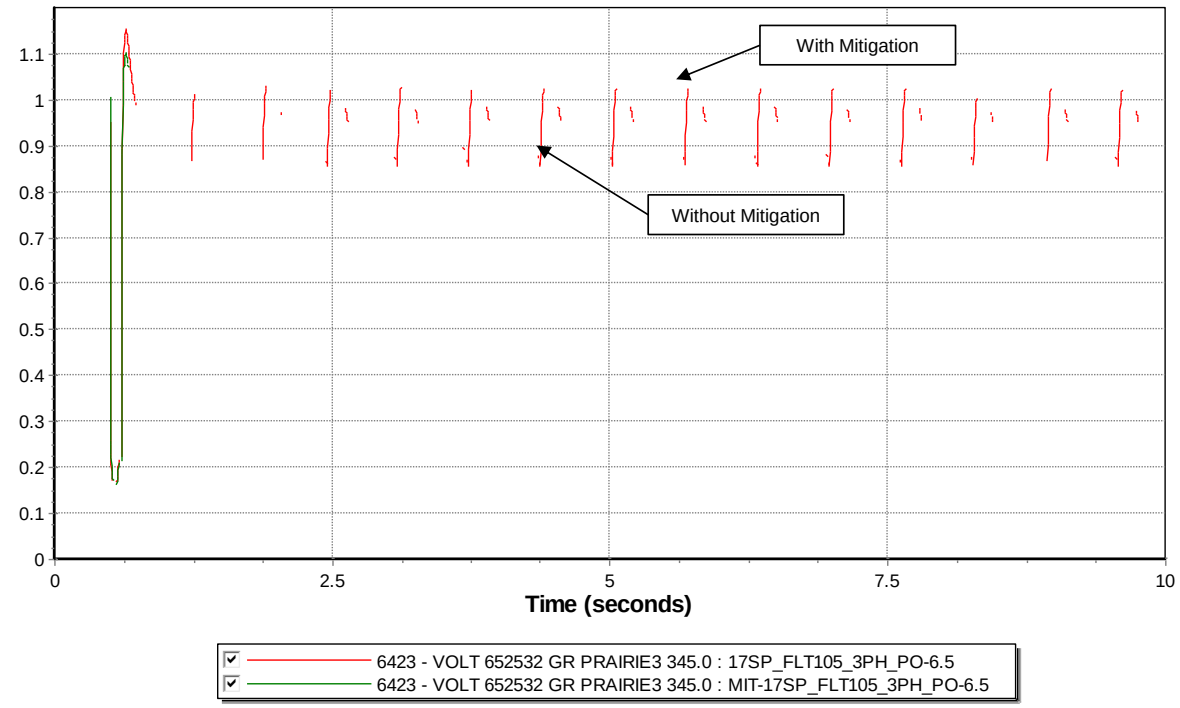

Figure 3-5. Plot of the voltage at GR PRAIRIE3 for FLT105-PO for 2017 Summer Peak case with and without mitigation.

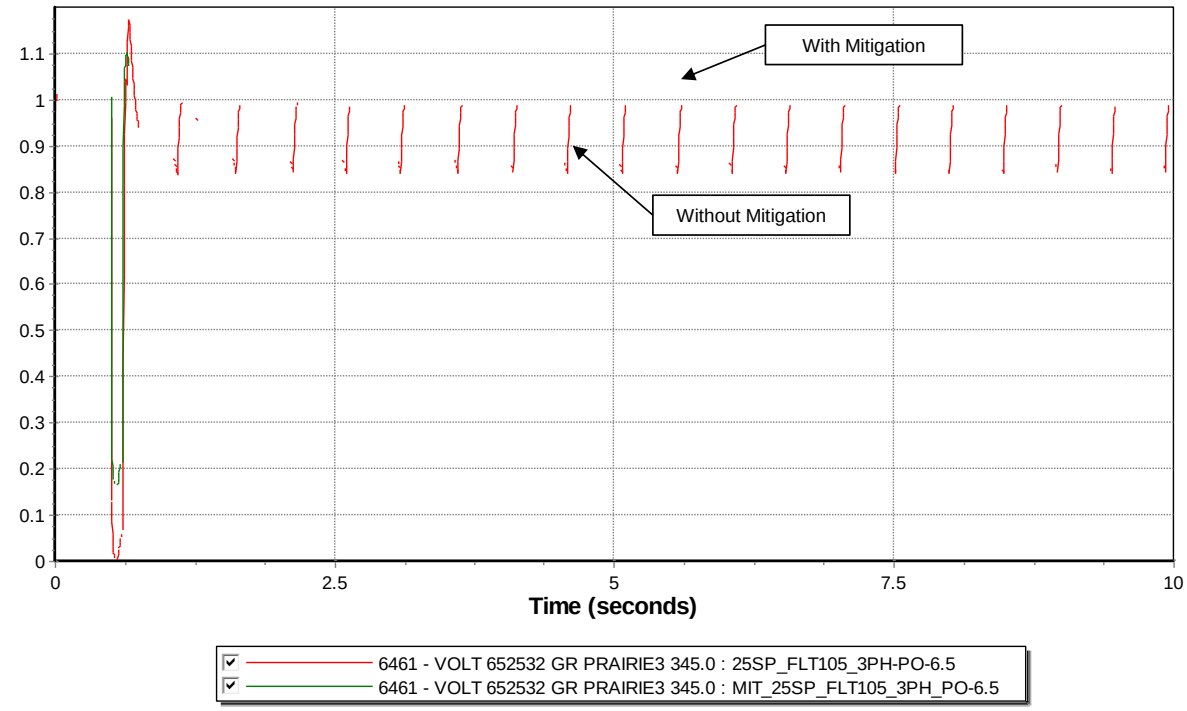

Figure 3-6. Plot of the voltage at GR PRAIRIE3 for FLT105-PO for 2025 Summer Peak case with and without mitigation.

3.3 High GGS Sensitivity Stability Analysis Results

The High GGS Sensitivity Stability Analysis determined there were no contingencies that resulted in system instability or generation tripping offline for the examined seasonal peak conditions when all generation interconnection requests were at 100% output.

However, voltage instability and low post-fault voltage recovery were observed for all examined seasonal peak conditions. After discussion with SPP, it was determined that the following upgrades should be implemented for all seasons:

- Keystone to Banner County (G16-034 Tap) 345 kV circuit #1
- SPP R Plan
    - Cherry County/Thedford 345/115/13.8 kV transformer
    - Gentleman to Cherry County 345 kV circuit #1
    - Holt County to Cherry County 345 kV circuit #1
- Rosemont to Pauline 115 kV circuit #2
- Gentleman to Keystone 345 kV circuit #2

After implementing the changes above, overvoltage was observed for FLT42-3PH. It was determined that in order to eliminate this violation, the shunt capacitor near Sidney 230 kV should be taken out of service.

As with the Cluster Scenario, for prior outage contingencies, FLT105-PO and FLT106-PO, 350 MW of generation curtailment was required. GEN-2016-075 (50MW) and GEN-2015-023 units 1 and 2 (each 150 MW) should be taken out of service in order to decrease the generation around Cherry County. After implementing these changes, observed voltage violations were mitigated.

FLT43-SB did not converge for all three seasonal peak conditions despite implementation of the recommended upgrades. After discussion with SPP, it was determined that additional analysis by NPPD and WAPA will be required for this contingency for the High GGS Sensitivity cases.

Plots of the bus voltages observed for the FLT36-3PH, FLT42-SB, and FLT49-SB with and without mitigation are shown in Figures 3-7 through 3-9.

Refer to Table 3-13 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria include ensuring that the transient voltage recovers to 0.7 p.u. in 2.5 seconds after the fault is cleared and ending in a steady-state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

Table 3-13
High GGS: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

[1]Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT01-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT02-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
3	FLT03-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
4	FLT04-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
5	FLT05-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
6	FLT06-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
7	FLT07-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
8	FLT08-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
9	FLT09-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
10	FLT10-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
11	FLT11-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
12	FLT12-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
13	FLT13-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
14	FLT14-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
15	FLT15-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
16	FLT16-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
17	FLT17-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
18	FLT18-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
19	FLT19-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
20	FLT20-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
21	FLT21-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
22	FLT22-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
23	FLT23-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
24	FLT24-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
25	FLT25-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
26	FLT26-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
27	FLT27-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
28	FLT28-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
29	FLT29-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
30	FLT30-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
31	FLT31-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
32	FLT32-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
33	FLT33-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
34	FLT34-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
35	FLT35-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
36	FLT36-3PH	No	No	Compliant	Stable	Yes	No	Not Compliant	Unstable	No	No	Compliant	Stable
37	FLT37-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
38	FLT38-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
39	FLT39-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
40	FLT40-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
41	FLT41-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
42	FLT42-3PH	No	No	Not Compliant	Stable	No	No	Not Compliant	Stable	No	No	Not Compliant	Stable
43	FLT43-SB	Did not converge				Did not converge				Did not converge			
44	FLT44-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
45	FLT45-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
46	FLT46-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
47	FLT47-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
48	FLT48-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
49	FLT49-SB	Yes	Yes	Not Compliant	Unstable	Yes	Yes	Not Compliant	Unstable	Yes	Yes	Not Compliant	Unstable
50	FLT50-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
51	FLT51-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
52	FLT52-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
53	FLT53-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
54	FLT54-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
55	FLT55-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
56	FLT56-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
57	FLT57-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
58	FLT58-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
59	FLT59-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
60	FLT60-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable

(1) Refer to Tabel 2-3 for a description of the contingency scenario
(2) The yellow highlight indicates that these cases were mitigated by the recommendations provided by SPP.
(3) The red highlight indicates cases that further anaylsis is required.

Table 3-13 (Continued)
High GGS: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

[1]Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
61	FLT61-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
62	FLT62-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
63	FLT63-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
64	FLT64-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
65	FLT65-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
66	FLT66-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
67	FLT67-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
68	FLT68-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
69	FLT69-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
70	FLT70-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
71	FLT71-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
72	FLT72-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
73	FLT73-3PH	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable
74	FLT74-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
75	FLT75-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
76	FLT76-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
77	FLT77-SB	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable
78	FLT78-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
79	FLT79-SB	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable
80	FLT80-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
81	FLT81-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
82	FLT82-PO	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable
83	FLT83-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
84	FLT84-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
85	FLT85-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
86	FLT86-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
87	FLT87-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
88	FLT88-3PH	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable
89	FLT89-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
90	FLT90-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
91	FLT91-PO	Yes	Yes	Not Compliant	Unstable	Yes	Yes	Not Compliant	Unstable	Yes	Yes	Not Compliant	Unstable
92	FLT92-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
93	FLT93-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
94	FLT94-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
95	FLT95-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
96	FLT96-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
97	FLT97-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
98	FLT98-3PH									No	No	Compliant	Stable
99	FLT99-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
100	FLT100-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
101	FLT101-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
102	FLT102-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
103	FLT103-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
104	FLT104-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
105	FLT105-PO	No	No	Not Compliant	Unstable	No	No	Not Compliant	Unstable	No	No	Not Compliant	Unstable
106	FLT106-PO									No	No	Not Compliant	Unstable
107	FLT107-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
108	FLT108-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
109	FLT109-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
110	FLT110-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
111	FLT111-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
112	FLT112-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
113	FLT113-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
114	FLT114-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
115	FLT115-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
116	FLT116-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable

(1) Refer to Tabel 2-3 for a description of the contingency scenario
(2) The yellow highlight indicates that these cases were mitigated by the recommendations provided by SPP.
(3) The red highlight indicates cases that further anaylsis is required.

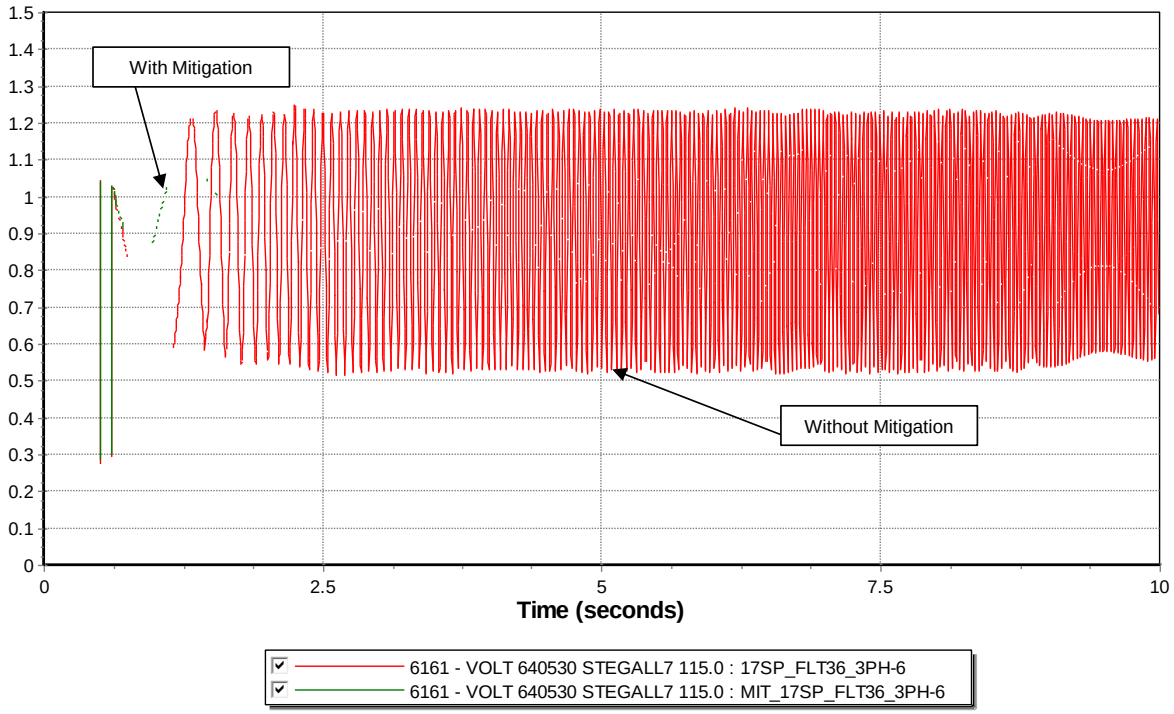

Figure 3-7. Plot of the voltage at STEGALL7 for FLT36-3PH for 2017 Summer Peak case with and without mitigation.

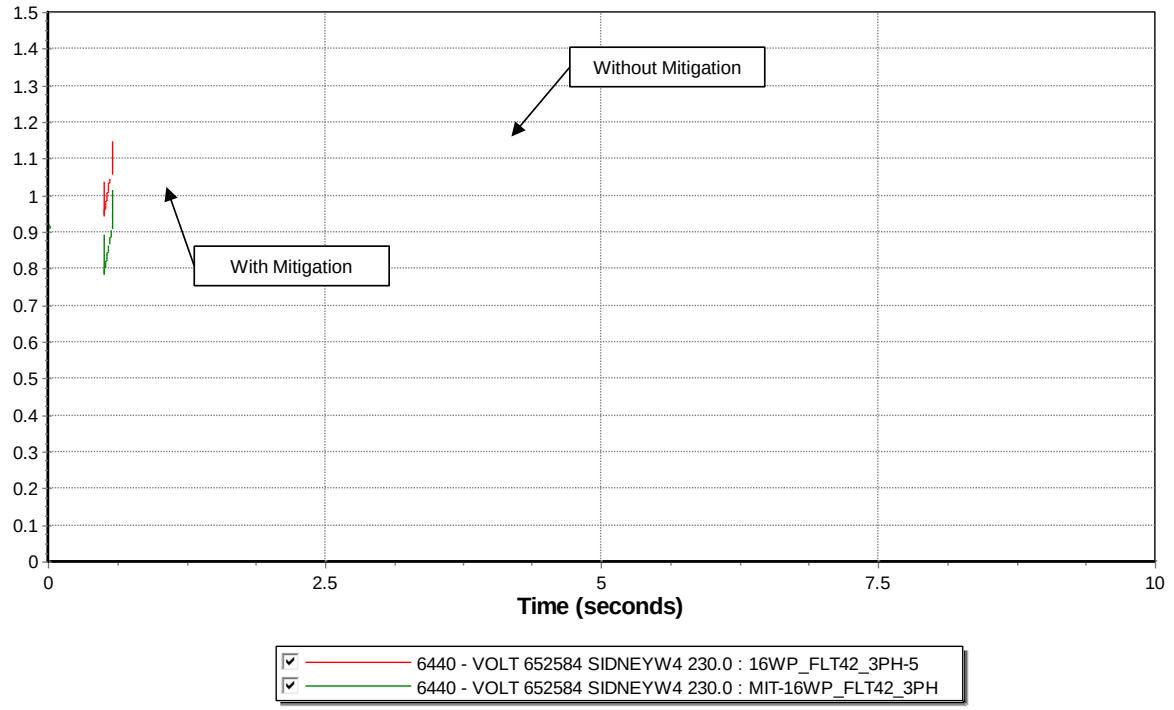

Figure 3-8. Plot of the voltage at SIDNEYW4 for FLT42-3PH for 2017 Summer Peak case with and without mitigation.

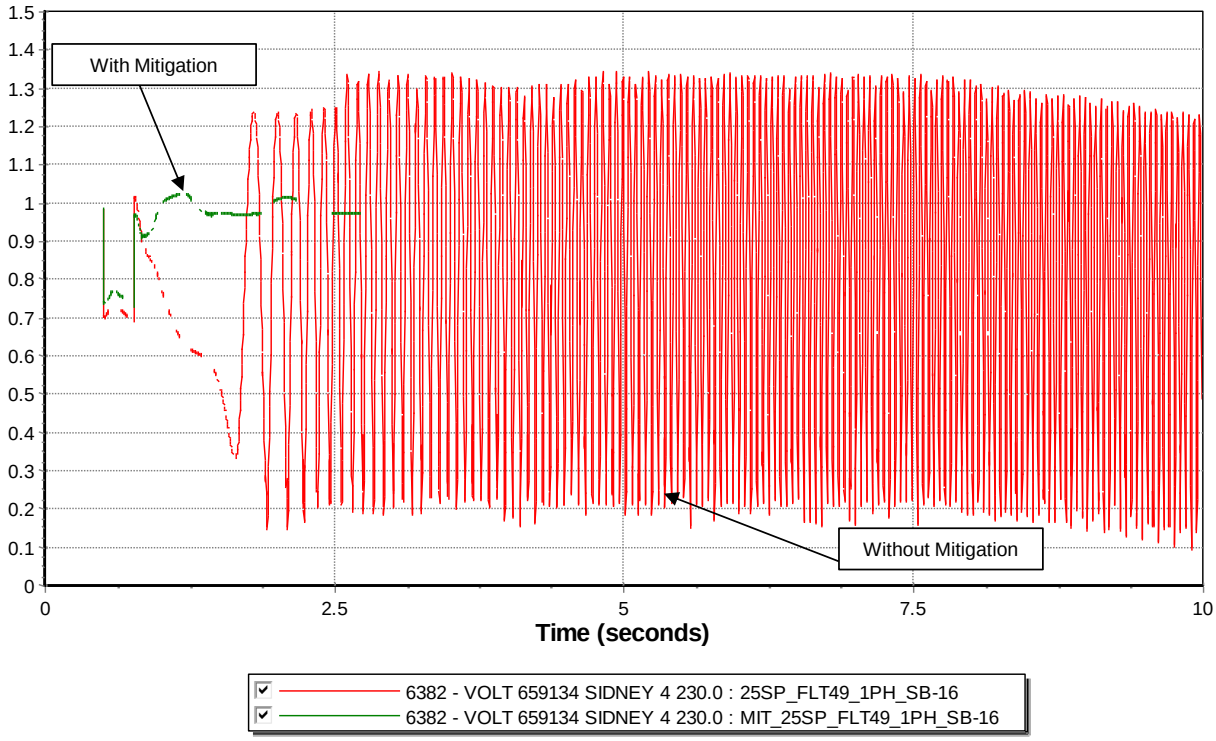

Figure 3-9. Plot of the voltage at SIDNEY 4 for FLT49-3PH for 2017 Summer Peak case with and without mitigation.

3.4 Stand Alone Scenario Stability Analysis Results: GEN-2015-089

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability or generation tripping offline for all examined seasonal peak conditions when GEN-2015-089 was interconnected at 100% output.

Refer to Table 3-14 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2015-089 Stand Alone Analysis. Table 3-14 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

Table 3-14
Stand Alone Scenario GEN-2015-089: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

[1]Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT107-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT108-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
3	FLT109-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
4	FLT110-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
5	FLT111-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
6	FLT112-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
7	FLT113-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
8	FLT114-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
9	FLT115-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
10	FLT116-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable

(1) Refer to Tabel 2-3 for a description of the contingency scenario
(2) The highlighted cases were observed to have violations. These violations were eliminated by the mitigation recommendations provided by SPP.

3.5 Stand Alone Scenario Stability Analysis Results: GEN-2016-021

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability or generation tripping offline for all examined seasonal peak conditions when GEN-2016-021 was interconnected at 100% output.

Refer to Table 3-15 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-021 Stand Alone Analysis. Table 3-15 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

Table 3-15
Stand Alone Scenario GEN-2016-021: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

[1]Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT01-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT02-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
3	FLT03-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
4	FLT04-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
5	FLT05-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
6	FLT06-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
7	FLT07-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
8	FLT08-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
9	FLT09-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
10	FLT10-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
11	FLT11-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
12	FLT12-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
13	FLT13-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
14	FLT14-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
15	FLT15-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
16	FLT16-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
17	FLT17-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
18	FLT18-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
19	FLT19-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
20	FLT20-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
21	FLT21-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
22	FLT22-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
23	FLT23-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
24	FLT24-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
25	FLT25-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
26	FLT26-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
27	FLT27-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
28	FLT28-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
29	FLT29-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
30	FLT30-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
31	FLT31-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
32	FLT32-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable

(1) Refer to Tabel 2-3 for a description of the contingency scenario
(2) The highlighted cases were observed to have violations. These violations were eliminated by the mitigation recommendations provided by SPP.

3.6 Stand Alone Scenario Stability Analysis Results: GEN-2016-023

The Stand Alone Scenario Stability Analysis determined that contingencies FLT36-3PH, FLT43-SB and FLT44-SB resulted in voltage violations for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak when GEN-2016-023 was interconnected at 100% output.

Refer to Table 3-16 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-023 Stand Alone Analysis. Table 3-16 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

To mitigate the voltage instability, the following upgrades were implemented in all seasons:

- Keystone to Banner County (G16-034 Tap) 345 kV circuit #1
- SPP R Plan
    - Cherry County/Thedford 345/115/13.8 kV Transformer
    - Gentleman to Cherry County 345 kV circuit #1
    - Holt County to Cherry County 345 kV circuit #1
- Gentleman to Keystone 345 kV circuit #2

After the above mitigation, instability was still observed for FLT43-SB and FLT44-SB. It was determined that the following mitigation was required to eliminate the violations observed for all examined seasonal peak conditions:

- Block Sidney DC tie
- Shunt Reactor near Sidney 230 kV taken out of service

After the above mitigation was implemented, there were no additional voltage violations or system instability and all voltages and generators recovered within SPP criteria. Figure 3-7 and 3-8 is a plot of bus voltages for FLT36-3PH and FLT43-SB, respectively, with and without mitigation.

Table 3-16
Stand Alone Scenario GEN-2016-023: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

[1]Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT33-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT34-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
3	FLT35-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
4	FLT36-3PH	No	Yes	Not Compliant	Unstable	No	Yes	Not Compliant	Unstable	No	Yes	Not Compliant	Unstable
5	FLT37-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
6	FLT38-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
7	FLT39-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
8	FLT40-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
9	FLT41-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
10	FLT42-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
11	FLT43-SB	No	Yes	Not Compliant	Unstable	No	Yes	Not Compliant	Unstable	No	Yes	Not Compliant	Unstable
12	FLT44-SB	No	No	Not Compliant	Unstable	No	No	Not Compliant	Unstable	No	No	Compliant	Stable
13	FLT45-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
14	FLT46-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
15	FLT47-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
16	FLT48-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
17	FLT49-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
18	FLT50-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
19	FLT51-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable

(1) Refer to Tabel 2-3 for a description of the contingency scenario
(2) The highlighted cases were observed to have violations. These violations were eliminated by the mitigation recommendations provided by SPP.

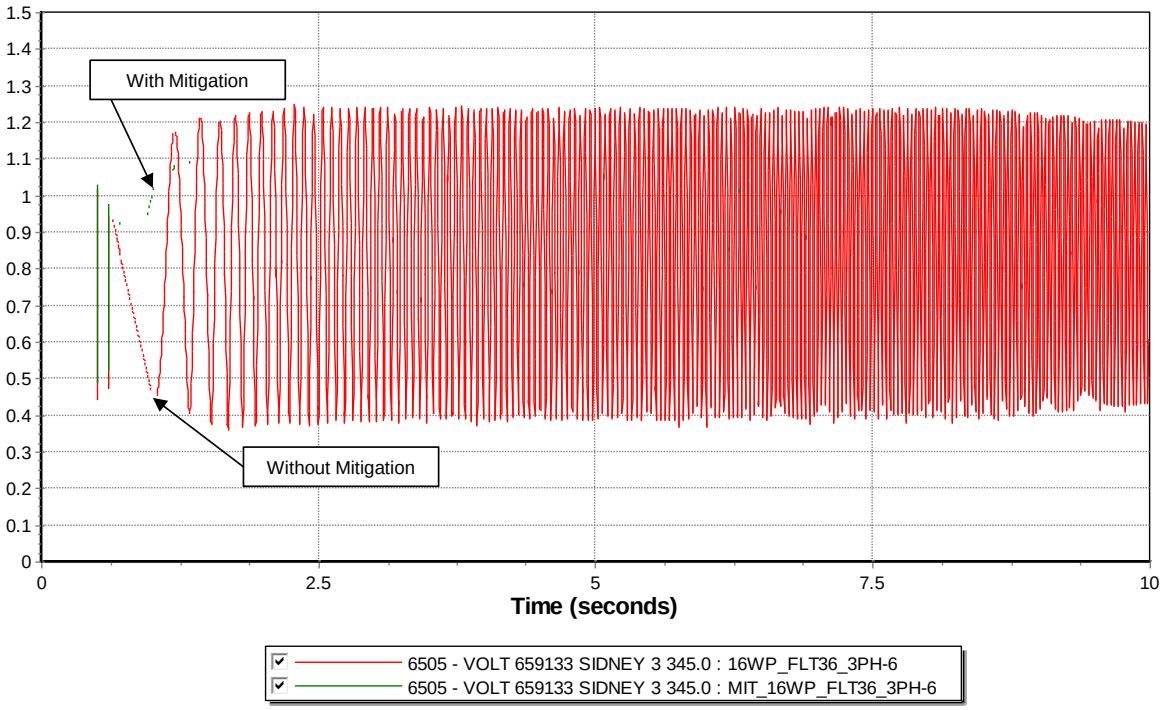

Figure 3-10. Plot of the voltage at SIDNEY for FLT36-3PH for 2016 Winter Peak case with and without mitigation.

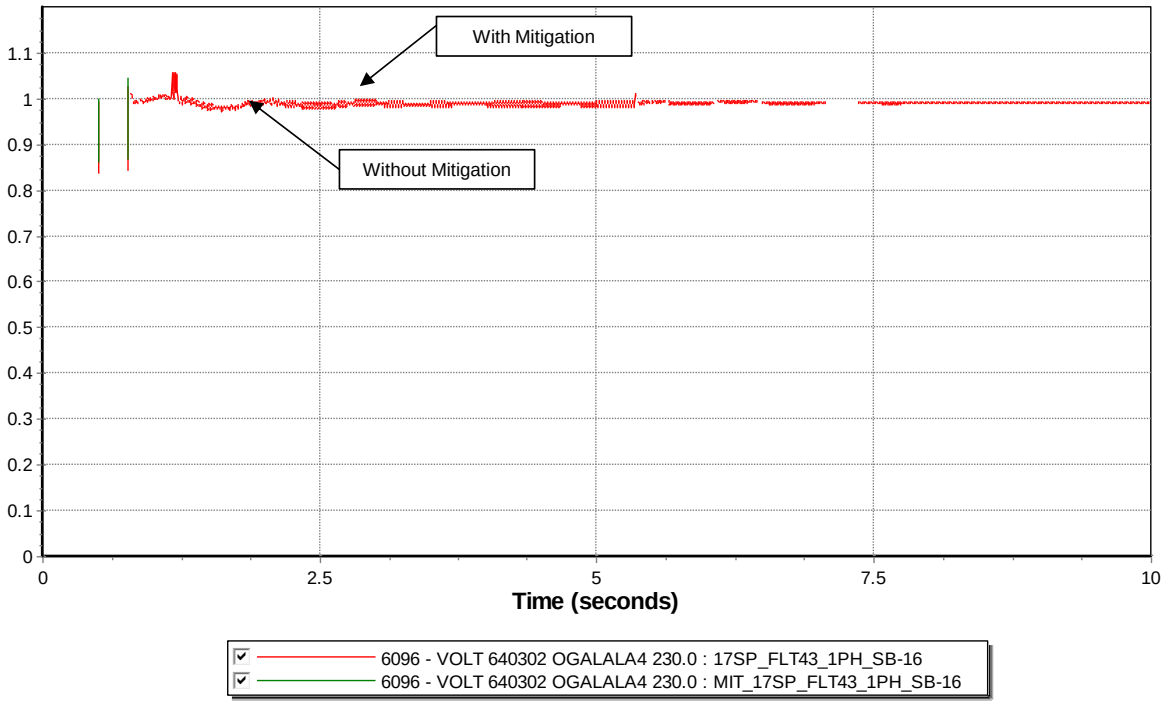

Figure 3-11. Plot of the voltage at OGALALA for FLT43-SB for 2017 Summer Peak case with and without mitigation.

3.7 Stand Alone Scenario Stability Analysis Results: GEN-2016-029

The Stand Alone Scenario Stability Analysis determined that contingencies FLT36-3PH, FLT43-SB and FLT44-SB resulted in voltage violations for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak when GEN-2016-029 was interconnected at 100% output.

Refer to Table 3-17 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-029 Stand Alone Analysis. Table 3-17 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

To mitigate the voltage instability, the following upgrades were implemented in all seasons:

- Keystone to Banner County (G16-034 Tap) 345 kV circuit #1
- SPP R Plan
    - Cherry County/Thedford 345/115/13.8 kV Transformer
    - Gentleman to Cherry County 345 kV circuit #1
    - Holt County to Cherry County 345 kV circuit #1
- Gentleman to Keystone 345 kV circuit #2

After the above mitigation, instability was still observed for FLT43-SB and FLT44-SB. It was determined that the following mitigation was required to eliminate the violations observed for all examined seasonal peak conditions:

- Block Sidney DC tie
- Shunt Reactor near Sidney 230 kV taken out of service

After the above mitigation was implemented, there were no additional voltage violations or system instability and all voltages and generators recovered within SPP criteria. Figure 3-9 and 3-10 is a plot of bus voltages for FLT36-3PH and FLT43-SB, respectively, with and without mitigation.

Table 3-17
Stand Alone Scenario GEN-2016-029: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

[1]Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT33-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT34-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
3	FLT35-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
4	FLT36-3PH	No	Yes	Not Compliant	Unstable	No	Yes	Not Compliant	Unstable	No	Yes	Not Compliant	Unstable
5	FLT37-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
6	FLT38-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
7	FLT39-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
8	FLT40-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
9	FLT41-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
10	FLT42-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
11	FLT43-SB	No	Yes	Not Compliant	Unstable	No	Yes	Not Compliant	Unstable	No	Yes	Not Compliant	Unstable
12	FLT44-SB	No	No	Not Compliant	Unstable	No	No	Not Compliant	Unstable	No	No	Compliant	Stable
13	FLT45-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
14	FLT46-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
15	FLT47-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
16	FLT48-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
17	FLT49-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
18	FLT50-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
19	FLT51-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable

(1) Refer to Tabel 2-3 for a description of the contingency scenario
(2) The highlighted cases were observed to have violations. These violations were eliminated by the mitigation recommendations provided by SPP.

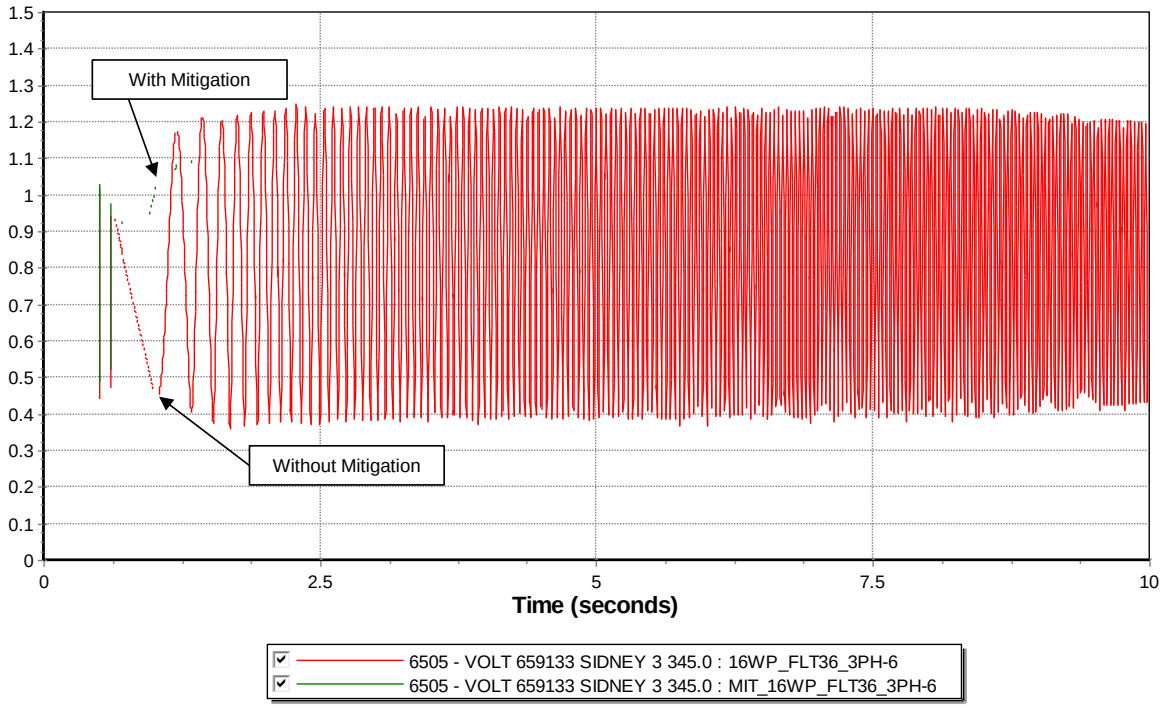

Figure 3-12. Plot of the voltage at SIDNEY for FLT36-PH for 2016 Winter Peak case with and without mitigation.

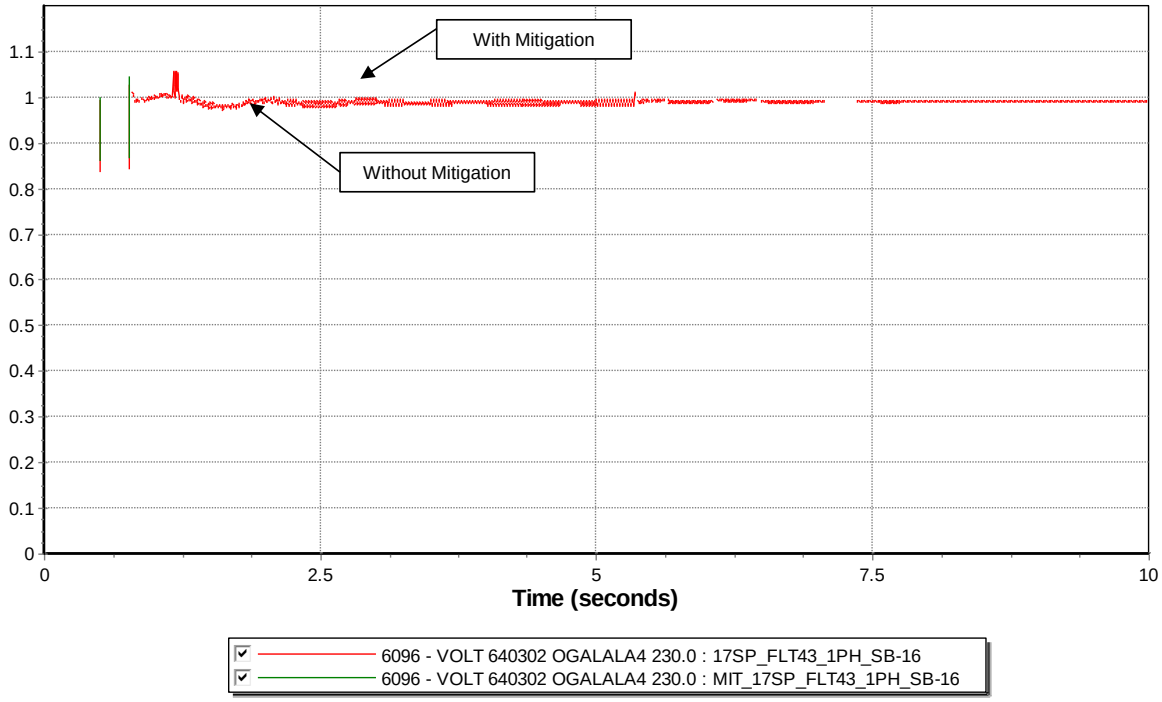

Figure 3-13. Plot of the voltage at OGALALA4 for FLT43-SB for 2017 Summer Peak case with and without mitigation.

3.8 Stand Alone Scenario Stability Analysis Results: GEN-2016-034

The Stand Alone Scenario Stability Analysis determined that contingencies FLT36-3PH, FLT43-SB and FLT44-SB resulted in voltage violations for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak when GEN-2016-034 was interconnected at 100% output.

Refer to Table 3-18 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-034 Stand Alone Analysis. Table 3-18 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

To mitigate the voltage instability, the following upgrades were implemented in all seasons:

- Keystone to Banner County (G16-034 Tap) 345 kV circuit #1
- SPP R Plan
    - Cherry County/Thedford 345/115/13.8 kV transformer
    - Gentleman to Cherry County 345 kV circuit #1
    - Holt County to Cherry County 345 kV circuit #1
- Gentleman to Keystone 345 kV circuit #2

After the above mitigation, instability was still observed for FLT43-SB and FLT44-SB. It was determined that the following mitigation was required to eliminate the violations observed for all examined seasonal peak conditions:

- Block Sidney DC tie
- Shunt Reactor near Sidney 230 kV taken out of service

After the above mitigation was implemented, there were no additional voltage violations or system instability and all voltages and generators recovered within SPP criteria. Figure 3-11 and 3-12 is a plot of bus voltages for FLT36-3PH and FLT43-SB, respectively, with and without mitigation.

Table 3-18
Stand Alone Scenario GEN-2016-034: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

[1]Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT33-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT34-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
3	FLT35-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
4	FLT36-3PH	No	Yes	Not Compliant	Unstable	No	Yes	Not Compliant	Unstable	No	Yes	Not Compliant	Unstable
5	FLT37-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
6	FLT38-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
7	FLT39-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
8	FLT40-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
9	FLT41-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
10	FLT42-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
11	FLT43-SB	No	Yes	Not Compliant	Unstable	No	Yes	Not Compliant	Unstable	No	Yes	Not Compliant	Unstable
12	FLT44-SB	No	No	Not Compliant	Unstable	No	No	Not Compliant	Unstable	No	No	Compliant	Stable
13	FLT45-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
14	FLT46-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
15	FLT47-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
16	FLT48-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
17	FLT49-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
18	FLT50-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
19	FLT51-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable

(1) Refer to Tabel 2-3 for a description of the contingency scenario
(2) The highlighted cases were observed to have violations. These violations were eliminated by the mitigation recommendations provided by SPP.

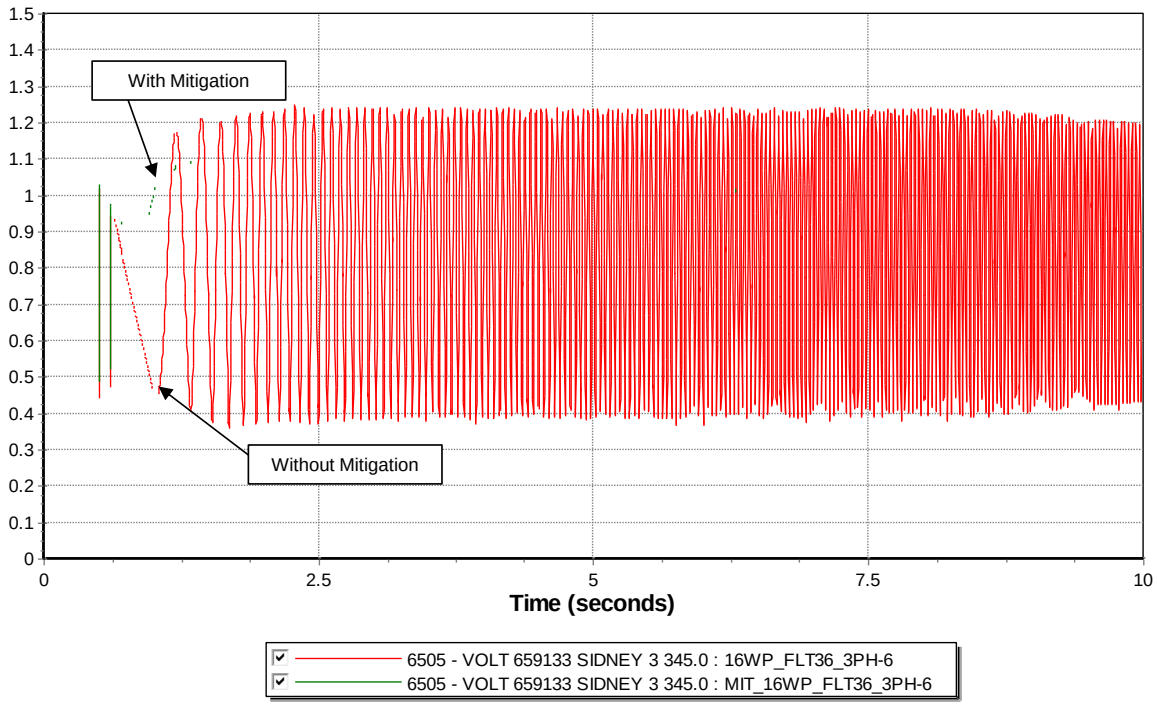

Figure 3-14. Plot of the voltage at SIDNEY for FLT43-SB for 2016 Winter Peak case with and without mitigation.

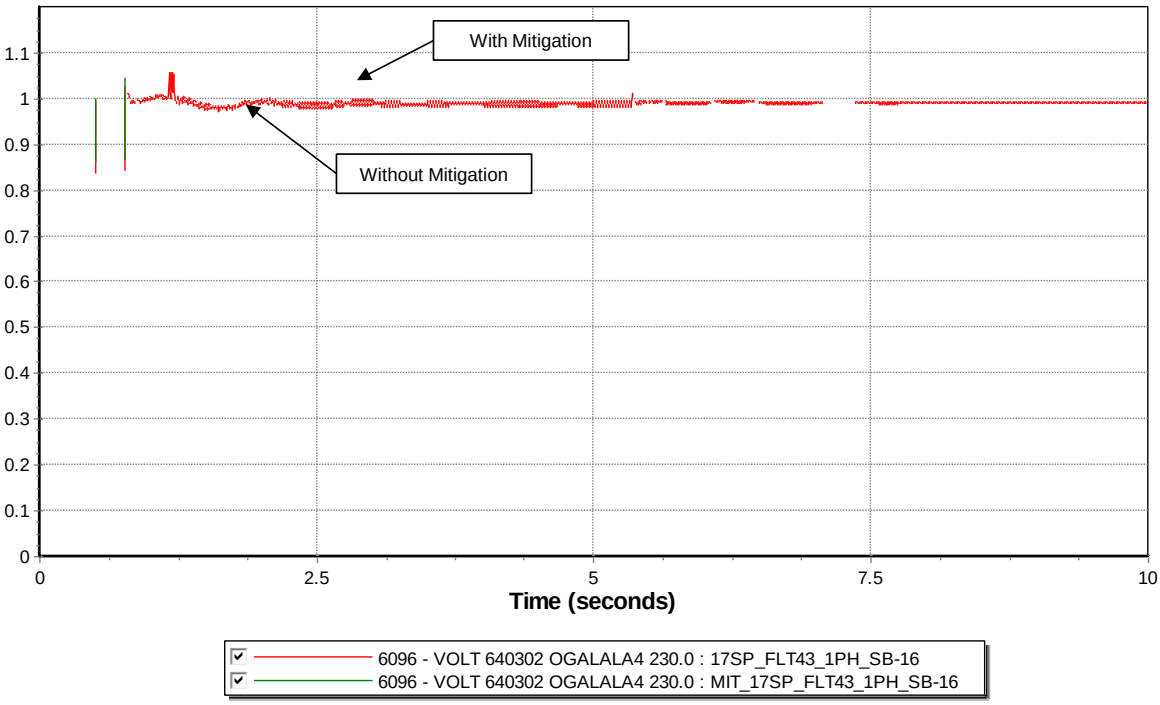

Figure 3-15. Plot of the voltage at OGALALA for FLT43-SB for 2017 Summer Peak case with and without mitigation.

3.9 Stand Alone Scenario Stability Analysis Results: GEN-2016-043

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability or generation tripping offline for all examined seasonal peak conditions when GEN-2016-043 was interconnected at 100% output.

Refer to Table 3-19 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-043 Stand Alone Analysis. Table 3-19 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

Table 3-19
Stand Alone Scenario GEN-2016-043: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

[1]Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT01-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT02-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
3	FLT03-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
4	FLT04-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
5	FLT05-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
6	FLT06-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
7	FLT07-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
8	FLT08-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
9	FLT09-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
10	FLT10-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
11	FLT11-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
12	FLT12-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
13	FLT13-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
14	FLT14-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
15	FLT15-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
16	FLT16-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
17	FLT17-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
18	FLT18-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
19	FLT19-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
20	FLT20-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
21	FLT21-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
22	FLT22-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
23	FLT23-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
24	FLT24-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
25	FLT25-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
26	FLT26-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
27	FLT27-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
28	FLT28-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
29	FLT29-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
30	FLT30-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
31	FLT31-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
32	FLT32-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable

(1) Refer to Tabel 2-3 for a description of the contingency scenario
(2) The highlighted cases were observed to have violations. These violations were eliminated by the mitigation recommendations provided by SPP.

3.10 Stand Alone Scenario Stability Analysis Results: GEN-2016-050

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability or generation tripping offline for all examined seasonal peak conditions when GEN-2016-050 was interconnected at 100% output.

Refer to Table 3-20 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-050 Stand Alone Analysis. Table 3-20 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

Table 3-20
Stand Alone Scenario GEN-2016-050: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

[1]Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT52-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT53-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
3	FLT54-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
4	FLT55-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
5	FLT56-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
6	FLT57-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
7	FLT58-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
8	FLT59-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
9	FLT60-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
10	FLT61-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
11	FLT62-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
12	FLT63-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
13	FLT64-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
14	FLT65-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
15	FLT66-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
16	FLT67-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
17	FLT68-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
18	FLT69-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable

(1) Refer to Tabel 2-3 for a description of the contingency scenario
(2) The highlighted cases were observed to have violations. These violations were eliminated by the mitigation recommendations provided by SPP.

3.11 Stand Alone Scenario Stability Analysis Results: GEN-2016-055

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability or generation tripping offline for all examined seasonal peak conditions when GEN-2016-055 was interconnected at 100% output.

Refer to Table 3-21 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-055 Stand Alone Analysis. Table 3-21 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

Table 3-21
Stand Alone Scenario GEN-2016-055: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

[1]Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT55-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT70-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
3	FLT71-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
4	FLT72-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
5	FLT73-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
6	FLT74-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
7	FLT75-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
8	FLT76-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
9	FLT77-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
10	FLT78-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
11	FLT79-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
12	FLT80-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
13	FLT81-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
14	FLT82-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
15	FLT83-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
16	FLT84-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
17	FLT85-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
18	FLT86-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable

(1) Refer to Tabel 2-3 for a description of the contingency scenario
(2) The highlighted cases were observed to have violations. These violations were eliminated by the mitigation recommendations provided by SPP.

3.12 Stand Alone Scenario Stability Analysis Results: GEN-2016-064

The Stand Alone Scenario Stability Analysis determined that contingencies FLT77-SB, FLT79-SB, FLT88-3PH and FLT91-3PO resulted in voltage violations for all examined seasonal peak conditions when GEN-2016-064 was interconnected at 100% output.

Refer to Table 3-22 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-064 Stand Alone Analysis. Table 3-22 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

To mitigate the voltage violations, the following upgrade was implemented in all seasons:

- Rosemont to Pauline 115 kV circuit #2

After the above mitigation was implemented, there were no additional voltage violations or system instability and all voltages and generators recovered within SPP criteria. Figure 3-13 through 3-16 are plots of bus voltages for FLT77-SB, FLT79-SB, FLT88-3PH and FLT91-PO with and without mitigation.

Table 3-22
Stand Alone Scenario GEN-2016-064: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

[1]Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT55-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT70-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
3	FLT72-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
4	FLT74-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
5	FLT76-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
6	FLT77-SB	No	No	Compliant	Stable	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable
7	FLT78-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
8	FLT79-SB	No	No	Compliant	Stable	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable
9	FLT80-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
10	FLT87-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
11	FLT88-3PH	Yes	Yes	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable
12	FLT89-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
13	FLT90-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
14	FLT91-PO	Yes	Yes	Not Compliant	Unstable	Yes	Yes	Not Compliant	Unstable	Yes	Yes	Not Compliant	Unstable
15	FLT92-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
16	FLT93-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
17	FLT94-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable

(1) Refer to Tabel 2-3 for a description of the contingency scenario
(2) The highlighted cases were observed to have violations. These violations were eliminated by the mitigation recommendations provided by SPP.

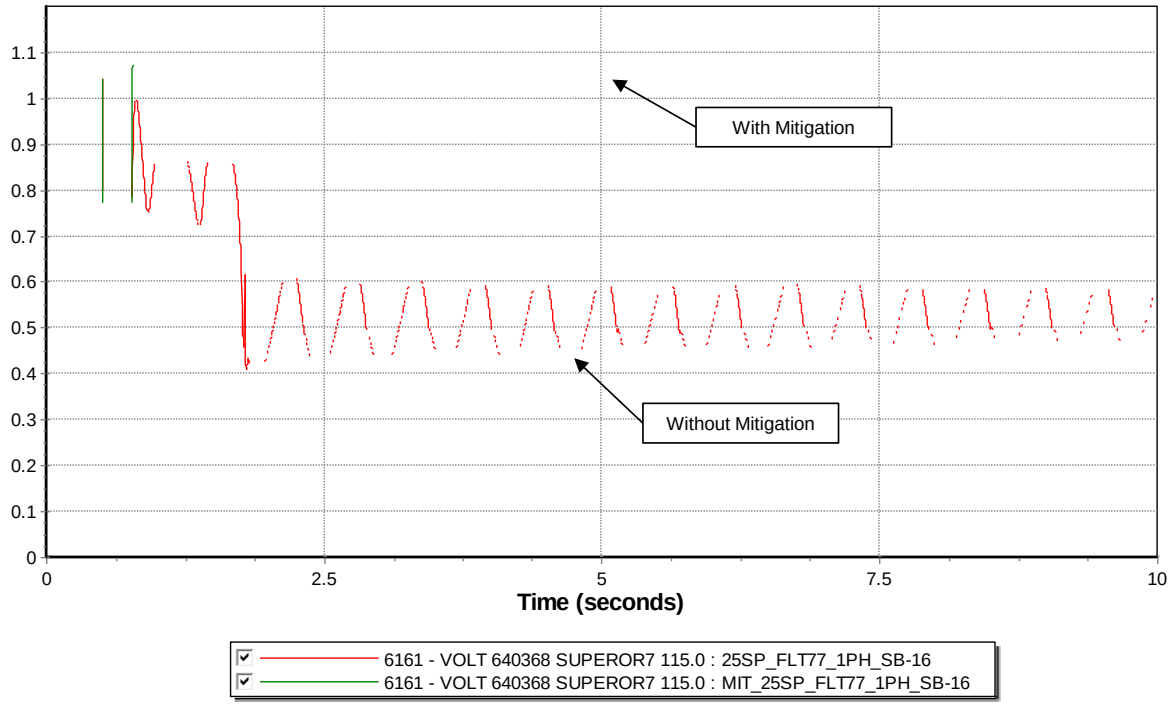

Figure 3-16. Plot of the voltage at SUPEROR7 for FLT77-SB for 2025 Summer Peak case with and without mitigation.

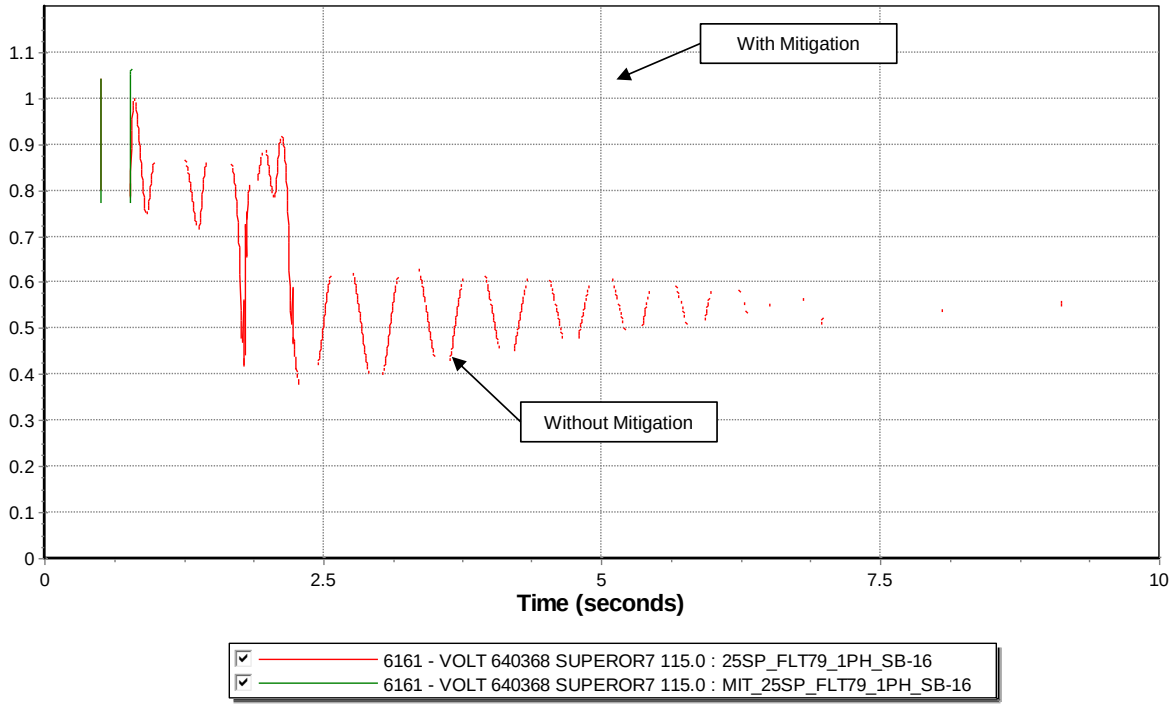

Figure 3-17. Plot of the voltage at SUPEROR7 for FLT79-SB for 2025 Summer Peak case with and without mitigation.

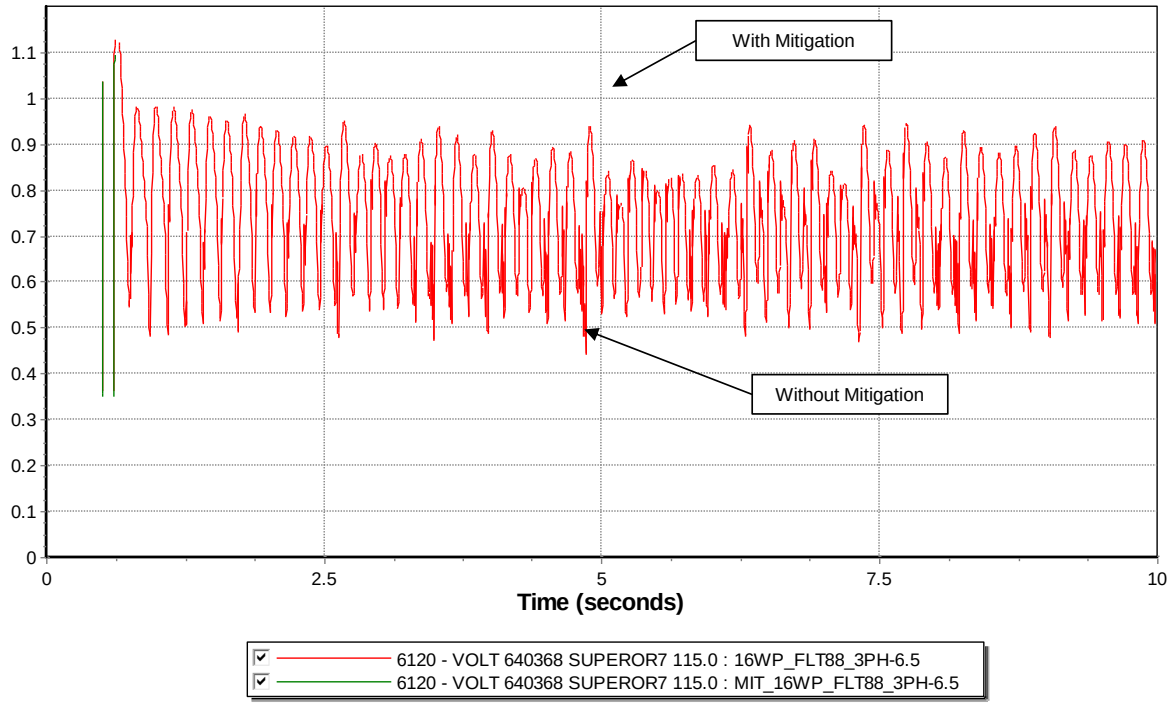

Figure 3-18. Plot of the voltage at SUPEROR7 for FLT88-3PH for 2016 Winter Peak case with and without mitigation.

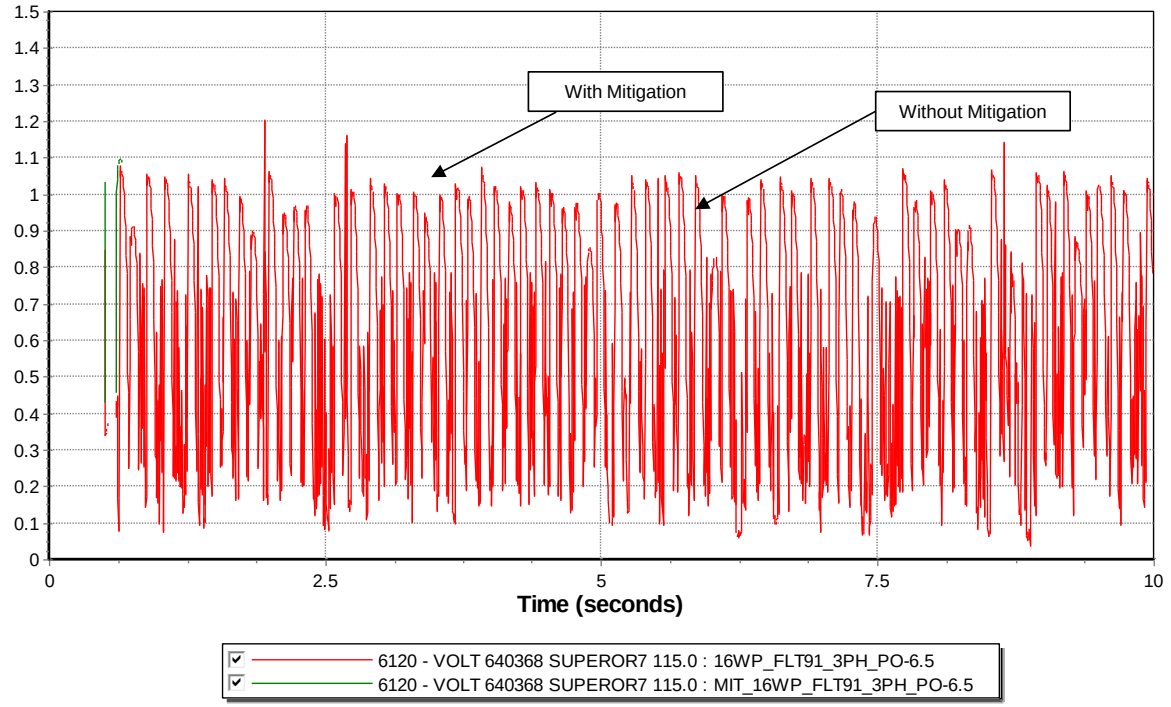

Figure 3-19. Plot of the voltage at SUPEROR7 for FLT91-PO for 2016 Winter Peak case with and without mitigation.

3.13 Stand Alone Scenario Stability Analysis Results: GEN-2016-075

The Stand Alone Scenario Stability Analysis determined that contingencies FLT105-PO and FLT106-PO resulted in voltage instability for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak when GEN-2016-075 was interconnected at 100% output.

Refer to Table 3-23 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-075 Stand Alone Analysis. Table 3-23 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

For prior outage conditions, it was determined that the following mitigation was required to eliminate the violations observed for all examined seasonal peak conditions:

- Decrease generation around Cherry County by decreasing G07170718WG generator output by 75 MW (from 200 to 125 MW) and taking GEN-2015-023 units 1 and 2 (each 150 MW) out of service

After the above mitigation was implemented, there were no additional voltage violations or system instability and all voltages and generators recovered within SPP criteria. Figure 3-17 is a plot of bus voltages for FLT105-PO with and without mitigation.

Table 3-23
Stand Alone Scenario GEN-2016-075: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

[1]Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT95-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT96-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
3	FLT97-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
4	FLT98-3PH									No	No	Compliant	Stable
5	FLT99-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
6	FLT100-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
7	FLT101-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
8	FLT102-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
9	FLT103-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
10	FLT104-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
11	FLT105-PO	No	No	Not Compliant	Unstable	No	No	Not Compliant	Unstable	No	No	Not Compliant	Unstable
12	FLT106-PO									No	No	Not Compliant	Unstable

(1) Refer to Tabel 2-3 for a description of the contingency scenario
(2) The highlighted cases were observed to have violations. These violations were eliminated by the mitigation recommendations provided by SPP.

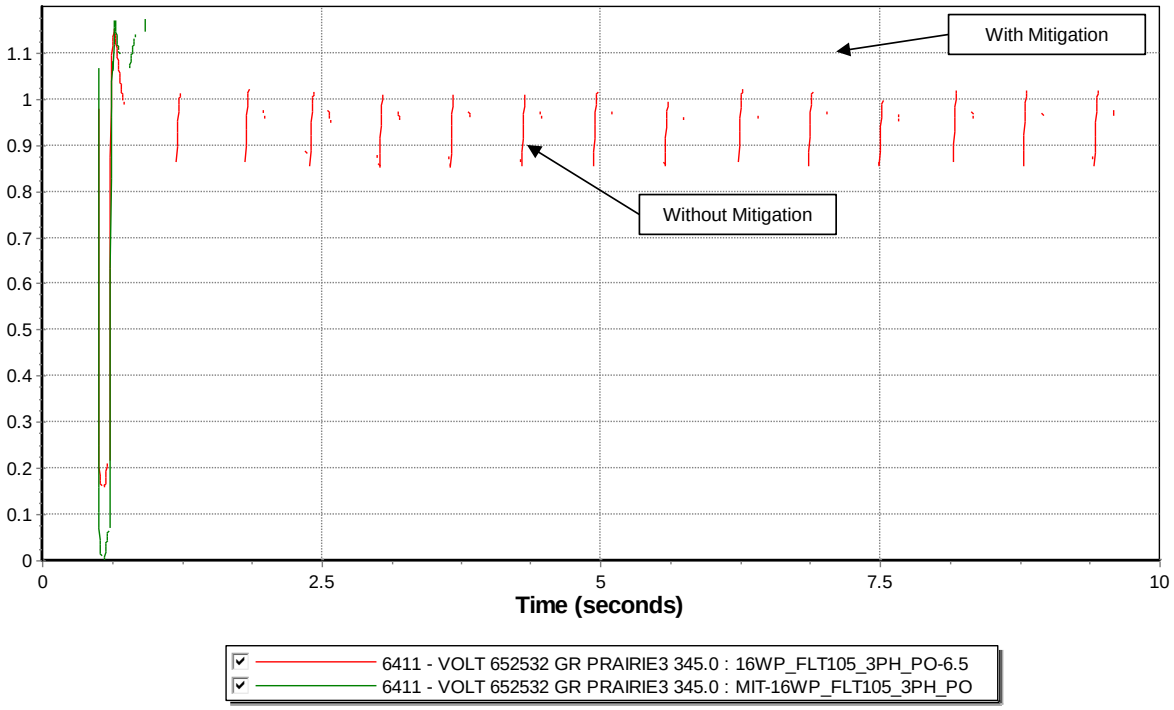

Figure 3-20. Plot of the voltage at GR PRAIRIE3 for FLT105-PO for 2016 Winter Peak Case.

SECTION 4: SHORT-CIRCUIT ANALYSIS

The objective of this task is to quantify the three-phase to ground fault currents for the 2017 and 2025 Summer Peak season for each interconnecting generator.

4.1 Approach

The Short-Circuit analysis will assess breaker adequacy and fault duties for the generator interconnection bus and five buses away from the point of interconnection. MEPPI will assume no outages to find maximum short-circuit currents that flow through the breaker. The Automatic Sequencing Fault Calculation (ASCC) function in PSS/E was utilized to perform this task. FLAT conditions were applied to pre-fault conditions and the following adjustments were utilized:

- All synchronous and asynchronous machine P and Q output was set to zero
- All transformer tap ratios were set to 1.0 p.u. and all phase shift angles were set to zero
- All generator reactance's were fixed to the subtransient reactance
- All line charging was set to zero
- All shunts were set to zero
- All loads were set to zero
- All pre-fault bus voltages were set to 1.0 p.u. and a phase shift angle of zero

4.2 Short-Circuit Results: 2017 Summer Peak

The maximum fault current for each bus is provided for the 2017 Summer Peak conditions. The following tables show the short circuit results for the study generators for the 2017 Summer Peak condition:

- Table 4-1: Short-circuit Analysis for GEN-2015-089
- Table 4-2: Short-circuit Analysis for GEN-2016-021 and GEN-2016-043
- Table 4-3: Short-circuit Analysis for GEN-2016-023 and GEN-2016-029
- Table 4-4: Short-circuit Analysis for GEN-2016-034
- Table 4-5: Short-circuit Analysis for GEN-2016-050
- Table 4-6: Short-circuit Analysis for GEN-2016-055
- Table 4-7: Short-circuit Analysis for GEN-2016-064
- Table 4-8: Short-circuit Analysis for GEN-2016-075

Table 4-1
Short-Circuit Analysis for Study Project GEN-2015-089

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
560074	G16-017-TAP	345	6.64	652245	CLEVELD8	69	4.20	652567	DENISON4	230	4.46
560347	G10-051-TAP	230	7.02	652249	ARMOUR 8	69	2.44	652574	SIOUXCY8	69	17.54
563230	GEN-2015-089	230	5.37	652251	MTVERNS8	69	3.03	652578	PAHOJA 4	230	7.20
580011	G10-051&1127	230	6.25	652252	MTVERNN8	69	2.90	652580	SPENCR 8	69	11.18
583830	G14013G01431	230	4.17	652254	BERSFRD8	69	3.22	652582	APPLEDORN 4	230	6.95
601006	SPLT RK3	345	13.37	652276	FTTHOMP8	69	4.34	652583	DENISON8	69	11.18
602004	SPLT RK4	230	12.39	652277	LAKPLAT8	69	4.01	652588	CLEVELD4	230	4.72
602005	SPLT RK5	161	7.95	652278	HANLON18	69	5.24	652591	HANLON 7	115	5.50
603009	GRANT 7	115	3.94	652279	HANLON28	69	5.24	652600	ASH TAP	115	6.66
603011	MINEHAH7	115	12.68	652284	HURON 8	69	3.65	652603	EXIRA 5	161	6.75
603012	LAWRENC7	115	28.17	652285	SULLYBT8	69	2.36	652606	LETCHER4	230	4.71
603013	PIPESTN7	115	8.99	652286	TYNDALL8	69	2.52	652607	WESSINGTON 4	230	6.78
603016	SPLT RK7	115	35.07	652287	RASMUSN8	69	3.16	652609	LETCHER7	115	6.02
603017	WSX FLS7	115	14.48	652397	VFODNES7	115	6.27	652614	CARPENTER 4	230	6.76
603149	ANSON4	115	33.55	652398	VFODNES4	230	6.97	652626	UTICAJC7	115	8.97
603200	ANSON 7	115	31.16	652399	VFODNES8	69	4.20	652630	WATERTNCAP 4	230	13.41
603225	FALLS 7	115	15.11	652463	WH SWAN7	115	12.71	652806	FTTHOM1-LNX3	345	9.39
603228	SPLITRK CAP7	115	34.56	652474	AURORA 7	115	4.37	652807	FTTHOM2-LNX3	345	9.39
603265	PROSE CAP7	115	33.36	652475	BONESTL7	115	3.62	652821	SULLYBT-LNX3	230	6.15
603274	RENNER 7	115	11.39	652476	EAGLEBT7	115	1.91	652833	GRPRAR2-LNX3	345	6.45
605191	LAWRENC8	69	15.50	652478	GREGORY7	115	2.30	652864	SIOUXCY-LNX3	345	14.33
635200	RAUN 3	345	23.42	652484	NUNDRWD4	230	3.40	656267	MANNINGTAP 8	69	4.38
635201	RAUN 5	161	27.04	652486	PHILIP 4	230	3.11	656570	WISDOM5	161	8.63
635223	PLYMOTH5	161	19.55	652488	PHILTAP4	230	3.69	658030	DENISONWEST8	69	6.42
635224	PLYMOTH8	69	20.72	652491	IRVSIMM7	115	6.41	658031	DENSOUMAIN8	69	6.58
635225	MORNSD 5	161	10.13	652494	WINNER 7	115	2.11	659120	BRDLAND3	345	3.99
635226	LEEDS 5	161	15.53	652501	ARMOUR 7	115	4.17	659121	SPIRITM7	115	6.49
635260	LEMARST5	161	9.61	652502	BERSFRD7	115	3.91	659122	STORLA 4	230	6.04
635385	HUDSON 8	69	5.90	652503	BLAIR 4	230	8.83	659123	STORLA 7	115	6.60
635391	IRETONT8	69	5.74	652505	FLANDRU7	115	4.02	659196	CARPENTER 8	69	3.17
635400	HIGHLND 3	345	10.56	652506	FTTHOMP3	345	9.39	659198	LETCHR PS227	115	2.60
636010	LEHIGH 3	345	10.25	652507	FTTHOMP4	230	19.80	659205	BRDLAND4	230	9.72
640080	BELDEN 7	115	6.73	652509	FTRANDL4	230	11.03	659250	SXF WBRANDN7	115	13.11
640084	BLMFLD 7	115	6.11	652510	FTRANDL7	115	13.05	659251	SXF CORSON 7	115	10.93
640113	CLRWATR7	115	5.17	652511	GAVINS 7	115	10.30	659256	SXF 57TH ST7	115	2.88
640126	E.COL. 4	230	9.42	652513	HANLON 4	230	5.97	659257	SXF SHINDLR7	115	2.98
640127	COLMB.E7	115	21.02	652514	HURON 4	230	10.71	659258	SXF HARSBRG7	115	3.68
640131	COLMB.W4	230	9.54	652515	HURON 7	115	15.06	659259	SXF CHANCLR7	115	4.50
640133	COLMBUS4	230	11.05	652516	LAKPLAT4	230	5.60	659281	HYDE 8	69	3.31
640134	KELLY 7	115	17.40	652517	MANNING7	115	5.20	659292	KEYSTN PS237	115	2.58
640136	COLMBUS7	115	18.75	652518	MTVERN 7	115	4.30	659295	SDPRAIRWND 4	230	5.61
640163	EMERSON7	115	5.44	652519	OAHE 4	230	13.62	659900	EAGLE 4	230	7.05
640165	EMMET 7	115	2.99	652520	OAHE 7	115	8.18	659901	EAGLE 8	69	13.51
640200	GR ISLD4	230	16.35	652521	SULLYBT4	230	6.15	659907	J1CENTR8	69	8.08
640212	HARTGTN7	115	5.65	652523	SIOUXFL4	230	12.80	659912	J6BOYER8	69	9.48
640226	HOSKINS3	345	11.51	652524	SIOUXFL7	115	25.22	659921	J15SXCNTR8	69	6.54
640227	HOSKINS4	230	9.50	652525	TYNDALL7	115	3.86	659942	K217HAWARDE8	69	7.46
640305	ONEILL 7	115	3.92	652526	UTICAJC4	230	7.90	659946	K216LIBERTY8	69	7.30
640306	ONEILL 8	69	4.23	652528	WOONSKT7	115	5.26	659953	K412HINTONM8	69	10.92
640342	SHELCRK3	345	9.95	652529	WATERTN3	345	9.47	659971	K301HINTON 8	69	9.96
640343	SHELCRK4	230	10.52	652530	WATERTN4	230	13.41	659980	K135CONCORD8	69	6.61
640349	SPENCER7	115	4.60	652531	WATERTN7	115	12.11	660003	HURONWP7	115	9.99
640386	TWIN CH4	230	8.41	652535	REDFELD7	115	4.07	660004	MITCHEL7	115	5.85
640387	TWIN CH7	115	10.56	652536	RASMUSN4	230	6.57	660005	TRIPP 7	115	4.14
640388	TWIN CH8	69	7.71	652540	BIGBND14	230	11.82	660006	YKNTJCT7	115	9.28
640424	S.SIOUXCITY7	115	7.26	652541	BIGBND24	230	11.65	660007	MENNOJT7	115	6.64
640540	MEADOWGROVE4	230	5.53	652561	DENISON5	161	5.56	660008	MITCLNW7	115	5.47
645451	S3451 3	345	19.03	652563	SPENCER5	161	8.47	660009	BTAP WP7	115	14.63
648506	PR BRZ 4	230	4.17	652564	SIOUXCY3	345	14.33	660018	B_H WIND 7	115	3.46
652031	KPS21-GY7	115	1.46	652565	SIOUXCY4	230	19.02	660026	NAPA JCT7	115	8.60
652229	FLANDRU8	69	2.98	652566	SIOUXCY5	161	19.96	952509	G12_009IS	115	6.47
652235	SIOUXFL8	69	3.88								

Table 4-2
Short-Circuit Analysis for Study Projects GEN-2016-021 and GEN-2016-043

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
560062	G15-088-TAP	345	10.80	640072	BATTLCR7	115	7.03	640521	ANTELOPE 7	115	13.42
560347	G10-051-TAP	230	7.02	640073	BATTLCR8	69	3.85	640540	MEADOWGROVE4	230	5.53
579444	G06-044N-HV1	115	5.59	640078	BEEMER 7	115	4.44	645100	FC1A 5	161	26.36
580011	G10-051&1127	230	6.25	640080	BELDEN 7	115	6.73	645451	S3451 3	345	19.03
583780	GEN-2013-032	115	11.00	640081	BELDEN 8	69	3.85	645454	S3454 3	345	23.62
584510	GEN-2015-007	345	7.58	640084	BLMFLD 7	115	6.11	645455	S3455 3	345	27.28
584910	GEN-2015-053	115	13.21	640085	BLMFLD 8	69	2.52	645456	S3456 3	345	29.82
585130	GEN-2015-076	115	3.85	640113	CLRWATR7	115	5.17	645458	S3458 3	345	27.74
587150	GEN-2016-021	345	4.43	640115	CO.LINE7	115	6.82	645459	S3459 3	345	21.13
587280	GEN-2016-043	345	7.44	640119	COL.COG7	115	18.85	645740	S3740 3	345	17.12
601006	SPLT RK3	345	13.37	640122	COL.DRY7	115	16.00	646206	S1206 5	161	39.66
601029	LKFLDXL3	345	13.22	640124	COL.SE 7	115	16.22	646209	S1209 5	161	36.46
601034	NOBLES 3	345	10.24	640125	COLMB.E3	345	9.79	646226	S1226 5	161	21.64
603016	SPLT RK7	115	35.07	640126	E.COL. 4	230	9.42	646231	S1231 5	161	36.48
631041	LAKEFLD5	161	18.87	640127	COLMB.E7	115	21.02	646237	S1237 5	161	16.44
631138	LAKEFLD3	345	14.62	640131	COLMB.W4	230	9.54	646249	S1249 5	161	21.05
631193	HUNTLEY3	345	6.07	640133	COLMBUS4	230	11.05	646250	S1250 5	161	32.37
635000	CBLUFFS3	345	28.13	640134	KELLY 7	115	17.40	646251	S1251 5	161	28.47
635014	POTTCO 3	345	21.29	640136	COLMBUS7	115	18.75	646252	S1252 5	161	18.21
635017	ATCHSNT3	345	15.02	640139	COOPER 3	345	25.04	646254	S1254 5	161	25.85
635200	RAUN 3	345	23.42	640149	CREITON7	115	4.79	646255	S1255 5	161	39.60
635201	RAUN 5	161	27.04	640150	CREITON8	69	3.31	646281	S1281 5	161	23.45
635202	NEAL 4 5	161	18.65	640151	CRESTON7	115	5.95	646297	S1297 5	161	17.58
635203	NEAL N 5	161	25.55	640157	DAVIDCY7	115	5.33	646298	S1298 5	161	26.01
635204	NEAL 8	69	9.86	640163	EMERSON7	115	5.44	646305	S1305 5	161	24.86
635220	INTCHG 5	161	14.64	640164	EMERSONG	69	3.75	646341	S1341 5	161	24.27
635221	KELLOGG5	161	16.93	640181	GENOA 7	115	4.91	647909	S909 8	69	25.21
635222	KELLOGG8	69	17.54	640200	GR ISLD4	230	16.35	648506	PR BRZ 4	230	4.17
635223	PLYMOTH5	161	19.55	640212	HARTGTN7	115	5.65	650114	NW68HOLDRG3	345	16.34
635225	MORNSD 5	161	10.13	640213	HARTGTN8	69	3.62	650185	WAGENER 3	345	19.51
635226	LEEDS 5	161	15.53	640226	HOSKINS3	345	11.51	650189	103&ROKEBY3	345	19.51
635227	SBRIDGE T8	69	8.64	640227	HOSKINS4	230	9.50	650210	NW70FAIRFD7	115	20.80
635228	AIRPORT 5	161	16.84	640228	HOSKINS7	115	17.45	650214	NW68HOLDRG7	115	24.85
635230	LIBERTY5	161	24.85	640263	MADISON7	115	6.11	650216	SW27&F 7	115	21.48
635235	SALIX 5	161	16.01	640271	MCCOOL 3	345	10.21	650285	WAGENER 7	115	30.53
635236	SALIX 8	69	13.28	640277	MOORE 3	345	21.00	650290	ROKEBY 7	115	24.44
635300	MONONA 5	161	5.32	640278	SHELDON7	115	31.25	652287	RASMUSN8	69	3.16
635301	MONONA 8	69	4.47	640293	NELIGH 7	115	10.13	652507	FTTHOMP4	230	19.80
635330	CRWFRD 5	161	4.79	640294	NELIGH 8	69	5.94	652509	FTRANDL4	230	11.03
635368	OBRIEN 3	345	10.67	640296	NORFK.N7	115	12.80	652510	FTRANDL7	115	13.05
635369	KOSSUTH 3	345	6.36	640298	NORFOLK7	115	12.11	652511	GAVINS 7	115	10.30
635400	HIGHLND 3	345	10.56	640300	OAKLAND7	115	7.55	652516	LAKPLAT4	230	5.60
635589	ECLIPSE3	345	8.02	640305	ONEILL 7	115	3.92	652526	UTICAJC4	230	7.90
635590	FALLOW 3	345	9.57	640316	PAWNEEL7	115	11.24	652536	RASMUSN4	230	6.57
635600	GRIMES 3	345	18.89	640318	PETRSBG7	115	6.36	652537	WHITE 3	345	14.23
635601	GRIMES 5	161	23.71	640336	SCHUYLR7	115	5.71	652561	DENISON5	161	5.56
635602	142ST 5	161	20.84	640342	SHELCRK3	345	9.95	652563	SPENCER5	161	8.47
635605	GRNGRTP5	161	25.55	640343	SHELCRK4	230	10.52	652564	SIOUXCY3	345	14.33
635608	LINWELD5	161	21.48	640345	SILVRCK7	115	4.55	652565	SIOUXCY4	230	19.02
635630	BOONVIL3	345	16.08	640357	STANTON7	115	5.10	652566	SIOUXCY5	161	19.96
635631	BOONVIL5	161	20.06	640363	STNTN.N7	115	6.91	652567	DENISON4	230	4.46
635635	MADISON3	345	14.87	640377	TEKAMAH5	161	8.57	652574	SIOUXCY8	69	17.54
635680	BONDRNT3	345	17.83	640378	TEKAMAH7	115	8.05	652578	PAHOJA 4	230	7.20
635700	SYCAMOR3	345	18.63	640386	TWIN CH4	230	8.41	652583	DENISON8	69	11.18
635701	SYCAMOR5	161	31.22	640387	TWIN CH7	115	10.56	652864	SIOUXCY-LNX3	345	14.33
636000	WEBSTER3	345	9.43	640388	TWIN CH8	69	7.71	656353	HOPE5	161	8.44
636001	WEBSTER5	161	15.64	640400	W.POINT7	115	5.08	656369	WEBSTER8	69	8.52
636010	LEHIGH 3	345	10.25	640402	WAHOO 7	115	4.72	659121	SPIRITM7	115	6.49
636020	FT.DODG5	161	9.90	640424	S.SIOUXCITY7	115	7.26	659900	EAGLE 4	230	7.05
636025	HAYES 5	161	10.11	640425	S.SIOUXCITY8	69	4.47	659901	EAGLE 8	69	13.51
636050	WRIGHT 5	161	9.34	640444	PETERSBRG.N7	115	6.37	660006	YKNTJCT7	115	9.28
640070	BANCRFT7	115	5.16	640520	ANTELOPE 3	345	6.07				

Table 4-3
Short-Circuit Analysis for Study Projects GEN-2016-023 and GEN-2016-029

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
531451	MINGO 7	345	6.93	640304	OGALALANPPD7	115	14.77	652873	STEGALL-LNX3	230	5.38
560075	G16-023-TAP	345	7.29	640325	REDWILO3	345	6.31	659131	LARAMIE3	345	7.95
560090	G16-034-TAP	345	6.79	640326	REDWILO7	115	10.52	659133	SIDNEY 3	345	6.89
587090	GEN-2016-023	345	6.15	640338	SCOTBLF7	115	5.80	659134	SIDNEY 4	230	6.57
587190	GEN-2016-029	345	6.15	640374	SWEET W3	345	10.27	659135	STEGALL3	345	5.23
587220	GEN-2016-034	345	6.79	640381	THEDFRD7	115	9.08	659170	STEGALDC	230	5.75
640065	AXTELL 3	345	9.99	640396	VICTRYH4	230	3.70	659206	STGXFMR4	230	5.66
640183	GENTLMN3	345	16.30	640397	VICTRYH7	115	5.92	659210	SIDXFMR4	230	7.12
640184	GENTLMN4	230	19.17	640500	CHERRYC3	345	5.64	659425	SIDNEY1-LNX3	345	6.89
640252	KEYSTON3	345	11.46	640510	HOLT.CO3	345	7.19	659426	SIDNEY2-LNX3	345	6.89
640253	KEYSTON7	115	15.18	640530	STEGALL7	115	8.11	659800	GRANTNB7	115	6.25
640255	KINGSLY7	115	9.19	652571	GR ISLD3	345	12.03	659801	OGALALA7	115	14.77
640286	N.PLATT4	230	12.97	652573	STEGALL4	230	5.38	659821	GERINGT7	115	5.28
640302	OGALALA4	230	7.73								

Table 4-4
Short-Circuit Analysis for Study Project GEN-2016-034

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
531429	MINGO 3	115	10.07	640200	GR ISLD4	230	16.35	640530	STEGALL7	115	8.11
531451	MINGO 7	345	6.93	640252	KEYSTON3	345	11.46	652571	GR ISLD3	345	12.03
531465	SETAB 7	345	7.50	640253	KEYSTON7	115	15.18	652572	SIDNEY 7	115	4.21
560075	G16-023-TAP	345	7.29	640255	KINGSLY7	115	9.19	652573	STEGALL4	230	5.38
560082	G16-050-TAP	345	8.05	640269	MCCOOK 7	115	7.65	652584	SIDNEYW4	230	3.30
560090	G16-034-TAP	345	6.79	640271	MCCOOL 3	345	10.21	652832	GRPRAR1-LNX3	345	6.45
584650	GEN-2015-023	345	6.62	640286	N.PLATT4	230	12.97	652871	GR ISLD-LNX3	345	12.03
584990	GEN-2015-061	345	5.64	640287	N.PLATT7	115	18.20	659131	LARAMIE3	345	7.95
585030	GEN-2015-065	345	6.37	640302	OGALALA4	230	7.73	659133	SIDNEY 3	345	6.89
587090	GEN-2016-023	345	6.15	640304	OGALALANPPD7	115	14.77	659134	SIDNEY 4	230	6.57
587190	GEN-2016-029	345	6.15	640312	PAULINE3	345	8.43	659135	STEGALL3	345	5.23
587220	GEN-2016-034	345	6.79	640325	REDWILO3	345	6.31	659206	STGXFMR4	230	5.66
640065	AXTELL 3	345	9.99	640326	REDWILO7	115	10.52	659210	SIDXFMR4	230	7.12
640066	AXTELL 7	115	14.48	640338	SCOTBLF7	115	5.80	659425	SIDNEY1-LNX3	345	6.89
640082	BEVERLY7	115	4.62	640359	STAPLETON 7	115	4.12	659426	SIDNEY2-LNX3	345	6.89
640091	BRULE 7	115	5.39	640365	STOCKVL7	115	4.54	659800	GRANTNB7	115	6.25
640093	C.CREEK4	230	7.00	640374	SWEET W3	345	10.27	659801	OGALALA7	115	14.77
640096	CALAMS 7	115	3.43	640381	THEDFRD7	115	9.08	659809	ROSCOE 7	115	6.33
640167	ENDERS 7	115	3.70	640500	CHERRYC3	345	5.64	659810	SPCREEK7	115	4.34
640183	GENTLMN3	345	16.30	640510	HOLT.CO3	345	7.19	659824	MCONGHY7	115	5.36
640184	GENTLMN4	230	19.17								

Table 4-5
Short-Circuit Analysis for Study Project GEN-2016-050

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
530551	SALINE 3	115	5.06	560134	ROSEMONT	115	12.12	640261	LOWELL 7	115	8.07
530552	GORHAM 3	115	3.15	562334	G13-010-TAP	345	9.20	640262	LOWELL 8	69	4.02
530553	S HAYS 3	115	8.98	572051	GEN2008-123N	115	7.36	640271	MCCOOL 3	345	10.21
530558	KNOLL 6	230	11.57	575010	GEN-2009-008	230	4.61	640272	MCCOOL 7	115	13.90
530561	KNOLL 3	115	11.97	579470	GEN-2008-092	230	8.35	640275	MINDEN 7	115	7.16
530581	N HAYS3	115	10.40	583600	GEN-2013-010	345	9.20	640277	MOORE 3	345	21.00
530582	S HAYS6	230	8.99	585240	GEN-2015-088	345	10.40	640278	SHELDON7	115	31.25
530583	POSTROCK7	345	9.02	587340	GEN-2016-049	345	8.71	640286	N.PLATT4	230	12.97
530584	POSTROCK6	230	11.79	587350	GEN-2016-050	345	7.35	640302	OGALALA4	230	7.73
530592	SMOKYHL6	230	6.94	587360	GEN-2016-055	115	6.42	640310	ORLEANS7	115	2.52
530593	SMKYP1 6	230	6.03	587440	GEN-2016-064	115	9.55	640311	ORLEANS8	69	2.62
530599	SMKYP2 6	230	6.44	640065	AXTELL 3	345	9.99	640312	PAULINE3	345	8.43
530605	REDLIN 3	115	4.19	640066	AXTELL 7	115	14.48	640313	PAULINE7	115	19.26
530676	GMEC 3	115	11.38	640103	CANADAY7	115	13.73	640314	PAULINE8	69	4.84
530677	OGALATP3	115	2.63	640131	COLMB.W4	230	9.54	640321	PROSSER7	115	6.70
530680	HEIZER 6	230	8.28	640139	COOPER 3	345	25.04	640325	REDWILO3	345	6.31
530695	CHETOLAH3	115	9.07	640161	ELMCRK_7	115	5.91	640326	REDWILO7	115	10.52
531451	MINGO 7	345	6.93	640183	GENTLMN3	345	16.30	640330	RIVERDL4	230	7.00
531469	SPERVIL7	345	15.27	640184	GENTLMN4	230	19.17	640331	RIVERDL7	115	11.88
531501	BUCKNER7	345	10.30	640194	GOSPER 7	115	4.26	640374	SWEET W3	345	10.27
532871	CIRCLE 6	230	8.60	640200	GR ISLD4	230	16.35	640381	THEDFRD7	115	9.08
532873	SUMMIT 6	230	12.98	640201	GR ISLD7	115	22.66	640383	TOWER 7	115	8.78
539678	GRTBEND3	115	12.84	640206	GUIDE R7	115	5.65	640407	WESTMIN7	115	7.85
539679	GRTBEND6	230	8.32	640214	HASTING4	230	7.32	640448	HOLDREGE 8	69	3.72
539695	SPEARVL6	230	13.11	640215	HASTING7	115	19.92	640500	CHERRYC3	345	5.64
539759	SPRVL 3	115	11.82	640222	HILDRTH7	115	4.52	640510	HOLT.CO3	345	7.19
539803	IRONWOOD7	345	14.76	640224	HOLDREG7	115	6.33	641087	EGYCNTR7	115	18.45
560002	IRONWOOD7	345	14.75	640242	JOHN.2 7	115	12.53	641088	HASTCTY7	115	19.92
560062	G15-088-TAP	345	10.80	640244	JOHN.LK7	115	8.64	650114	NW68HOLDRG3	345	16.34
560081	G16-049-TAP	345	9.53	640248	KEAR.NE7	115	9.08	650189	103&ROKEBY3	345	19.51
560082	G16-050-TAP	345	8.05	640250	KEARNEY7	115	11.69	652571	GR ISLD3	345	12.03
560083	G16-055-TAP	115	8.71	640252	KEYSTON3	345	11.46	652871	GR ISLD-LNX3	345	12.03
560090	G16-034-TAP	345	6.79	640253	KEYSTON7	115	15.18	659425	SIDNEY1-LNX3	345	6.89

Table 4-6
Short-Circuit Analysis for Study Project GEN-2016-055

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
530583	POSTROCK7	345	9.02	640200	GR ISLD4	230	16.35	640311	ORLEANS8	69	2.62
560062	G15-088-TAP	345	10.80	640206	GUIDE R7	115	5.65	640312	PAULINE3	345	8.43
560082	G16-050-TAP	345	8.05	640207	GUIDE R8	69	2.62	640313	PAULINE7	115	19.26
560083	G16-055-TAP	115	8.71	640214	HASTING4	230	7.32	640314	PAULINE8	69	4.84
560134	ROSEMONT	115	12.12	640215	HASTING7	115	19.92	640368	SUPEROR7	115	3.71
572051	GEN2008-123N	115	7.36	640220	HEBRON 7	115	5.37	640372	SUTTON 7	115	6.29
585240	GEN-2015-088	345	10.40	640222	HILDRTH7	115	4.52	640373	SUTTON 8	69	3.76
587350	GEN-2016-050	345	7.35	640224	HOLDREG7	115	6.33	640374	SWEET W3	345	10.27
587360	GEN-2016-055	115	6.42	640240	JOHN.1 7	115	8.22	640383	TOWER 7	115	8.78
587440	GEN-2016-064	115	9.55	640242	JOHN.2 7	115	12.53	640407	WESTMIN7	115	7.85
640065	AXTELL 3	345	9.99	640244	JOHN.LK7	115	8.64	640448	HOLDREGE 8	69	3.72
640066	AXTELL 7	115	14.48	640245	JOHN.LK8	69	4.10	641082	BYPASS 7	115	16.24
640100	CAMBRIG7	115	4.05	640248	KEAR.NE7	115	9.08	641083	D.HENRY7	115	11.34
640102	CANADAY4	230	6.19	640250	KEARNEY7	115	11.69	641085	E7THST 7	115	18.72
640103	CANADAY7	115	13.73	640256	LXNGTN 7	115	6.95	641087	EGYCNTR7	115	18.45
640139	COOPER 3	345	25.04	640261	LOWELL 7	115	8.07	641088	HASTCTY7	115	19.92
640144	COZAD 7	115	4.41	640271	MCCOOL 3	345	10.21	641090	S. 281 7	115	11.28
640161	ELMCRK_7	115	5.91	640275	MINDEN 7	115	7.16	650114	NW68HOLDRG3	345	16.34
640178	GENEVA 7	115	9.65	640277	MOORE 3	345	21.00	650189	103&ROKEBY3	345	19.51
640183	GENTLMN3	345	16.30	640278	SHELDON7	115	31.25	652571	GR ISLD3	345	12.03
640194	GOSPER 7	115	4.26	640310	ORLEANS7	115	2.52				

Table 4-7
Short-Circuit Analysis for Study Project GEN-2016-064

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
530583	POSTROCK7	345	9.02	640200	GR ISLD4	230	16.35	640313	PAULINE7	115	19.26
560061	G15-087-TAP	115	5.45	640206	GUIDE R7	115	5.65	640314	PAULINE8	69	4.84
560062	G15-088-TAP	345	10.80	640207	GUIDE R8	69	2.62	640368	SUPEROR7	115	3.71
560082	G16-050-TAP	345	8.05	640214	HASTING4	230	7.32	640372	SUTTON 7	115	6.29
560083	G16-055-TAP	115	8.71	640215	HASTING7	115	19.92	640373	SUTTON 8	69	3.76
560134	ROSEMONT	115	12.12	640218	HEBRN N7	115	5.63	640374	SWEET W3	345	10.27
572051	GEN2008-123N	115	7.36	640220	HEBRON 7	115	5.37	640448	HOLDREGE 8	69	3.72
585240	GEN-2015-088	345	10.40	640222	HILDRTH7	115	4.52	641082	BYPASS 7	115	16.24
587350	GEN-2016-050	345	7.35	640224	HOLDREG7	115	6.33	641083	D.HENRY7	115	11.34
587360	GEN-2016-055	115	6.42	640242	JOHN.2 7	115	12.53	641085	E7THST 7	115	18.72
587440	GEN-2016-064	115	9.55	640250	KEARNEY7	115	11.69	641087	EGYCNTR7	115	18.45
640065	AXTELL 3	345	9.99	640271	MCCOOL 3	345	10.21	641088	HASTCTY7	115	19.92
640066	AXTELL 7	115	14.48	640275	MINDEN 7	115	7.16	641090	S. 281 7	115	11.28
640105	CARLJCT7	115	5.44	640277	MOORE 3	345	21.00	650114	NW68HOLDRG3	345	16.34
640139	COOPER 3	345	25.04	640278	SHELDON7	115	31.25	650189	103&ROKEBY3	345	19.51
640178	GENEVA 7	115	9.65	640310	ORLEANS7	115	2.52	652571	GR ISLD3	345	12.03
640183	GENTLMN3	345	16.30	640312	PAULINE3	345	8.43				

Table 4-8
Short-Circuit Analysis for Study Project GEN-2016-075

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
560074	G16-017-TAP	345	6.64	640374	SWEET W3	345	10.27	652532	GR PRAIRIE3	345	6.45
579450	G0717WG0718W	345	5.60	640381	THEDFRD7	115	9.08	652540	BIGBND14	230	11.82
584650	GEN-2015-023	345	6.62	640500	CHERRYC3	345	5.64	652541	BIGBND24	230	11.65
640096	CALAMS 7	115	3.43	640510	HOLT.CO3	345	7.19	652571	GR ISLD3	345	12.03
640183	GENTLMN3	345	16.30	652276	FTTHOMP8	69	4.34	652606	LETCHER4	230	4.71
640184	GENTLMN4	230	19.17	652506	FTTHOMP3	345	9.39	652607	WESSINGTON 4	230	6.78
640200	GR ISLD4	230	16.35	652507	FTTHOMP4	230	19.80	652806	FTTHOM1-LNX3	345	9.39
640252	KEYSTON3	345	11.46	652509	FTRANDL4	230	11.03	652807	FTTHOM2-LNX3	345	9.39
640271	MCCOOL 3	345	10.21	652514	HURON 4	230	10.71	652832	GRPRAR1-LNX3	345	6.45
640325	REDWILO3	345	6.31	652516	LAKPLAT4	230	5.60	652833	GRPRAR2-LNX3	345	6.45
640359	STAPLETON 7	115	4.12	652519	OAHE 4	230	13.62	652871	GR ISLD-LNX3	345	12.03

4.3 Short-Circuit Results: 2025 Summer Peak

The maximum fault current for each bus is provided for the 2025 Summer Peak conditions. The following tables show the short circuit results for the study generators for the 2025 Summer Peak condition:

- Table 4-9: Short-circuit Analysis for GEN-2015-089
- Table 4-10: Short-circuit Analysis for GEN-2016-021 and GEN-2016-043
- Table 4-11: Short-circuit Analysis for GEN-2016-023 and GEN-2016-029
- Table 4-12: Short-circuit Analysis for GEN-2016-034
- Table 4-13: Short-circuit Analysis for GEN-2016-050
- Table 4-14: Short-circuit Analysis for GEN-2016-055
- Table 4-15: Short-circuit Analysis for GEN-2016-064
- Table 4-16: Short-circuit Analysis for GEN-2016-075

Table 4-9
Short-Circuit Analysis for Study Project GEN-2015-089

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
560074	G16-017-TAP	345	6.66	652235	SIOUXFL8	69	3.88	652566	SIOUXCY5	161	20.27
560347	G10-051-TAP	230	7.04	652245	CLEVELD8	69	4.33	652567	DENISON4	230	4.51
563230	GEN-2015-089	230	5.38	652249	ARMOUR 8	69	2.44	652574	SIOUXCY8	69	17.65
580011	G10-051&1127	230	6.26	652251	MTVERNS8	69	3.03	652578	PAHOJA 4	230	7.28
583830	G14013G01431	230	4.17	652252	MTVERNN8	69	2.90	652582	APPLEDORN 4	230	7.08
601006	SPLT RK3	345	13.85	652254	BERSFRD8	69	3.22	652583	DENISON8	69	11.35
602004	SPLT RK4	230	12.54	652276	FTTHOMP8	69	4.35	652588	CLEVELD4	230	4.78
602005	SPLT RK5	161	8.02	652277	LAKPLAT8	69	4.02	652591	HANLON 7	115	5.51
603009	GRANT 7	115	3.94	652278	HANLON18	69	5.24	652600	ASH TAP	115	8.75
603011	MINEHAH7	115	12.78	652279	HANLON28	69	5.24	652603	EXIRA 5	161	6.89
603012	LAWRENC7	115	28.69	652284	HURON 8	69	3.66	652606	LETCHER4	230	4.72
603013	PIPESTN7	115	9.03	652285	SULLYBT8	69	2.36	652607	WESSINGTON 4	230	6.80
603016	SPLT RK7	115	35.84	652286	TYNDALL8	69	2.52	652609	LETCHER7	115	6.03
603017	WSX FLS7	115	14.61	652287	RASMUSN8	69	3.16	652614	CARPENTER 4	230	6.86
603149	ANSON4	115	34.25	652397	VFODNES7	115	6.29	652626	UTICAJC7	115	8.98
603200	ANSON 7	115	31.75	652398	VFODNES4	230	7.00	652630	WATERTNCAP 4	230	14.40
603225	FALLS 7	115	15.25	652399	VFODNES8	69	4.20	652806	FTTHOM1-LNX3	345	9.47
603228	SPLITRK CAP7	115	35.31	652463	WH SWAN7	115	12.86	652807	FTTHOM2-LNX3	345	9.47
603265	PROSE CAP7	115	34.06	652474	AURORA 7	115	4.54	652821	SULLYBT-LNX3	230	6.18
603274	RENNER 7	115	11.47	652475	BONESTL7	115	3.91	652833	GRPRAR2-LNX3	345	6.46
605191	LAWRENC8	69	15.59	652476	EAGLEBT7	115	1.95	652864	SIOUXCY-LNX3	345	14.52
635200	RAUN 3	345	23.91	652478	GREGORY7	115	2.86	656267	MANNINGTAP 8	69	4.41
635201	RAUN 5	161	27.36	652484	NUNDRWD4	230	3.41	656570	WISDOM5	161	10.26
635223	PLYMOTH5	161	19.84	652486	PHILIP 4	230	3.12	658030	DENISONWEST8	69	6.54
635224	PLYMOTH8	69	20.86	652488	PHILTAP4	230	3.71	658031	DENSOUMAIN8	69	6.70
635225	MORNSD 5	161	10.19	652491	IRVSIMM7	115	8.26	659120	BRDLAND3	345	4.01
635226	LEEDS 5	161	15.67	652494	WINNER 7	115	3.49	659121	SPIRITM7	115	6.49
635260	LEMARST5	161	9.70	652501	ARMOUR 7	115	4.18	659122	STORLA 4	230	6.05
635385	HUDSON 8	69	5.93	652502	BERSFRD7	115	3.92	659123	STORLA 7	115	6.61
635391	IRETONT8	69	5.77	652503	BLAIR 4	230	9.80	659196	CARPENTER 8	69	3.17
635400	HIGHLND 3	345	11.13	652505	FLANDRU7	115	4.34	659198	LETCHR PS227	115	2.60
636010	LEHIGH 3	345	11.34	652506	FTTHOMP3	345	9.47	659205	BRDLAND4	230	9.86
640080	BELDEN 7	115	6.73	652507	FTTHOMP4	230	20.20	659250	SXF WBRANDN7	115	13.23
640084	BLMFLD 7	115	6.12	652509	FTRANDL4	230	11.06	659251	SXF CORSON 7	115	11.01
640113	CLRWATR7	115	5.19	652510	FTRANDL7	115	13.22	659256	SXF 57TH ST7	115	2.89
640126	E.COL. 4	230	9.44	652511	GAVINS 7	115	10.31	659257	SXF SHINDLR7	115	2.99
640127	COLMB.E7	115	21.09	652513	HANLON 4	230	6.00	659258	SXF HARSBRG7	115	3.69
640131	COLMB.W4	230	9.56	652514	HURON 4	230	10.89	659259	SXF CHANCLR7	115	4.51
640133	COLMBUS4	230	11.07	652515	HURON 7	115	15.25	659281	HYDE 8	69	3.31
640134	KELLY 7	115	17.47	652516	LAKPLAT4	230	5.60	659292	KEYSTN PS237	115	2.58
640136	COLMBUS7	115	18.83	652517	MANNING7	115	5.20	659295	SDPRAIRWND 4	230	5.61
640163	EMERSON7	115	5.45	652518	MTVERN 7	115	4.30	659900	EAGLE 4	230	7.11
640165	EMMET 7	115	3.01	652519	OAHE 4	230	13.82	659901	EAGLE 8	69	13.63
640200	GR ISLD4	230	16.38	652520	OAHE 7	115	11.71	659907	J1CENTR8	69	8.13
640212	HARTGTN7	115	5.66	652521	SULLYBT4	230	6.18	659912	J6BOYER8	69	9.57
640226	HOSKINS3	345	11.55	652523	SIOUXFL4	230	12.97	659921	J15SXCNTR8	69	6.58
640227	HOSKINS4	230	9.53	652524	SIOUXFL7	115	25.65	659942	K217HAWARDE8	69	7.50
640305	ONEILL 7	115	3.93	652525	TYNDALL7	115	3.86	659946	K216LIBERTY8	69	7.33
640306	ONEILL 8	69	4.24	652526	UTICAJC4	230	7.92	659953	K412HINTONM8	69	10.96
640342	SHELCRK3	345	9.99	652528	WOONSKT7	115	5.27	659971	K301HINTON 8	69	10.00
640343	SHELCRK4	230	10.55	652529	WATERTN3	345	10.18	659980	K135CONCORD8	69	6.62
640349	SPENCER7	115	4.62	652530	WATERTN4	230	14.40	660003	HURONWP7	115	10.05
640386	TWIN CH4	230	8.44	652531	WATERTN7	115	13.66	660004	MITCHEL7	115	5.86
640387	TWIN CH7	115	10.58	652535	REDFELD7	115	4.15	660005	TRIPP 7	115	4.14
640388	TWIN CH8	69	7.72	652536	RASMUSN4	230	6.59	660006	YKNTJCT7	115	9.28
640424	S.SIOUXCITY7	115	7.28	652540	BIGBND14	230	11.94	660007	MENNOJT7	115	6.65
640540	MEADOWGROVE4	230	5.53	652541	BIGBND24	230	10.06	660008	MITCLNW7	115	5.48
645451	S3451 3	345	19.57	652561	DENISON5	161	5.60	660009	BTAP WP7	115	14.81
648506	PR BRZ 4	230	4.17	652563	SPENCER5	161	10.14	660018	B_H WIND 7	115	3.46
652031	KPS21-GY7	115	1.67	652564	SIOUXCY3	345	14.52	660026	NAPA JCT7	115	8.60
652229	FLANDRU8	69	3.55	652565	SIOUXCY4	230	19.27	952509	G12_009IS	115	6.50

Table 4-10
Short-Circuit Analysis for Study Projects GEN-2016-021 and GEN-2016-043

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
560062	G15-088-TAP	345	10.85	640072	BATTLCR7	115	7.54	640521	ANTELOPE 7	115	13.67
560347	G10-051-TAP	230	7.04	640073	BATTLCR8	69	3.93	640540	MEADOWGROVE4	230	5.53
579444	G06-044N-HV1	115	5.65	640078	BEEMER 7	115	4.45	645100	FC1A 5	161	27.11
580011	G10-051&1127	230	6.26	640080	BELDEN 7	115	6.73	645451	S3451 3	345	19.57
583780	GEN-2013-032	115	11.16	640081	BELDEN 8	69	3.86	645454	S3454 3	345	24.04
584510	GEN-2015-007	345	7.60	640084	BLMFLD 7	115	6.12	645455	S3455 3	345	27.83
584910	GEN-2015-053	115	13.46	640085	BLMFLD 8	69	3.72	645456	S3456 3	345	30.62
585130	GEN-2015-076	115	3.85	640113	CLRWATR7	115	5.19	645458	S3458 3	345	27.91
587150	GEN-2016-021	345	4.44	640115	CO.LINE7	115	7.71	645459	S3459 3	345	22.64
587280	GEN-2016-043	345	7.45	640119	COL.COG7	115	18.91	645740	S3740 3	345	17.24
601006	SPLT RK3	345	13.85	640122	COL.DRY7	115	16.05	646206	S1206 5	161	40.89
601029	LKFLDXL3	345	13.55	640124	COL.SE 7	115	16.27	646209	S1209 5	161	41.88
601034	NOBLES 3	345	10.71	640125	COLMB.E3	345	9.82	646226	S1226 5	161	22.91
603016	SPLT RK7	115	35.84	640126	E.COL. 4	230	9.44	646231	S1231 5	161	39.29
631041	LAKEFLD5	161	20.04	640127	COLMB.E7	115	21.09	646237	S1237 5	161	16.77
631138	LAKEFLD3	345	16.12	640131	COLMB.W4	230	9.56	646249	S1249 5	161	21.30
631193	HUNTLEY3	345	10.60	640133	COLMBUS4	230	11.07	646250	S1250 5	161	34.53
631197	LEDYARD3	345	11.46	640134	KELLY 7	115	17.47	646251	S1251 5	161	29.36
635000	CBLUFFS3	345	28.70	640136	COLMBUS7	115	18.83	646252	S1252 5	161	19.18
635014	POTTCO 3	345	21.78	640139	COOPER 3	345	25.06	646254	S1254 5	161	26.15
635017	ATCHSNT3	345	15.04	640149	CREITON7	115	4.80	646255	S1255 5	161	40.45
635200	RAUN 3	345	23.91	640150	CREITON8	69	4.41	646281	S1281 5	161	23.71
635201	RAUN 5	161	27.36	640151	CRESTON7	115	5.96	646297	S1297 5	161	17.93
635202	NEAL 4 5	161	18.80	640157	DAVIDCY7	115	5.34	646298	S1298 5	161	26.90
635203	NEAL N 5	161	25.84	640163	EMERSON7	115	5.45	646301	S1301 5	161	7.31
635204	NEAL 8	69	9.87	640164	EMERSONG	69	3.75	646305	S1305 5	161	25.65
635220	INTCHG 5	161	14.75	640181	GENOA 7	115	4.96	646341	S1341 5	161	25.00
635221	KELLOGG5	161	17.08	640200	GR ISLD4	230	16.38	647909	S909 8	69	25.70
635222	KELLOGG8	69	17.62	640212	HARTGTN7	115	5.66	648506	PR BRZ 4	230	4.17
635223	PLYMOTH5	161	19.84	640213	HARTGTN8	69	3.62	650114	NW68HOLDRG3	345	16.54
635225	MORNSD 5	161	10.19	640226	HOSKINS3	345	11.55	650185	WAGENER 3	345	19.79
635226	LEEDS 5	161	15.67	640227	HOSKINS4	230	9.53	650189	103&ROKEBY3	345	19.73
635227	SBRIDGE T8	69	8.66	640228	HOSKINS7	115	17.65	650210	NW70FAIRFD7	115	21.24
635228	AIRPORT 5	161	16.98	640263	MADISON7	115	6.14	650214	NW68HOLDRG7	115	25.49
635230	LIBERTY5	161	25.12	640271	MCCOOL 3	345	10.24	650216	SW27&F 7	115	22.01
635235	SALIX 5	161	16.14	640277	MOORE 3	345	21.27	650285	WAGENER 7	115	31.14
635236	SALIX 8	69	13.32	640278	SHELDON7	115	32.67	650290	ROKEBY 7	115	26.24
635300	MONONA 5	161	5.34	640293	NELIGH 7	115	10.25	652287	RASMUSN8	69	3.16
635301	MONONA 8	69	4.48	640294	NELIGH 8	69	5.96	652507	FTTHOMP4	230	20.20
635330	CRWFRD 5	161	4.80	640296	NORFK.N7	115	13.04	652509	FTRANDL4	230	11.06
635368	OBRIEN 3	345	11.32	640298	NORFOLK7	115	12.26	652510	FTRANDL7	115	13.22
635369	KOSSUTH 3	345	10.97	640300	OAKLAND7	115	7.60	652511	GAVINS 7	115	10.31
635400	HIGHLND 3	345	11.13	640305	ONEILL 7	115	3.93	652516	LAKPLAT4	230	5.60
635589	ECLIPSE3	345	8.08	640316	PAWNEEL7	115	11.35	652526	UTICAJC4	230	7.92
635590	FALLOW 3	345	9.65	640318	PETRSBG7	115	6.44	652536	RASMUSN4	230	6.59
635600	GRIMES 3	345	19.44	640336	SCHUYLR7	115	5.78	652537	WHITE 3	345	16.98
635601	GRIMES 5	161	24.10	640342	SHELCRK3	345	9.99	652561	DENISON5	161	5.60
635602	142ST 5	161	21.13	640343	SHELCRK4	230	10.55	652563	SPENCER5	161	10.14
635605	GRNGRTP5	161	26.01	640345	SILVRCK7	115	4.55	652564	SIOUXCY3	345	14.52
635608	LINWELD5	161	21.79	640357	STANTON7	115	5.12	652565	SIOUXCY4	230	19.27
635630	BOONVIL3	345	16.39	640363	STNTN.N7	115	6.94	652566	SIOUXCY5	161	20.27
635631	BOONVIL5	161	20.33	640377	TEKAMAH5	161	8.60	652567	DENISON4	230	4.51
635635	MADISON3	345	15.13	640378	TEKAMAH7	115	8.07	652574	SIOUXCY8	69	17.65
635680	BONDRNT3	345	18.36	640386	TWIN CH4	230	8.44	652578	PAHOJA 4	230	7.28
635700	SYCAMOR3	345	19.17	640387	TWIN CH7	115	10.58	652583	DENISON8	69	11.35
635701	SYCAMOR5	161	32.03	640388	TWIN CH8	69	7.72	652864	SIOUXCY-LNX3	345	14.52
636000	WEBSTER3	345	11.03	640400	W.POINT7	115	5.09	656353	HOPE5	161	8.73
636001	WEBSTER5	161	16.71	640402	WAHOO 7	115	4.72	656369	WEBSTER8	69	8.74
636010	LEHIGH 3	345	11.34	640424	S.SIOUXCITY7	115	7.28	659121	SPIRITM7	115	6.49
636020	FT.DODG5	161	10.20	640425	S.SIOUXCITY8	69	4.48	659900	EAGLE 4	230	7.11
636025	HAYES 5	161	10.43	640444	PETERSBRG.N7	115	6.45	659901	EAGLE 8	69	13.63
636050	WRIGHT 5	161	9.65	640461	OAKDALEP23 7	115	8.40	660006	YKNTJCT7	115	9.28
640070	BANCRFT7	115	5.17	640520	ANTELOPE 3	345	6.10				

Table 4-11
Short-Circuit Analysis for Study Projects GEN-2016-023 and GEN-2016-029

Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
MINGO 7	345	7.03	640304	OGALALANPPD7	115	14.78	652873	STEGALL-LNX3	230	5.38
G16-023-TAP	345	7.29	640325	REDWILO3	345	6.34	659131	LARAMIE3	345	7.95
G16-034-TAP	345	6.80	640326	REDWILO7	115	10.56	659133	SIDNEY 3	345	6.90
GEN-2016-023	345	6.15	640338	SCOTBLF7	115	5.80	659134	SIDNEY 4	230	6.57
GEN-2016-029	345	6.15	640374	SWEET W3	345	10.27	659135	STEGALL3	345	5.24
GEN-2016-034	345	6.80	640381	THEDFRD7	115	9.09	659170	STEGALDC	230	5.75
AXTELL 3	345	10.00	640396	VICTRYH4	230	3.70	659206	STGXFMR4	230	5.66
GENTLMN3	345	16.33	640397	VICTRYH7	115	5.92	659210	SIDXFMR4	230	7.13
GENTLMN4	230	19.20	640500	CHERRYC3	345	5.65	659425	SIDNEY1-LNX3	345	6.90
KEYSTON3	345	11.47	640510	HOLT.CO3	345	7.20	659426	SIDNEY2-LNX3	345	6.90
KEYSTON7	115	15.19	640530	STEGALL7	115	8.12	659800	GRANTNB7	115	6.25
KINGSLY7	115	9.19	652571	GR ISLD3	345	12.05	659801	OGALALA7	115	14.78
N.PLATT4	230	13.00	652573	STEGALL4	230	5.38	659821	GERINGT7	115	5.28
OGALALA4	230	7.74								

Table 4-12
Short-Circuit Analysis for Study Project GEN-2016-034

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
531429	MINGO 3	115	13.16	640200	GR ISLD4	230	16.38	640530	STEGALL7	115	8.12
531451	MINGO 7	345	7.03	640252	KEYSTON3	345	11.47	652571	GR ISLD3	345	12.05
531465	SETAB 7	345	7.54	640253	KEYSTON7	115	15.19	652572	SIDNEY 7	115	4.21
560075	G16-023-TAP	345	7.29	640255	KINGSLY7	115	9.19	652573	STEGALL4	230	5.38
560082	G16-050-TAP	345	8.05	640269	MCCOOK 7	115	7.67	652584	SIDNEYW4	230	3.30
560090	G16-034-TAP	345	6.80	640271	MCCOOL 3	345	10.24	652832	GRPRAR1-LNX3	345	6.46
584650	GEN-2015-023	345	6.63	640286	N.PLATT4	230	13.00	652871	GR ISLD-LNX3	345	12.05
584990	GEN-2015-061	345	5.71	640287	N.PLATT7	115	18.25	659131	LARAMIE3	345	7.95
585030	GEN-2015-065	345	6.45	640302	OGALALA4	230	7.74	659133	SIDNEY 3	345	6.90
587090	GEN-2016-023	345	6.15	640304	OGALALANPPD7	115	14.78	659134	SIDNEY 4	230	6.57
587190	GEN-2016-029	345	6.15	640312	PAULINE3	345	8.44	659135	STEGALL3	345	5.24
587220	GEN-2016-034	345	6.80	640325	REDWILO3	345	6.34	659206	STGXFMR4	230	5.66
640065	AXTELL 3	345	10.00	640326	REDWILO7	115	10.56	659210	SIDXFMR4	230	7.13
640066	AXTELL 7	115	14.49	640338	SCOTBLF7	115	5.80	659425	SIDNEY1-LNX3	345	6.90
640082	BEVERLY7	115	4.66	640359	STAPLETON 7	115	4.13	659426	SIDNEY2-LNX3	345	6.90
640091	BRULE 7	115	5.39	640365	STOCKVL7	115	4.55	659800	GRANTNB7	115	6.25
640093	C.CREEK4	230	7.03	640374	SWEET W3	345	10.27	659801	OGALALA7	115	14.78
640096	CALAMS 7	115	3.45	640381	THEDFRD7	115	9.09	659809	ROSCOE 7	115	6.33
640167	ENDERS 7	115	3.71	640500	CHERRYC3	345	5.65	659810	SPCREEK7	115	4.34
640183	GENTLMN3	345	16.33	640510	HOLT.CO3	345	7.20	659824	MCONGHY7	115	5.36
640184	GENTLMN4	230	19.20								

Table 4-13
Short-Circuit Analysis for Study Project GEN-2016-050

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
530551	SALINE 3	115	5.07	562334	G13-010-TAP	345	9.22	640261	LOWELL 7	115	8.07
530552	GORHAM 3	115	3.15	572051	GEN2008-123N	115	7.36	640262	LOWELL 8	69	4.02
530553	S HAYS 3	115	9.00	575010	GEN-2009-008	230	4.62	640271	MCCOOL 3	345	10.24
530558	KNOLL 6	230	11.61	579470	GEN-2008-092	230	8.37	640272	MCCOOL 7	115	13.93
530561	KNOLL 3	115	12.00	583600	GEN-2013-010	345	9.22	640275	MINDEN 7	115	7.16
530581	N HAYS3	115	10.42	585240	GEN-2015-088	345	10.44	640277	MOORE 3	345	21.27
530582	S HAYS6	230	9.03	587340	GEN-2016-049	345	8.72	640278	SHELDON7	115	32.67
530583	POSTROCK7	345	9.05	587350	GEN-2016-050	345	7.36	640286	N.PLATT4	230	13.00
530584	POSTROCK6	230	11.83	587360	GEN-2016-055	115	6.43	640302	OGALALA4	230	7.74
530592	SMOKYHL6	230	6.99	587440	GEN-2016-064	115	9.55	640310	ORLEANS7	115	2.52
530593	SMKYP1 6	230	6.07	640065	AXTELL 3	345	10.00	640311	ORLEANS8	69	2.62
530599	SMKYP2 6	230	6.49	640066	AXTELL 7	115	14.49	640312	PAULINE3	345	8.44
530605	REDLIN 3	115	4.20	640103	CANADAY7	115	13.75	640313	PAULINE7	115	19.27
530676	GMEC 3	115	11.41	640131	COLMB.W4	230	9.56	640314	PAULINE8	69	4.84
530677	OGALATP3	115	2.63	640139	COOPER 3	345	25.06	640321	PROSSER7	115	6.70
530680	HEIZER 6	230	8.39	640161	ELMCRK_7	115	5.91	640325	REDWILO3	345	6.34
530695	CHETOLAH3	115	9.09	640183	GENTLMN3	345	16.33	640326	REDWILO7	115	10.56
531451	MINGO 7	345	7.03	640184	GENTLMN4	230	19.20	640330	RIVERDL4	230	7.01
531469	SPERVIL7	345	15.33	640194	GOSPER 7	115	4.26	640331	RIVERDL7	115	11.89
531501	BUCKNER7	345	10.33	640200	GR ISLD4	230	16.38	640374	SWEET W3	345	10.27
532871	CIRCLE 6	230	9.59	640201	GR ISLD7	115	22.69	640381	THEDFRD7	115	9.09
532873	SUMMIT 6	230	13.54	640206	GUIDE R7	115	5.65	640383	TOWER 7	115	8.78
539678	GRTBEND3	115	12.96	640214	HASTING4	230	7.32	640407	WESTMIN7	115	7.86
539679	GRTBEND6	230	8.44	640215	HASTING7	115	19.93	640448	HOLDREGE 8	69	5.56
539695	SPEARVL6	230	13.15	640222	HILDRTH7	115	4.52	640500	CHERRYC3	345	5.65
539759	SPRVL 3	115	11.83	640223	HILDRTH8	69	3.31	640510	HOLT.CO3	345	7.20
539803	IRONWOOD7	345	14.82	640224	HOLDREG7	115	6.33	641087	EGYCNTR7	115	18.46
560002	IRONWOOD7	345	14.80	640242	JOHN.2 7	115	12.55	641088	HASTCTY7	115	19.93
560062	G15-088-TAP	345	10.85	640244	JOHN.LK7	115	8.65	650114	NW68HOLDRG3	345	16.54
560081	G16-049-TAP	345	9.55	640248	KEAR.NE7	115	9.09	650189	103&ROKEBY3	345	19.73
560082	G16-050-TAP	345	8.05	640250	KEARNEY7	115	11.70	652571	GR ISLD3	345	12.05
560083	G16-055-TAP	115	8.71	640252	KEYSTON3	345	11.47	652871	GR ISLD-LNX3	345	12.05
560090	G16-034-TAP	345	6.80	640253	KEYSTON7	115	15.19	659425	SIDNEY1-LNX3	345	6.90
560134	ROSEMONT	115	12.12								

Table 4-14
Short-Circuit Analysis for Study Project GEN-2016-055

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
530583	POSTROCK7	345	9.05	640200	GR ISLD4	230	16.38	640310	ORLEANS7	115	2.52
560062	G15-088-TAP	345	10.85	640206	GUIDE R7	115	5.65	640311	ORLEANS8	69	2.62
560082	G16-050-TAP	345	8.05	640207	GUIDE R8	69	2.62	640312	PAULINE3	345	8.44
560083	G16-055-TAP	115	8.71	640214	HASTING4	230	7.32	640313	PAULINE7	115	19.27
560134	ROSEMONT	115	12.12	640215	HASTING7	115	19.93	640314	PAULINE8	69	4.84
572051	GEN2008-123N	115	7.36	640220	HEBRON 7	115	5.37	640368	SUPEROR7	115	3.71
585240	GEN-2015-088	345	10.44	640222	HILDRTH7	115	4.52	640372	SUTTON 7	115	6.29
587350	GEN-2016-050	345	7.36	640223	HILDRTH8	69	3.31	640373	SUTTON 8	69	3.76
587360	GEN-2016-055	115	6.43	640224	HOLDREG7	115	6.33	640374	SWEET W3	345	10.27
587440	GEN-2016-064	115	9.55	640240	JOHN.1 7	115	8.22	640383	TOWER 7	115	8.78
640065	AXTELL 3	345	10.00	640242	JOHN.2 7	115	12.55	640407	WESTMIN7	115	7.86
640066	AXTELL 7	115	14.49	640244	JOHN.LK7	115	8.65	640448	HOLDREGE 8	69	5.56
640100	CAMBRIG7	115	4.05	640245	JOHN.LK8	69	4.10	641082	BYPASS 7	115	16.25
640102	CANADAY4	230	6.20	640248	KEAR.NE7	115	9.09	641083	D.HENRY7	115	11.35
640103	CANADAY7	115	13.75	640250	KEARNEY7	115	11.70	641085	E7THST 7	115	18.73
640139	COOPER 3	345	25.06	640256	LXNGTN 7	115	6.95	641087	EGYCNTR7	115	18.46
640144	COZAD 7	115	4.42	640261	LOWELL 7	115	8.07	641088	HASTCTY7	115	19.93
640161	ELMCRK_7	115	5.91	640271	MCCOOL 3	345	10.24	641090	S. 281 7	115	11.28
640178	GENEVA 7	115	9.65	640275	MINDEN 7	115	7.16	650114	NW68HOLDRG3	345	16.54
640183	GENTLMN3	345	16.33	640277	MOORE 3	345	21.27	650189	103&ROKEBY3	345	19.73
640194	GOSPER 7	115	4.26	640278	SHELDON7	115	32.67	652571	GR ISLD3	345	12.05

Table 4-15
Short-Circuit Analysis for Study Project GEN-2016-064

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
530583	POSTROCK7	345	9.05	640200	GR ISLD4	230	16.38	640312	PAULINE3	345	8.44
560061	G15-087-TAP	115	5.45	640206	GUIDE R7	115	5.65	640313	PAULINE7	115	19.27
560062	G15-088-TAP	345	10.85	640207	GUIDE R8	69	2.62	640314	PAULINE8	69	4.84
560082	G16-050-TAP	345	8.05	640214	HASTING4	230	7.32	640368	SUPEROR7	115	3.71
560083	G16-055-TAP	115	8.71	640215	HASTING7	115	19.93	640372	SUTTON 7	115	6.29
560134	ROSEMONT	115	12.12	640218	HEBRN N7	115	5.63	640373	SUTTON 8	69	3.76
572051	GEN2008-123N	115	7.36	640220	HEBRON 7	115	5.37	640374	SWEET W3	345	10.27
585240	GEN-2015-088	345	10.44	640222	HILDRTH7	115	4.52	640448	HOLDREGE 8	69	5.56
587350	GEN-2016-050	345	7.36	640223	HILDRTH8	69	3.31	641082	BYPASS 7	115	16.25
587360	GEN-2016-055	115	6.43	640224	HOLDREG7	115	6.33	641083	D.HENRY7	115	11.35
587440	GEN-2016-064	115	9.55	640242	JOHN.2 7	115	12.55	641085	E7THST 7	115	18.73
640065	AXTELL 3	345	10.00	640250	KEARNEY7	115	11.70	641087	EGYCNTR7	115	18.46
640066	AXTELL 7	115	14.49	640271	MCCOOL 3	345	10.24	641088	HASTCTY7	115	19.93
640105	CARLJCT7	115	5.44	640275	MINDEN 7	115	7.16	641090	S. 281 7	115	11.28
640139	COOPER 3	345	25.06	640277	MOORE 3	345	21.27	650114	NW68HOLDRG3	345	16.54
640178	GENEVA 7	115	9.65	640278	SHELDON7	115	32.67	650189	103&ROKEBY3	345	19.73
640183	GENTLMN3	345	16.33	640310	ORLEANS7	115	2.52	652571	GR ISLD3	345	12.05

Table 4-16
Short-Circuit Analysis for Study Project GEN-2016-075

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
560074	G16-017-TAP	345	6.66	640374	SWEET W3	345	10.27	652532	GR PRAIRIE3	345	6.46
579450	G0717WG0718W	345	5.60	640381	THEDFRD7	115	9.09	652540	BIGBND14	230	11.94
584650	GEN-2015-023	345	6.63	640500	CHERRYC3	345	5.65	652571	GR ISLD3	345	12.05
640096	CALAMS 7	115	3.45	640510	HOLT.CO3	345	7.20	652606	LETCHER4	230	4.72
640183	GENTLMN3	345	16.33	652276	FTTHOMP8	69	4.35	652607	WESSINGTON 4	230	6.80
640184	GENTLMN4	230	19.20	652506	FTTHOMP3	345	9.47	652806	FTTHOM1-LNX3	345	9.47
640200	GR ISLD4	230	16.38	652507	FTTHOMP4	230	20.20	652807	FTTHOM2-LNX3	345	9.47
640252	KEYSTON3	345	11.47	652509	FTRANDL4	230	11.06	652832	GRPRAR1-LNX3	345	6.46
640271	MCCOOL 3	345	10.24	652514	HURON 4	230	10.89	652833	GRPRAR2-LNX3	345	6.46
640325	REDWILO3	345	6.34	652516	LAKPLAT4	230	5.60	652871	GR ISLD-LNX3	345	12.05
640359	STAPLETON 7	115	4.13	652519	OAHE 4	230	13.82	659312	LOWERBRULE 4	230	11.05

SECTION 5: POWER FACTOR ANALYSIS

The objective of this task is to quantify the power factor at the point of interconnection for the wind farms during base case and system contingencies. SPP transmission planning practice requires interconnecting generation projects to maintain the power factor (pf) at the Point of Interconnection (POI) within +/- 0.95 pf for system intact conditions and for post-contingency conditions. This is analyzed by having the wind/solar farm maintain a prescribed voltage schedule at the point of interconnection of 1.0 p.u. voltage or higher.

The 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak power flows provided by SPP were examined prior to the Power Factor Analysis to ensure they contained the proposed study project modeled at 100% of the nameplate rating and any previously queued projects listed in Table 2-2. There was no suspect power flow data in the study area. The proposed study project and any previously queued projects at the same point of interconnection were turned off during the power factor analysis. The wind farm(s) were then replaced by a generator modeled at the high side bus with the same real power (MW) capability as the wind farm(s) and open limits for the reactive power set points (Mvar). The generator was set to hold the POI scheduled bus voltage. All N-1, three-phase fault contingencies from Table 2-3 were then applied and the reactive power required to maintain the bus voltage was recorded.

5.1 Approach

The upgrades that were identified in the Stability Analysis were implemented to each power case for the power factor analysis. Refer to Section 3 for the necessary upgrades and Table 5-1 for the scheduled voltage each study generator was set to hold at the point of interconnection for each season.

GEN-2015-089 was disabled and a generator was placed at the study project's high side bus (563230). The generator was modeled with PGEN = 200 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the study project's high side bus to GEN-2015-089 were disabled.

GEN-2016-021, GEN-2016-043, and GEN-2015-007 were all disabled in the power flow case. A generator was placed at the high side bus of GEN-2016-021 (587150) and modeled with PGEN = 300 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. A second generator was placed at the high side bus of GEN-2016-043 (587280) and was modeled with PGEN = 230 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. A third generator was placed at the high side bus of GEN-2015-007 (584510) and was modeled with PGEN = 230 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the high side bus of each project to the corresponding generator were disabled. Note the Power Factor Analysis was performed separately for GEN-2016-021 and GEN-2016-043.

GEN-2016-023 and GEN-2016-029 were disabled in the power flow case. A generator was placed at the high side bus of GEN-2016-023 (587090) and modeled with PGEN = 150.5 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. A second generator was placed at the high side bus of GEN-2016-029 (587190) and was modeled with PGEN = 150.5 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the high side bus of each project to the corresponding generator were disabled. Note the Power Factor Analysis was performed separately for GEN-2016-023 and GEN-2016-029.

GEN-2016-034 was disabled and a generator was placed at the study project's high side bus (587220). The generator was modeled with PGEN = 90 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the study project's high side bus to GEN-2016-034 were disabled.

GEN-2016-050 was disabled and a generator was placed at the study project's high side bus (587350). The generator was modeled with PGEN = 250.7 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the study project's high side bus to GEN-2016-050 were disabled.

GEN-2016-055 was disabled and a generator was placed at the study project's high side bus (560083). The generator was modeled with PGEN = 126.5 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the study project's high side bus to GEN-2016-055 were disabled.

GEN-2016-064 and GEN-2008-123 were disabled in the power flow case. A generator was placed at the high side bus of GEN-2016-064 (587440) and modeled with PGEN = 116 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. A second generator was placed at the high side bus of GEN-2008-123 (572051) and was modeled with PGEN = 89.5 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the high side bus of each project to the corresponding generator were disabled. Note the Power Factor Analysis was performed for GEN-2016-064.

GEN-2016-075, GEN-2007-017/GEN-2007-018, and Grand Prairie Generation were all disabled in the power flow case. A generator was placed at the high side bus of GEN-2016-075 (579450) and modeled with PGEN = 50 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. A second generator was placed at the high side bus of GEN-2007-017/GEN-2007-018 (579450) and was modeled with PGEN = 200 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. A third generator was placed at the high side bus of Grand Prairie Generation (579450) and was modeled with PGEN = 200 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the high side bus of each project to the corresponding generator were disabled. Note the Power Factor Analysis was performed for GEN-2016-075.

Table 5-1
Voltage Schedule of All Study Generators for All Seasons

Point of Interconnection Voltage (p.u.)				
Request	**POI**	**16WP**	**17SP**	**25SP**
GEN-2015-089	Utica 230 kV	1.0116	1.0089	1.0070
GEN-2016-021	Hoskins 345 kV	1.0016	1.0000	1.0019
GEN-2016-023	Tap Sidney to Laramie River (560075)	1.0259	1.0222	1.0219
GEN-2016-029	Tap Sidney to Laramie River (560075)	1.0259	1.0222	1.0219
GEN-2016-034	Tap Sidney to Laramie River (560090)	1.0200	1.0104	1.0098
GEN-2016-043	Hoskins 345 kV	1.0016	1.0000	1.0019
GEN-2016-050	Tap Axtell to Post Rock 345 kV	1.0039	1.0000	1.0000
GEN-2016-055	Tap Pauline to Hildreth 115 kV	1.0392	1.0350	1.0301
GEN-2016-064	Tap Pauline to Guide 115 kV (Rosemont 115 kV)	1.0367	1.0351	1.0367
GEN-2016-075	Tap Ft. Thompson to Hope County 345 kV (Grand Prairie 345 kV)	1.0210	1.0084	1.0086

5.2 Power Factor Analysis Results

The power factor was calculated for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions. The following tables show the power factor results for the study generators:

- Table 5-1: Power Factor Analysis for GEN-2015-089
- Table 5-2: Power Factor Analysis for GEN-2016-021
- Table 5-3: Power Factor Analysis for GEN-2016-023
- Table 5-4: Power Factor Analysis for GEN-2016-029
- Table 5-5: Power Factor Analysis for GEN-2016-034
- Table 5-6: Power Factor Analysis for GEN-2016-043
- Table 5-7: Power Factor Analysis for GEN-2016-050
- Table 5-8: Power Factor Analysis for GEN-2016-055
- Table 5-9: Power Factor Analysis for GEN-2016-064
- Table 5-10: Power Factor Analysis for GEN-2016-075

Note that a positive Q (Mvar) output illustrates that the generator is absorbing reactive power from the system, implying a leading power factor; a negative Q (Mvar) illustrates that the generator is supplying reactive power to the system, implying a lagging power factor.

Table 5-1
Power Factor Analysis: GEN-2015-089

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.994	Leading	22.20	0.995	Leading	20.21	0.996	Leading	18.55
1	FLT01	0.997	Leading	15.03	0.997	Leading	16.41	0.997	Leading	15.84
2	FLT02	0.993	Leading	22.95	0.994	Leading	22.41	0.995	Leading	20.70
3	FLT03	1.000	Leading	1.98	0.999	Leading	7.79	0.999	Leading	6.37
4	FLT04	0.994	Leading	21.90	0.995	Leading	19.24	0.996	Leading	17.79
5	FLT05	0.994	Leading	22.57	0.995	Leading	20.33	0.996	Leading	18.70
6	FLT06	0.999	Leading	8.84	0.999	Leading	8.23	1.000	Leading	4.24
7	FLT07	0.994	Leading	22.04	0.995	Leading	20.69	0.995	Leading	19.17
8	FLT08	0.992	Leading	24.97	0.991	Leading	26.47	0.993	Leading	23.37
9	FLT09	0.995	Leading	20.50	0.995	Leading	19.97	0.996	Leading	18.61
10	FLT10	0.994	Leading	22.20	0.995	Leading	20.21	0.996	Leading	18.55
12	FLT12	0.995	Leading	20.27	0.996	Leading	18.52	0.996	Leading	16.96
13	FLT13	0.995	Leading	20.93	0.996	Leading	18.65	0.996	Leading	17.14
14	FLT14	0.997	Leading	15.59	0.997	Leading	16.72	0.997	Leading	16.13
15	FLT15	0.994	Leading	22.38	0.995	Leading	20.49	0.996	Leading	18.78
16	FLT16	0.994	Leading	21.87	0.995	Leading	19.90	0.996	Leading	18.08
17	FLT17	0.994	Leading	22.21	0.995	Leading	20.25	0.996	Leading	18.59
18	FLT18	0.996	Leading	17.91	0.997	Leading	15.01	0.998	Leading	12.66
19	FLT19	0.994	Leading	22.25	0.995	Leading	20.30	0.996	Leading	18.63
20	FLT20	0.994	Leading	21.28	0.995	Leading	19.18	0.996	Leading	17.52
33	FLT33	0.994	Leading	22.18	0.995	Leading	20.13	0.996	Leading	18.43
34	FLT34	0.994	Leading	21.74	0.996	Leading	18.49	0.996	Leading	17.48
35	FLT35	0.994	Leading	21.99	0.995	Leading	19.80	0.996	Leading	18.14
36	FLT36	0.993	Leading	22.94	0.994	Leading	21.17	0.995	Leading	19.45
37	FLT37	0.994	Leading	22.21	0.995	Leading	20.18	0.996	Leading	18.51
38	FLT38	0.994	Leading	21.74	0.995	Leading	19.35	0.996	Leading	17.74
39	FLT39	0.994	Leading	22.08	0.995	Leading	19.92	0.996	Leading	18.25
40	FLT40	0.994	Leading	22.19	0.995	Leading	20.13	0.996	Leading	18.47
41	FLT41	0.994	Leading	22.16	0.995	Leading	20.14	0.996	Leading	18.48
42	FLT42	0.994	Leading	22.20	0.995	Leading	20.21	0.996	Leading	18.55
52	FLT52	0.994	Leading	21.20	0.996	Leading	18.15	0.997	Leading	16.52
53	FLT53	0.996	Leading	18.98	0.997	Leading	15.73	0.998	Leading	14.14
54	FLT54	0.995	Leading	20.11	0.996	Leading	16.90	0.997	Leading	15.42
55	FLT55	0.994	Leading	21.48	0.995	Leading	19.57	0.996	Leading	18.02
56	FLT56	0.994	Leading	22.33	0.995	Leading	20.36	0.996	Leading	18.70
57	FLT57	0.994	Leading	22.02	0.995	Leading	19.83	0.996	Leading	18.12
58	FLT58	0.994	Leading	21.24	0.995	Leading	19.04	0.996	Leading	17.50
70	FLT70	0.994	Leading	22.10	0.995	Leading	20.08	0.996	Leading	18.46
71	FLT71	0.994	Leading	22.26	0.995	Leading	20.30	0.996	Leading	18.63
72	FLT72	0.994	Leading	22.25	0.995	Leading	20.26	0.996	Leading	18.59
73	FLT73	0.994	Leading	22.22	0.995	Leading	20.23	0.996	Leading	18.57
74	FLT74	0.994	Leading	21.80	0.995	Leading	19.89	0.996	Leading	18.29
75	FLT75	0.994	Leading	22.25	0.995	Leading	20.28	0.996	Leading	18.59
87	FLT87	0.994	Leading	22.03	0.995	Leading	19.99	0.996	Leading	18.35
88	FLT88	0.994	Leading	22.22	0.995	Leading	20.23	0.996	Leading	18.57
89	FLT89	0.994	Leading	22.06	0.995	Leading	20.05	0.996	Leading	18.41
95	FLT95	0.997	Leading	16.69	1.000	Leading	3.81	1.000	Leading	1.66
96	FLT96	0.989	Leading	29.62	0.994	Leading	22.47	0.995	Leading	20.70
97	FLT97	0.998	Leading	12.67	1.000	Leading	4.35	1.000	Leading	1.84
98	FLT98	0.994	Leading	22.37	0.995	Leading	19.71	0.996	Leading	17.98
99	FLT99	0.994	Leading	21.14	0.993	Leading	23.16	0.995	Leading	20.53
100	FLT100	0.993	Leading	23.02	0.995	Leading	20.91	0.995	Leading	19.08
107	FLT107	0.997	Leading	14.91	0.995	Leading	20.70	0.996	Leading	17.76
108	FLT108	0.990	Leading	28.61	0.992	Leading	25.44	0.989	Leading	29.43
109	FLT109	0.996	Leading	17.26	0.997	Leading	15.36	0.999	Leading	10.76
110	FLT110	0.989	Leading	30.37	0.992	Leading	25.10	0.994	Leading	22.46

Study Generator GEN-2015-089

The Power Factor Analysis shows that GEN-2015-089 has a power factor range of 0.989 leading to unity for the 2016 Winter Peak conditions, a power factor range of 0.991 leading to unity for the 2017 Summer Peak conditions, and a power factor range of 0.991 leading to unity for the 2025 Summer Peak conditions.

Table 5-2
Power Factor Analysis: GEN-2016-021

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.998	Leading	17.04	0.999	Leading	12.78	0.998	Leading	17.13
1	FLT01	0.999	Lagging	-10.42	1.000	Lagging	-5.01	1.000	Lagging	-0.61
2	FLT02	0.998	Leading	18.91	0.998	Leading	18.53	0.997	Leading	24.29
3	FLT03	0.990	Lagging	-43.76	0.986	Lagging	-50.99	0.989	Lagging	-44.05
4	FLT04	0.998	Leading	19.95	0.998	Leading	18.90	0.997	Leading	23.10
5	FLT05	0.999	Leading	15.73	0.999	Leading	11.34	0.999	Leading	12.56
6	FLT06	0.998	Leading	16.70	0.999	Leading	10.23	0.999	Leading	13.71
7	FLT07	0.998	Leading	17.81	0.999	Leading	12.02	0.998	Leading	16.48
8	FLT08	0.999	Leading	14.60	1.000	Leading	5.11	1.000	Leading	7.83
9	FLT09	0.998	Leading	19.03	0.999	Leading	13.56	0.998	Leading	17.49
10	FLT10	0.998	Leading	17.04	0.999	Leading	12.78	0.998	Leading	17.13
12	FLT12	1.000	Leading	4.49	1.000	Lagging	-3.11	1.000	Leading	2.73
13	FLT13	0.995	Leading	30.51	0.995	Leading	29.39	0.994	Leading	34.06
14	FLT14	1.000	Leading	6.31	0.999	Leading	11.64	0.999	Leading	16.08
15	FLT15	0.998	Leading	16.67	0.999	Leading	11.91	0.999	Leading	16.29
16	FLT16	0.999	Leading	12.63	1.000	Leading	9.43	0.999	Leading	15.14
17	FLT17	0.998	Leading	17.00	0.999	Leading	12.47	0.998	Leading	16.81
18	FLT18	0.997	Leading	22.88	0.998	Leading	20.65	0.997	Leading	24.38
19	FLT19	0.998	Leading	17.44	0.999	Leading	12.95	0.998	Leading	17.19
20	FLT20	0.999	Leading	13.46	0.999	Leading	12.37	0.999	Leading	16.21
33	FLT33	0.998	Leading	16.85	0.999	Leading	12.50	0.998	Leading	16.73
34	FLT34	0.998	Leading	17.28	0.999	Leading	12.35	0.999	Leading	15.94
35	FLT35	0.998	Leading	17.10	0.999	Leading	12.66	0.998	Leading	16.99
36	FLT36	0.999	Leading	16.38	0.999	Leading	12.12	0.999	Leading	16.24
37	FLT37	0.998	Leading	17.02	0.999	Leading	12.67	0.998	Leading	17.00
38	FLT38	0.998	Leading	17.10	0.999	Leading	12.46	0.998	Leading	16.76
39	FLT39	0.998	Leading	17.04	0.999	Leading	12.54	0.998	Leading	16.83
40	FLT40	0.998	Leading	16.99	0.999	Leading	12.55	0.998	Leading	16.89
41	FLT41	0.998	Leading	17.01	0.999	Leading	12.65	0.998	Leading	16.99
42	FLT42	0.998	Leading	17.04	0.999	Leading	12.78	0.998	Leading	17.13
52	FLT52	0.999	Leading	13.85	0.999	Leading	9.51	0.999	Leading	14.04
53	FLT53	1.000	Leading	7.69	1.000	Leading	4.74	0.999	Leading	9.65
54	FLT54	0.999	Leading	12.48	1.000	Leading	7.21	0.999	Leading	11.95
55	FLT55	0.999	Leading	14.02	0.999	Leading	11.21	0.999	Leading	15.59
56	FLT56	0.998	Leading	17.09	0.999	Leading	12.52	0.998	Leading	16.95
57	FLT57	0.999	Leading	16.32	0.999	Leading	11.93	0.999	Leading	16.32
58	FLT58	0.999	Leading	14.82	0.999	Leading	11.30	0.999	Leading	15.89
70	FLT70	0.998	Leading	16.65	0.999	Leading	12.50	0.998	Leading	17.12
71	FLT71	0.998	Leading	16.96	0.999	Leading	12.66	0.998	Leading	16.85
72	FLT72	0.998	Leading	17.09	0.999	Leading	12.78	0.998	Leading	17.12
73	FLT73	0.998	Leading	16.98	0.999	Leading	12.75	0.998	Leading	17.09
74	FLT74	0.999	Leading	15.69	0.999	Leading	12.96	0.998	Leading	17.58
75	FLT75	0.998	Leading	16.96	0.999	Leading	12.72	0.998	Leading	17.12
87	FLT87	0.999	Leading	16.42	0.999	Leading	11.98	0.999	Leading	16.43
88	FLT88	0.998	Leading	16.98	0.999	Leading	12.75	0.998	Leading	17.09
89	FLT89	0.998	Leading	16.60	0.999	Leading	12.27	0.998	Leading	16.71
95	FLT95	0.998	Leading	17.57	0.999	Leading	10.71	0.999	Leading	14.23
96	FLT96	0.999	Leading	10.04	0.999	Leading	11.33	0.999	Leading	15.76
97	FLT97	0.999	Leading	11.32	1.000	Leading	1.97	1.000	Leading	2.92
98	FLT98	0.998	Leading	16.58	0.999	Leading	12.03	0.999	Leading	16.33
99	FLT99	0.998	Leading	16.53	0.999	Leading	13.97	0.998	Leading	17.94
100	FLT100	0.998	Leading	16.85	0.999	Leading	12.71	0.998	Leading	17.06
107	FLT107	0.999	Leading	11.40	1.000	Leading	6.95	1.000	Leading	9.31
108	FLT108	0.999	Leading	12.48	1.000	Leading	9.34	0.999	Leading	13.39
109	FLT109	0.999	Leading	14.58	0.999	Leading	10.14	0.999	Leading	14.40
110	FLT110	0.999	Leading	15.86	0.999	Leading	12.77	0.998	Leading	17.33

Study Generator GEN-2016-021

The Power Factor Analysis shows that GEN-2016-021 has a power factor range of 0.995 leading to 0.990 lagging (supplying) for the 2016 Winter Peak conditions, a power factor range of 0.995 leading to 0.986 lagging for the 2017 Summer Peak conditions, and a power factor range of 0.994 leading to 0.989 lagging for the 2025 Summer Peak conditions.

Table 5-3
Power Factor Analysis: GEN-2016-023

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.991	Leading	20.69	0.993	Leading	17.68	0.993	Leading	17.67
1	FLT01	0.991	Leading	20.36	0.993	Leading	17.50	0.993	Leading	17.54
2	FLT02	0.991	Leading	20.26	0.994	Leading	17.03	0.994	Leading	17.02
3	FLT03	0.991	Leading	20.46	0.993	Leading	17.59	0.993	Leading	17.58
4	FLT04	0.991	Leading	20.71	0.993	Leading	17.72	0.993	Leading	17.70
5	FLT05	0.991	Leading	20.70	0.993	Leading	17.70	0.993	Leading	17.69
6	FLT06	0.991	Leading	20.79	0.993	Leading	17.65	0.993	Leading	17.61
7	FLT07	0.991	Leading	20.54	0.993	Leading	17.47	0.993	Leading	17.49
8	FLT08	0.991	Leading	20.07	0.994	Leading	16.50	0.994	Leading	16.46
9	FLT09	0.991	Leading	20.79	0.993	Leading	17.80	0.993	Leading	17.72
10	FLT10	0.991	Leading	20.69	0.993	Leading	17.68	0.993	Leading	17.67
12	FLT12	0.991	Leading	20.38	0.994	Leading	17.17	0.994	Leading	17.19
13	FLT13	0.991	Leading	20.56	0.993	Leading	17.53	0.993	Leading	17.52
14	FLT14	0.991	Leading	20.41	0.993	Leading	17.53	0.993	Leading	17.56
15	FLT15	0.991	Leading	20.68	0.993	Leading	17.67	0.993	Leading	17.66
16	FLT16	0.991	Leading	20.66	0.993	Leading	17.61	0.993	Leading	17.60
17	FLT17	0.991	Leading	20.68	0.993	Leading	17.67	0.993	Leading	17.66
18	FLT18	0.991	Leading	20.65	0.993	Leading	17.61	0.993	Leading	17.60
19	FLT19	0.991	Leading	20.68	0.993	Leading	17.68	0.993	Leading	17.67
20	FLT20	0.991	Leading	20.65	0.993	Leading	17.64	0.993	Leading	17.63
33	FLT33	0.993	Leading	18.10	0.992	Leading	19.04	0.992	Leading	18.99
34	FLT34	0.998	Leading	10.23	0.998	Lagging	-9.85	0.996	Lagging	-12.87
35	FLT35	0.996	Leading	13.25	1.000	Leading	3.38	1.000	Leading	2.78
36	FLT36	0.945	Lagging	-52.21	0.920	Lagging	-64.33	0.904	Lagging	-71.14
37	FLT37	0.991	Leading	20.01	0.990	Leading	20.96	0.990	Leading	21.26
38	FLT38	0.998	Leading	9.77	1.000	Leading	4.32	1.000	Leading	4.17
39	FLT39	0.994	Leading	16.96	0.995	Leading	14.51	0.996	Leading	14.18
40	FLT40	0.991	Leading	20.43	0.994	Leading	16.56	0.994	Leading	16.46
41	FLT41	0.991	Leading	19.76	0.995	Leading	14.45	0.995	Leading	14.49
42	FLT42	0.991	Leading	20.69	0.993	Leading	17.68	0.993	Leading	17.67
52	FLT52	0.991	Leading	19.98	0.994	Leading	17.12	0.994	Leading	17.01
53	FLT53	0.992	Leading	19.05	0.995	Leading	15.41	0.995	Leading	14.73
54	FLT54	0.991	Leading	20.47	0.994	Leading	17.21	0.994	Leading	16.88
55	FLT55	0.990	Leading	20.99	0.993	Leading	17.69	0.993	Leading	17.68
56	FLT56	0.991	Leading	20.73	0.993	Leading	17.63	0.993	Leading	17.67
57	FLT57	0.991	Leading	20.48	0.993	Leading	17.39	0.993	Leading	17.38
58	FLT58	0.991	Leading	20.65	0.993	Leading	17.85	0.993	Leading	17.79
70	FLT70	0.991	Leading	20.33	0.993	Leading	17.48	0.993	Leading	17.57
71	FLT71	0.991	Leading	20.67	0.993	Leading	17.57	0.993	Leading	17.40
72	FLT72	0.991	Leading	20.68	0.993	Leading	17.68	0.993	Leading	17.67
73	FLT73	0.991	Leading	20.67	0.993	Leading	17.67	0.993	Leading	17.65
74	FLT74	0.991	Leading	20.58	0.993	Leading	17.78	0.993	Leading	17.85
75	FLT75	0.991	Leading	20.67	0.993	Leading	17.63	0.993	Leading	17.70
87	FLT87	0.991	Leading	20.60	0.993	Leading	17.62	0.993	Leading	17.61
88	FLT88	0.991	Leading	20.67	0.993	Leading	17.67	0.993	Leading	17.65
89	FLT89	0.991	Leading	20.62	0.993	Leading	17.63	0.993	Leading	17.62
95	FLT95	0.992	Leading	19.60	0.995	Leading	15.08	0.995	Leading	15.13
96	FLT96	0.992	Leading	19.58	0.994	Leading	17.21	0.994	Leading	17.06
97	FLT97	0.994	Leading	16.21	0.999	Leading	6.69	0.999	Leading	5.88
98	FLT98	0.991	Leading	20.17	0.993	Leading	17.40	0.993	Leading	17.40
99	FLT99	0.991	Leading	20.62	0.993	Leading	17.76	0.993	Leading	17.78
100	FLT100	0.991	Leading	20.65	0.993	Leading	17.65	0.993	Leading	17.64
107	FLT107	0.991	Leading	20.38	0.994	Leading	17.15	0.994	Leading	17.19
108	FLT108	0.991	Leading	20.65	0.993	Leading	17.67	0.993	Leading	17.64
109	FLT109	0.991	Leading	20.41	0.994	Leading	17.23	0.994	Leading	17.24
110	FLT110	0.991	Leading	20.69	0.993	Leading	17.68	0.993	Leading	17.67

Study Generator GEN-2016-023

The Power Factor Analysis shows that GEN-2016-023 has a power factor range of 0.990 leading to 0.945 lagging for the 2016 Winter Peak conditions, a power factor range of 0.990 leading to 0.950 lagging for the 2017 Summer Peak conditions, and a power factor range of 0.990 leading to 0.904 lagging for the 2025 Summer Peak conditions.

Table 5-4
Power Factor Analysis: GEN-2016-029

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.991	Leading	20.69	0.993	Leading	17.68	0.993	Leading	17.67
1	FLT01	0.991	Leading	20.36	0.993	Leading	17.50	0.993	Leading	17.54
2	FLT02	0.991	Leading	20.26	0.994	Leading	17.03	0.994	Leading	17.02
3	FLT03	0.991	Leading	20.46	0.993	Leading	17.59	0.993	Leading	17.58
4	FLT04	0.991	Leading	20.71	0.993	Leading	17.72	0.993	Leading	17.70
5	FLT05	0.991	Leading	20.70	0.993	Leading	17.70	0.993	Leading	17.69
6	FLT06	0.991	Leading	20.79	0.993	Leading	17.65	0.993	Leading	17.61
7	FLT07	0.991	Leading	20.54	0.993	Leading	17.47	0.993	Leading	17.49
8	FLT08	0.991	Leading	20.07	0.994	Leading	16.50	0.994	Leading	16.46
9	FLT09	0.991	Leading	20.79	0.993	Leading	17.80	0.993	Leading	17.72
10	FLT10	0.991	Leading	20.69	0.993	Leading	17.68	0.993	Leading	17.67
12	FLT12	0.991	Leading	20.38	0.994	Leading	17.17	0.994	Leading	17.19
13	FLT13	0.991	Leading	20.56	0.993	Leading	17.53	0.993	Leading	17.52
14	FLT14	0.991	Leading	20.41	0.993	Leading	17.53	0.993	Leading	17.56
15	FLT15	0.991	Leading	20.68	0.993	Leading	17.67	0.993	Leading	17.66
16	FLT16	0.991	Leading	20.66	0.993	Leading	17.61	0.993	Leading	17.60
17	FLT17	0.991	Leading	20.68	0.993	Leading	17.67	0.993	Leading	17.66
18	FLT18	0.991	Leading	20.65	0.993	Leading	17.61	0.993	Leading	17.60
19	FLT19	0.991	Leading	20.68	0.993	Leading	17.68	0.993	Leading	17.67
20	FLT20	0.991	Leading	20.65	0.993	Leading	17.64	0.993	Leading	17.63
33	FLT33	0.993	Leading	18.10	0.992	Leading	19.04	0.992	Leading	18.99
34	FLT34	0.998	Leading	10.23	0.998	Lagging	-9.85	0.996	Lagging	-12.87
35	FLT35	0.996	Leading	13.25	1.000	Leading	3.38	1.000	Leading	2.78
36	FLT36	0.945	Lagging	-52.21	0.920	Lagging	-64.33	0.904	Lagging	-71.14
37	FLT37	0.991	Leading	20.01	0.990	Leading	20.96	0.990	Leading	21.26
38	FLT38	0.998	Leading	9.77	1.000	Leading	4.32	1.000	Leading	4.17
39	FLT39	0.994	Leading	16.96	0.995	Leading	14.51	0.996	Leading	14.18
40	FLT40	0.991	Leading	20.43	0.994	Leading	16.56	0.994	Leading	16.46
41	FLT41	0.991	Leading	19.76	0.995	Leading	14.45	0.995	Leading	14.49
42	FLT42	0.991	Leading	20.69	0.993	Leading	17.68	0.993	Leading	17.67
52	FLT52	0.991	Leading	19.98	0.994	Leading	17.12	0.994	Leading	17.01
53	FLT53	0.992	Leading	19.05	0.995	Leading	15.41	0.995	Leading	14.73
54	FLT54	0.991	Leading	20.47	0.994	Leading	17.21	0.994	Leading	16.88
55	FLT55	0.990	Leading	20.99	0.993	Leading	17.69	0.993	Leading	17.68
56	FLT56	0.991	Leading	20.73	0.993	Leading	17.63	0.993	Leading	17.67
57	FLT57	0.991	Leading	20.48	0.993	Leading	17.39	0.993	Leading	17.38
58	FLT58	0.991	Leading	20.65	0.993	Leading	17.85	0.993	Leading	17.79
70	FLT70	0.991	Leading	20.33	0.993	Leading	17.48	0.993	Leading	17.57
71	FLT71	0.991	Leading	20.67	0.993	Leading	17.57	0.993	Leading	17.40
72	FLT72	0.991	Leading	20.68	0.993	Leading	17.68	0.993	Leading	17.67
73	FLT73	0.991	Leading	20.67	0.993	Leading	17.67	0.993	Leading	17.65
74	FLT74	0.991	Leading	20.58	0.993	Leading	17.78	0.993	Leading	17.85
75	FLT75	0.991	Leading	20.67	0.993	Leading	17.63	0.993	Leading	17.70
87	FLT87	0.991	Leading	20.60	0.993	Leading	17.62	0.993	Leading	17.61
88	FLT88	0.991	Leading	20.67	0.993	Leading	17.67	0.993	Leading	17.65
89	FLT89	0.991	Leading	20.62	0.993	Leading	17.63	0.993	Leading	17.62
95	FLT95	0.992	Leading	19.60	0.995	Leading	15.08	0.995	Leading	15.13
96	FLT96	0.992	Leading	19.58	0.994	Leading	17.21	0.994	Leading	17.06
97	FLT97	0.994	Leading	16.21	0.999	Leading	6.69	0.999	Leading	5.88
98	FLT98	0.991	Leading	20.17	0.993	Leading	17.40	0.993	Leading	17.40
99	FLT99	0.991	Leading	20.62	0.993	Leading	17.76	0.993	Leading	17.78
100	FLT100	0.991	Leading	20.65	0.993	Leading	17.65	0.993	Leading	17.64
107	FLT107	0.991	Leading	20.38	0.994	Leading	17.15	0.994	Leading	17.19
108	FLT108	0.991	Leading	20.65	0.993	Leading	17.67	0.993	Leading	17.64
109	FLT109	0.991	Leading	20.41	0.994	Leading	17.23	0.994	Leading	17.24
110	FLT110	0.991	Leading	20.69	0.993	Leading	17.68	0.993	Leading	17.67

Study Generator GEN-2016-029

The Power Factor Analysis shows that GEN-2016-029 has a power factor range of 0.990 leading to 0.945 lagging for the 2016 Winter Peak conditions, a power factor range of 0.990 leading to 0.950 lagging for the 2017 Summer Peak conditions, and a power factor range of 0.990 leading to 0.904 lagging for the 2025 Summer Peak conditions.

Table 5-5
Power Factor Analysis: GEN-2016-034

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.997	Leading	7.30	1.000	Leading	2.65	1.000	Leading	2.22
1	FLT01	0.998	Leading	6.16	1.000	Leading	2.02	1.000	Leading	1.75
2	FLT02	0.998	Leading	5.81	1.000	Leading	0.58	1.000	Leading	0.18
3	FLT03	0.998	Leading	6.17	1.000	Leading	2.13	1.000	Leading	1.66
4	FLT04	0.997	Leading	7.38	1.000	Leading	2.75	1.000	Leading	2.33
5	FLT05	0.997	Leading	7.34	1.000	Leading	2.71	1.000	Leading	2.27
6	FLT06	0.996	Leading	7.60	1.000	Leading	2.54	1.000	Leading	2.02
7	FLT07	0.997	Leading	6.84	1.000	Leading	1.96	1.000	Leading	1.61
8	FLT08	0.998	Leading	5.36	1.000	Lagging	-1.07	1.000	Lagging	-1.59
9	FLT09	0.996	Leading	7.59	0.999	Leading	3.00	1.000	Leading	2.37
10	FLT10	0.997	Leading	7.30	1.000	Leading	2.65	1.000	Leading	2.22
12	FLT12	0.998	Leading	6.24	1.000	Leading	1.04	1.000	Leading	0.73
13	FLT13	0.997	Leading	6.82	1.000	Leading	2.07	1.000	Leading	1.64
14	FLT14	0.998	Leading	6.32	1.000	Leading	2.13	1.000	Leading	1.86
15	FLT15	0.997	Leading	7.29	1.000	Leading	2.63	1.000	Leading	2.20
16	FLT16	0.997	Leading	7.22	1.000	Leading	2.43	1.000	Leading	2.02
17	FLT17	0.997	Leading	7.28	1.000	Leading	2.62	1.000	Leading	2.19
18	FLT18	0.997	Leading	7.22	1.000	Leading	2.44	1.000	Leading	2.04
19	FLT19	0.997	Leading	7.30	1.000	Leading	2.64	1.000	Leading	2.21
20	FLT20	0.997	Leading	7.18	1.000	Leading	2.52	1.000	Leading	2.09
33	FLT33	0.990	Lagging	-12.93	0.996	Lagging	-8.51	0.995	Lagging	-9.26
34	FLT34	0.808	Lagging	-65.51	0.692	Lagging	-93.55	0.676	Lagging	-97.67
35	FLT35	0.999	Leading	2.98	0.995	Lagging	-9.37	0.993	Lagging	-10.34
36	FLT36	0.570	Lagging	-129.31	0.491	Lagging	-159.18	0.464	Lagging	-171.14
37	FLT37	0.997	Lagging	-7.48	0.999	Lagging	-3.37	0.999	Lagging	-2.96
38	FLT38	0.960	Lagging	-26.20	0.921	Lagging	-38.05	0.919	Lagging	-38.36
39	FLT39	0.998	Lagging	-5.60	0.996	Lagging	-8.06	0.995	Lagging	-9.05
40	FLT40	0.997	Leading	6.39	1.000	Lagging	-1.41	1.000	Lagging	-2.13
41	FLT41	0.999	Leading	4.09	0.995	Lagging	-8.87	0.995	Lagging	-9.13
42	FLT42	0.997	Leading	7.30	1.000	Leading	2.65	1.000	Leading	2.22
52	FLT52	0.999	Leading	4.56	1.000	Leading	0.25	1.000	Lagging	-0.35
53	FLT53	1.000	Leading	0.94	0.998	Lagging	-5.83	0.995	Lagging	-8.58
54	FLT54	0.998	Leading	5.81	1.000	Lagging	-0.14	1.000	Lagging	-1.35
55	FLT55	0.996	Leading	8.13	1.000	Leading	2.45	1.000	Leading	2.07
56	FLT56	0.997	Leading	7.48	1.000	Leading	2.48	1.000	Leading	2.22
57	FLT57	0.997	Leading	6.53	1.000	Leading	1.54	1.000	Leading	1.11
58	FLT58	0.997	Leading	7.01	0.999	Leading	3.02	1.000	Leading	2.45
70	FLT70	0.998	Leading	5.93	1.000	Leading	1.84	1.000	Leading	1.80
71	FLT71	0.997	Leading	7.26	1.000	Leading	2.30	1.000	Leading	1.31
72	FLT72	0.997	Leading	7.29	1.000	Leading	2.65	1.000	Leading	2.23
73	FLT73	0.997	Leading	7.24	1.000	Leading	2.60	1.000	Leading	2.16
74	FLT74	0.997	Leading	6.94	0.999	Leading	3.05	0.999	Leading	2.90
75	FLT75	0.997	Leading	7.25	1.000	Leading	2.51	1.000	Leading	2.38
87	FLT87	0.997	Leading	6.96	1.000	Leading	2.38	1.000	Leading	1.95
88	FLT88	0.997	Leading	7.24	1.000	Leading	2.60	1.000	Leading	2.16
89	FLT89	0.997	Leading	7.02	1.000	Leading	2.44	1.000	Leading	2.01
95	FLT95	0.999	Leading	4.62	0.999	Lagging	-3.20	0.999	Lagging	-3.43
96	FLT96	1.000	Leading	1.19	1.000	Leading	0.39	1.000	Lagging	-0.24
97	FLT97	0.995	Lagging	-8.60	0.934	Lagging	-34.39	0.925	Lagging	-36.81
98	FLT98	0.998	Leading	5.22	1.000	Leading	1.88	1.000	Leading	1.52
99	FLT99	0.997	Leading	7.04	0.999	Leading	3.07	1.000	Leading	2.66
100	FLT100	0.997	Leading	7.06	1.000	Leading	2.44	1.000	Leading	2.03
107	FLT107	0.998	Leading	6.26	1.000	Leading	1.00	1.000	Leading	0.72
108	FLT108	0.997	Leading	7.13	1.000	Leading	2.58	1.000	Leading	2.08
109	FLT109	0.997	Leading	6.42	1.000	Leading	1.21	1.000	Leading	0.84
110	FLT110	0.997	Leading	7.31	1.000	Leading	2.66	1.000	Leading	2.22

Study Generator GEN-2016-034

The Power Factor Analysis shows that GEN-2016-034 has a power factor range of 0.996 leading to 0.570 lagging for the 2016 Winter Peak conditions, a power factor range of 0.999 leading to 0.491 lagging for the 2017 Summer Peak conditions, and a power factor range of 0.999 leading to 0.464 lagging for the 2025 Summer Peak conditions.

Table 5-6
Power Factor Analysis: GEN-2016-043

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.997	Leading	17.04	0.998	Leading	12.78	0.997	Leading	17.13
1	FLT01	0.999	Lagging	-10.42	1.000	Lagging	-5.01	1.000	Lagging	-0.61
2	FLT02	0.997	Leading	18.91	0.997	Leading	18.53	0.994	Leading	24.29
3	FLT03	0.982	Lagging	-43.76	0.976	Lagging	-50.99	0.982	Lagging	-44.05
4	FLT04	0.996	Leading	19.95	0.997	Leading	18.90	0.995	Leading	23.10
5	FLT05	0.998	Leading	15.73	0.999	Leading	11.34	0.999	Leading	12.56
6	FLT06	0.997	Leading	16.70	0.999	Leading	10.23	0.998	Leading	13.71
7	FLT07	0.997	Leading	17.81	0.999	Leading	12.02	0.997	Leading	16.48
8	FLT08	0.998	Leading	14.60	1.000	Leading	5.11	0.999	Leading	7.83
9	FLT09	0.997	Leading	19.03	0.998	Leading	13.56	0.997	Leading	17.49
10	FLT10	0.997	Leading	17.04	0.998	Leading	12.78	0.997	Leading	17.13
12	FLT12	1.000	Leading	4.49	1.000	Lagging	-3.11	1.000	Leading	2.73
13	FLT13	0.991	Leading	30.51	0.992	Leading	29.39	0.989	Leading	34.06
14	FLT14	1.000	Leading	6.31	0.999	Leading	11.64	0.998	Leading	16.08
15	FLT15	0.997	Leading	16.67	0.999	Leading	11.91	0.998	Leading	16.29
16	FLT16	0.998	Leading	12.63	0.999	Leading	9.43	0.998	Leading	15.14
17	FLT17	0.997	Leading	17.00	0.999	Leading	12.47	0.997	Leading	16.81
18	FLT18	0.995	Leading	22.88	0.996	Leading	20.65	0.994	Leading	24.38
19	FLT19	0.997	Leading	17.44	0.998	Leading	12.95	0.997	Leading	17.19
20	FLT20	0.998	Leading	13.46	0.999	Leading	12.37	0.998	Leading	16.21
33	FLT33	0.997	Leading	16.85	0.999	Leading	12.50	0.997	Leading	16.73
34	FLT34	0.997	Leading	17.28	0.999	Leading	12.35	0.998	Leading	15.94
35	FLT35	0.997	Leading	17.10	0.998	Leading	12.66	0.997	Leading	16.99
36	FLT36	0.997	Leading	16.38	0.999	Leading	12.12	0.998	Leading	16.24
37	FLT37	0.997	Leading	17.02	0.998	Leading	12.67	0.997	Leading	17.00
38	FLT38	0.997	Leading	17.10	0.999	Leading	12.46	0.997	Leading	16.76
39	FLT39	0.997	Leading	17.04	0.999	Leading	12.54	0.997	Leading	16.83
40	FLT40	0.997	Leading	16.99	0.999	Leading	12.55	0.997	Leading	16.89
41	FLT41	0.997	Leading	17.01	0.998	Leading	12.65	0.997	Leading	16.99
42	FLT42	0.997	Leading	17.04	0.998	Leading	12.78	0.997	Leading	17.13
52	FLT52	0.998	Leading	13.85	0.999	Leading	9.51	0.998	Leading	14.04
53	FLT53	0.999	Leading	7.69	1.000	Leading	4.74	0.999	Leading	9.65
54	FLT54	0.999	Leading	12.48	1.000	Leading	7.21	0.999	Leading	11.95
55	FLT55	0.998	Leading	14.02	0.999	Leading	11.21	0.998	Leading	15.59
56	FLT56	0.997	Leading	17.09	0.999	Leading	12.52	0.997	Leading	16.95
57	FLT57	0.997	Leading	16.32	0.999	Leading	11.93	0.997	Leading	16.32
58	FLT58	0.998	Leading	14.82	0.999	Leading	11.30	0.998	Leading	15.89
70	FLT70	0.997	Leading	16.65	0.999	Leading	12.50	0.997	Leading	17.12
71	FLT71	0.997	Leading	16.96	0.998	Leading	12.66	0.997	Leading	16.85
72	FLT72	0.997	Leading	17.09	0.998	Leading	12.78	0.997	Leading	17.12
73	FLT73	0.997	Leading	16.98	0.998	Leading	12.75	0.997	Leading	17.09
74	FLT74	0.998	Leading	15.69	0.998	Leading	12.96	0.997	Leading	17.58
75	FLT75	0.997	Leading	16.96	0.998	Leading	12.72	0.997	Leading	17.12
87	FLT87	0.997	Leading	16.42	0.999	Leading	11.98	0.997	Leading	16.43
88	FLT88	0.997	Leading	16.98	0.998	Leading	12.75	0.997	Leading	17.09
89	FLT89	0.997	Leading	16.60	0.999	Leading	12.27	0.997	Leading	16.71
95	FLT95	0.997	Leading	17.57	0.999	Leading	10.71	0.998	Leading	14.23
96	FLT96	0.999	Leading	10.04	0.999	Leading	11.33	0.998	Leading	15.76
97	FLT97	0.999	Leading	11.32	1.000	Leading	1.97	1.000	Leading	2.92
98	FLT98	0.997	Leading	16.58	0.999	Leading	12.03	0.997	Leading	16.33
99	FLT99	0.997	Leading	16.53	0.998	Leading	13.97	0.997	Leading	17.94
100	FLT100	0.997	Leading	16.85	0.998	Leading	12.71	0.997	Leading	17.06
107	FLT107	0.999	Leading	11.40	1.000	Leading	6.95	0.999	Leading	9.31
108	FLT108	0.999	Leading	12.48	0.999	Leading	9.34	0.998	Leading	13.39
109	FLT109	0.998	Leading	14.58	0.999	Leading	10.14	0.998	Leading	14.40
110	FLT110	0.998	Leading	15.86	0.998	Leading	12.77	0.997	Leading	17.33

Study Generator GEN-2016-043

The Power Factor Analysis shows that GEN-2016-043 has a power factor range of 0.991 leading to 0.982 lagging for the 2016 Winter Peak conditions, a power factor range of 0.992 leading to 0.976 lagging for the 2017 Summer Peak conditions, and a power factor range of 0.989 leading to 0.982 lagging for the 2025 Summer Peak conditions.

Table 5-7
Power Factor Analysis: GEN-2016-050

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.998	Leading	16.73	0.985	Lagging	-44.65	0.984	Lagging	-45.95
1	FLT01	0.999	Leading	12.27	0.983	Lagging	-47.12	0.982	Lagging	-48.04
2	FLT02	0.999	Leading	12.64	0.982	Lagging	-47.87	0.981	Lagging	-49.44
3	FLT03	1.000	Leading	4.81	0.977	Lagging	-54.48	0.977	Lagging	-55.24
4	FLT04	0.998	Leading	16.78	0.985	Lagging	-44.63	0.984	Lagging	-45.94
5	FLT05	0.998	Leading	16.74	0.984	Lagging	-44.67	0.984	Lagging	-46.05
6	FLT06	0.998	Leading	17.40	0.984	Lagging	-45.08	0.983	Lagging	-46.64
7	FLT07	0.998	Leading	14.24	0.982	Lagging	-47.88	0.981	Lagging	-49.29
8	FLT08	0.999	Leading	9.59	0.977	Lagging	-54.48	0.976	Lagging	-55.83
9	FLT09	0.998	Leading	16.88	0.984	Lagging	-44.74	0.984	Lagging	-46.11
10	FLT10	0.998	Leading	16.73	0.985	Lagging	-44.65	0.984	Lagging	-45.95
12	FLT12	0.998	Leading	14.24	0.983	Lagging	-47.09	0.982	Lagging	-48.18
13	FLT13	0.998	Leading	13.95	0.982	Lagging	-47.92	0.981	Lagging	-49.13
14	FLT14	0.999	Leading	13.20	0.983	Lagging	-46.43	0.983	Lagging	-47.36
15	FLT15	0.998	Leading	16.68	0.984	Lagging	-44.73	0.984	Lagging	-45.99
16	FLT16	0.998	Leading	16.57	0.984	Lagging	-44.67	0.984	Lagging	-45.85
17	FLT17	0.998	Leading	16.66	0.984	Lagging	-44.73	0.984	Lagging	-46.01
18	FLT18	0.998	Leading	16.95	0.985	Lagging	-44.49	0.984	Lagging	-45.74
19	FLT19	0.998	Leading	16.72	0.984	Lagging	-44.67	0.984	Lagging	-45.95
20	FLT20	0.998	Leading	15.98	0.984	Lagging	-45.44	0.983	Lagging	-46.75
33	FLT33	0.998	Leading	14.34	0.983	Lagging	-47.51	0.981	Lagging	-49.36
34	FLT34	0.998	Leading	17.16	0.981	Lagging	-49.41	0.980	Lagging	-51.36
35	FLT35	0.998	Leading	17.52	0.985	Lagging	-43.66	0.984	Lagging	-45.17
36	FLT36	1.000	Leading	7.75	0.975	Lagging	-56.87	0.972	Lagging	-60.68
37	FLT37	0.998	Leading	15.98	0.984	Lagging	-45.94	0.983	Lagging	-47.35
38	FLT38	0.998	Leading	17.55	0.985	Lagging	-43.18	0.984	Lagging	-44.72
39	FLT39	0.998	Leading	16.12	0.983	Lagging	-46.43	0.982	Lagging	-47.85
40	FLT40	0.998	Leading	16.36	0.983	Lagging	-46.85	0.982	Lagging	-48.19
41	FLT41	0.998	Leading	16.24	0.984	Lagging	-45.86	0.983	Lagging	-47.17
42	FLT42	0.998	Leading	16.73	0.985	Lagging	-44.65	0.984	Lagging	-45.95
52	FLT52	0.938	Leading	92.64	0.955	Leading	77.67	0.952	Leading	80.52
53	FLT53	0.980	Lagging	-50.37	0.977	Lagging	-55.25	0.974	Lagging	-58.19
54	FLT54	1.000	Leading	5.30	0.998	Lagging	-17.22	0.997	Lagging	-21.00
55	FLT55	0.997	Leading	20.20	0.976	Lagging	-55.71	0.979	Lagging	-52.35
56	FLT56	0.988	Leading	39.97	0.995	Lagging	-26.33	0.994	Lagging	-28.47
57	FLT57	0.999	Lagging	-8.55	0.964	Lagging	-69.38	0.966	Lagging	-67.43
58	FLT58	0.995	Leading	23.88	0.998	Lagging	-13.94	0.997	Lagging	-18.83
70	FLT70	1.000	Leading	5.87	0.980	Lagging	-50.81	0.984	Lagging	-46.05
71	FLT71	0.998	Leading	15.64	0.983	Lagging	-47.49	0.978	Lagging	-53.31
72	FLT72	0.998	Leading	16.34	0.985	Lagging	-44.62	0.984	Lagging	-45.71
73	FLT73	0.998	Leading	16.23	0.984	Lagging	-44.89	0.983	Lagging	-46.27
74	FLT74	0.990	Leading	35.43	0.996	Lagging	-22.98	0.997	Lagging	-20.46
75	FLT75	0.998	Leading	15.63	0.984	Lagging	-45.82	0.984	Lagging	-44.80
87	FLT87	0.999	Leading	12.11	0.981	Lagging	-49.76	0.980	Lagging	-50.98
88	FLT88	0.998	Leading	16.23	0.984	Lagging	-44.89	0.983	Lagging	-46.27
89	FLT89	0.999	Leading	12.71	0.981	Lagging	-49.19	0.980	Lagging	-50.43
95	FLT95	0.995	Leading	25.60	0.999	Lagging	-10.41	0.999	Lagging	-12.82
96	FLT96	0.997	Lagging	-18.32	0.976	Lagging	-55.72	0.975	Lagging	-56.65
97	FLT97	0.999	Lagging	-9.69	0.961	Lagging	-72.46	0.958	Lagging	-75.39
98	FLT98	0.999	Leading	13.06	0.984	Lagging	-45.41	0.983	Lagging	-46.53
99	FLT99	0.998	Leading	15.64	0.987	Lagging	-41.56	0.985	Lagging	-43.79
100	FLT100	0.998	Leading	15.06	0.983	Lagging	-46.13	0.983	Lagging	-47.15
107	FLT107	0.998	Leading	13.82	0.982	Lagging	-48.55	0.981	Lagging	-49.51
108	FLT108	0.998	Leading	15.73	0.984	Lagging	-45.68	0.983	Lagging	-47.05
109	FLT109	0.998	Leading	13.90	0.982	Lagging	-48.36	0.981	Lagging	-49.56
110	FLT110	0.998	Leading	16.69	0.985	Lagging	-44.64	0.984	Lagging	-45.95

Study Generator GEN-2016-050

The Power Factor Analysis shows that GEN-2016-050 has a power factor range of 0.938 leading to 0.980 lagging for the 2016 Winter Peak conditions, a power factor range of 0.995 leading to 0.961 lagging for the 2017 Summer Peak conditions, and a power factor range of 0.952 leading to 0.958 lagging for the 2025 Summer Peak conditions.

Table 5-8
Power Factor Analysis: GEN-2016-055

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.979	Leading	26.05	0.983	Leading	23.79	0.986	Leading	21.10
1	FLT01	0.982	Leading	24.34	0.984	Leading	22.97	0.987	Leading	20.45
2	FLT02	0.982	Leading	24.15	0.985	Leading	22.02	0.989	Leading	19.19
3	FLT03	0.985	Leading	22.00	0.987	Leading	20.75	0.990	Leading	18.29
4	FLT04	0.979	Leading	26.09	0.983	Leading	23.85	0.986	Leading	21.17
5	FLT05	0.979	Leading	26.05	0.983	Leading	23.77	0.986	Leading	21.06
6	FLT06	0.979	Leading	26.31	0.983	Leading	23.69	0.987	Leading	20.94
7	FLT07	0.980	Leading	25.47	0.984	Leading	23.11	0.987	Leading	20.43
8	FLT08	0.983	Leading	23.38	0.987	Leading	20.29	0.991	Leading	17.50
9	FLT09	0.979	Leading	26.26	0.983	Leading	23.90	0.986	Leading	21.14
10	FLT10	0.979	Leading	26.05	0.983	Leading	23.79	0.986	Leading	21.10
12	FLT12	0.981	Leading	24.89	0.984	Leading	22.65	0.988	Leading	20.04
13	FLT13	0.981	Leading	25.00	0.984	Leading	22.62	0.988	Leading	20.01
14	FLT14	0.981	Leading	24.71	0.984	Leading	23.23	0.987	Leading	20.70
15	FLT15	0.979	Leading	26.03	0.983	Leading	23.76	0.986	Leading	21.08
16	FLT16	0.980	Leading	25.97	0.983	Leading	23.73	0.986	Leading	21.08
17	FLT17	0.980	Leading	26.01	0.983	Leading	23.75	0.986	Leading	21.07
18	FLT18	0.979	Leading	26.12	0.983	Leading	23.84	0.986	Leading	21.17
19	FLT19	0.979	Leading	26.04	0.983	Leading	23.78	0.986	Leading	21.10
20	FLT20	0.980	Leading	25.79	0.983	Leading	23.56	0.987	Leading	20.88
33	FLT33	0.980	Leading	25.53	0.984	Leading	23.19	0.987	Leading	20.26
34	FLT34	0.979	Leading	26.13	0.983	Leading	23.64	0.987	Leading	20.78
35	FLT35	0.979	Leading	26.22	0.983	Leading	23.95	0.986	Leading	21.21
36	FLT36	0.983	Leading	23.95	0.986	Leading	21.10	0.990	Leading	17.94
37	FLT37	0.980	Leading	25.92	0.983	Leading	23.54	0.987	Leading	20.83
38	FLT38	0.979	Leading	26.08	0.983	Leading	23.86	0.986	Leading	21.01
39	FLT39	0.979	Leading	26.08	0.983	Leading	23.54	0.987	Leading	20.71
40	FLT40	0.980	Leading	25.94	0.983	Leading	23.31	0.987	Leading	20.63
41	FLT41	0.980	Leading	25.96	0.983	Leading	23.56	0.987	Leading	20.87
42	FLT42	0.979	Leading	26.05	0.983	Leading	23.79	0.986	Leading	21.10
52	FLT52	0.987	Leading	20.75	0.985	Leading	21.82	0.989	Leading	19.20
53	FLT53	0.992	Leading	16.55	0.990	Leading	17.95	0.993	Leading	15.44
54	FLT54	0.991	Leading	17.48	0.993	Leading	14.88	0.995	Leading	12.13
55	FLT55	0.993	Leading	15.40	0.991	Leading	17.30	0.994	Leading	14.05
56	FLT56	0.985	Leading	21.82	0.989	Leading	18.74	0.993	Leading	15.40
57	FLT57	0.982	Leading	24.18	0.985	Leading	21.83	0.988	Leading	19.50
58	FLT58	0.980	Leading	25.73	0.980	Leading	25.40	0.984	Leading	22.67
70	FLT70	1.000	Leading	2.12	1.000	Lagging	-3.74	0.996	Lagging	-11.35
71	FLT71	0.984	Leading	23.12	0.978	Leading	26.91	0.965	Leading	34.57
72	FLT72	0.980	Leading	25.68	0.982	Leading	24.05	0.986	Leading	21.73
73	FLT73	0.981	Leading	25.05	0.984	Leading	22.97	0.988	Leading	20.18
74	FLT74	0.996	Leading	10.97	0.998	Leading	8.48	1.000	Leading	1.93
75	FLT75	0.984	Leading	23.15	0.985	Leading	21.92	0.996	Leading	10.96
87	FLT87	0.986	Leading	21.43	0.988	Leading	19.45	0.992	Leading	16.28
88	FLT88	0.981	Leading	25.05	0.984	Leading	22.97	0.988	Leading	20.18
89	FLT89	0.986	Leading	21.66	0.989	Leading	18.89	0.992	Leading	15.70
95	FLT95	0.976	Leading	28.43	0.971	Leading	31.06	0.977	Leading	27.73
96	FLT96	0.991	Leading	16.78	0.987	Leading	20.64	0.990	Leading	18.04
97	FLT97	0.986	Leading	21.45	0.990	Leading	18.36	0.993	Leading	15.23
98	FLT98	0.981	Leading	25.22	0.984	Leading	23.20	0.987	Leading	20.48
99	FLT99	0.980	Leading	25.73	0.982	Leading	24.57	0.986	Leading	21.63
100	FLT100	0.980	Leading	25.54	0.983	Leading	23.38	0.987	Leading	20.77
107	FLT107	0.981	Leading	25.13	0.984	Leading	22.68	0.988	Leading	20.12
108	FLT108	0.980	Leading	25.73	0.983	Leading	23.55	0.987	Leading	20.82
109	FLT109	0.981	Leading	25.19	0.984	Leading	22.77	0.988	Leading	20.14
110	FLT110	0.979	Leading	26.03	0.983	Leading	23.79	0.986	Leading	21.10

Study Generator GEN-2016-055

The Power Factor Analysis shows that GEN-2016-055 has a power factor range of 0.996 leading to unity for the 2016 Winter Peak conditions, a power factor range of 0.971 leading to unity for the 2017 Summer Peak conditions, and a power factor range of 0.965 leading to 0.996 lagging for the 2025 Summer Peak conditions.

Table 5-9
Power Factor Analysis: GEN-2016-064

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.987	Leading	19.16	0.988	Leading	18.38	0.987	Leading	19.15
1	FLT01	0.988	Leading	17.87	0.988	Leading	17.76	0.987	Leading	18.65
2	FLT02	0.989	Leading	17.72	0.989	Leading	17.02	0.989	Leading	17.66
3	FLT03	0.991	Leading	15.99	0.991	Leading	16.04	0.989	Leading	16.98
4	FLT04	0.987	Leading	19.19	0.988	Leading	18.43	0.987	Leading	19.20
5	FLT05	0.987	Leading	19.16	0.988	Leading	18.36	0.987	Leading	19.11
6	FLT06	0.986	Leading	19.36	0.988	Leading	18.31	0.987	Leading	19.03
7	FLT07	0.987	Leading	18.72	0.988	Leading	17.88	0.987	Leading	18.66
8	FLT08	0.989	Leading	17.08	0.991	Leading	15.68	0.990	Leading	16.36
9	FLT09	0.986	Leading	19.32	0.988	Leading	18.46	0.987	Leading	19.18
10	FLT10	0.987	Leading	19.16	0.988	Leading	18.38	0.987	Leading	19.15
12	FLT12	0.988	Leading	18.28	0.989	Leading	17.51	0.988	Leading	18.32
13	FLT13	0.988	Leading	18.38	0.989	Leading	17.52	0.988	Leading	18.34
14	FLT14	0.988	Leading	18.16	0.988	Leading	17.96	0.987	Leading	18.84
15	FLT15	0.987	Leading	19.14	0.988	Leading	18.35	0.987	Leading	19.13
16	FLT16	0.987	Leading	19.10	0.988	Leading	18.33	0.987	Leading	19.13
17	FLT17	0.987	Leading	19.13	0.988	Leading	18.35	0.987	Leading	19.12
18	FLT18	0.987	Leading	19.22	0.988	Leading	18.42	0.987	Leading	19.20
19	FLT19	0.987	Leading	19.16	0.988	Leading	18.37	0.987	Leading	19.15
20	FLT20	0.987	Leading	18.96	0.988	Leading	18.21	0.987	Leading	18.97
33	FLT33	0.987	Leading	18.83	0.988	Leading	17.99	0.987	Leading	18.59
34	FLT34	0.986	Leading	19.34	0.988	Leading	18.28	0.988	Leading	18.07
35	FLT35	0.986	Leading	19.30	0.988	Leading	18.51	0.987	Leading	19.24
36	FLT36	0.988	Leading	17.79	0.990	Leading	16.57	0.989	Leading	17.01
37	FLT37	0.987	Leading	19.07	0.988	Leading	18.21	0.987	Leading	18.97
38	FLT38	0.986	Leading	19.29	0.988	Leading	18.51	0.987	Leading	19.17
39	FLT39	0.987	Leading	19.16	0.988	Leading	18.21	0.987	Leading	18.88
40	FLT40	0.987	Leading	19.09	0.988	Leading	18.06	0.987	Leading	18.83
41	FLT41	0.987	Leading	19.11	0.988	Leading	18.22	0.987	Leading	18.99
42	FLT42	0.987	Leading	19.16	0.988	Leading	18.38	0.987	Leading	19.15
52	FLT52	0.991	Leading	15.28	0.990	Leading	16.45	0.989	Leading	17.31
53	FLT53	0.995	Leading	11.11	0.994	Leading	12.95	0.993	Leading	14.01
54	FLT54	0.994	Leading	13.16	0.994	Leading	12.56	0.994	Leading	13.10
55	FLT55	0.998	Leading	7.35	0.994	Leading	12.46	0.994	Leading	12.62
56	FLT56	0.985	Leading	20.27	0.987	Leading	18.95	0.986	Leading	19.59
57	FLT57	0.988	Leading	17.84	0.989	Leading	16.95	0.988	Leading	17.95
58	FLT58	0.987	Leading	18.62	0.987	Leading	19.14	0.986	Leading	19.94
70	FLT70	0.981	Leading	22.69	0.981	Leading	22.78	0.976	Leading	25.70
71	FLT71	0.990	Leading	16.55	0.990	Leading	16.32	0.988	Leading	17.84
72	FLT72	0.987	Leading	18.99	0.987	Leading	18.74	0.986	Leading	19.83
73	FLT73	0.990	Leading	16.19	0.991	Leading	15.32	0.990	Leading	16.31
74	FLT74	0.997	Leading	9.12	0.997	Leading	8.49	0.998	Leading	6.42
75	FLT75	0.990	Leading	16.79	0.990	Leading	16.18	0.990	Leading	16.18
87	FLT87	0.993	Leading	13.41	0.993	Leading	13.77	0.993	Leading	13.31
88	FLT88	0.990	Leading	16.19	0.991	Leading	15.32	0.990	Leading	16.31
89	FLT89	0.994	Leading	13.06	0.995	Leading	11.20	0.996	Leading	10.64
95	FLT95	0.984	Leading	21.08	0.980	Leading	23.76	0.979	Leading	24.04
96	FLT96	0.995	Leading	11.67	0.991	Leading	16.04	0.990	Leading	16.87
97	FLT97	0.991	Leading	15.76	0.992	Leading	14.42	0.992	Leading	14.80
98	FLT98	0.987	Leading	18.61	0.988	Leading	17.90	0.987	Leading	18.65
99	FLT99	0.987	Leading	18.92	0.987	Leading	18.96	0.986	Leading	19.54
100	FLT100	0.987	Leading	18.78	0.988	Leading	18.07	0.987	Leading	18.90
107	FLT107	0.988	Leading	18.47	0.989	Leading	17.55	0.988	Leading	18.41
108	FLT108	0.987	Leading	18.91	0.988	Leading	18.20	0.987	Leading	18.93
109	FLT109	0.988	Leading	18.51	0.989	Leading	17.62	0.988	Leading	18.43
110	FLT110	0.987	Leading	19.14	0.988	Leading	18.38	0.987	Leading	19.15

Study Generator GEN-2016-064

The Power Factor Analysis shows that GEN-2016-064 has a power factor range of 0.998 leading to 0.981 lagging for the 2016 Winter Peak conditions, a power factor range of 0.997 leading to 0.980 lagging for the 2017 Summer Peak conditions, and a power factor range of 0.998 leading to 0.976 lagging for the 2025 Summer Peak conditions.

Table 5-10
Power Factor Analysis: GEN-2016-075

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.993	Lagging	-5.81	0.994	Lagging	-5.54	0.994	Lagging	-5.54
1	FLT01	0.992	Lagging	-6.19	0.993	Lagging	-5.74	0.994	Lagging	-5.70
2	FLT02	0.992	Lagging	-6.22	0.992	Lagging	-6.39	0.992	Lagging	-6.43
3	FLT03	0.992	Lagging	-6.54	0.994	Lagging	-5.71	0.994	Lagging	-5.72
4	FLT04	0.993	Lagging	-5.81	0.994	Lagging	-5.50	0.994	Lagging	-5.50
5	FLT05	0.993	Lagging	-5.82	0.994	Lagging	-5.53	0.994	Lagging	-5.54
6	FLT06	0.993	Lagging	-5.82	0.994	Lagging	-5.58	0.994	Lagging	-5.61
7	FLT07	0.993	Lagging	-5.86	0.994	Lagging	-5.66	0.994	Lagging	-5.63
8	FLT08	0.993	Lagging	-6.09	0.991	Lagging	-6.64	0.991	Lagging	-6.71
9	FLT09	0.993	Lagging	-5.82	0.994	Lagging	-5.42	0.994	Lagging	-5.48
10	FLT10	0.993	Lagging	-5.81	0.994	Lagging	-5.54	0.994	Lagging	-5.54
12	FLT12	0.993	Lagging	-5.95	0.993	Lagging	-6.02	0.993	Lagging	-6.01
13	FLT13	0.993	Lagging	-6.05	0.993	Lagging	-5.80	0.993	Lagging	-5.80
14	FLT14	0.993	Lagging	-6.12	0.994	Lagging	-5.69	0.994	Lagging	-5.65
15	FLT15	0.993	Lagging	-5.82	0.994	Lagging	-5.55	0.994	Lagging	-5.55
16	FLT16	0.993	Lagging	-5.83	0.994	Lagging	-5.62	0.994	Lagging	-5.62
17	FLT17	0.993	Lagging	-5.82	0.994	Lagging	-5.56	0.994	Lagging	-5.56
18	FLT18	0.993	Lagging	-5.80	0.994	Lagging	-5.60	0.994	Lagging	-5.60
19	FLT19	0.993	Lagging	-5.82	0.994	Lagging	-5.55	0.994	Lagging	-5.55
20	FLT20	0.993	Lagging	-5.85	0.994	Lagging	-5.57	0.994	Lagging	-5.57
33	FLT33	0.993	Lagging	-6.02	0.993	Lagging	-5.80	0.993	Lagging	-5.89
34	FLT34	0.993	Lagging	-5.87	0.991	Lagging	-6.70	0.991	Lagging	-6.79
35	FLT35	0.993	Lagging	-5.76	0.994	Lagging	-5.62	0.994	Lagging	-5.64
36	FLT36	0.991	Lagging	-6.57	0.992	Lagging	-6.32	0.992	Lagging	-6.49
37	FLT37	0.993	Lagging	-5.89	0.994	Lagging	-5.67	0.994	Lagging	-5.68
38	FLT38	0.993	Lagging	-5.78	0.993	Lagging	-5.80	0.993	Lagging	-5.85
39	FLT39	0.993	Lagging	-5.88	0.993	Lagging	-5.76	0.993	Lagging	-5.82
40	FLT40	0.993	Lagging	-5.84	0.994	Lagging	-5.66	0.994	Lagging	-5.67
41	FLT41	0.993	Lagging	-5.86	0.994	Lagging	-5.61	0.994	Lagging	-5.61
42	FLT42	0.993	Lagging	-5.81	0.994	Lagging	-5.54	0.994	Lagging	-5.54
52	FLT52	0.992	Lagging	-6.41	0.994	Lagging	-5.65	0.994	Lagging	-5.65
53	FLT53	0.989	Lagging	-7.31	0.993	Lagging	-6.16	0.992	Lagging	-6.19
54	FLT54	0.990	Lagging	-7.29	0.990	Lagging	-6.95	0.991	Lagging	-6.86
55	FLT55	0.992	Lagging	-6.35	0.993	Lagging	-5.87	0.993	Lagging	-5.82
56	FLT56	0.993	Lagging	-5.92	0.993	Lagging	-5.75	0.994	Lagging	-5.72
57	FLT57	0.993	Lagging	-5.97	0.994	Lagging	-5.65	0.994	Lagging	-5.63
58	FLT58	0.993	Lagging	-6.08	0.994	Lagging	-5.44	0.994	Lagging	-5.44
70	FLT70	0.993	Lagging	-6.06	0.994	Lagging	-5.70	0.994	Lagging	-5.61
71	FLT71	0.993	Lagging	-5.81	0.994	Lagging	-5.57	0.994	Lagging	-5.64
72	FLT72	0.993	Lagging	-5.84	0.994	Lagging	-5.58	0.994	Lagging	-5.58
73	FLT73	0.993	Lagging	-5.83	0.994	Lagging	-5.55	0.994	Lagging	-5.56
74	FLT74	0.992	Lagging	-6.24	0.994	Lagging	-5.40	0.994	Lagging	-5.38
75	FLT75	0.993	Lagging	-5.81	0.994	Lagging	-5.55	0.994	Lagging	-5.52
87	FLT87	0.993	Lagging	-5.96	0.994	Lagging	-5.67	0.994	Lagging	-5.66
88	FLT88	0.993	Lagging	-5.83	0.994	Lagging	-5.55	0.994	Lagging	-5.56
89	FLT89	0.993	Lagging	-5.93	0.994	Lagging	-5.62	0.994	Lagging	-5.61
95	FLT95	0.998	Lagging	-3.04	0.999	Lagging	-1.88	0.999	Lagging	-1.96
96	FLT96	0.974	Lagging	-11.68	0.979	Lagging	-10.50	0.979	Lagging	-10.48
97	FLT97	0.984	Lagging	-9.17	0.993	Lagging	-5.87	0.992	Lagging	-6.21
98	FLT98	0.991	Lagging	-6.57	0.988	Lagging	-7.72	0.988	Lagging	-7.79
99	FLT99	0.992	Lagging	-6.20	0.995	Lagging	-5.15	0.994	Lagging	-5.40
100	FLT100	0.991	Lagging	-6.63	0.992	Lagging	-6.46	0.992	Lagging	-6.36
107	FLT107	0.993	Lagging	-5.95	0.993	Lagging	-6.02	0.993	Lagging	-5.99
108	FLT108	0.993	Lagging	-5.97	0.994	Lagging	-5.59	0.994	Lagging	-5.63
109	FLT109	0.993	Lagging	-5.99	0.993	Lagging	-5.98	0.993	Lagging	-5.99
110	FLT110	0.993	Lagging	-5.82	0.994	Lagging	-5.54	0.994	Lagging	-5.54

Study Generator GEN-2016-075

The Power Factor Analysis shows that GEN-2016-075 has a power factor range of 0.974 to 0.998 lagging for the 2016 Winter Peak conditions, a power factor range of 0.979 to 0.999 lagging for the 2017 Summer Peak conditions, and a power factor range of 0.979 to 0.999 lagging for the 2025 Summer Peak conditions.

SECTION 6: LOW/NO WIND/SOLAR IRRADIANCE ANALYSIS

The objective of this task is to determine the impact of low wind or no wind conditions on wind farms that interconnect to a 345 kV or 230 kV bus. The 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak power flows provided by SPP were examined for this analysis.

6.1 Approach

Low/no wind/solar irradiance conditions were examined for all renewable energy plants. Generators were disabled (independently), but the collector systems remained in-service. In order to maintain generation and load balance in the SPP area, the generation was scaled after disabling the respective generator. The amount of reactive power injected into the transmission network was recorded at the respective point of interconnection. This reactive power comes from the capacitance of the project's transmission lines and collector cables. A shunt reactor was added at the high side bus to bring the Mvar flow into the POI down to approximately zero.

6.2 Low/No Wind/Solar Irradiance Analysis Results

The reactance needed to bring the Mvar flow into the point of interconnect to zero Mvar was recorded for each season for all wind or solar farms. Refer to Table 6-1 for the Low/No Wind/Solar Irradiance Analysis results. The table lists the generators examined and the amount of reactive power needed for zero Mvar flow into the POI for each season.

Table 6-1
Low/No Wind/Solar Irradiance Analysis

Request	Size (MW)	POI Name	16WP	17SP	25SP
GEN-2015-089	200	Utica 230kV (652526)	29.15	29.15	29.15
GEN-2016-021	300	Hoskins 345kV (640226)	42.30	42.30	42.30
GEN-2016-023	150.5	Tap Sidney (659426) - Laramie River (659131) 345kV (587090)	12.40	12.40	12.40
GEN-2016-029	150.5	Tap Sidney (659426) - Laramie River (659131) 345kV (587090)	12.40	12.40	12.40
GEN-2016-034	90	Tap Sidney (659426) - Laramie River (659131) 345kV (587090)	3.55	3.55	3.55
GEN-2016-043	230	Hoskins 345kV (640226)	27.00	27.00	27.00
GEN-2016-050	250.7	Axtell (640065)-Post Rock (530583) 345 kV (560082)	16.75	16.75	16.75
GEN-2016-055	126.5	Tap Pauline (640313) -Hildreth (640222) 115 kV (560083)	4.40	4.40	4.40
GEN-2016-064	116	Tap Pauline (640313) – Guide (640206) POI (Rosemont 115 kV, 560134)	2.35	2.35	2.35
GEN-2016-075	50	Tap Ft. Thompson-Hope County 345 kV (Grand Prarie, 652532)	6.24	6.24	6.24

SECTION 7: CONCLUSIONS

Summary of the Stability Analysis

Cluster Scenario

The Cluster Scenario Stability Analysis determined there were multiple contingencies that resulted in voltage instability and low post-fault voltage recovery when all generation interconnection requests were at 100% output.

To mitigate the voltage instability and low post-fault steady-state voltages, the following upgrades were provided by SPP and implemented in all seasons:

- Keystone to Banner County (G16-034 Tap) 345 kV circuit #1
- SPP R Plan
  - Cherry County/Thedford 345/115/13.8 kV transformer
  - Gentleman to Cherry County 345 kV circuit #1
  - Holt County to Cherry County 345 kV circuit #1
- Update of conductor data for Rosemont to Pauline 115 kV circuit #1
- Rosemont to Pauline 115 kV circuit #2
- Gentleman to Keystone 345 kV circuit #2

After implementing the above upgrades, voltage instability was still observed for contingencies for all seasonal peak conditions examined. After discussion with SPP, it was determined that for the stuck breaker contingencies, the Sidney DC tie should be blocked and the shunt capacitor near Sidney 230 kV should be taken out of service. For the prior outage contingencies, a total of 350 MW of generation curtailment is necessary to mitigation violations. GEN-2016-075 (50MW) and GEN-2015-023 units 1 and 2 (each 150 MW) should be taken out of service in order to decrease the generation around Cherry County 345 kV.

After implementing these changes, the contingency analysis was re-simulated for all contingencies. With the upgrades, the Stability Analysis determined that there was no wind turbine tripping or system instability observed as a result of interconnecting all study projects at 100% output.

High GGS Sensitivity Scenario

The High GGS Scenario Stability Analysis determined there were multiple contingencies that resulted in voltage instability and low post-fault voltage recovery when all generation interconnection requests were at 100% output.

To mitigate the voltage instability and low post-fault steady-state voltages, the following upgrades were provided by SPP and implemented in all seasons:

- Keystone to Banner County (G16-034 Tap) 345 kV circuit #1
- SPP R Plan
  - Cherry County/Thedford 345/115/13.8 kV transformer
  - Gentleman to Cherry County 345 kV circuit #1
  - Holt County to Cherry County 345 kV circuit #1
- Rosemont to Pauline 115 kV circuit #2
- Gentleman to Keystone 345 kV circuit #2

After implementing the above upgrades, voltage instability was still observed for contingencies for all seasonal peak conditions examined. It was determined that for a three phase fault in the Sidney area, the shunt capacitor near Sidney 230 kV should be taken out of service. For the prior outage contingencies, a total of 350 MW of generation curtailment is necessary to mitigation violations. GEN-2016-075 (50MW) and GEN-2015-023 units 1 and 2 (each 150 MW) should be taken out of service in order to decrease the generation around Cherry County 345 kV.

The implementation of the upgrades eliminated the violations for all but one case when all generations requested were at 100% output. The case was a stuck breaker contingency in the Sidney-Ogallala area (FLT43-SB). After discussion with SPP, it was determined that additional analysis by NPPD and WAPA will be required for this contingency in the High GGS Scenario.

Stand-Alone Scenario

For GEN-2016-023, GEN-2016-029, and GEN-2016-034 voltage instability was observed for all seasonal peak conditions examined. The following mitigation was implemented to mitigate the observed violations:

- Keystone to Banner County (G16-034 Tap) 345 kV circuit #1
- SPP R Plan
  - Cherry County/Thedford 345/115/13.8 kV transformer
  - Gentleman to Cherry County 345 kV circuit #1
  - Holt County to Cherry County 345 kV circuit #1
- Gentleman to Keystone 345 kV circuit #2

For remaining stuck breaker contingencies that resulted in voltage instability, the following mitigation was implemented:

- Block Sidney 230 kV DC tie
- Take shunt capacitor near Sidney 230 kV out of service

After implementing these changes, the observed voltage instability was mitigated.

For GEN-2016-064 voltage instability was observed for all seasonal peak conditions examined. The following mitigation was implemented to mitigate the observed violations:

- Rosemont to Pauline 115 kV circuit #2

After implementing these changes, the observed voltage instability was mitigated.

For GEN-2016-075, voltage instability was observed for all seasonal peak conditions examined. The following mitigation was implemented for prior outage conditions:

- Decrease generation around Cherry County by decreasing G07170718WG generator output by 75 MW (from 200 to 125 MW) and taking GEN-2015-023 units 1 and 2 (each 150 MW) out of service

After implementing this change, the observe voltage instability was mitigated.

Summary of the Short-Circuit Analysis

The Short-Circuit Analysis was performed on the 2017 Summer Peak and 2025 Summer Peak power flows for all study projects. Refer to Table 7-1 for a list of maximum fault currents observed for each study project for the 2017 Summer Peak case. Refer to Table 7-2 for a list of maximum fault currents observed for each study project for the 2025 Summer Peak case.

Table 7-1
List of Maximum Fault Currents Observed for Each Study Project for the 2017 Summer Peak Case

Study Project	POI Name	Fault Current at POI (kA)	Maximum Fault Current (kA)	Fault Location	Bus Voltage (kV)
GEN-2015-089	Utica 230kV (652526)	7.90	35.06	SPLT RK7	115
GEN-2016-021	Hoskins 345kV (640226)	11.50	39.66	S1206 5	161
GEN-2016-023	Tap Sidney (659426) - Laramie River (659131) 345kV (587090)	5.76	28.86	NB WEST4	230
GEN-2016-029	Tap Sidney (659426) - Laramie River (659131) 345kV (587090)	5.76	28.86	NB WEST4	230
GEN-2016-034	Tap Sidney (659426) - Laramie River (659131) 345kV (587090)	5.76	28.86	NB WEST4	230
GEN-2016-043	Hoskins 345kV (640226)	11.50	39.59	S1255 5	161
GEN-2016-050	Axtell (640065)-Post Rock (530583) 345 kV (560082)	8.02	20.96	MOORE 3	345
GEN-2016-055	Tap Pauline (640313) -Hildreth (640222) 115 kV (560083)	8.64	20.96	MOORE 3	345
GEN-2016-064	Tap Pauline (640313) – Guide (640206) POI (Rosemont 115 kV, 560134)	8.64	20.96	MOORE 3	345
GEN-2016-075	Tap Ft. Thompson-Hope County 345 kV (Grand Prarie, 652532)	5.76	19.70	FTTHOMP4	230

Table 7-2
List of Maximum Fault Currents Observed for Each Study Project for the 2025 Summer Peak Case

Study Project	POI Name	Fault Current at POI (kA)	Maximum Fault Current (kA)	Fault Location	Bus Voltage (kV)
GEN-2015-089	Utica 230kV (652526)	7.92	35.83	SPLT RK7	115
GEN-2016-021	Hoskins 345kV (640226)	11.55	41.88	S1209 5	161
GEN-2016-023	Tap Sidney (659426) - Laramie River (659131) 345kV (587090)	5.77	28.87	NB WEST4	230
GEN-2016-029	Tap Sidney (659426) - Laramie River (659131) 345kV (587090)	5.77	28.87	NB WEST4	230
GEN-2016-034	Tap Sidney (659426) - Laramie River (659131) 345kV (587090)	5.77	28.87	NB WEST4	230
GEN-2016-043	Hoskins 345kV (640226)	11.55	41.88	S1209 5	161
GEN-2016-050	Axtell (640065)-Post Rock (530583) 345 kV (560082)	8.03	22.91	CIRCLE 3	115
GEN-2016-055	Tap Pauline (640313) -Hildreth (640222) 115 kV (560083)	8.64	21.25	MOORE 3	345
GEN-2016-064	Tap Pauline (640313) – Guide (640206) POI (Rosemont 115 kV, 560134)	8.64	21.25	MOORE 3	345
GEN-2016-075	Tap Ft. Thompson-Hope County 345 kV (Grand Prarie, 652532)	6.45	21.96	FTTHOMP4	230

Summary of Power Factor Analysis

The upgrades identified in the Stability Analysis were implemented in the power flow cases and utilized for the Power Factor Analysis. Refer to Table 7-3 for the power factor analysis results for each study generator.

Table 7-3
Power Factor Analysis Summary for Study Projects

Study Project	Power Factor Range for Each Study Project[1]					
	16WP		17SP		25SP	
GEN-2015-089	0.989	1.000	0.991	1.000	0.989	1.000
GEN-2016-021	-0.990	0.995	-0.986	0.995	-0.989	0.994
GEN-2016-023	-0.945	0.990	-0.920	0.990	-0.904	0.990
GEN-2016-029	-0.945	0.990	-0.950	0.990	-0.904	0.990
GEN-2016-034	-0.570	0.996	-0.491	0.999	-0.464	0.999
GEN-2016-043	-0.982	0.991	-0.976	0.992	-0.982	0.989
GEN-2016-050	-0.980	0.938	-0.961	0.955	-0.958	0.952
GEN-2016-055	0.976	1.000	0.971	1.000	-0.996	0.965
GEN-2016-064	0.981	0.998	0.980	0.997	0.976	0.998
GEN-2016-075	-0.974	-0.998	-0.979	-0.999	-0.979	-0.999

[1]Lagging power factors are negative and leading power factors are positive

Summary of Low Wind/No Wind Analysis

The amount of reactive power injected into the transmission network was recorded at the high side of the transformer near the point of interconnection for all study projects for each season. The maximum reactance needed for zero Mvar flow was -42.30 Mvar for GEN-2016-021. The minimum reactance needed for zero Mvar flow was -2.35 Mvar for GEN-2016-064.

11.17.9 J12: GROUP 12 DYNAMIC STABILITY ANALYSIS REPORT

Southwestern Power Pool Inc. (SPP)

Definitive Impact Study

DISIS-2016-001 (Group 12)

POWER-tek
green inspiration since 1994

Draft Report Submitted to
Southwest Power Pool Inc.
January 2017

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1. Executive Summary

The DISIS-2016-001 (Group 12) Impact Study is a generation interconnection study performed by POWER-tek Global Inc. for Southwest Power Pool (SPP). This report presents the results of impact study comprising of power factor, short circuit, and stability analyses for both cluster and stand-alone scenarios of the proposed interconnection projects under DISIS-2016-001 (Group 12) ("The Projects") as described in Table 1.1 below:

Table 1.1: Interconnection Request

Request	Size (MW)	Generator Model	Point of Interconnection (POI)
GEN-2016-013	10MW uprate (total = 60MW winter/52MW summer)	GENROU combustion turbine	La Russell 161kV (547479)
GEN-2016-014	10MW uprate (total = 60MW winter/52MW summer)	GENROU combustion turbine	La Russell 161kV (547479)

Power factor analysis, short circuit analysis up to 5 Buses away from each point of interconnection (POI), and transient stability simulations were performed for the Projects in service at its full output. SPP provided three base cases for Winter-2016, Summer-2017, and Summer-2025, each comprising of a power flow, sequence data and corresponding dynamics database. The previous queued request projects were already modeled in the base cases.

The power factor analysis consists of running all three phase contingencies shown in the Fault Definitions table in power flow to advise the necessary power factor at the POI for each contingency.

The power factor analysis indicates that interconnection request i.e., La Russell 161kV (547479) are required to provide reactive power as indicated in Tables 3.2.2 through 3.2.4. During power factor analysis, it is observed that 3 phase contingencies are meeting convergence criteria. However, it is important to highlight here that N-2 outages i.e., Pre Outage cases at the POI (La Russell 161kV) results in significant overloading at the remaining 3rd live circuit. These prior outage conditions determined a need for curtailment of studied generation in the case of certain transmission outages.

Per the SPP OATT, the Interconnection Customer will be required to provide 95% lagging (supplying vars) and 95% leading (absorbing vars) at the POI.

During stability performance for both cluster and stand-alone scenarios, all the 3 phase contingencies that involved the point of interconnection i.e., La Russell 161kV (547479) the response of the system is unstable especially during winter-2016 scenario. In this regard, further simulations were made to test such contingencies by considering the re-closer at the remote end (not at the POI end) and even with extended fault durations. It is observed that the response of the system remains stable with considering re-closer at the remote ends only i.e., (reference to plots for contingencies FLT01A-3PH, FLT03A-3PH, FLT05A-3PH, FLT31A-3PH, and FLT32A-3PH). Therefore it is recommended that for the contingencies that involved the POI, the re-closer should be considered at the remote end only and should not be considered at the POI side.

2. Introduction

2.1. Project Overview and Assumptions

The DISIS-2016-001 (Group 12) Impact Study is a generation interconnection study performed by POWER-tek Global Inc. for SPP. This report presents the results of impact study comprising of power factor, short circuit analysis, and stability analyses for both cluster and stand-alone scenarios of the proposed interconnection projects under DISIS-2016-001 (Group 12) ("The Projects") as described in Table 2.1.1 below:

Table 2.1.1: Interconnection requests

Request	Size (MW)	Generator Model	Point of Interconnection (POI)
GEN-2016-013	10MW uprate (total = 60MW winter/52MW summer)	GENROU combustion turbine	La Russell 161kV (547479)
GEN-2016-014	10MW uprate (total = 60MW winter/52MW summer)	GENROU combustion turbine	La Russell 161kV (547479)

Figure 2.1.1 show the single line diagram for the interconnection of the Projects to present and planned system of SPP. This arrangement was modeled and studied in power flow cases for these projects.

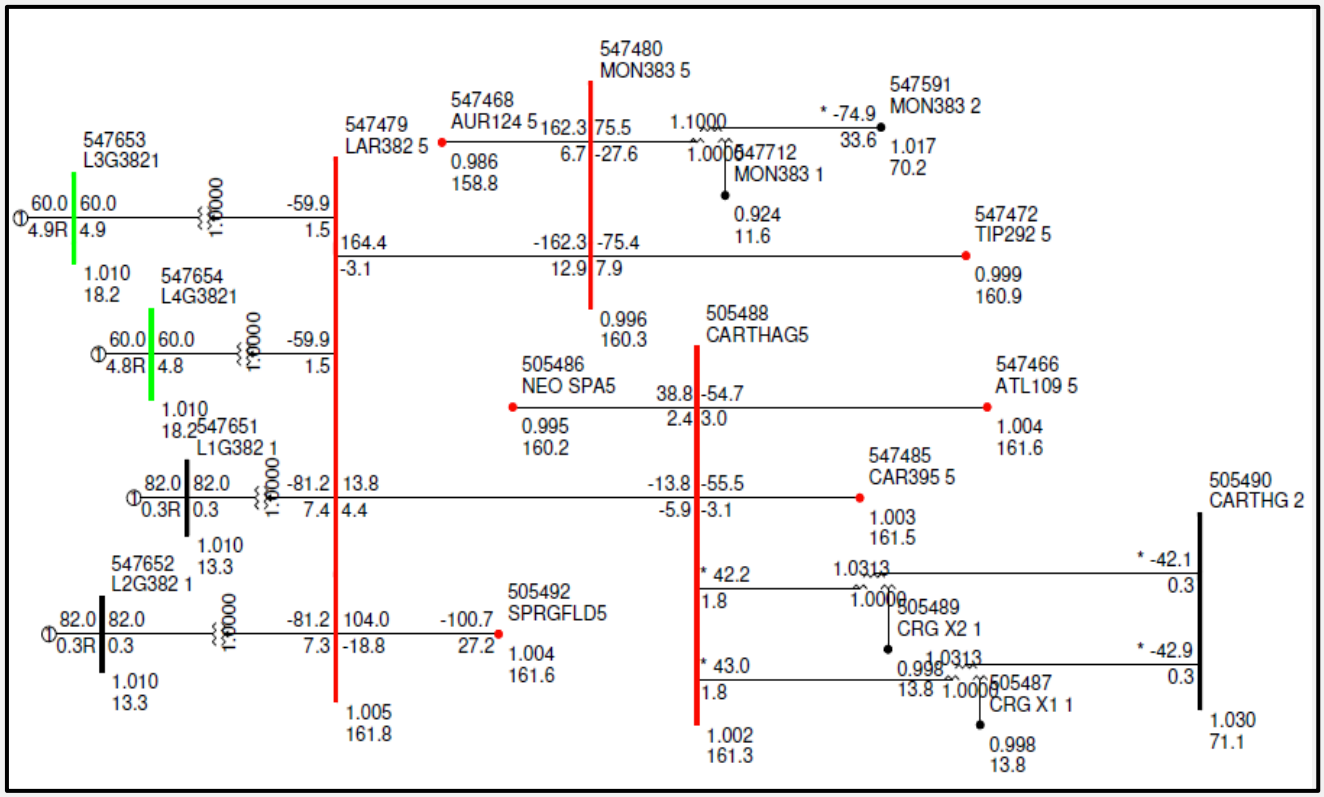

Figure 2.1.1: Power flow single line diagram for GEN-2016-013, GEN-2016-014 and surrounding system components

Appendix-D contains the machines, interconnection, and machines user model parameters.

Table 2.1.2 below shows the list of prior queued projects modeled in the base case.

Table 2.1.2: List of previous queued request projects

Request	Size (MW)	Wind Turbine Model	Point of Interconnection
GEN-2013-011	30.0 Increase (Pmax=683.0)	GENROU (509416)	Turk 138kV (507454)

ATC (Available Transfer Capability) studies were not performed as part of this study. These studies will be required at the time transmission service is actually requested. Additional transmission upgrades may be required based on that analysis.

Study assumptions in general have been based on the specific information and data provided by SPP. The accuracy of the conclusions contained within this study is dependent on the assumptions made with respect to other generation additions and transmission improvements planned by other entities. Changes in the assumptions of the timing of other generation additions or transmission improvements may affect this study's conclusions.

2.2. Objectives

The objectives of the study are to conduct power factor analysis and to determine the impact on system stability of interconnecting the proposed power plants to SPP's transmission system.

2.3. Models and Simulations Tools Used

Version 32.2.0 of the Siemens, PSS/E™ power system simulation program was used in this study.

SPP provided its latest stability database cases for Winter-2016, Summer-2017, and Summer-2025 peak seasons. The Project's PSS/E model had been developed prior to this study and was included in the power flow case and the dynamics database. Machines, interconnection and dynamic model data for the Project plants is provided in Appendix D.

Power flow single line diagram of the projects in summer 2017 peak condition is shown in Figure 2.1.1. This figure shows that combustion turbine model includes representation of the radial transmission line, the substation transformer from transmission voltage (161kV) to 18.0kV. The remainder of each power plant is represented by lumped equivalents including a generator, a step-up transformer, and collector system impedance.

No special modeling is required of line relays in these cases, except for the special modeling related to the wind-turbine tripping.

All generators in Areas 502, 520, 523, 524, 525, 351 were monitored.

3. Power Factor Analysis

3.1. Methodology

Power factor analysis was conducted for the Project using the following methodology:

1. Replace the power plant by a generator at the high side bus 345 kV, 138 kV, 115kV, or 69 kV bus, as applicable, with the MW of the power plants at that point of interconnection.
2. Turn off the power plant as modeled (as well as previous queued projects at the same point of interconnection).
3. Model a var generator at the Project's high voltage side, 345 kV, 138 kV, 115kV, or 69kV bus, as applicable. The var generator is set to hold a voltage schedule at the POI consistent with the voltage schedule in the provided power flow cases for summer and winter or 1.0 pu voltage, whichever is higher.
4. Perform the steady state contingency analysis to determine the power factor necessary at the POI for each contingency.
5. If the required power factor at the POI is beyond the capability of the studied wind turbines to meet (at the POI) capacitor banks may be considered for the stability analysis. The preference is to locate the capacitance banks on the 34.5 kV customer side. Factors to sizing capacitor banks include:
    5.1. The ability of the power plant to meet FERC Order 661A (low voltage ride through) with and without capacitor banks.
    5.2. The ability of the power plant to meet FERC Order 661A (power plant recovery to pre-fault voltage).
    5.3. If power plants trips on high voltage, power factor lower than unity may be required.

3.2. Analysis

Analysis was performed for the proposed Projects with all prior queued projects in service. A var generator was modeled at the point of interconnection and was set to hold a voltage schedule at the POI consistent with the voltage schedule in the provided power flow cases or 1 p.u. whichever is higher. The voltages for these Projects are summarized in Table 3.2.1. All upgrades and instructions were made in the base cases. No other changes were made in the base cases provided, other than the addition of the var generators. Contingency analysis was run for provided list of contingencies.

Table 3.2.1: POI voltages for the summer and winter peak cases

Request	Point of Interconnection	Size (MW)	Base Case Voltage (p.u.)		
			Winter 2016 Peak	Summer 2017 Peak	Summer 2025 Peak
GEN-2016-013	La Russell 161kV (547479)	10MW uprate (total = 60MW winter/52MW summer)	1.004	1.0	1.0
GEN-2016-014	La Russell 161kV (547479)	10MW uprate (total = 60MW winter/52MW summer)	1.002	1.0	1.0

The details of the var requirement during contingencies are highlighted in Table 3.2.2, 3.2.3 and 3.2.4. The highest and the lowest values obtained are highlighted in these tables.

1. For 2016 winter case: The maximum var generator supply is -8.9 MVARs at 1.0 (leading power factor) for the outage of 547480 [MON383 5 161.0] TO BUS 547472 [TIP292 5 161.0] CKT outage. The minimum var requirement is -38.1 MVAR at 1.0 (leading power factor) for outage of 547480 [MON383 5 161.0] TO BUS 547468 [AUR124 5 161.0] CKT outage.

Table 3.2.2: Var Generator output in 2016 winter peak case for DISIS-2016-001 (Group 12)

2016 winter Peak Case Power Factor Study:

Generation Interconnection Request Analysis						**For GEN-2016-013 & GEN-2016-014**		
Rated MW of Power plants OR at POI (MW) Rated MVAR of Power plants OR at POI (MVAR)						MW at POI **284.0** MVAR at POI **124.4**		
Cont. Name	**From Bus (# & Name)**		**To Bus (# & Name)**		**ID**	**MVAR at POI**	**P.F at POI**	**Remarks**
	Base Case MVAR Flow				N/A	-17.7	1.00	Converged and No Constraints
FLT01-3PH	547479	LAR382 5 161.0	547480	MON383 5 161.0	CKT 1	-33.9	0.99	Converged and No Constraints
FLT03-3PH	547479	LAR382 5 161.0	505488	CARTHAG5 161.0	CKT 1	-22.7	1.00	Converged and No Constraints
FLT05-3PH	547479	LAR382 5 161.0	505492	SPRGFLD5 161.0	CKT 1	-9.9	1.00	Converged and No Constraints
FLT07-3PH	547480	MON383 5 161.0	547468	AUR124 5 161.0	CKT 1	-38.1	0.99	Converged and No Constraints
FLT09-3PH	547480	MON383 5 161.0	547472	TIP292 5 161.0	CKT 1	-8.9	1.00	Converged and No Constraints
FLT11-3PH	547480	MON383 5 161.0	547591	MON383 2 69.00	T/F	-9.6	1.00	Converged and No Constraints

Generation Interconnection Request Analysis						For GEN-2016-013 & GEN-2016-014		
Rated MW of Power plants OR at POI (MW) Rated MVAR of Power plants OR at POI (MVAR)						MW at POI **284.0** MVAR at POI **124.4**		
Cont. Name	**From Bus (# & Name)**		**To Bus (# & Name)**		**ID**	**MVAR at POI**	**P.F at POI**	**Remarks**
FLT13-3PH	505492	SPRGFLD5 161.0	300678	5NIXA-1 161.0	CKT 1	-18.6	1.00	Converged and No Constraints
FLT15-3PH	505492	SPRGFLD5 161.0	505496	NIXA 5 161.0	CKT 1	-17.1	1.00	Converged and No Constraints
FLT17-3PH	505492	SPRGFLD5 161.0	549970	CLAY 5161.0	CKT 1	-18.7	1.00	Converged and No Constraints
FLT19-3PH	505492	SPRGFLD5 161.0	549959	BATTLEFIELD5161.0	CKT 1	-17.2	1.00	Converged and No Constraints
FLT21-3PH	505492	SPRGFLD5 161.0	549969	BROOKLINE 5161.0	CKT 1	-14.8	1.00	Converged and No Constraints
FLT23-3PH	505492	SPRGFLD5 161.0	505494	SPRGFLD2 69.00	T/F	-9.6	1.00	Converged and No Constraints
FLT25-3PH	505488	CARTHAG5 161.0	547466	ATL109 5 161.0	CKT 1	-17.1	1.00	Converged and No Constraints
FLT27-3PH	505488	CARTHAG5 161.0	505486	NEO SPA5 161.0	CKT 1	-18.7	1.00	Converged and No Constraints
FLT29-3PH	505488	CARTHAG5 161.0	505490	CARTHG 2 69.00	T/F	-18.7	1.00	Converged and No Constraints
FLT31-PO	547479	LAR382 5 161.0	547480	MON383 5 161.0	CKT 1	-26.7	1.00	Converged but remaining 3rd CKT 127% Loaded (283 MVA)
	547479	LAR382 5 161.0	505492	SPRGFLD5 161.0	CKT 1			
FLT32-PO	547479	LAR382 5 161.0	547480	MON383 5 161.0	CKT 1	-11.1	1.00	Converged but remaining 3rd CKT 127% Loaded (283 MVA)
	547479	LAR382 5 161.0	505488	CARTHAG5 161.0	CKT 1			

2. For 2017 summer case: The maximum var generator supply is 0.5 MVARs at 1.0 (leading power factor) for the outage of 547479 [LAR382 5 161.0] TO BUS 505492 [SPRGFLD5 161.0] CKT outage. The minimum var requirement is -32.4 MVAR at 1.0 (leading power factor) for outage of 547479 [LAR382 5 161.0] TO BUS 547480 [MON383 5 161.0] CKT outage.

Table 3.2.3: Var generator output in 2017 summer peak case for DISIS-2016-001 (Group 12)

2017 summer Peak Case Power Factor Study:

Generation Interconnection Request Analysis						For GEN-2016-013 & GEN-2016-014		
Rated MW of Power plants OR at POI (MW) Rated MVAR of Power plants OR at POI (MVAR)						MW at POI **268.0** MVAR at POI **114.5**		
Cont. Name	**From Bus (# & Name)**		**To Bus (# & Name)**		**ID**	**MVAR at POI**	**P.F at POI**	**Remarks**
	Base Case MVAR Flow				N/A	-10.2	1.00	Converged and No Constraints
FLT01-3PH	547479	LAR382 5 161.0	547480	MON383 5 161.0	CKT 1	-32.4	0.99	Converged and No Constraints
FLT03-3PH	547479	LAR382 5 161.0	505488	CARTHAG5 161.0	CKT 1	-19.1	1.00	Converged and No Constraints
FLT05-3PH	547479	LAR382 5 161.0	505492	SPRGFLD5 161.0	CKT 1	0.5	1.00	Converged and No Constraints
FLT07-3PH	547480	MON383 5 161.0	547468	AUR124 5 161.0	CKT 1	-24.7	1.00	Converged and No Constraints
FLT09-3PH	547480	MON383 5 161.0	547472	TIP292 5 161.0	CKT 1	-1.9	1.00	Converged and No Constraints
FLT11-3PH	547480	MON383 5 161.0	547591	MON383 2 69.00	T/F	-6.7	1.00	Converged and No Constraints
FLT13-3PH	505492	SPRGFLD5 161.0	300678	5NIXA-1 161.0	CKT 1	-11.2	1.00	Converged and No Constraints
FLT15-3PH	505492	SPRGFLD5 161.0	505496	NIXA 5 161.0	CKT 1	-9.4	1.00	Converged and No Constraints
FLT17-3PH	505492	SPRGFLD5 161.0	549970	CLAY 5161.0	CKT 1	-11	1.00	Converged and No Constraints
FLT19-3PH	505492	SPRGFLD5 161.0	549959	BATTLEFIELD5161.0	CKT 1	-10.7	1.00	Converged and No Constraints
FLT21-3PH	505492	SPRGFLD5 161.0	549969	BROOKLINE 5161.0	CKT 1	-6.7	1.00	Converged and No Constraints
FLT23-3PH	505492	SPRGFLD5 161.0	505494	SPRGFLD2 69.00	T/F	-6.7	1.00	Converged and No Constraints
FLT25-3PH	505488	CARTHAG5 161.0	547466	ATL109 5 161.0	CKT 1	-10.9	1.00	Converged and No Constraints
FLT27-3PH	505488	CARTHAG5 161.0	505486	NEO SPA5 161.0	CKT 1	-12.2	1.00	Converged and No Constraints
FLT29-3PH	505488	CARTHAG5 161.0	505490	CARTHG 2 69.00	T/F	-9	1.00	Converged and No Constraints
FLT31-PO	547479	LAR382 5 161.0	547480	MON383 5 161.0	CKT 1	-21.3	1.00	Converged but remaining 3rd CKT 139% Loaded (267 MVA)
	547479	LAR382 5 161.0	505492	SPRGFLD5 161.0	CKT 1			
FLT32-PO	547479	LAR382 5 161.0	547480	MON383 5 161.0	CKT 1	-16.5	1.00	Converged but remaining 3rd CKT 139% Loaded (267 MVA)
	547479	LAR382 5 161.0	505488	CARTHAG5 161.0	CKT 1			

3. For 2025 summer case: The maximum var generator supply is 61.1 MVARs at 0.97 (lagging power factor) for the outage of 547480 [MON383 5 161.0] TO BUS 547472 [TIP292 5 161.0] CKT outage. The minimum var

requirement is -15.8 MVAR at 1.0 (leading power factor) for outage of 547479 [LAR382 5 161.0] TO BUS 547480 [MON383 5 161.0] CKT outage and 547479 [LAR382 5 161.0] TO BUS 505488 [CARTHAG5 161.0] CKT outage.

Table 3.2.3: Var generator output in 2025 summer peak case for DISIS-2016-001 (Group 12)

2025 Summer Peak Case Power Factor Study:

Generation Interconnection Request Analysis						**For GEN-2016-013 & GEN-2016-014**		
Rated MW of Power plants OR at POI (MW) Rated MVAR of Power plants OR at POI (MVAR)						MW at POI **268.0** MVAR at POI **114.5**		
Cont. Name	**From Bus (# & Name)**		**To Bus (# & Name)**		**ID**	**MVAR at POI**	**P.F at POI**	**Remarks**
	Base Case MVAR Flow				N/A	45.2	0.99	Converged and No Constraints
FLT01-3PH	547479	LAR382 5 161.0	547480	MON383 5 161.0	CKT 1	-15.6	1.00	Converged and No Constraints
FLT03-3PH	547479	LAR382 5 161.0	505488	CARTHAG5 161.0	CKT 1	20	1.00	Converged and No Constraints
FLT05-3PH	547479	LAR382 5 161.0	505492	SPRGFLD5 161.0	CKT 1	55	0.98	Converged and No Constraints
FLT07-3PH	547480	MON383 5 161.0	547468	AUR124 5 161.0	CKT 1	44.3	0.99	Converged and No Constraints
FLT09-3PH	547480	MON383 5 161.0	547472	TIP292 5 161.0	CKT 1	61.1	0.97	Converged and No Constraints
FLT11-3PH	547480	MON383 5 161.0	547591	MON383 2 69.00	T/F	13.2	1.00	Converged and No Constraints
FLT13-3PH	505492	SPRGFLD5 161.0	300678	5NIXA-1 161.0	CKT 1	44	0.99	Converged and No Constraints
FLT15-3PH	505492	SPRGFLD5 161.0	505496	NIXA 5 161.0	CKT 1	46.2	0.99	Converged and No Constraints
FLT17-3PH	505492	SPRGFLD5 161.0	549970	CLAY 5161.0	CKT 1	44.5	0.99	Converged and No Constraints
FLT19-3PH	505492	SPRGFLD5 161.0	549959	BATTLEFIELD5161.0	CKT 1	44.7	0.99	Converged and No Constraints
FLT21-3PH	505492	SPRGFLD5 161.0	549969	BROOKLINE 5161.0	CKT 1	49	0.98	Converged and No Constraints
FLT23-3PH	505492	SPRGFLD5 161.0	505494	SPRGFLD2 69.00	T/F	13.2	1.00	Converged and No Constraints
FLT25-3PH	505488	CARTHAG5 161.0	547466	ATL109 5 161.0	CKT 1	45.3	0.99	Converged and No Constraints
FLT27-3PH	505488	CARTHAG5 161.0	505486	NEO SPA5 161.0	CKT 1	42.1	0.99	Converged and No Constraints
FLT29-3PH	505488	CARTHAG5 161.0	505490	CARTHG 2 69.00	T/F	41.3	0.99	Converged and No Constraints
FLT31-PO	547479	LAR382 5 161.0	547480	MON383 5 161.0	CKT 1	-6.4	1.00	Converged but remaining 3rd CKT 139% Loaded (267 MVA)
	547479	LAR382 5 161.0	505492	SPRGFLD5 161.0	CKT 1			

Generation Interconnection Request Analysis						For GEN-2016-013 & GEN-2016-014		
Rated MW of Power plants OR at POI (MW) Rated MVAR of Power plants OR at POI (MVAR)						MW at POI **268.0** MVAR at POI **114.5**		
Cont. Name	**From Bus (# & Name)**		**To Bus (# & Name)**		**ID**	**MVAR at POI**	**P.F at POI**	**Remarks**
FLT32-PO	547479	LAR382 5 161.0	547480	MON383 5 161.0	CKT 1	-15.8	1.00	Converged but remaining 3rd CKT 139% Loaded (267 MVA)
	547479	LAR382 5 161.0	505488	CARTHAG5 161.0	CKT 1			

3.3. Conclusions

The power factor analysis indicates the DISIS-2016-001 (Group 12) interconnection requests i.e., GEN-2016-013, and GEN-2016-014 are required to maintain the SPP standard power factor at the point of interconnection i.e., La Russell 161kV (547479) based on the contingencies studied.

All 3 phase contingencies for power factor analysis are meeting convergence criteria. However, it is important to highlight here that N-2 outages i.e., Pre Outage cases at the POI (La Russell 161kV) results in significant overloading at the remaining 3rd live circuit. These prior outage conditions determined a need for curtailment of studied generation in the case of certain transmission outages.

Per the SPP OATT, the Interconnection Customer will be required to provide 95% lagging (supplying vars) and 95% leading (absorbing vars) at the POI.

4. Short Circuit Analysis

The short circuit analysis out five buses away was performed for 2017, and 2025 summer peak case for each interconnection request under project cluster scenario of DISIS-2016-001 (Group 12). No outage was assumed in the system model.

4.1. Short Circuit Result for 2017 Summer Peak Case

The short circuit results for summer-2017 scenario (assumed not outage) at the POI are tabulated below.

4.1.1. Short Circuit Result for La Russell 161kV (547479)

The results of the short circuit analysis for POI i.e., La Russell 161kV (547479) and five bus levels away are tabulated below in table 4.1.1.

Table 4.1.1: Short circuit results for La Russell 161kV (547479)

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
547479	LAR382 5 161.0	0 Level	17101.1	10000.2
505488	CARTHAG5 161.0	1 Level	18534.6	13833.5
505492	SPRGFLD5 161.0	1 Level	29226.8	28059.8
547480	MON383 5 161.0	1 Level	12572	9019.7
547651	L1G382 1 13.20	1 Level	75532.3	77955.4
547652	L2G382 1 13.20	1 Level	75847.3	78319.4
547653	L3G3821 18.00	1 Level	33798.5	34642.8
547654	L4G3821 18.00	1 Level	33822.4	34669.1
300678	5NIXA-1 161.0	2 Level	20049.5	15282.3
505486	NEO SPA5 161.0	2 Level	16902.8	12163.5
505487	CRG X1 1 13.80	2 Level	13274.6	0
505489	CRG X2 1 13.80	2 Level	12593.4	0
505490	CARTHG 2 69.00	2 Level	15296.3	15285.5
505491	SPF X1 1 13.80	2 Level	17236.2	0
505494	SPRGFLD2 69.00	2 Level	9652.5	11378.9
505495	SPF X3 1 13.80	2 Level	8891.6	0
505496	NIXA 5 161.0	2 Level	13458.3	10617.4
547466	ATL109 5 161.0	2 Level	17697.6	13374.8

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
547468	AUR124 5 161.0	2 Level	10727.3	8054.5
547472	TIP292 5 161.0	2 Level	19034.7	13233.7
547485	CAR395 5 161.0	2 Level	13794.8	9614.6
547591	MON383 2 69.00	2 Level	11926.7	11041
547712	MON383 1 12.50	2 Level	17186.6	0
549959	BATTLEFIELD5161.0	2 Level	28582	27499.5
549969	BROOKLINE 5161.0	2 Level	30323	29857.1
549970	CLAY 5161.0	2 Level	19858.5	15624.9
300089	5JAMESV 161.0	3 Level	15911.3	0
300101	5MORGAN 161.0	3 Level	11178.6	8801.5
300129	5WASHBRN 161.0	3 Level	8471.3	5933.4
300649	2JASPER 69.00	3 Level	5100.3	2296.1
300669	2ELWOOD 69.00	3 Level	4886.2	3443.6
300680	2VERONA 69.00	3 Level	6545.8	3303.8
300745	2DMNDTP 69.00	3 Level	5910.4	0
300751	2REEDS 69.00	3 Level	6916.6	4564.3
301161	5LOGAN 161.0	3 Level	15471.4	11200.2
505472	TABLE R5 161.0	3 Level	12844.9	12917.5
505497	NXA X1 1 13.80	3 Level	15453.3	0
505499	NXA X2 1 13.80	3 Level	7418.5	0
505501	NIXA 2 69.00	3 Level	11034.5	10236.5
547400	MON376J2 69.00	3 Level	4169.2	3122.7
547405	MON352J2 69.00	3 Level	7747.9	6091.9
547449	PRC460 2 69.00	3 Level	5818.7	4422.8
547471	NEO184 5 161.0	3 Level	15624.4	11469.6
547473	RDS295 5 161.0	3 Level	8012.3	5246.7
547483	JOP389 5 161.0	3 Level	21617.5	15213.2
547491	PUR421 5 161.0	3 Level	11063	7495.9
547494	OAK432 5 161.0	3 Level	19357.1	14682.9

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
547499	CPK446 5 161.0	3 Level	8283.5	6605.2
547500	RNM393 5 161.0	3 Level	15526.8	11303
547533	ATL109 2 69.00	3 Level	20699.5	20110
547537	AUR124 2 69.00	3 Level	12520.8	11476.6
547540	MON152 2 69.00	3 Level	10559.3	9142
547702	ATL109 1 12.50	3 Level	18194.3	0
547704	AUR1241 12.50	3 Level	7387.5	0
549954	JTEC 5161.0	3 Level	29294	24835.7
549955	JUNCTION 5161.0	3 Level	22278.4	19429.4
549958	MAIN STREET5161.0	3 Level	20386.6	19082.3
549960	SW DISP PLT5161.0	3 Level	27415.6	23023.4
549962	MILL 5161.0	3 Level	17143.3	13928.4
549963	MENTOR 5161.0	3 Level	16120.5	12192.1
549979	BATTLEFIELD269.00	3 Level	22373.5	20467.9
549980	BATLEFLDXF1113.20	3 Level	22174.2	0
549984	BROOKLINE 7345.0	3 Level	12240.1	9570.6
549988	BRKLNE XF1 113.20	3 Level	58324	0
549989	BRKLNE XF2 113.20	3 Level	58348.1	0
300045	7MORGAN 345.0	4 Level	11939	4957.4
300095	5MANSFD 161.0	4 Level	9676.9	0
300348	5BTLFD 161.0	4 Level	23534.5	18069.7
300651	2LAMR 69.00	4 Level	9794.2	0
300653	2MEDOC 69.00	4 Level	2589.8	0
300657	2ASHGRV 69.00	4 Level	3920.7	0
300659	2BOWRML 69.00	4 Level	6342.7	2228.8
300667	2CRANE 69.00	4 Level	3302.5	0
300673	2JAMESV 69.00	4 Level	12472	4455.4
300679	2PRDYTP 69.00	4 Level	5200.8	0
300718	5CLEVCOV 161.0	4 Level	10913.8	9275

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
300726	5RIVRDL 161.0	4 Level	10388.8	0
300744	2DMNDGR 69.00	4 Level	2739.2	0
300748	2NEOSAC 69.00	4 Level	10125.5	7721.2
300762	2WNTWRT 69.00	4 Level	5017.6	0
300763	2WASHBRN 69.00	4 Level	6460.3	0
300782	2MORGAN 69.00	4 Level	6737.9	0
338099	5GRANDVIEW% 161.0	4 Level	8919	5868.2
505473	TBR X1 1 13.80	4 Level	19549.2	0
505474	TABLE R2 69.00	4 Level	11758.8	14000.5
505475	TBR X2 1 13.80	4 Level	17931.1	0
505476	TBR1&2 1 13.80	4 Level	50815.6	28938.5
505478	TBR3&4 1 13.80	4 Level	51147.8	29010.1
505480	BEAVER 5 161.0	4 Level	10761.1	9939.8
505498	STOCKTN5 161.0	4 Level	9219.9	7323.8
505543	NX ESPY2 69.00	4 Level	10733.3	8419.2
506935	FLINTCR7 345.0	4 Level	15809.5	16263.9
547402	MON416J2 69.00	4 Level	3687.8	2777.1
547406	MON352 2 69.00	4 Level	7462.3	5834.3
547407	MON311J2 69.00	4 Level	6695.7	5155.7
547462	SVRCK469 5 161.0	4 Level	15420	10457.2
547467	ORO110 5 161.0	4 Level	21320.9	16514.7
547476	ASB349 5 161.0	4 Level	14263.7	10453.4
547478	DAD368 5 161.0	4 Level	10988.1	8756.2
547492	RDS424 5 161.0	4 Level	8561.3	5610.2
547496	NOL435 5 161.0	4 Level	10642.4	8458.7
547497	RVS438 5 161.0	4 Level	11263.2	9537.4
547498	STL439 5 161.0	4 Level	26421.2	18021.6
547532	CAR108 2 69.00	4 Level	8778.6	5473.4
547543	NEO184 2 69.00	4 Level	12622.3	12783.6

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
547544	WEN205 2 69.00	4 Level	4669	3370.7
547556	OAK280 2 69.00	4 Level	16494.5	14103
547564	SOL315 2 69.00	4 Level	14417.9	12351.2
547565	SOL315T2 69.00	4 Level	20403.7	19688.8
547578	AUR355 2 69.00	4 Level	9611.3	7109.6
547581	JOP360 2 69.00	4 Level	14225.4	10491.8
547592	JOP389 2 69.00	4 Level	15078	13811
547593	JOP391 5 161.0	4 Level	14547.8	10181.8
547595	RNM393 2 69.00	4 Level	19082.4	17993.9
547611	MAR437 2 69.00	4 Level	5766.3	4378.2
547618	CPK446 2 69.00	4 Level	9517.8	8951.3
547708	NEO184A1 12.50	4 Level	14191.8	0
547709	NEO184B1 12.50	4 Level	11580	0
547713	JOP389 1 12.50	4 Level	17369.3	0
547721	CPK446 1 12.50	4 Level	14161.1	0
547722	RNM393 1 12.50	4 Level	17909.4	0
549890	JTEC GEN#1 120.00	4 Level	115101	121895.9
549891	JTEC CTS 112.50	4 Level	39181.2	40583.5
549893	JTEC GEN#2 120.00	4 Level	111449.3	119438.3
549911	GOLDEN 269.00	4 Level	21961.3	19018.7
549913	DAYTON 269.00	4 Level	20888.2	17860.8
549918	MILL 269.00	4 Level	24080.2	22497.9
549921	MAIN STREET269.00	4 Level	27243.7	30940.1
549936	MAINST XF1 113.20	4 Level	36818.5	0
549938	MAINST XF2 113.20	4 Level	33297.6	0
549946	MILL XF1 113.20	4 Level	14311.9	0
549948	MILL XF2 113.20	4 Level	14381.7	0
549956	NICHOLS 5161.0	4 Level	20352.3	18627.3
549957	WEST BELT 5161.0	4 Level	20102.7	18348.7

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
549961	JAMES RIVER5161.0	4 Level	17173.3	14324.6
549968	MC CARTNEY 5161.0	4 Level	15503.8	10500
549971	PIC WEST 5161.0	4 Level	18283.8	14871
300042	7HUBEN 345.0	5 Level	10601	0
300081	5GAINES 161.0	5 Level	6533.3	3147
300118	5STKAEC 161.0	5 Level	8761.2	6838.5
300647	2BLLMYTP 69.00	5 Level	5279.6	0
300656	2JACK ST 69.00	5 Level	7585.7	0
300658	2BILLNG 69.00	5 Level	6873.5	5180.4
300660	2BRNSPG 69.00	5 Level	3624.5	0
300663	2CASSIDY 69.00	5 Level	7201.8	0
300664	2CAVESP 69.00	5 Level	2404.8	0
300666	2CLRKSN 69.00	5 Level	2962	0
300668	2DADEVL 69.00	5 Level	5729.4	0
300670	2EPURDY 69.00	5 Level	3698.4	0
300672	2GRNFLD 69.00	5 Level	6133.9	0
300677	2MTVRN 69.00	5 Level	8498.2	6968.6
300681	2BUTRFLD 69.00	5 Level	5176.1	0
300685	2LAMARPT 69.00	5 Level	8368.4	0
300723	2PARDIS 69.00	5 Level	4953.3	3612.7
300725	2REEDSP 69.00	5 Level	9684.6	8369.7
300735	2T.ROCK 69.00	5 Level	10764.1	11547.1
300750	2NEOSHO 69.00	5 Level	8932.8	0
300753	2SIMS 69.00	5 Level	3756.2	0
300754	2SPGCTP 69.00	5 Level	5878.7	0
300758	2SWTWT 69.00	5 Level	4438.3	0
300774	2EUDORA 69.00	5 Level	5750.4	0
300788	2SLAGLE 69.00	5 Level	6089.6	0
300794	5LAMAR 161.0	5 Level	9159.7	0

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
300805	5RIVERSIDE 161.0	5 Level	9481.5	3311
300816	5COLLINS 161.0	5 Level	6804.7	3687.2
300824	2SELIGM 69.00	5 Level	5995.2	0
300949	7JASPER 345.0	5 Level	11772.5	0
301057	5GRVSPG 161.0	5 Level	7368	0
301128	5MTNGRV 161.0	5 Level	6498.1	0
301168	2MANSFL 69.00	5 Level	10112.1	0
301360	2T.ROCKSW 69.00	5 Level	11123.8	11820.5
301368	5STRAFFORD 161.0	5 Level	13253	7774.2
338120	5S.LEAD HILL161.0	5 Level	7203.5	3585.3
338682	5OSAGE CRK#!161.0	5 Level	8815.4	5205.9
504000	AVOCA 5 161.0	5 Level	9417.1	9021.3
505482	BVR #1 1 13.80	5 Level	32303.6	17593.4
505484	BVR #2 1 13.80	5 Level	32303.6	17593.4
505500	STK #1 1 13.80	5 Level	26650	12717.1
505541	NIXA DT2 69.00	5 Level	10789.1	7704.3
506920	FLINT2-1 13.80	5 Level	27991.8	0
506921	FLINT1-1 13.80	5 Level	33458.9	0
506932	EUREKA 5 161.0	5 Level	9512.8	7099
506934	FLINTCR5 161.0	5 Level	34003.5	38944.6
506979	SHIPERD7 345.0	5 Level	10755.3	10029.9
510411	GROVE 5 161.0	5 Level	6164.3	5132.6
512750	TONECE7 345.0	5 Level	15642.3	15410.4
532932	LITCH 5 161.0	5 Level	12163.6	10582.5
547401	MON376 2 69.00	5 Level	6616.6	5087.5
547403	MON416 2 69.00	5 Level	3594.9	2669.4
547404	PUR390 2 69.00	5 Level	1856.6	1417.9
547408	MON311 2 69.00	5 Level	6616.6	5087.5
547431	WEB105 2 69.00	5 Level	8400.1	6732.3

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
547438	EXP449T2 69.00	5 Level	9206.5	7039.7
547450	JAS344T2 69.00	5 Level	5296.9	2959.2
547463	KOD471 2 69.00	5 Level	12244.7	9269.9
547469	RIV4525 161.0	5 Level	25613	22661.5
547470	JOP145 5 161.0	5 Level	19190.5	14466
547477	CJ 366 5 161.0	5 Level	14019.6	10229.1
547482	HOL387 5 161.0	5 Level	9345.3	7081.2
547484	DEC392 5 161.0	5 Level	16163.6	12623.8
547488	BRN412 5 161.0	5 Level	9807.6	7156.7
547489	BRN413 5 161.0	5 Level	10042.4	7744.9
547490	FIR417 5 161.0	5 Level	15895.4	12106.4
547493	BOL431 5 161.0	5 Level	5363.7	4161.5
547527	WEB436 2 69.00	5 Level	10040.1	6836.8
547534	ORO110 2 69.00	5 Level	18791.1	17066.8
547546	BIL221 2 69.00	5 Level	7327.7	5262.2
547553	ALB262 2 69.00	5 Level	8719.2	3949.2
547559	TIP292 2 69.00	5 Level	10278.7	7389.1
547560	ROC296 2 69.00	5 Level	9421.4	7356.7
547563	LIN314 2 69.00	5 Level	10728.3	9898.8
547566	AND322 2 69.00	5 Level	6048	4596.5
547582	SAR362T2 69.00	5 Level	4548	3219.9
547585	DAD368 2 69.00	5 Level	9279.9	9225.3
547588	JOP372 2 69.00	5 Level	14772	11192.2
547604	BHJ415 2 69.00	5 Level	11325.9	6625
547606	MTV420 2 69.00	5 Level	7188.9	4181.6
547607	JOP422 5 161.0	5 Level	14340.4	9780.7
547608	JOP430 2 69.00	5 Level	13772	10382.8
547610	NOL435 2 69.00	5 Level	8898.7	8829.4
547649	A1G349 1 13.80	5 Level	86827.8	93788.3

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
547650	A2G349 1 13.80	5 Level	17442.1	18073.2
547655	S1G439 1 13.20	5 Level	67523	68988.9
547656	S2G439 1 18.00	5 Level	69602.7	72264.8
547657	S3G439 1 18.00	5 Level	77834.5	79991.5
547658	S4G439 1 18.00	5 Level	85235.7	88510.3
547685	PLB447 2 69.00	5 Level	11982.5	9664.7
547703	ORO110 1 12.50	5 Level	16539.1	0
547711	DAD368 1 12.50	5 Level	14342.1	0
547720	NOL435 1 12.50	5 Level	14627.3	0
549892	MAC GT1&2 113.80	5 Level	51030.4	52261.9
549900	JRPS GT1 113.80	5 Level	64628.7	68781.9
549901	JRPS GT2 113.80	5 Level	72320	78374.6
549904	JAMES RIVER269.00	5 Level	29028.8	43480.7
549910	COX 269.00	5 Level	15807.4	12150.6
549914	FORT 269.00	5 Level	19147.5	14028.1
549916	BLACKMAN 269.00	5 Level	20582.2	15925.4
549917	INGRAM 269.00	5 Level	18833.8	14326.8
549919	CHAD 269.00	5 Level	16804.1	11171.7
549920	HARGISS 269.00	5 Level	19069.5	14892.4
549922	GRAND 269.00	5 Level	20902.1	17120.6
549924	LAUREL 269.00	5 Level	18905.6	15278.2
549925	NICHOLS 269.00	5 Level	23915.9	25671.1
549929	WASHINGTON 269.00	5 Level	20256.2	16923.4
549932	PACKER 269.00	5 Level	15230.4	11372.3
549940	NICHOL XF1 113.20	5 Level	35955.5	0
549944	JRPS XF1 113.20	5 Level	2770.9	0
549966	SUMMIT 5161.0	5 Level	14134.2	11193.8

4.2. Short Circuit Result for 2025 Summer Peak Case

The short circuit results for summer-2025 scenario (assumed not outage) at the POI are tabulated below.

4.2.1. Short Circuit Result for La Russell 161kV (547479)

The results of the short circuit analysis for POI i.e., La Russell 161kV (547479) and five bus levels away are tabulated below in table 4.2.1.

Table 4.2.1: Short circuit results for La Russell 161kV (547479)

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
547479	LAR382 5 161.0	0 Level	17123.9	10068
505488	CARTHAG5 161.0	1 Level	18044.9	13681.6
505492	SPRGFLD5 161.0	1 Level	29509	28232.6
547480	MON383 5 161.0	1 Level	12806.6	9364.2
547651	L1G382 1 13.20	1 Level	75541.7	77962.9
547652	L2G382 1 13.20	1 Level	75856.9	78327
547653	L3G3821 18.00	1 Level	33801.7	34645.3
547654	L4G3821 18.00	1 Level	33825.6	34671.6
300678	5NIXA-1 161.0	2 Level	20181.4	15332.5
505486	NEO SPA5 161.0	2 Level	16924.6	12203.6
505487	CRG X1 1 13.80	2 Level	12946.4	0
505489	CRG X2 1 13.80	2 Level	12305.2	0
505490	CARTHG 2 69.00	2 Level	12453.7	13136.5
505491	SPF X1 1 13.80	2 Level	17629.3	0
505494	SPRGFLD2 69.00	2 Level	9623.2	11347
505495	SPF X3 1 13.80	2 Level	8713.6	0
505496	NIXA 5 161.0	2 Level	13490	10628
547466	ATL109 5 161.0	2 Level	17697.6	13376.3
547468	AUR124 5 161.0	2 Level	10668	8068.1
547472	TIP292 5 161.0	2 Level	19068.2	13276
547485	CAR395 5 161.0	2 Level	13580.2	9561.2
547591	MON383 2 69.00	2 Level	11435.8	10537.7
547712	MON383 1 12.50	2 Level	17010.9	0

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
549959	BATTLEFIELD5161.0	2 Level	28850.7	27664.7
549969	BROOKLINE 5161.0	2 Level	30596.5	30033.6
549970	CLAY 5161.0	2 Level	20120.3	15730.3
300089	5JAMESV 161.0	3 Level	15994.9	0
300101	5MORGAN 161.0	3 Level	11003.3	8692.7
300129	5WASHBRN 161.0	3 Level	8513.9	5951.5
300669	2ELWOOD 69.00	3 Level	4880.2	3441.2
300680	2VERONA 69.00	3 Level	6452.8	3267.2
300745	2DMNDTP 69.00	3 Level	5646.1	0
301161	5LOGAN 161.0	3 Level	15622	11251.7
505472	TABLE R5 161.0	3 Level	12865.3	12934.4
505497	NXA X1 1 13.80	3 Level	15454.9	0
505499	NXA X2 1 13.80	3 Level	7413.2	0
505501	NIXA 2 69.00	3 Level	11216.7	10426.2
547400	MON376J2 69.00	3 Level	4107.1	3080.9
547405	MON352J2 69.00	3 Level	7536.5	5935
547449	PRC460 2 69.00	3 Level	5737.1	4365.4
547471	NEO184 5 161.0	3 Level	15660.9	11518.2
547473	RDS295 5 161.0	3 Level	8028.4	5255
547483	JOP389 5 161.0	3 Level	21635.4	15253.2
547491	PUR421 5 161.0	3 Level	10998.6	7490.1
547494	OAK432 5 161.0	3 Level	19307.8	14682.1
547499	CPK446 5 161.0	3 Level	8175.8	6566.4
547500	RNM393 5 161.0	3 Level	15551.5	11326.6
547533	ATL109 2 69.00	3 Level	21798.7	20750
547537	AUR124 2 69.00	3 Level	12263.3	11332.9
547540	MON152 2 69.00	3 Level	10200.1	8828.6
547702	ATL109 1 12.50	3 Level	18222.3	0
547704	AUR1241 12.50	3 Level	7366.2	0

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
549954	JTEC 5161.0	3 Level	29534.9	24950.9
549955	JUNCTION 5161.0	3 Level	22489.1	19535
549958	MAIN STREET5161.0	3 Level	20546.6	19174.7
549960	SW DISP PLT5161.0	3 Level	27633.7	23125.7
549962	MILL 5161.0	3 Level	17469.5	14067.1
549963	MENTOR 5161.0	3 Level	16262.9	12245.3
549979	BATTLEFIELD269.00	3 Level	22450	20510
549980	BATLEFLDXF1113.20	3 Level	22187.7	0
549984	BROOKLINE 7345.0	3 Level	12317.7	9605.5
549988	BRKLNE XF1 113.20	3 Level	58407.4	0
549989	BRKLNE XF2 113.20	3 Level	58431.4	0
300045	7MORGAN 345.0	4 Level	11976.9	4962.2
300095	5MANSFD 161.0	4 Level	9724.2	0
300348	5BTLFD 161.0	4 Level	23691.7	18131.4
300657	2ASHGRV 69.00	4 Level	3915.7	0
300667	2CRANE 69.00	4 Level	3285.4	0
300673	2JAMESV 69.00	4 Level	12491.7	4457.1
300679	2PRDYTP 69.00	4 Level	5161.1	0
300718	5CLEVCOV 161.0	4 Level	10928.2	9283.4
300726	5RIVRDL 161.0	4 Level	10431.5	0
300744	2DMNDGR 69.00	4 Level	2684.4	0
300748	2NEOSAC 69.00	4 Level	9965.6	7577.6
300762	2WNTWRT 69.00	4 Level	4875.2	0
300763	2WASHBRN 69.00	4 Level	6458.9	0
300782	2MORGAN 69.00	4 Level	6585.3	0
338099	5GRANDVIEW% 161.0	4 Level	8957.4	5881.8
505473	TBR X1 1 13.80	4 Level	19533.7	0
505474	TABLE R2 69.00	4 Level	11732	13976.4
505475	TBR X2 1 13.80	4 Level	17920	0

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
505476	TBR1&2 1 13.80	4 Level	50829.5	28942.1
505478	TBR3&4 1 13.80	4 Level	51162	29013.8
505480	BEAVER 5 161.0	4 Level	10866.8	10013.9
505498	STOCKTN5 161.0	4 Level	9085.4	7270
505543	NX ESPY2 69.00	4 Level	10870.9	8519.5
506935	FLINTCR7 345.0	4 Level	16633	16972.1
547402	MON416J2 69.00	4 Level	3639.2	2744
547406	MON352 2 69.00	4 Level	7266	5690.2
547407	MON311J2 69.00	4 Level	6537.1	5042.8
547462	SVRCK469 5 161.0	4 Level	15433.2	10475.9
547467	ORO110 5 161.0	4 Level	21259.1	16519.5
547476	ASB349 5 161.0	4 Level	14282.8	10512.7
547478	DAD368 5 161.0	4 Level	10812.7	8642.7
547492	RDS424 5 161.0	4 Level	8587.1	5620.8
547496	NOL435 5 161.0	4 Level	10753.2	8542
547497	RVS438 5 161.0	4 Level	11282.4	9548.8
547498	STL439 5 161.0	4 Level	26410.4	18047.8
547532	CAR108 2 69.00	4 Level	8848.6	5490.2
547543	NEO184 2 69.00	4 Level	12600.1	12761.9
547544	WEN205 2 69.00	4 Level	4636.9	3349.4
547556	OAK280 2 69.00	4 Level	16799.4	14242.9
547564	SOL315 2 69.00	4 Level	14946.1	12591.6
547565	SOL315T2 69.00	4 Level	21471.5	20302.3
547578	AUR355 2 69.00	4 Level	9390.6	7028.6
547581	JOP360 2 69.00	4 Level	14511.6	10591.4
547592	JOP389 2 69.00	4 Level	15073.7	13798.5
547593	JOP391 5 161.0	4 Level	14566.4	10200.2
547595	RNM393 2 69.00	4 Level	19306.9	18123.6
547611	MAR437 2 69.00	4 Level	5719.6	4360.2

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
547618	CPK446 2 69.00	4 Level	9284.4	8813.3
547708	NEO184A1 12.50	4 Level	14185.8	0
547709	NEO184B1 12.50	4 Level	11575.3	0
547713	JOP389 1 12.50	4 Level	17366	0
547721	CPK446 1 12.50	4 Level	14076.6	0
547722	RNM393 1 12.50	4 Level	17937.2	0
549890	JTEC GEN#1 120.00	4 Level	115200.5	121970
549891	JTEC CTS 112.50	4 Level	39213.9	40606.8
549893	JTEC GEN#2 120.00	4 Level	111630.4	119576.8
549911	GOLDEN 269.00	4 Level	22033.6	19054.4
549913	DAYTON 269.00	4 Level	20956.7	17893.8
549918	MILL 269.00	4 Level	24267.6	22604.1
549921	MAIN STREET269.00	4 Level	27404.5	31075.6
549936	MAINST XF1 113.20	4 Level	36872.2	0
549938	MAINST XF2 113.20	4 Level	33343.9	0
549946	MILL XF1 113.20	4 Level	14326.7	0
549948	MILL XF2 113.20	4 Level	14396.4	0
549956	NICHOLS 5161.0	4 Level	20515.3	18717.3
549957	WEST BELT 5161.0	4 Level	20260.1	18435.1
549961	JAMES RIVER5161.0	4 Level	17279	14372.5
549968	MC CARTNEY 5161.0	4 Level	16075.2	10666.9
549971	PIC WEST 5161.0	4 Level	18464.7	14949.4
300042	7HUBEN 345.0	5 Level	10649	0
300081	5GAINES 161.0	5 Level	6539.2	3147.9
300118	5STKAEC 161.0	5 Level	8636.2	6794.5
300658	2BILLNG 69.00	5 Level	6800.1	5152.5
300660	2BRNSPG 69.00	5 Level	3606.8	0
300663	2CASSIDY 69.00	5 Level	7211.2	0
300664	2CAVESP 69.00	5 Level	2403	0

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
300668	2DADEVL 69.00	5 Level	5569.7	0
300670	2EPURDY 69.00	5 Level	3678.3	0
300677	2MTVRN 69.00	5 Level	8240.6	6852
300681	2BUTRFLD 69.00	5 Level	5153	0
300723	2PARDIS 69.00	5 Level	4948.8	3611.2
300725	2REEDSP 69.00	5 Level	9530.2	8173.1
300735	2T.ROCK 69.00	5 Level	10740.3	11529.8
300750	2NEOSHO 69.00	5 Level	8840.3	0
300753	2SIMS 69.00	5 Level	3754.9	0
300754	2SPGCTP 69.00	5 Level	5819	0
300758	2SWTWT 69.00	5 Level	4419.4	0
300774	2EUDORA 69.00	5 Level	5668.4	0
300788	2SLAGLE 69.00	5 Level	6056	0
300805	5RIVERSIDE 161.0	5 Level	9520	3339.8
300816	5COLLINS 161.0	5 Level	6709.5	3668.8
300824	2SELIGM 69.00	5 Level	5991.4	0
300949	7JASPER 345.0	5 Level	11752.4	0
301057	5GRVSPG 161.0	5 Level	7386.7	0
301128	5MTNGRV 161.0	5 Level	6534.1	0
301168	2MANSFL 69.00	5 Level	9969.8	0
301360	2T.ROCKSW 69.00	5 Level	11095.9	11800.5
301368	5STRAFFORD 161.0	5 Level	13605.9	7851.8
338120	5S.LEAD HILL161.0	5 Level	7208.7	3586.3
338682	5OSAGE CRK#!161.0	5 Level	8854.9	5217.2
504000	AVOCA 5 161.0	5 Level	9608.1	9164.6
505482	BVR #1 1 13.80	5 Level	32345.2	17603.5
505484	BVR #2 1 13.80	5 Level	32345.2	17603.5
505500	STK #1 1 13.80	5 Level	26592.9	12708.4
505541	NIXA DT2 69.00	5 Level	10903.2	7771

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
506920	FLINT2-1 13.80	5 Level	28127.2	0
506921	FLINT1-1 13.80	5 Level	33656.8	0
506932	EUREKA 5 161.0	5 Level	9569.8	7125
506934	FLINTCR5 161.0	5 Level	36813.5	41953.9
506979	SHIPERD7 345.0	5 Level	11192.2	10338.2
510411	GROVE 5 161.0	5 Level	6195.3	5154
512750	TONECE7 345.0	5 Level	16386.1	15996.7
532932	LITCH 5 161.0	5 Level	12258.5	10739.1
547401	MON376 2 69.00	5 Level	6461.7	4977.5
547403	MON416 2 69.00	5 Level	3548.7	2638.9
547404	PUR390 2 69.00	5 Level	1844.7	1409.5
547408	MON311 2 69.00	5 Level	6461.7	4977.5
547431	WEB105 2 69.00	5 Level	8474	6762.9
547438	EXP449T2 69.00	5 Level	9203.9	7036.7
547450	JAS344T2 69.00	5 Level	5283.9	2955.8
547463	KOD471 2 69.00	5 Level	12320.6	9296.2
547469	RIV4525 161.0	5 Level	25649.7	22723.4
547470	JOP145 5 161.0	5 Level	19153	14466
547477	CJ 366 5 161.0	5 Level	14001.1	10240.9
547482	HOL387 5 161.0	5 Level	9359.3	7087.9
547484	DEC392 5 161.0	5 Level	16648	12886.3
547488	BRN412 5 161.0	5 Level	9828.1	7166.3
547489	BRN413 5 161.0	5 Level	10059.6	7753.6
547490	FIR417 5 161.0	5 Level	15866.1	12114.4
547493	BOL431 5 161.0	5 Level	5284.4	4095
547527	WEB436 2 69.00	5 Level	10120.4	6860.4
547534	ORO110 2 69.00	5 Level	19004.3	17175.1
547546	BIL221 2 69.00	5 Level	7260.2	5239
547559	TIP292 2 69.00	5 Level	10320.1	7403.1

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
547560	ROC296 2 69.00	5 Level	9416.5	7353.5
547563	LIN314 2 69.00	5 Level	10713	9886.5
547566	AND322 2 69.00	5 Level	6042.1	4593
547582	SAR362T2 69.00	5 Level	4526	3205.3
547585	DAD368 2 69.00	5 Level	9252.7	9219.9
547588	JOP372 2 69.00	5 Level	14948.8	11258.1
547604	BHJ415 2 69.00	5 Level	11330.9	6626.1
547606	MTV420 2 69.00	5 Level	6821.8	4095.9
547607	JOP422 5 161.0	5 Level	14355.3	9797.3
547608	JOP430 2 69.00	5 Level	13815.4	10396.7
547610	NOL435 2 69.00	5 Level	8876.7	8803.9
547649	A1G349 1 13.80	5 Level	86851.4	93808.1
547650	A2G349 1 13.80	5 Level	17444.5	18075.1
547655	S1G439 1 13.20	5 Level	67521.3	68988.6
547656	S2G439 1 18.00	5 Level	69599.5	72264.1
547657	S3G439 1 18.00	5 Level	77831.7	79990.8
547658	S4G439 1 18.00	5 Level	85231.5	88509.2
547685	PLB447 2 69.00	5 Level	12094.1	9712.6
547703	ORO110 1 12.50	5 Level	16551.8	0
547711	DAD368 1 12.50	5 Level	14336.1	0
547720	NOL435 1 12.50	5 Level	14613.5	0
549892	MAC GT1&2 113.80	5 Level	65375.9	64895.3
549900	JRPS GT1 113.80	5 Level	64663.7	68807.3
549901	JRPS GT2 113.80	5 Level	72384.1	78423
549904	JAMES RIVER269.00	5 Level	29184	43708.9
549910	COX 269.00	5 Level	15847.8	12166.3
549914	FORT 269.00	5 Level	19211.6	14050.7
549916	BLACKMAN 269.00	5 Level	20697.2	15970.3
549917	INGRAM 269.00	5 Level	18935.4	14365.1

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
549919	CHAD 269.00	5 Level	16879.9	11193.6
549920	HARGISS 269.00	5 Level	19157.2	14927.4
549922	GRAND 269.00	5 Level	20993.2	17160.8
549924	LAUREL 269.00	5 Level	18949.1	15297.1
549925	NICHOLS 269.00	5 Level	23966.5	25709.1
549929	WASHINGTON 269.00	5 Level	20356	16969
549932	PACKER 269.00	5 Level	15302.5	11398.5
549940	NICHOL XF1 113.20	5 Level	35978.1	0
549944	JRPS XF1 113.20	5 Level	2771.2	0
549966	SUMMIT 5161.0	5 Level	14355.1	11283.4

5. Stability Analysis for Cluster Scenario

5.1. Faults Simulated

Thirty One (31) faults were considered for the transient stability simulations which included three phase faults, as well as single phase line faults. Single-phase line faults were simulated by applying fault impedance to the positive sequence network at the fault location. As per the SPP current practice to compute the fault levels, the fault impedance was computed to give a positive sequence voltage at the specified fault location of approximately 60% of pre-fault voltage.

Concurrently and previously queued projects as respectively shown in Table-1 and Table-2 of the study request i.e., GEN-2013-011 as well as areas number 502, 520, 523, 524, 525, and 351 were monitored during all the simulations. Table 5.1.1 shows the list of simulated contingencies. This table also shows the fault clearing time and the time delay before re-closing for all the study contingencies.

Simulations were performed with a 0.1-second steady-state run followed by the appropriate disturbance as described in Table 5.1.1. Simulations were run for minimum 15-second duration to confirm proper machine damping.

Some additional contingencies were also performed without re-closer at the point of interconnection i.e., La Russell 161kV (547479) to verify that all unstable contingencies in table 5.1.1 becomes stable without considering the re-closer at the POI i.e., (the contingencies that involved POI, the re-closer is considered at the remote end but not considered at the POI side). Table 5.1.2 shows the list of simulated contingencies. This table also shows the fault clearing time and the time delay before re-closing for all the study contingencies.

Table 5.1.1 and 5.1.2 summarizes the overall results for all faults simulations of cluster scenario. Complete sets of plots for Winter-2016, Summer-2017, and Summer-2025 peak seasons for each fault are included in Appendices A, B and C respectively.

Table 5.1.1: List of simulated faults for cluster scenario stability analysis

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
1	FLT01-3PH	3 phase fault on the LAR382 5 (547479) to MON383 5 (547480) 161kV line, near LAR382 5. a. Apply fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	**UnStable**	Stable	Stable
2	FLT02-1PH	Single phase fault on the LAR382 5 (547479) to MON383 5 (547480) 161kV line, near LAR382 5. a. Apply single phase fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
3	FLT03-3PH	3 phase fault on the LAR382 5 (547479) to CARTHAG5 (505488) 161kV line, near LAR382 5. a. Apply fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	**UnStable**	Stable	Stable
4	FLT04-1PH	Single phase fault on the LAR382 5 (547479) to CARTHAG5 (505488) 161kV line, near LAR382 5. a. Apply single phase fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
5	FLT05-3PH	3 phase fault on the LAR382 5 (547479) to SPRGFLD5 (505492) 161kV line, near LAR382 5. a. Apply fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	UnStable	Stable	Stable
6	FLT06-1PH	Single phase fault on the LAR382 5 (547479) to SPRGFLD5 (505492) 161kV line, near LAR382 5. a. Apply single phase fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
7	FLT07-3PH	3 phase fault on the MON383 5 (547480) to AUR124 5 (547468) 161kV line, near MON383 5. a. Apply fault at the MON383 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
8	FLT08-1PH	Single phase fault on the MON383 5 (547480) to AUR124 5 (547468) 161kV line, near MON383 5. a. Apply single phase fault at the MON383 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
9	FLT09-3PH	3 phase fault on the MON383 5 (547480) to TIP292 5 (547472) 161kV line, near MON383 5. a. Apply fault at the MON383 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
10	FLT10-1PH	Single phase fault on the MON383 5 (547480) to TIP292 5 (547472) 161kV line, near MON383 5. a. Apply single phase fault at the MON383 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
11	FLT11-3PH	3 phase fault on the MON383 5 (547480) to MON383 2 (547591) to MON383 1 (547712) Transformers, near MON383 5. a. Apply fault at the MON383 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line	Stable	Stable	Stable
12	FLT13-3PH	3 phase fault on the SPRGFLD5 (505492) to 5NIXA-1 (300678) 161kV line, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
13	FLT14-1PH	Single phase fault on the SPRGFLD5 (505492) to 5NIXA-1 (300678) 161kV line, near SPRGFLD5. a. Apply single phase fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
14	FLT15-3PH	3 phase fault on the SPRGFLD5 (505492) to NIXA 5 (505496) 161kV line, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
15	FLT16-1PH	Single phase fault on the SPRGFLD5 (505492) to NIXA 5 (505496) 161kV line, near SPRGFLD5. a. Apply single phase fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
16	FLT17-3PH	3 phase fault on the SPRGFLD5 (505492) to CLAY 5 (549970) 161kV line, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
17	FLT18-1PH	Single phase fault on the SPRGFLD5 (505492) to CLAY 5 (549970) 161kV line, near SPRGFLD5. a. Apply single phase fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
18	FLT19-3PH	3 phase fault on the SPRGFLD5 (505492) to BATTLEFIELD5 (549959) 161kV line, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
19	FLT20-1PH	Single phase fault on the SPRGFLD5 (505492) to BATTLEFIELD5 (549959) 161kV line, near SPRGFLD5. a. Apply single phase fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
20	FLT21-3PH	3 phase fault on the SPRGFLD5 (505492) to BROOKLINE 5 (549969) 161kV line, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
21	FLT22-1PH	Single phase fault on the SPRGFLD5 (505492) to BROOKLINE 5 (549969) 161kV line, near SPRGFLD5. a. Apply single phase fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
22	FLT23-3PH	3 phase fault on the SPRGFLD5 (505492) to SPRGFLD2 (505494) to SPF X3 1 (505495) Transformers, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted Transformer	Stable	Stable	Stable
23	FLT25-3PH	3 phase fault on the CARTHAG5 (505488) to ATL109 5 (547466) 161kV line, near CARTHAG5. a. Apply fault at the CARTHAG5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
24	FLT26-1PH	Single phase fault on the CARTHAG5 (505488) to ATL109 5 (547466) 161kV line, near CARTHAG5. a. Apply single phase fault at the CARTHAG5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
25	FLT27-3PH	3 phase fault on the CARTHAG5 (505488) to NEO SPA5 (505486) 161kV line, near CARTHAG5. a. Apply fault at the CARTHAG5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
26	FLT28-1PH	Single phase fault on the CARTHAG5 (505488) to NEO SPA5 (505486) 161kV line, near CARTHAG5. a. Apply single phase fault at the CARTHAG5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
27	FLT29-3PH	3 phase fault on the CARTHAG5 (505488) to CARTHG 2 (505490) to CRG X1 1 (505487) Transformers, near CARTHAG5. a. Apply fault at the CARTHAG5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted Transformer	Stable	Stable	Stable
28	FLT31-PO	**Prior Outage of LAR382 5 to MON383 5 161kV line** a. Prior Outage LAR382 5 (547479) to MON383 5 (547480) 161kV line. b. Apply fault at the LAR382 5 (547479) to SPRGFLD5 (505492) 161kV line, near LAR382 5. c. Clear fault after 5 cycles by tripping the faulted line d. Wait 20 cycles, and then re-close the line in (c) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	**UnStable**	Stable	Stable
29	FLT32-PO	**Prior Outage of LAR382 5 to MON383 5 161kV line** a. Prior Outage LAR382 5 (547479) to MON383 5 (547480) 161kV line. b. Apply fault at the LAR382 5 (547479) to CARTHAG5 (505488) 161kV line, near LAR382 5. c. Clear fault after 5 cycles by tripping the faulted line d. Wait 20 cycles, and then re-close the line in (c) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	**UnStable**	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
30	FLT33-SB	**CARTHAG5 161kV Stuck Breaker** a. Apply single phase fault at the CARTHAG5 (505488) 161kV bus on the CARTHAG5 (505488) – LAR382 5 (547479) 161kV line. b. Wait 16 cycles, and then drop CARTHAG5 (505488) to LAR382 5 (547479) 161kV line. c. Trip CARTHAG5 (505488) to NEO SPA5 (505486) 161kV line.	Stable	Stable	Stable
31	FLT34-SB	**SPRGFLD5 161kV Stuck Breaker** a. Apply single phase fault at the SPRGFLD5 (505492) 161kV bus on the SPRGFLD5 (505492) – LAR382 5 (547479) 161kV line. b. Wait 16 cycles, and then drop SPRGFLD5 (505492) – LAR382 5 (547479) 161kV line. c. Trip SPRGFLD5 (505492) to NIXA 5 (505496 161kV line.	Stable	Stable	Stable

Table 5.1.2: List of additional simulated faults for cluster scenario stability analysis

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
1	FLT01-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Monett 161kV line c. After 20 cycles reclose La Russell to Monett 161kV line, and apply 3 phase fault at La Russell 115kV. d. After 7 cycles remove fault, and trip La Russell to Monett 161kV line e. After 300 cycles reclose La Russell to Monett 161kV line, and apply 3 phase fault at La Russell 161kV. f. After 7 cycles remove fault, and trip La Russell to Monett 161kV line	Un-Stable	Un-Stable	Un-Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
2	FLT01A-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Monett 161kV line c. After 20 cycles reclose La Russell to Monett 161kV line at Monett station only, and apply 3 phase fault at La Russell 115kV end of line. d. After 7 cycles remove fault, and trip La Russell to Monett 161kV line e. After 300 cycles reclose La Russell to Monett 161kV line at Monett station only, and apply 3 phase fault at La Russell 161kV end of line. f. After 7 cycles remove fault, and trip La Russell to Monett 161kV line	Stable	Stable	Stable
3	FLT03-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line c. After 20 cycles reclose La Russell to Springfield 161kV line, and apply 3 phase fault at La Russell 115kV. d. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line	Un-Stable	Un-Stable	Un-Stable
4	FLT03A-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line c. After 20 cycles reclose La Russell to Springfield 161kV line at Springfield station only, and apply 3 phase fault at La Russell 115kV end of line. d. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line	Stable	Stable	Stable
5	FLT05-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line c. After 20 cycles reclose La Russell to Carthage 161kV line, and apply 3 phase fault at La Russell 115kV. d. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line	Un-Stable	Stable	Un-Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
6	FLT05A-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line c. After 20 cycles reclose La Russell to Carthage 161kV line at Carthage station only, and apply 3 phase fault at La Russell 115kV end of line. d. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line	Stable	Stable	Stable
7	FLT31-PO	a. Prior Outage La Russell to Monett 161kV line. b. Apply 3 phase fault at La Russell 161kV c. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line d. After 20 cycles reclose La Russell to Springfield 161kV line, and apply 3 phase fault at La Russell 115kV. e. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line	Un-Stable	Un-Stable	Un-Stable
8	FLT31A-PO	a. Prior Outage La Russell to Monett 161kV line. b. Apply 3 phase fault at La Russell 161kV c. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line d. After 20 cycles reclose La Russell to Springfield 161kV line at Springfield station only, and apply 3 phase fault at La Russell 115kV end of line. e. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line	Stable	Stable	Stable
9	FLT32-PO	a. Prior Outage La Russell to Monett 161kV line. b. Apply 3 phase fault at La Russell 161kV c. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line d. After 20 cycles reclose La Russell to Carthage 161kV line, and apply 3 phase fault at La Russell 115kV. e. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line	Un-Stable	Un-Stable	Un-Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
10	FLT32A-PO	a. Prior Outage La Russell to Monett 161kV line. b. Apply 3 phase fault at La Russell 161kV c. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line d. After 20 cycles reclose La Russell to Carthage 161kV line at Carthage station only, and apply 3 phase fault at La Russell 115kV end of line. e. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line	Stable	Stable	Stable

5.2. Simulation Results for Cluster Scenario

For cluster scenarios, all the 3 phase contingencies that involved the Point of interconnection i.e., La Russell 161kV (547479) the response of the system is unstable especially during winter-2016 scenario. In this regard, further simulations were made to test such contingencies by considering the re-closer at the remote end (not at the POI end) and even with extended fault durations. It is observed that the response of the system remains stable with considering re-closer at the remote ends only i.e., (reference to plots for contingencies FLT01A-3PH, FLT03A-3PH, FLT05A-3PH, FLT31A-3PH, and FLT32A-3PH). Therefore we recommend for the contingencies that involved the POI the re-closer should be considered at the remote end only and should not be considered at the POI side.
For all other contingencies, there are no impacts on the stability performance of the SPP system for the contingencies tested on the SPP provided base cases.

6. Stability Analysis for Stand-Alone Scenarios

For stand-alone scenario, selective contingencies are simulated for each interconnection request at 100% capacity of each generator at the POI.

6.1. Fault Simulated for GEN-2016-013 Request

Table 6.1.1, summarizes the results for all simulations for GEN-2016-013 request. Some additional contingencies were also performed without re-closer at the point of interconnection i.e., La Russell 161kV (547479) to verify that all unstable contingencies in table 6.1.1 becomes stable without considering the re-closer at the POI.

Table 6.1.1 and 6.1.2 summarizes the overall results for all faults simulations of stand-alone scenario. Complete sets of plots for Winter-2016, Summer-2017, and summer-2025 peak seasons for each fault for GEN-2016-013 are in Appendices E1, E2, and E3 respectively.

Table 6.1.1: List of simulated faults for stand-alone stability analysis (GEN-2016-013)

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
1	FLT01-3PH	3 phase fault on the LAR382 5 (547479) to MON383 5 (547480) 161kV line, near LAR382 5. a. Apply fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	**UnStable**	Stable	Stable
2	FLT02-1PH	Single phase fault on the LAR382 5 (547479) to MON383 5 (547480) 161kV line, near LAR382 5. a. Apply single phase fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
3	FLT03-3PH	3 phase fault on the LAR382 5 (547479) to CARTHAG5 (505488) 161kV line, near LAR382 5. a. Apply fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	**UnStable**	Stable	Stable
4	FLT04-1PH	Single phase fault on the LAR382 5 (547479) to CARTHAG5 (505488) 161kV line, near LAR382 5. a. Apply single phase fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
5	FLT05-3PH	3 phase fault on the LAR382 5 (547479) to SPRGFLD5 (505492) 161kV line, near LAR382 5. a. Apply fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	**UnStable**	Stable	Stable
6	FLT06-1PH	Single phase fault on the LAR382 5 (547479) to SPRGFLD5 (505492) 161kV line, near LAR382 5. a. Apply single phase fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
7	FLT07-3PH	3 phase fault on the MON383 5 (547480) to AUR124 5 (547468) 161kV line, near MON383 5. a. Apply fault at the MON383 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
8	FLT08-1PH	Single phase fault on the MON383 5 (547480) to AUR124 5 (547468) 161kV line, near MON383 5. a. Apply single phase fault at the MON383 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
9	FLT09-3PH	3 phase fault on the MON383 5 (547480) to TIP292 5 (547472) 161kV line, near MON383 5. a. Apply fault at the MON383 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
10	FLT10-1PH	Single phase fault on the MON383 5 (547480) to TIP292 5 (547472) 161kV line, near MON383 5. a. Apply single phase fault at the MON383 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
11	FLT11-3PH	3 phase fault on the MON383 5 (547480) to MON383 2 (547591) to MON383 1 (547712) Transformers, near MON383 5. a. Apply fault at the MON383 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line	Stable	Stable	Stable
12	FLT13-3PH	3 phase fault on the SPRGFLD5 (505492) to 5NIXA-1 (300678) 161kV line, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
13	FLT14-1PH	Single phase fault on the SPRGFLD5 (505492) to 5NIXA-1 (300678) 161kV line, near SPRGFLD5. a. Apply single phase fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
14	FLT15-3PH	3 phase fault on the SPRGFLD5 (505492) to NIXA 5 (505496) 161kV line, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
15	FLT16-1PH	Single phase fault on the SPRGFLD5 (505492) to NIXA 5 (505496) 161kV line, near SPRGFLD5. a. Apply single phase fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
16	FLT17-3PH	3 phase fault on the SPRGFLD5 (505492) to CLAY 5 (549970) 161kV line, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
17	FLT18-1PH	Single phase fault on the SPRGFLD5 (505492) to CLAY 5 (549970) 161kV line, near SPRGFLD5. a. Apply single phase fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
18	FLT19-3PH	3 phase fault on the SPRGFLD5 (505492) to BATTLEFIELD5 (549959) 161kV line, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
19	FLT20-1PH	Single phase fault on the SPRGFLD5 (505492) to BATTLEFIELD5 (549959) 161kV line, near SPRGFLD5. a. Apply single phase fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
20	FLT21-3PH	3 phase fault on the SPRGFLD5 (505492) to BROOKLINE 5 (549969) 161kV line, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
21	FLT22-1PH	Single phase fault on the SPRGFLD5 (505492) to BROOKLINE 5 (549969) 161kV line, near SPRGFLD5. a. Apply single phase fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
22	FLT23-3PH	3 phase fault on the SPRGFLD5 (505492) to SPRGFLD2 (505494) to SPF X3 1 (505495) Transformers, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted Transformer	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
23	FLT25-3PH	3 phase fault on the CARTHAG5 (505488) to ATL109 5 (547466) 161kV line, near CARTHAG5. a. Apply fault at the CARTHAG5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
24	FLT26-1PH	Single phase fault on the CARTHAG5 (505488) to ATL109 5 (547466) 161kV line, near CARTHAG5. a. Apply single phase fault at the CARTHAG5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
25	FLT27-3PH	3 phase fault on the CARTHAG5 (505488) to NEO SPA5 (505486) 161kV line, near CARTHAG5. a. Apply fault at the CARTHAG5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
26	FLT28-1PH	Single phase fault on the CARTHAG5 (505488) to NEO SPA5 (505486) 161kV line, near CARTHAG5. a. Apply single phase fault at the CARTHAG5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
27	FLT29-3PH	3 phase fault on the CARTHAG5 (505488) to CARTHG 2 (505490) to CRG X1 1 (505487) Transformers, near CARTHAG5. a. Apply fault at the CARTHAG5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted Transformer	Stable	Stable	Stable
28	FLT31-PO	**Prior Outage of LAR382 5 to MON383 5 161kV line** a. Prior Outage LAR382 5 (547479) to MON383 5 (547480) 161kV line. b. Apply fault at the LAR382 5 (547479) to SPRGFLD5 (505492) 161kV line, near LAR382 5. c. Clear fault after 5 cycles by tripping the faulted line d. Wait 20 cycles, and then re-close the line in (c) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	**UnStable**	Stable	Stable
29	FLT32-PO	**Prior Outage of LAR382 5 to MON383 5 161kV line** a. Prior Outage LAR382 5 (547479) to MON383 5 (547480) 161kV line. b. Apply fault at the LAR382 5 (547479) to CARTHAG5 (505488) 161kV line, near LAR382 5. c. Clear fault after 5 cycles by tripping the faulted line d. Wait 20 cycles, and then re-close the line in (c) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	**UnStable**	Stable	Stable
30	FLT33-SB	**CARTHAG5 161kV Stuck Breaker** a. Apply single phase fault at the CARTHAG5 (505488) 161kV bus on the CARTHAG5 (505488) – LAR382 5 (547479) 161kV line. b. Wait 16 cycles, and then drop CARTHAG5 (505488) to LAR382 5 (547479) 161kV line. c. Trip CARTHAG5 (505488) to NEO SPA5 (505486) 161kV line.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
31	FLT34-SB	**SPRGFLD5 161kV Stuck Breaker** a. Apply single phase fault at the SPRGFLD5 (505492) 161kV bus on the SPRGFLD5 (505492) – LAR382 5 (547479) 161kV line. b. Wait 16 cycles, and then drop SPRGFLD5 (505492) – LAR382 5 (547479) 161kV line. c. Trip SPRGFLD5 (505492) to NIXA 5 (505496 161kV line.	Stable	Stable	Stable

Table 6.1.2: List of additional simulated faults for stand-alone scenario stability analysis

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
1	FLT01-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Monett 161kV line c. After 20 cycles reclose La Russell to Monett 161kV line, and apply 3 phase fault at La Russell 115kV. d. After 7 cycles remove fault, and trip La Russell to Monett 161kV line e. After 300 cycles reclose La Russell to Monett 161kV line, and apply 3 phase fault at La Russell 161kV. f. After 7 cycles remove fault, and trip La Russell to Monett 161kV line	Un-Stable	Un-Stable	Un-Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
2	FLT01A-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Monett 161kV line c. After 20 cycles reclose La Russell to Monett 161kV line at Monett station only, and apply 3 phase fault at La Russell 115kV end of line. d. After 7 cycles remove fault, and trip La Russell to Monett 161kV line e. After 300 cycles reclose La Russell to Monett 161kV line at Monett station only, and apply 3 phase fault at La Russell 161kV end of line. f. After 7 cycles remove fault, and trip La Russell to Monett 161kV line	Stable	Stable	Stable
3	FLT03-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line c. After 20 cycles reclose La Russell to Springfield 161kV line, and apply 3 phase fault at La Russell 115kV. d. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line	Un-Stable	Un-Stable	Un-Stable
4	FLT03A-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line c. After 20 cycles reclose La Russell to Springfield 161kV line at Springfield station only, and apply 3 phase fault at La Russell 115kV end of line. d. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line	Stable	Stable	Stable
5	FLT05-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line c. After 20 cycles reclose La Russell to Carthage 161kV line, and apply 3 phase fault at La Russell 115kV. d. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line	Un-Stable	Stable	Un-Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
6	FLT05A-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line c. After 20 cycles reclose La Russell to Carthage 161kV line at Carthage station only, and apply 3 phase fault at La Russell 115kV end of line. d. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line	Stable	Stable	Stable
7	FLT31-PO	a. Prior Outage La Russell to Monett 161kV line. b. Apply 3 phase fault at La Russell 161kV c. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line d. After 20 cycles reclose La Russell to Springfield 161kV line, and apply 3 phase fault at La Russell 115kV. e. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line	Un-Stable	Un-Stable	Un-Stable
8	FLT31A-PO	a. Prior Outage La Russell to Monett 161kV line. b. Apply 3 phase fault at La Russell 161kV c. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line d. After 20 cycles reclose La Russell to Springfield 161kV line at Springfield station only, and apply 3 phase fault at La Russell 115kV end of line. e. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line	Stable	Stable	Stable
9	FLT32-PO	a. Prior Outage La Russell to Monett 161kV line. b. Apply 3 phase fault at La Russell 161kV c. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line d. After 20 cycles reclose La Russell to Carthage 161kV line, and apply 3 phase fault at La Russell 115kV. e. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line	Un-Stable	Un-Stable	Un-Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
10	FLT32A-PO	a. Prior Outage La Russell to Monett 161kV line. b. Apply 3 phase fault at La Russell 161kV c. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line d. After 20 cycles reclose La Russell to Carthage 161kV line at Carthage station only, and apply 3 phase fault at La Russell 115kV end of line. e. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line	Stable	Stable	Stable

6.2. Fault Simulated for GEN-2016-014 Request

Table 6.2.1, summarizes the results for all simulations for GEN-2016-014 request. Some additional contingencies were also performed without re-closer at the point of interconnection i.e., La Russell 161kV (547479) to verify that all unstable contingencies in table 6.2.1 becomes stable without considering the re-closer at the POI.

Table 6.2.1 and 6.2.2 summarizes the overall results for all faults simulations of stand-alone scenario. Complete sets of plots for Winter-2016, Summer-2017, and summer-2025 peak seasons for each fault for GEN-2016-014 are in Appendices F1, F2, and F3 respectively.

Table 6.2.1: List of simulated faults for stand-alone stability analysis (GEN-2016-014)

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
1	FLT01-3PH	3 phase fault on the LAR382 5 (547479) to MON383 5 (547480) 161kV line, near LAR382 5. a. Apply fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	**UnStable**	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
2	FLT02-1PH	Single phase fault on the LAR382 5 (547479) to MON383 5 (547480) 161kV line, near LAR382 5. a. Apply single phase fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
3	FLT03-3PH	3 phase fault on the LAR382 5 (547479) to CARTHAG5 (505488) 161kV line, near LAR382 5. a. Apply fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	**UnStable**	Stable	Stable
4	FLT04-1PH	Single phase fault on the LAR382 5 (547479) to CARTHAG5 (505488) 161kV line, near LAR382 5. a. Apply single phase fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
5	FLT05-3PH	3 phase fault on the LAR382 5 (547479) to SPRGFLD5 (505492) 161kV line, near LAR382 5. a. Apply fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	**UnStable**	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
6	FLT06-1PH	Single phase fault on the LAR382 5 (547479) to SPRGFLD5 (505492) 161kV line, near LAR382 5. a. Apply single phase fault at the LAR382 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
7	FLT07-3PH	3 phase fault on the MON383 5 (547480) to AUR124 5 (547468) 161kV line, near MON383 5. a. Apply fault at the MON383 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
8	FLT08-1PH	Single phase fault on the MON383 5 (547480) to AUR124 5 (547468) 161kV line, near MON383 5. a. Apply single phase fault at the MON383 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
9	FLT09-3PH	3 phase fault on the MON383 5 (547480) to TIP292 5 (547472) 161kV line, near MON383 5. a. Apply fault at the MON383 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
10	FLT10-1PH	Single phase fault on the MON383 5 (547480) to TIP292 5 (547472) 161kV line, near MON383 5. a. Apply single phase fault at the MON383 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
11	FLT11-3PH	3 phase fault on the MON383 5 (547480) to MON383 2 (547591) to MON383 1 (547712) Transformers, near MON383 5. a. Apply fault at the MON383 5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line	Stable	Stable	Stable
12	FLT13-3PH	3 phase fault on the SPRGFLD5 (505492) to 5NIXA-1 (300678) 161kV line, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
13	FLT14-1PH	Single phase fault on the SPRGFLD5 (505492) to 5NIXA-1 (300678) 161kV line, near SPRGFLD5. a. Apply single phase fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
14	FLT15-3PH	3 phase fault on the SPRGFLD5 (505492) to NIXA 5 (505496) 161kV line, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
15	FLT16-1PH	Single phase fault on the SPRGFLD5 (505492) to NIXA 5 (505496) 161kV line, near SPRGFLD5. a. Apply single phase fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
16	FLT17-3PH	3 phase fault on the SPRGFLD5 (505492) to CLAY 5 (549970) 161kV line, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
17	FLT18-1PH	Single phase fault on the SPRGFLD5 (505492) to CLAY 5 (549970) 161kV line, near SPRGFLD5. a. Apply single phase fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
18	FLT19-3PH	3 phase fault on the SPRGFLD5 (505492) to BATTLEFIELD5 (549959) 161kV line, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
19	FLT20-1PH	Single phase fault on the SPRGFLD5 (505492) to BATTLEFIELD5 (549959) 161kV line, near SPRGFLD5. a. Apply single phase fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
20	FLT21-3PH	3 phase fault on the SPRGFLD5 (505492) to BROOKLINE 5 (549969) 161kV line, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
21	FLT22-1PH	Single phase fault on the SPRGFLD5 (505492) to BROOKLINE 5 (549969) 161kV line, near SPRGFLD5. a. Apply single phase fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
22	FLT23-3PH	3 phase fault on the SPRGFLD5 (505492) to SPRGFLD2 (505494) to SPF X3 1 (505495) Transformers, near SPRGFLD5. a. Apply fault at the SPRGFLD5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted Transformer	Stable	Stable	Stable
23	FLT25-3PH	3 phase fault on the CARTHAG5 (505488) to ATL109 5 (547466) 161kV line, near CARTHAG5. a. Apply fault at the CARTHAG5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
24	FLT26-1PH	Single phase fault on the CARTHAG5 (505488) to ATL109 5 (547466) 161kV line, near CARTHAG5. a. Apply single phase fault at the CARTHAG5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
25	FLT27-3PH	3 phase fault on the CARTHAG5 (505488) to NEO SPA5 (505486) 161kV line, near CARTHAG5. a. Apply fault at the CARTHAG5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
26	FLT28-1PH	Single phase fault on the CARTHAG5 (505488) to NEO SPA5 (505486) 161kV line, near CARTHAG5. a. Apply single phase fault at the CARTHAG5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted line c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
27	FLT29-3PH	3 phase fault on the CARTHAG5 (505488) to CARTHG 2 (505490) to CRG X1 1 (505487) Transformers, near CARTHAG5. a. Apply fault at the CARTHAG5 161kV bus. b. Clear fault after 5 cycles by tripping the faulted Transformer	Stable	Stable	Stable
28	FLT31-PO	**Prior Outage of LAR382 5 to MON383 5 161kV line** a. Prior Outage LAR382 5 (547479) to MON383 5 (547480) 161kV line. b. Apply fault at the LAR382 5 (547479) to SPRGFLD5 (505492) 161kV line, near LAR382 5. c. Clear fault after 5 cycles by tripping the faulted line d. Wait 20 cycles, and then re-close the line in (c) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	**UnStable**	Stable	Stable
29	FLT32-PO	**Prior Outage of LAR382 5 to MON383 5 161kV line** a. Prior Outage LAR382 5 (547479) to MON383 5 (547480) 161kV line. b. Apply fault at the LAR382 5 (547479) to CARTHAG5 (505488) 161kV line, near LAR382 5. c. Clear fault after 5 cycles by tripping the faulted line d. Wait 20 cycles, and then re-close the line in (c) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	**UnStable**	Stable	Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
30	FLT33-SB	**CARTHAG5 161kV Stuck Breaker** a. Apply single phase fault at the CARTHAG5 (505488) 161kV bus on the CARTHAG5 (505488) – LAR382 5 (547479) 161kV line. b. Wait 16 cycles, and then drop CARTHAG5 (505488) to LAR382 5 (547479) 161kV line. c. Trip CARTHAG5 (505488) to NEO SPA5 (505486) 161kV line.	Stable	Stable	Stable
31	FLT34-SB	**SPRGFLD5 161kV Stuck Breaker** a. Apply single phase fault at the SPRGFLD5 (505492) 161kV bus on the SPRGFLD5 (505492) – LAR382 5 (547479) 161kV line. b. Wait 16 cycles, and then drop SPRGFLD5 (505492) – LAR382 5 (547479) 161kV line. c. Trip SPRGFLD5 (505492) to NIXA 5 (505496 161kV line.	Stable	Stable	Stable

Table 6.2.2: List of additional simulated faults for stand-alone scenario stability analysis

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
1	FLT01-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Monett 161kV line c. After 20 cycles reclose La Russell to Monett 161kV line, and apply 3 phase fault at La Russell 115kV. d. After 7 cycles remove fault, and trip La Russell to Monett 161kV line e. After 300 cycles reclose La Russell to Monett 161kV line, and apply 3 phase fault at La Russell 161kV. f. After 7 cycles remove fault, and trip La Russell to Monett 161kV line	Un-Stable	Un-Stable	Un-Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
2	FLT01A-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Monett 161kV line c. After 20 cycles reclose La Russell to Monett 161kV line at Monett station only, and apply 3 phase fault at La Russell 115kV end of line. d. After 7 cycles remove fault, and trip La Russell to Monett 161kV line e. After 300 cycles reclose La Russell to Monett 161kV line at Monett station only, and apply 3 phase fault at La Russell 161kV end of line. f. After 7 cycles remove fault, and trip La Russell to Monett 161kV line	Stable	Stable	Stable
3	FLT03-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line c. After 20 cycles reclose La Russell to Springfield 161kV line, and apply 3 phase fault at La Russell 115kV. d. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line	Un-Stable	Un-Stable	Un-Stable
4	FLT03A-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line c. After 20 cycles reclose La Russell to Springfield 161kV line at Springfield station only, and apply 3 phase fault at La Russell 115kV end of line. d. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line	Stable	Stable	Stable
5	FLT05-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line c. After 20 cycles reclose La Russell to Carthage 161kV line, and apply 3 phase fault at La Russell 115kV. d. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line	Un-Stable	Stable	Un-Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
6	FLT05A-3PH	a. Apply 3 phase fault at La Russell 161kV b. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line c. After 20 cycles reclose La Russell to Carthage 161kV line at Carthage station only, and apply 3 phase fault at La Russell 115kV end of line. d. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line	Stable	Stable	Stable
7	FLT31-PO	a. Prior Outage La Russell to Monett 161kV line. b. Apply 3 phase fault at La Russell 161kV c. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line d. After 20 cycles reclose La Russell to Springfield 161kV line, and apply 3 phase fault at La Russell 115kV. e. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line	Un-Stable	Un-Stable	Un-Stable
8	FLT31A-PO	a. Prior Outage La Russell to Monett 161kV line. b. Apply 3 phase fault at La Russell 161kV c. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line d. After 20 cycles reclose La Russell to Springfield 161kV line at Springfield station only, and apply 3 phase fault at La Russell 115kV end of line. e. After 7 cycles remove fault, and trip La Russell to Springfield 161kV line	Stable	Stable	Stable
9	FLT32-PO	a. Prior Outage La Russell to Monett 161kV line. b. Apply 3 phase fault at La Russell 161kV c. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line d. After 20 cycles reclose La Russell to Carthage 161kV line, and apply 3 phase fault at La Russell 115kV. e. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line	Un-Stable	Un-Stable	Un-Stable

Cont. #	Contingency Name	Description	2016 winter Results	2017 summer Results	2025 Summer Results
10	FLT32A-PO	a. Prior Outage La Russell to Monett 161kV line. b. Apply 3 phase fault at La Russell 161kV c. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line d. After 20 cycles reclose La Russell to Carthage 161kV line at Carthage station only, and apply 3 phase fault at La Russell 115kV end of line. e. After 7 cycles remove fault, and trip La Russell to Carthage 161kV line	Stable	Stable	Stable

6.3. Simulation Results for Stand-Alone Scenarios

For stand-alone scenarios, all the 3 phase contingencies that involved the point of interconnection i.e., La Russell 161kV (547479) the response of the system is unstable especially during winter-2016 scenario. In this regard, further simulations were made to test such contingencies by considering the re-closer at the remote end (not at the POI end) and even with extended fault durations. It is observed that the response of the system remains stable with considering re-closer at the remote ends only i.e., (reference to plots for contingencies FLT01A-3PH, FLT03A-3PH, FLT05A-3PH, FLT31A-3PH, and FLT32A-3PH). Therefore we recommend for the contingencies that involved the POI the re-closer should be considered at the remote end only and should not be considered at the POI side.

For all other contingencies, there are no impacts on the stability performance for stand-alone scenarios of the SPP system for the contingencies tested on the SPP provided base cases.

7. Conclusions

The findings of the impact study for the proposed interconnection projects under DSIS-2015-002 (Group 12) considered 100% of their proposed installed capacity is as follows:

1. The power factor analysis indicates that interconnection request i.e., La Russell 161kV (547479) are required to provide reactive power as indicated in Tables 3.2.2 through 3.2.4. During power factor analysis, it is observed that 3 phase contingencies are meeting convergence criteria. However, it is important to highlight here that N-2 outages i.e., Pre Outage cases at the POI (La Russell 161kV) results in significant overloading at the remaining 3rd live circuit. These prior outage conditions determined a need for curtailment of studied generation in the case of certain transmission outages.
   Per the SPP OATT, the Interconnection Customer will be required to provide 95% lagging (supplying vars) and 95% leading (absorbing vars) at the POI.

2. During stability performance for both cluster and stand-alone scenarios, all the 3 phase contingencies that involved the point of interconnection i.e., La Russell 161kV (547479) the response of the system is unstable especially during winter-2016 scenario. In this regard, further simulations were made to test such contingencies by considering the re-closer at the remote end (not at the POI end) and even with extended fault durations. It is observed that the response of the system remains stable with considering re-closer at the remote ends only i.e., (reference to plots for contingencies FLT01A-3PH, FLT03A-3PH, FLT05A-3PH, FLT31A-3PH, and FLT32A-3PH). Therefore it is recommended that for the contingencies that involved the POI the re-closer should be considered at the remote end only and should not be considered at the POI side.

8. **Appendix A: 2016 winter Peak Case Stability Run Plots – Cluster**

9. **Appendix B: 2017 summer Peak Case Stability Run Plots – Cluster**

10. **Appendix C: 2025 Summer Peak Case Stability Run Plots – Cluster**

11. **Appendix D: Project Model Data**

12. **Appendix E1: 2016 winter Peak Case Stability Run Plots for GEN-2016-013 Stand-Alone Scenario**

13. **Appendix E2: 2017 summer Peak Case Stability Run Plots for GEN-2016-013 Stand-Alone Scenario**

14. **Appendix E3: 2025 Summer Peak Case Stability Run Plots for GEN-2016-013 Stand-Alone Scenario**

15. **Appendix F1: 2016 winter Peak Case Stability Run Plots for GEN-2016-014 Stand-Alone Scenario**

16. **Appendix F2: 2017 summer Peak Case Stability Run Plots for GEN-2016-014 Stand-Alone Scenario**

17. **Appendix F3: 2025 Summer Peak Case Stability Run Plots for GEN-2016-014 Stand-Alone Scenario**

11.17.10 J13: GROUP 13 DYNAMIC STABILITY ANALYSIS REPORT

Southwestern Power Pool Inc. (SPP)

Preliminary Impact Study
DISIS-2016-001 (Group 13)

POWER-tek
green inspiration since 1994

Draft Report Submitted to
Southwest Power Pool Inc.
January 2017

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1. Executive Summary

The DISIS-2016-001 (Group 13) Impact Study is a generation interconnection study performed by POWER-tek Global Inc. for Southwest Power Pool (SPP). This report presents the results of impact study comprising of power factor, short circuit, and stability analyses for cluster scenarios of the proposed interconnection projects under DISIS-2016-001 (Group 13) ("The Projects") as described in Table 1.1 below:

Table 1.1: Interconnection Request

Request	Size (MW)	Generator Model	Point of Interconnection (POI)
GEN-2016-040	18.4 uprate to GEN-2015-005 (total 218.5MW)	GE 2.3MW & 1.79MW	Nebraska City-Sibley 345kV, (G15051640TAP, 560028)
ASGI-2016-003	12	GENROU	Paola 161kV (543069)

Power factor analysis, short circuit analysis up to 5 Buses away from the point of interconnection (POI), and transient stability simulations were performed for the Projects in service at its full output. SPP provided three base cases for Winter-2016, Summer-2017, and Summer-2025, each comprising of a power flow, sequence data and corresponding dynamics database. The previous queued request projects were already modeled in the base cases.
The power factor analysis consists of running all N-1, three phase contingencies shown in the Fault Definitions table in power flow to advise the necessary power factor at the POI for each contingency.

The power factor analysis indicates that interconnection requests i.e., Nebraska City-Sibley 345kV (G15051640TAP, 560028), and Paola 161kV (543069) are required to provide reactive power as indicated in Tables 3.2.2 through 3.2.4. Per the SPP OATT, the Interconnection Customer will be required to provide 95% lagging (supplying vars) and 95% leading (absorbing vars) at the POI.

To offset the capacitive effects of the collector system and transmission line of the wind farm under low wind or no wind conditions, the inductive reactive support analysis for wind generator GEN-2016-040 performed for Summer-2017 scenario. This analysis indicates that at POI Nebraska City-Sibley 345kV (G15051640TAP, 560028) 9.1 MVAR reactor is required at Bus 584490 to maintain zero MVAR flow at POI. Maintaining zero MVARs flow at the POI at all times is not possible with static reactor banks. It will be determined on a case by case basis for each generator as to whether additional reactor banks are required for low wind conditions.

There are no impacts on the stability performance of the SPP system during both cluster and stand-alone scenarios for the contingencies tested on the provided base cases. The study machines stayed on-line and stable for all simulated faults. The project stability simulations with thirty six (36) specified test disturbances did not show instability problems in the SPP system. Any oscillations were damped out.

2. Introduction

2.1. Project Overview and Assumptions

The DISIS-2016-001 (Group 13) Impact Study is a generation interconnection study performed by POWER-tek Global Inc. for SPP. This report presents the results of impact study comprising of power factor, short circuit analysis, and stability analyses for both cluster and stand-alone scenarios of the proposed interconnection projects under DISIS-2016-001 (Group 13) ("The Projects") as described in Table 2.1.1 below:

Table 2.1.1: Interconnection requests

Request	Size (MW)	Wind Turbine Model	Point of Interconnection
GEN-2016-040	18.4 uprate to GEN-2015-005 (total 218.5MW)	GE 2.3MW & 1.79MW	Nebraska City-Sibley 345kV, (G15051640TAP, 560028)
ASGI-2016-003	12	GENROU	Paola 161kV (543069)

Figure 2.1.1, and Figure 2.1.2 respectively show the single line diagram for the interconnection of the Projects to present and planned system of SPP. This arrangement was modeled and studied in power flow cases for these projects.

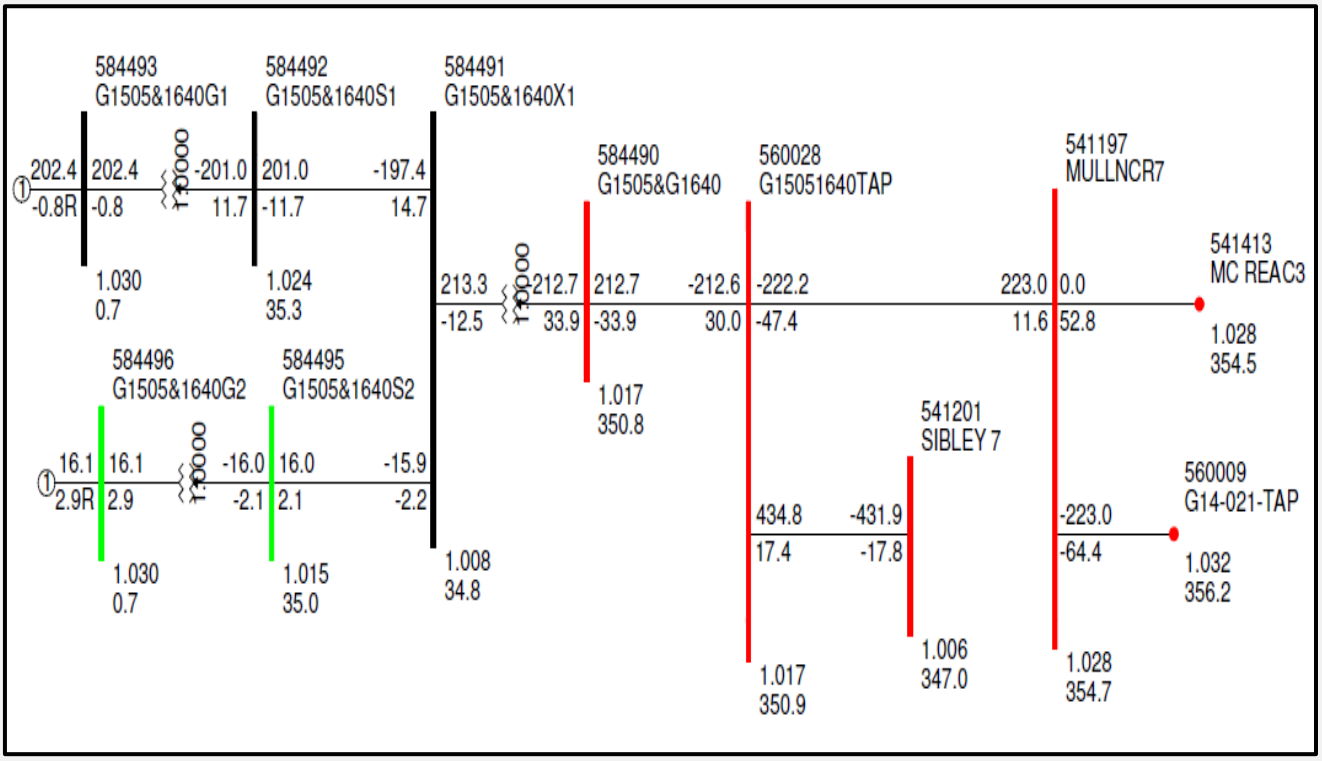

Figure 2.1.1: Power flow single line diagram for GEN-2016-040 and surrounding system components

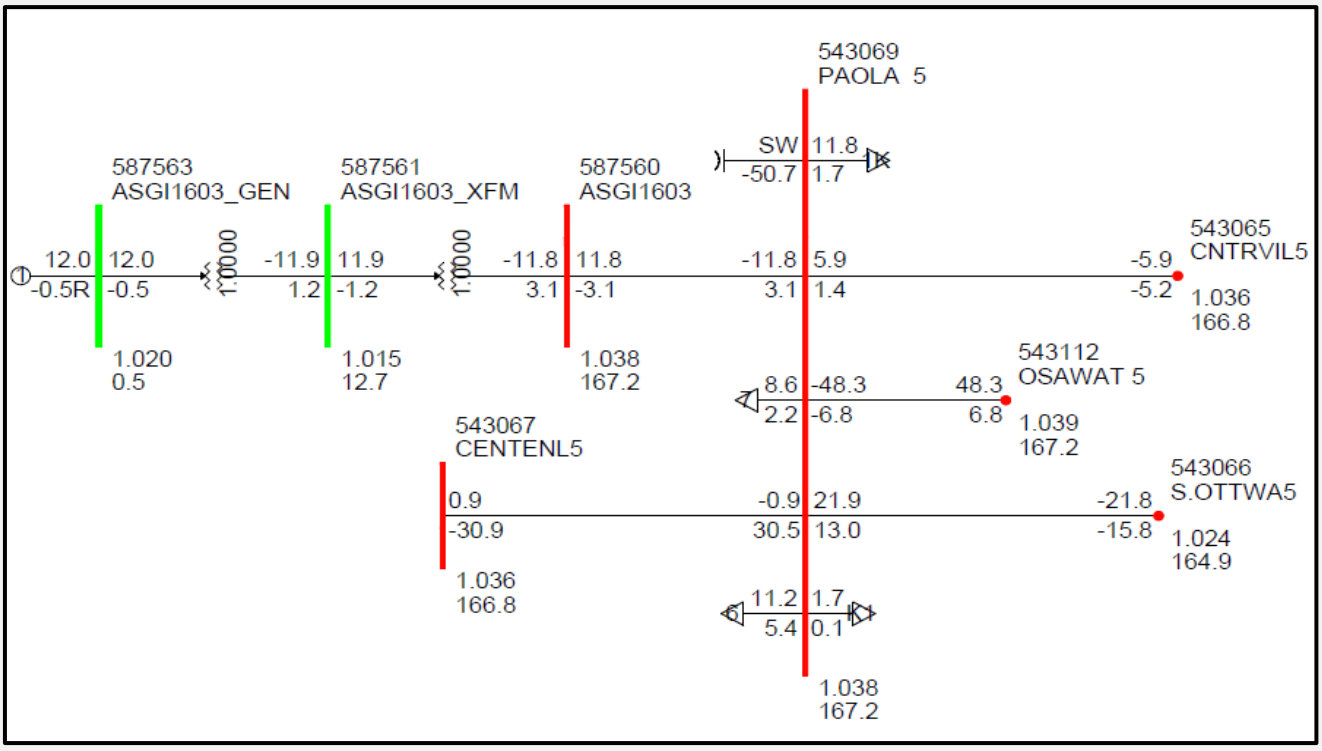

Figure 2.1.2: Power flow single line diagram ASGI-2016-003 and surrounding system components

Appendix-D contains the machines, interconnection, and machines user model parameters.

Table 2.1.2 below shows the list of prior queued projects modeled in the base case.

Table 2.1.2: List of previous queued request projects

Request	Size (MW)	Wind Turbine Model	Point of Interconnection
GEN-2008-129	641/675	Combined Cycle (541163/541164)	Pleasant Hill 161kV (541225)
GEN-2010-036	4.6	GENROU (533264)	6th Street 115kV (533264)
GEN-2011-011	900.0	GENROU (542962)	Iatan 345kV (542982)
ASGI-2013-007	90.0	GE 2.5MW (562454)	Tap Hickory Creek (300087) – Locust Creek (300094) 161kV (562450)
GEN-2014-021	300.0	Vestas V110 2.0MW (583913,583917)	Tap Nebraska City/S3458 (645458) to Mullins Creek (541197) 345kV (560009)
GEN-2015-005	200.1	GE 1.79MW (9 wtg's) and GE 2.0MW (92wtg's)	Nebraska City-Sibley 345kV (bus 560028)

ATC (Available Transfer Capability) studies were not performed as part of this study. These studies will be required at the time transmission service is actually requested. Additional transmission upgrades may be required based on that analysis.

Study assumptions in general have been based on the specific information and data provided by SPP. The accuracy of the conclusions contained within this study is dependent on the assumptions made with respect to other generation additions and transmission improvements planned by other entities. Changes in the assumptions of the timing of other generation additions or transmission improvements may affect this study's conclusions.

2.2. Objectives

The objectives of the study are to conduct power factor analysis, short circuit analysis and to determine the impact on system stability of interconnecting the proposed wind farms to SPP's transmission system.

2.3. Models and Simulations Tools Used

Version 32.2.0 of the Siemens, PSS/E™ power system simulation program was used in this study.

SPP provided its latest stability database cases for Winter-2016, Summer-2017, and Summer-2025 peak seasons. The Project's PSS/E model had been developed prior to this study and was included in the power flow case and the dynamics database. Machines, interconnection and dynamic model data for the Project plants is provided in Appendix D.

Power flow single line diagram of the projects in summer 2017 peak condition are shown in Figure 2.1.1, and Figure 2.1.2 respectively. These figures shows that wind farms model includes representation of the radial transmission line, the substation transformer from transmission voltage (138kV and 345kV) to 34.5V. The remainder of each wind farm is represented by lumped equivalents including a generator, a step-up transformer, and collector system impedance. No special modeling is required of line relays in these cases, except for the special modeling related to the wind-turbine tripping.

All generators in Areas 536, 540, 541, 542, 544, 545, 545, 640, 645, 650, 652, 635, 330, 356 were monitored.

3. Power Factor Analysis

3.1. Methodology

Power factor analysis was conducted for the Project using the following methodology:

1. Replace the wind farm by a generator at the high side bus 345 kV, 138 kV, 115kV, or 69 kV bus, as applicable, with the MW of the wind farms at that point of interconnection.
2. Turn off the wind farm as modeled (as well as previous queued projects at the same point of interconnection).
3. Model a var generator at the Project's high voltage side, 345 kV, 138 kV, 115kV, or 69kV bus, as applicable. The var generator is set to hold a voltage schedule at the POI consistent with the voltage schedule in the provided power flow cases for Summer and Winter or 1.0 pu voltage, whichever is higher.
4. Perform the steady state contingency analysis to determine the power factor necessary at the POI for each contingency.
5. If the required power factor at the POI is beyond the capability of the studied wind turbines to meet (at the POI) capacitor banks may be considered for the stability analysis. The preference is to locate the capacitance banks on the 34.5 kV customer side. Factors to sizing capacitor banks include:
    5.1. The ability of the wind farm to meet FERC Order 661A (low voltage ride through) with and without capacitor banks.
    5.2. The ability of the wind farm to meet FERC Order 661A (wind farm recovery to pre-fault voltage).
    5.3. If wind farms trips on high voltage, power factor lower than unity may be required.

3.2. Analysis

Analysis was performed for the proposed Projects with all prior queued projects in service. A var generator was modeled at the point of interconnection and was set to hold a voltage schedule at the POI consistent with the voltage schedule in the provided power flow cases OR 1 p.u. whichever is higher. The voltages for these Projects are summarized in Table 3.2.1. All upgrades and instructions were made in the base cases. No other changes were made in the base cases provided, other than the addition of the var generators. Contingency analysis was run for provided list of contingencies.

Table 3.2.1: POI voltages for the Summer and Winter peak cases

Request	Point of Interconnection	Size (MW)	Base Case Voltage (p.u.)		
			Winter 2016 Peak	Summer 2017 Peak	Summer 2025 Peak
GEN-2016-040	Nebraska City-Sibley 345kV, (G15051640TAP, 560028)	18.4 uprate to GEN-2015-005 (total 218.5MW)	1.021	1.017	1.018
ASGI-2016-003	Paola 161kV (543069)	12	1.0327	1.0385	1.0344

The details of the var requirement during contingencies are highlighted in Table 3.2.2, 3.2.3 and 3.2.4. The highest and the lowest values obtained are highlighted in these Tables.

1. For 2016 Winter case (GEN-2016-040 analysis): The maximum var generator supply is 101.8 MVARs at 0.91 (lagging power factor) for the outage of 645458 [S3458 3 345.0] TO BUS 560009 [G14-021-TAP 345.0] CKT outage and 541201 [SIBLEY 7 345.0] TO BUS 345408 [7OVERTON 345.0] CKT outage. The minimum var requirement is –56.6 MVARs at 0.97 (leading power factor) for the outage of 541201 [SIBLEY 7 345.0] TO BUS 542972 [HAWTH 7 345.0] CKT outage.
2. For 2016 Winter case (ASGI-2016-003 analysis): The maximum var generator supply is 2.8 MVARs at 0.97 (lagging power factor) for the outage of 645458 [S3458 3 345.0] TO BUS 560009 [G14-021-TAP 345.0] CKT outage and 541201 [SIBLEY 7 345.0] TO BUS 541200 [PHILL 7 345.0] CKT outage. The minimum var requirement is –44.9 MVARs at 0.26 (leading power factor) for the outage of 543069 [PAOLA 5 161.0] TO BUS 543067 [CENTENL5 161.0] CKT outage and 543069 [PAOLA 5 161.0] TO BUS 543066 [S.OTTWA5 161.0] CKT outage.

Table 3.2.2: Var Generator output in 2016 Winter peak case for DISIS-2016-001 (Group 13)

2016 Winter Peak Case Power Factor Study:

Generation Interconnection Request Analysis Rated MW of Wind Farms OR at POI (MW) Rated MVAR of Wind Farms OR at POI (MVAR)						**GEN-2016-040** MW at POI **218.5** MVAR at POI **105.8** MVAR at POI **-105.8**		**ASGI-2016-003** MW at POI **12.0** MVAR at POI **9.0** MVAR at POI **-3.75**	
Cont. Name	**From Bus (# & Name)**		**To Bus (# & Name)**		**ID**	**MVAR at POI**	**P.F at POI**	**MVAR at POI**	**P.F at POI**
	Base Case MVAR Flow				N/A	-34.6	0.99	-2.90	0.97
FLT01-3PH	560028	G15051640TAP345.0	541201	SIBLEY 7 345.0	CKT 1	-44.9	0.98	-0.10	1.00
FLT02-3PH	560028	G15051640TAP345.0	541197	MULLNCR7 345.0	CKT 1	19.8	1.00	-1.70	0.99
FLT03-3PH	541197	MULLNCR7 345.0	560009	G14-021-TAP 345.0	CKT 1	23.8	0.99	-0.70	1.00
FLT04-3PH	541201	SIBLEY 7 345.0	345408	7OVERTON 345.0	CKT 1	-17.1	1.00	-1.40	0.99

Generation Interconnection Request Analysis Rated MW of Wind Farms OR at POI (MW) Rated MVAR of Wind Farms OR at POI (MVAR)						GEN-2016-040 MW at POI **218.5** MVAR at POI **105.8** MVAR at POI **-105.8**		ASGI-2016-003 MW at POI **12.0** MVAR at POI **9.0** MVAR at POI **-3.75**	
Cont. Name	**From Bus (# & Name)**		**To Bus (# & Name)**		**ID**	**MVAR at POI**	**P.F at POI**	**MVAR at POI**	**P.F at POI**
FLT05-3PH	541201	SIBLEY 7 345.0	542972	HAWTH 7 345.0	CKT 1	-56.6	0.97	-2.20	0.98
FLT06-3PH	541201	SIBLEY 7 345.0	541200	PHILL 7 345.0	CKT 1	-46	0.98	2.50	0.98
FLT07-3PH	541201	SIBLEY 7 345.0	541202	SIBLEY 5 161.0	T/F	-39.3	0.98	-2.90	0.97
FLT08-3PH	560009	G14-021-TAP 345.0	583910	GEN-2014-021345.0	CKT 1	N/A	N/A	N/A	N/A
FLT09-3PH	560009	G14-021-TAP 345.0	645458	S3458 3 345.0	CKT 1	83.4	0.93	-1.20	1.00
FLT10-3PH	345408	7OVERTON 345.0	345088	7MCCREDIE 345.0	CKT 1	-21.9	1.00	-0.80	1.00
FLT11-3PH	345408	7OVERTON 345.0	345409	5OVERTON 161.0	T/F	-41.3	0.98	-3.40	0.96
FLT12-3PH	542972	HAWTH 7 345.0	542980	NASHUA 7 345.0	CKT 1	-19.4	1.00	-0.60	1.00
FLT13-3PH	542972	HAWTH 7 345.0	542973	HAWTHRN5 161.0	T/F	-41.0	0.98	-1.80	0.99
FLT14-3PH	541200	PHILL 7 345.0	541198	PECULR 7 345.0	CKT 1	-53.7	0.97	2.70	0.98
FLT15-3PH	543069	PAOLA 5 161.0	543065	CNTRVIL5 161.0	CKT 1	-40.4	0.98	-0.20	1.00
FLT16-3PH	543069	PAOLA 5 161.0	543066	S.OTTWA5 161.0	CKT 1	-40.7	0.98	-17.70	0.56
FLT17-3PH	543069	PAOLA 5 161.0	543067	CENTENL5 161.0	CKT 1	-38.6	0.98	-28.20	0.39
FLT18-3PH	543065	CNTRVIL5 161.0	560029	G15-016-TAP 161.0	CKT 1	-40	0.98	2.30	0.98
FLT19-3PH	543066	S.OTTWA5 161.0	543055	SEOTTWA5 161.0	CKT 1	-40.6	0.98	-3.30	0.96
FLT20-PH	543067	CENTENL5 161.0	543068	WAGSTAF5 161.0	CKT 1	-40.2	0.98	-16.50	0.59
FLT21-3PH	560029	G15-016-TAP 161.0	532934	MARMTNE5 161.0	CKT 1	-41.5	0.98	-17.00	0.58
FLT22-PO	543069	PAOLA 5 161.0	543065	CNTRVIL5 161.0	CKT 1	-40.5	0.98	-15.60	0.61
	543069	PAOLA 5 161.0	543066	S.OTTWA5 161.0	CKT 1				
FLT23-PO	543069	PAOLA 5 161.0	543065	CNTRVIL5 161.0	CKT 1	-37.9	0.99	-23.90	0.45
	543069	PAOLA 5 161.0	543067	CENTENL5 161.0	CKT 1				
FLT24-PO	543069	PAOLA 5 161.0	543067	CENTENL5 161.0	CKT 1	-38.2	0.99	-44.90	0.26

Generation Interconnection Request Analysis Rated MW of Wind Farms OR at POI (MW) Rated MVAR of Wind Farms OR at POI (MVAR)						GEN-2016-040 MW at POI **218.5** MVAR at POI **105.8** MVAR at POI **-105.8**		ASGI-2016-003 MW at POI **12.0** MVAR at POI **9.0** MVAR at POI **-3.75**	
Cont. Name	**From Bus (# & Name)**		**To Bus (# & Name)**		**ID**	**MVAR at POI**	**P.F at POI**	**MVAR at POI**	**P.F at POI**
	543069	PAOLA 5 161.0	543066	S.OTTWA5 161.0	CKT 1				
FLT30-PO	541201	SIBLEY 7 345.0	560028	G15051640TAP345.0	CKT 1	-44.9	0.98	0.10	1.00
	645458	S3458 3 345.0	640139	COOPER 3 345.0	CKT 1				
FLT31-PO	541201	SIBLEY 7 345.0	560028	G15051640TAP345.0	CKT 1	-42.5	0.98	-0.20	1.00
	645458	S3458 3 345.0	650189	103&ROKEBY3 345.0	CKT 1				
FLT32-PO	541201	SIBLEY 7 345.0	560028	G15051640TAP345.0	CKT 1	-48.0	0.98	-0.20	1.00
	645740	S3740 3 345.0	645455	S3455 3 345.0	CKT 1				
FLT33-PO	541201	SIBLEY 7 345.0	560028	G15051640TAP345.0	CKT 1	-45.9	0.98	-0.20	1.00
	645458	S3458 3 345.0	645456	S3456 3 345.0	CKT 1				
FLT34-PO	645458	S3458 3 345.0	560009	G14-021-TAP 345.0	CKT 1	72.8	0.95	2.80	0.97
	541201	SIBLEY 7 345.0	541200	PHILL 7 345.0	CKT 1				
FLT35-PO	645458	S3458 3 345.0	560009	G14-021-TAP 345.0	CKT 1	67.4	0.96	-0.50	1.00
	541201	SIBLEY 7 345.0	542972	HAWTH 7 345.0	CKT 1				
FLT36-PO	645458	S3458 3 345.0	560009	G14-021-TAP 345.0	CKT 1	101.8	0.91	0.80	1.00
	541201	SIBLEY 7 345.0	345408	7OVERTON 345.0	CKT 1				
FLT37-PO	645458	S3458 3 345.0	560009	G14-021-TAP 345.0	CKT 1	80.8	0.94	-0.90	1.00
	541201	SIBLEY 7 345.0	541202	SIBLEY 5 161.0	T/F				

Note: FLT08-3PH was not simulated since it was making Small Island for GEN-2014-021345.

3. For 2017 Summer case (GEN-2016-040 analysis): The maximum var generator supply is 94.8 MVARs at 0.92 (lagging power factor) for the outage of 645458 [S3458 3 345.0] TO BUS 560009 [G14-021-TAP 345.0] CKT outage and 541201 [SIBLEY 7 345.0] TO BUS 345408 [7OVERTON 345.0] CKT outage. The minimum var requirement is –52.4 MVARs at 0.97 (leading power factor) for the outage of 541201 [SIBLEY 7 345.0] TO BUS 542972 [HAWTH 7 345.0] CKT outage.

4. For 2017 Summer case (ASGI-2016-003 analysis): The maximum var generator supply is 6.0 MVARs at 0.89 (lagging power factor) for the outage of 543066 [S.OTTWA5 161.0] TO BUS 543055 [SEOTTWA5 161.0] CKT outage. The minimum var requirement is –50.2 MVARs at 0.23 (leading power factor) for the outage of 543069 [PAOLA 5 161.0] TO BUS 543067 [CENTENL5 161.0] CKT outage and 543069 [PAOLA 5 161.0] TO BUS 543066 [S.OTTWA5 161.0] CKT outage.

Table 3.2.3: Var generator output in 2017 Summer peak case for DISIS-2016-001 (Group 13)

2017 Summer Peak Case Power Factor Study:

Generation Interconnection Request Analysis Rated MW of Wind Farms OR at POI (MW) Rated MVAR of Wind Farms OR at POI (MVAR)						**GEN-2016-040** MW at POI **218.5** MVAR at POI **105.8** MVAR at POI **-105.8**		**ASGI-2016-003** MW at POI **12.0** MVAR at POI **9.0** MVAR at POI **-3.75**	
Cont. Name	**From Bus (# & Name)**		**To Bus (# & Name)**		**ID**	**MVAR at POI**	**P.F at POI**	**MVAR at POI**	**P.F at POI**
	Base Case MVAR Flow				N/A	-29.8	0.99	-3.00	0.97
FLT01-3PH	560028	G15051640TAP345.0	541201	SIBLEY 7 345.0	CKT 1	-50.1	0.97	-0.20	1.00
FLT02-3PH	560028	G15051640TAP345.0	541197	MULLNCR7 345.0	CKT 1	13.5	1.00	-1.90	0.99
FLT03-3PH	541197	MULLNCR7 345.0	560009	G14-021-TAP 345.0	CKT 1	17.4	1.00	-0.60	1.00
FLT04-3PH	541201	SIBLEY 7 345.0	345408	7OVERTON 345.0	CKT 1	-11.6	1.00	-1.50	0.99
FLT05-3PH	541201	SIBLEY 7 345.0	542972	HAWTH 7 345.0	CKT 1	-52.4	0.97	-2.20	0.98
FLT06-3PH	541201	SIBLEY 7 345.0	541200	PHILL 7 345.0	CKT 1	-34.2	0.99	0.80	1.00
FLT07-3PH	541201	SIBLEY 7 345.0	541202	SIBLEY 5 161.0	T/F	-39.7	0.98	-2.90	0.97
FLT08-3PH	560009	G14-021-TAP 345.0	583910	GEN-2014-021345.0	CKT 1	N/A	N/A	N/A	N/A
FLT09-3PH	560009	G14-021-TAP 345.0	645458	S3458 3 345.0	CKT 1	77.2	0.94	-1.20	1.00
FLT10-3PH	345408	7OVERTON 345.0	345088	7MCCREDIE 345.0	CKT 1	-15.9	1.00	-1.30	0.99
FLT11-3PH	345408	7OVERTON 345.0	345409	5OVERTON 161.0	T/F	-36.6	0.99	-3.40	0.96
FLT12-3PH	542972	HAWTH 7 345.0	542980	NASHUA 7 345.0	CKT 1	-10.3	1.00	-0.80	1.00
FLT13-3PH	542972	HAWTH 7 345.0	542973	HAWTHRN5 161.0	T/F	-36.5	0.99	-1.80	0.99
FLT14-3PH	541200	PHILL 7 345.0	541198	PECULR 7 345.0	CKT 1	-40.9	0.98	-0.50	1.00
FLT15-3PH	543069	PAOLA 5 161.0	543065	CNTRVIL5 161.0	CKT 1	-37.2	0.99	-5.40	0.91

Generation Interconnection Request Analysis Rated MW of Wind Farms OR at POI (MW) Rated MVAR of Wind Farms OR at POI (MVAR)						GEN-2016-040 MW at POI **218.5** MVAR at POI **105.8** MVAR at POI **-105.8**		ASGI-2016-003 MW at POI **12.0** MVAR at POI **9.0** MVAR at POI **-3.75**	
Cont. Name	**From Bus (# & Name)**		**To Bus (# & Name)**		**ID**	**MVAR at POI**	**P.F at POI**	**MVAR at POI**	**P.F at POI**
FLT16-3PH	543069	PAOLA 5 161.0	543066	S.OTTWA5 161.0	CKT 1	-36.7	0.99	-18.40	0.55
FLT17-3PH	543069	PAOLA 5 161.0	543067	CENTENL5 161.0	CKT 1	-35.3	0.99	-32.90	0.34
FLT18-3PH	543065	CNTRVIL5 161.0	560029	G15-016-TAP 161.0	CKT 1	-36.6	0.99	-0.10	1.00
FLT19-3PH	543066	S.OTTWA5 161.0	543055	SEOTTWA5 161.0	CKT 1	-37	0.99	6.00	0.89
FLT20-PH	543067	CENTENL5 161.0	543068	WAGSTAF5 161.0	CKT 1	-36.3	0.99	-24.60	0.44
FLT21-3PH	560029	G15-016-TAP 161.0	532934	MARMTNE5 161.0	CKT 1	-37.8	0.99	-19.40	0.53
FLT22-PO	543069	PAOLA 5 161.0	543065	CNTRVIL5 161.0	CKT 1	-37.0	0.99	-20.30	0.51
	543069	PAOLA 5 161.0	543066	S.OTTWA5 161.0	CKT 1				
FLT23-PO	543069	PAOLA 5 161.0	543065	CNTRVIL5 161.0	CKT 1	-35.3	0.99	-35.50	0.32
	543069	PAOLA 5 161.0	543067	CENTENL5 161.0	CKT 1				
FLT24-PO	543069	PAOLA 5 161.0	543067	CENTENL5 161.0	CKT 1	-36.6	0.99	-50.00	0.23
	543069	PAOLA 5 161.0	543066	S.OTTWA5 161.0	CKT 1				
FLT30-PO	541201	SIBLEY 7 345.0	560028	G15051640TAP345.0	CKT 1	-49.2	0.98	0.10	1.00
	645458	S3458 3 345.0	640139	COOPER 3 345.0	CKT 1				
FLT31-PO	541201	SIBLEY 7 345.0	560028	G15051640TAP345.0	CKT 1	-47.7	0.98	-0.30	1.00
	645458	S3458 3 345.0	650189	103&ROKEBY3 345.0	CKT 1				
FLT32-PO	541201	SIBLEY 7 345.0	560028	G15051640TAP345.0	CKT 1	-50.5	0.97	-0.20	1.00
	645740	S3740 3 345.0	645455	S3455 3 345.0	CKT 1				
FLT33-PO	541201	SIBLEY 7 345.0	560028	G15051640TAP345.0	CKT 1	-51.0	0.97	-0.20	1.00
	645458	S3458 3 345.0	645456	S3456 3 345.0	CKT 1				
FLT34-PO	645458	S3458 3 345.0	560009	G14-021-TAP 345.0	CKT 1	72.6	0.95	1.70	0.99
	541201	SIBLEY 7 345.0	541200	PHILL 7 345.0	CKT 1				

Generation Interconnection Request Analysis Rated MW of Wind Farms OR at POI (MW) Rated MVAR of Wind Farms OR at POI (MVAR)						GEN-2016-040 MW at POI **218.5** MVAR at POI **105.8** MVAR at POI **-105.8**		ASGI-2016-003 MW at POI **12.0** MVAR at POI **9.0** MVAR at POI **-3.75**	
Cont. Name	**From Bus (# & Name)**		**To Bus (# & Name)**		**ID**	**MVAR at POI**	**P.F at POI**	**MVAR at POI**	**P.F at POI**
FLT35-PO	645458	S3458 3 345.0	560009	G14-021-TAP 345.0	CKT 1	63.2	0.96	-0.30	1.00
	541201	SIBLEY 7 345.0	542972	HAWTH 7 345.0	CKT 1				
FLT36-PO	645458	S3458 3 345.0	560009	G14-021-TAP 345.0	CKT 1	94.8	0.92	0.80	1.00
	541201	SIBLEY 7 345.0	345408	7OVERTON 345.0	CKT 1				
FLT37-PO	645458	S3458 3 345.0	560009	G14-021-TAP 345.0	CKT 1	70.6	0.95	-1.00	1.00
	541201	SIBLEY 7 345.0	541202	SIBLEY 5 161.0	T/F				

5. For 2025 Summer case (GEN-2016-040 analysis): The maximum var generator supply is 91.8 MVARs at 0.92 (lagging power factor) for the outage of 645458 [S3458 3 345.0] TO BUS 560009 [G14-021-TAP 345.0] CKT outage and 541201 [SIBLEY 7 345.0] TO BUS 345408 [7OVERTON 345.0] CKT outage. The minimum var requirement is –-53.5 MVARs at 0.97 (leading power factor) for the outage of 541201 [SIBLEY 7 345.0] TO BUS 560028 [G15051640TAP345.0] CKT outage and 645458 [S3458 3 345.0] TO BUS 645456 [S3456 3 345.0] CKT outage.
6. For 2025 Summer case (ASGI-2016-003 analysis): The maximum var generator supply is 8.4 MVARs at 0.82 (lagging power factor) for the outage of 543066 [S.OTTWA5 161.0] TO BUS 543055 [SEOTTWA5 161.0] CKT outage. The minimum var requirement is –44.7 MVARs at 0.26 (leading power factor) for the outage of 543069 [PAOLA 5 161.0] TO BUS 543067 [CENTENL5 161.0] CKT outage and 543069 [PAOLA 5 161.0] TO BUS 543066 [S.OTTWA5 161.0] CKT outage.

Table 3.2.4: Var generator output in 2025 Summer peak case for DISIS-2016-001 (Group 13)

2025 Summer Peak Case Power Factor Study:

Generation Interconnection Request Analysis Rated MW of Wind Farms OR at POI (MW) Rated MVAR of Wind Farms OR at POI (MVAR)						GEN-2016-040 MW at POI **218.5** MVAR at POI **105.8** MVAR at POI **-105.8**		ASGI-2016-003 MW at POI **12.0** MVAR at POI **9.0** MVAR at POI **-3.75**	
Cont. Name	**From Bus (# & Name)**		**To Bus (# & Name)**		**ID**	**MVAR at POI**	**P.F at POI**	**MVAR at POI**	**P.F at POI**
	Base Case MVAR Flow				N/A	-30.6	0.99	-2.80	0.97
FLT01-3PH	560028	G15051640TAP345.0	541201	SIBLEY 7 345.0	CKT 1	-51.5	0.97	0.10	1.00
FLT02-3PH	560028	G15051640TAP345.0	541197	MULLNCR7 345.0	CKT 1	13	1.00	-1.70	0.99

Generation Interconnection Request Analysis Rated MW of Wind Farms OR at POI (MW) Rated MVAR of Wind Farms OR at POI (MVAR)						GEN-2016-040 MW at POI **218.5** MVAR at POI **105.8** MVAR at POI **-105.8**		ASGI-2016-003 MW at POI **12.0** MVAR at POI **9.0** MVAR at POI **-3.75**	
Cont. Name	**From Bus (# & Name)**		**To Bus (# & Name)**		**ID**	**MVAR at POI**	**P.F at POI**	**MVAR at POI**	**P.F at POI**
FLT03-3PH	541197	MULLNCR7 345.0	560009	G14-021-TAP 345.0	CKT 1	16.9	1.00	-0.40	1.00
FLT04-3PH	541201	SIBLEY 7 345.0	345408	7OVERTON 345.0	CKT 1	-14.5	1.00	-1.50	0.99
FLT05-3PH	541201	SIBLEY 7 345.0	542972	HAWTH 7 345.0	CKT 1	-46.4	0.98	-2.20	0.98
FLT06-3PH	541201	SIBLEY 7 345.0	541200	PHILL 7 345.0	CKT 1	-36.7	0.99	1.30	0.99
FLT07-3PH	541201	SIBLEY 7 345.0	541202	SIBLEY 5 161.0	T/F	-41.8	0.98	-2.60	0.98
FLT08-3PH	560009	G14-021-TAP 345.0	583910	GEN-2014-021345.0	CKT 1	N/A	N/A	N/A	N/A
FLT09-3PH	560009	G14-021-TAP 345.0	645458	S3458 3 345.0	CKT 1	76.4	0.94	-1.00	1.00
FLT10-3PH	345408	7OVERTON 345.0	345088	7MCCREDIE 345.0	CKT 1	-15.1	1.00	-0.90	1.00
FLT11-3PH	345408	7OVERTON 345.0	345409	5OVERTON 161.0	T/F	-37.9	0.99	-3.00	0.97
FLT12-3PH	542972	HAWTH 7 345.0	542980	NASHUA 7 345.0	CKT 1	-12.6	1.00	-0.90	1.00
FLT13-3PH	542972	HAWTH 7 345.0	542973	HAWTHRN5 161.0	T/F	-36.5	0.99	-1.90	0.99
FLT14-3PH	541200	PHILL 7 345.0	541198	PECULR 7 345.0	CKT 1	-42.8	0.98	0.10	1.00
FLT15-3PH	543069	PAOLA 5 161.0	543065	CNTRVIL5 161.0	CKT 1	-38.6	0.98	-13.30	0.67
FLT16-3PH	543069	PAOLA 5 161.0	543066	S.OTTWA5 161.0	CKT 1	-37.8	0.99	-17.30	0.57
FLT17-3PH	543069	PAOLA 5 161.0	543067	CENTENL5 161.0	CKT 1	-37	0.99	-28.90	0.38
FLT18-3PH	543065	CNTRVIL5 161.0	560029	G15-016-TAP 161.0	CKT 1	-37.9	0.99	-7.00	0.86
FLT19-3PH	543066	S.OTTWA5 161.0	543055	SEOTTWA5 161.0	CKT 1	-38.1	0.99	8.40	0.82
FLT20-PH	543067	CENTENL5 161.0	543068	WAGSTAF5 161.0	CKT 1	-37.4	0.99	-20.10	0.51
FLT21-3PH	560029	G15-016-TAP 161.0	532934	MARMTNE5 161.0	CKT 1	-39.1	0.98	-26.20	0.42
FLT22-PO	543069	PAOLA 5 161.0	543065	CNTRVIL5 161.0	CKT 1	-38.4	0.98	-27.10	0.40
	543069	PAOLA 5 161.0	543066	S.OTTWA5 161.0	CKT 1				
FLT23-PO	543069	PAOLA 5 161.0	543065	CNTRVIL5 161.0	CKT 1	-36.6	0.99	-39.80	0.29

Generation Interconnection Request Analysis Rated MW of Wind Farms OR at POI (MW) Rated MVAR of Wind Farms OR at POI (MVAR)						GEN-2016-040 MW at POI **218.5** MVAR at POI **105.8** MVAR at POI **-105.8**		ASGI-2016-003 MW at POI **12.0** MVAR at POI **9.0** MVAR at POI **-3.75**	
Cont. Name	**From Bus (# & Name)**		**To Bus (# & Name)**		**ID**	**MVAR at POI**	**P.F at POI**	**MVAR at POI**	**P.F at POI**
	543069	PAOLA 5 161.0	543067	CENTENL5 161.0	CKT 1				
FLT24-PO	543069	PAOLA 5 161.0	543067	CENTENL5 161.0	CKT 1	-35.7	0.99	-44.70	0.26
	543069	PAOLA 5 161.0	543066	S.OTTWA5 161.0	CKT 1				
FLT30-PO	541201	SIBLEY 7 345.0	560028	G15051640TAP345.0	CKT 1	-51.6	0.97	0.40	1.00
	645458	S3458 3 345.0	640139	COOPER 3 345.0	CKT 1				
FLT31-PO	541201	SIBLEY 7 345.0	560028	G15051640TAP345.0	CKT 1	-50.5	0.97	-0.10	1.00
	645458	S3458 3 345.0	650189	103&ROKEBY3 345.0	CKT 1				
FLT32-PO	541201	SIBLEY 7 345.0	560028	G15051640TAP345.0	CKT 1	-52.2	0.97	0.10	1.00
	645740	S3740 3 345.0	645455	S3455 3 345.0	CKT 1				
FLT33-PO	541201	SIBLEY 7 345.0	560028	G15051640TAP345.0	CKT 1	-53.5	0.97	0.10	1.00
	645458	S3458 3 345.0	645456	S3456 3 345.0	CKT 1				
FLT34-PO	645458	S3458 3 345.0	560009	G14-021-TAP 345.0	CKT 1	70.3	0.95	2.20	0.98
	541201	SIBLEY 7 345.0	541200	PHILL 7 345.0	CKT 1				
FLT35-PO	645458	S3458 3 345.0	560009	G14-021-TAP 345.0	CKT 1	68.5	0.95	-0.10	1.00
	541201	SIBLEY 7 345.0	542972	HAWTH 7 345.0	CKT 1				
FLT36-PO	645458	S3458 3 345.0	560009	G14-021-TAP 345.0	CKT 1	91.8	0.92	0.80	1.00
	541201	SIBLEY 7 345.0	345408	7OVERTON 345.0	CKT 1				
FLT37-PO	645458	S3458 3 345.0	560009	G14-021-TAP 345.0	CKT 1	68.9	0.95	-0.60	1.00
	541201	SIBLEY 7 345.0	541202	SIBLEY 5 161.0	T/F				

3.3. Conclusions

The power factor analysis indicates the DISIS-2016-001 (Group 13) interconnection requests i.e., GEN-2016-040, and ASGI-2016-003 are required to maintain the SPP standard power factor at the point of interconnection i.e., Nebraska City-Sibley 345kV (G15051640TAP, 560028), and Paola 161kV (543069) based on the contingencies studied.

Per the SPP OATT, the Interconnection Customer will be required to provide 95% lagging (supplying vars) and 95% leading (absorbing vars) at the POI.

4. Inductive Reactive Support Analysis

Analysis for low wind/no wind conditions in cluster scenario is performed for the proposed wind generator request. To offset the capacitive effects of the collector system and transmission line of the wind farm under low wind or no wind conditions, analysis was performed for Summer 2017 scenario to calculate the Inductive Reactive Support at point of interconnection for each interconnection request under project DISIS-2016-001 (Group 13) .

Following methodology was adopted as communicated by SPP:

1. Switch the generator and capacitor bank (if installed) out of service with the collector system as modeled remaining in service.
2. Calculate the amount of inductive reactive support required at the 34.5kV collector buses which would result in zero VAR flow at the POI."

The inductive reactive support analysis for wind generator GEN-2016-040 performed for Summer-2017 scenario which indicates that at POI Nebraska City-Sibley 345kV (G15051640TAP, 560028) 9.1 MVAR reactor is required at Bus 584490 to maintain zero MVAR flow at POI.

Maintaining zero MVAR flow at the POI at all times is not possible with static reactor banks. It will be determined on a case by case basis for each generator as to whether additional reactor banks are required for low wind conditions.

The single line diagram for wind generators showing the inductive reactive requirement for GEN-2016-040 is shown in Figure 4.1 below:

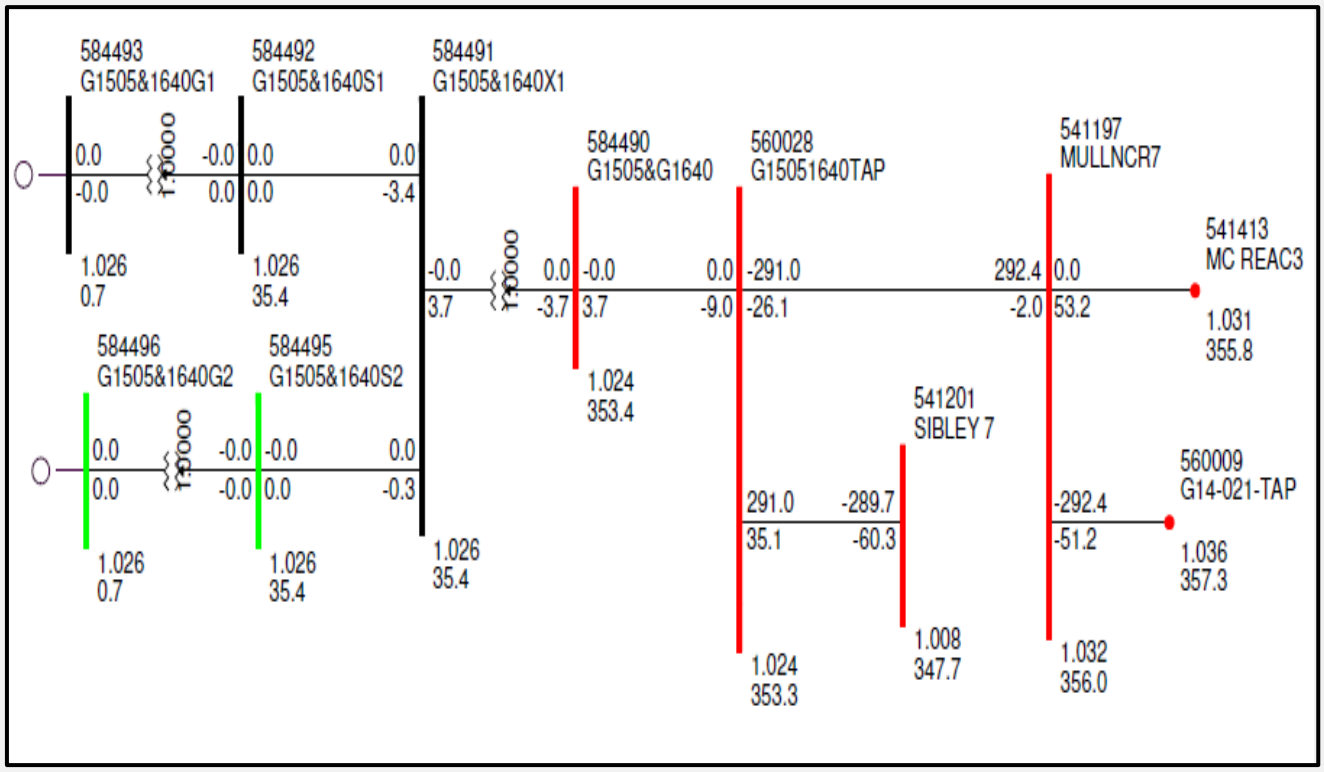

Figure 4.1.1: Inductive reactive requirement for GEN-2016-040

5. Short Circuit Analysis

The short circuit analysis out five buses away was performed for 2017 and 2025 summer peak case for the interconnection requests under project cluster scenario of DISIS-2016-001 (Group 13). No outage was assumed in the system model.

5.1. Short Circuit Result for 2017 Summer Peak Case

The short circuit results for Summer-2017 scenario (assumed not outage) at the POI are tabulated below

5.1.1. Short Circuit Result for Nebraska City-Sibley 345kV (G15051640TAP, 560028)

The results of the short circuit analysis for POI i.e., Nebraska City-Sibley 345kV (G15051640TAP, 560028) and five bus levels away are tabulated below in Table 5.1.1.

Table 5.1.1: Short circuit results for Nebraska City-Sibley 345kV (G15051640TAP, 560028) (GEN-2016-040)

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
560028	G15051640TAP345.0	0 Level	8881.5	5481.7
541197	MULLNCR7 345.0	1 Level	8345.9	4906.4
541201	SIBLEY 7 345.0	1 Level	22435.1	17591.3
584490	G1505&G1640 345.0	1 Level	7858.2	0
345408	7OVERTON 345.0	2 Level	13298.6	2750.4
541200	PHILL 7 345.0	2 Level	20107	19132.5
541202	SIBLEY 5 161.0	2 Level	32011.3	32037.7
541360	SIBLEY T 13.80	2 Level	77087.3	0
541413	MC REAC3 345.0	2 Level	7982.4	0
541414	SIB REA1 345.0	2 Level	19987.7	0
542972	HAWTH 7 345.0	2 Level	23398.6	21813.6
560009	G14-021-TAP 345.0	2 Level	9103.8	5269.6
584491	G1505&1640X134.50	2 Level	30243	0
345088	7MCCREDIE 345.0	3 Level	17588.4	0
345409	5OVERTON 161.0	3 Level	21709.7	1166
541198	PECULR 7 345.0	3 Level	22264.1	20131
541225	PHILL 5 161.0	3 Level	33262.5	35636.1

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
541250	SIBLEYPL 161.0	3 Level	34267.6	34467
541361	PHILL T 13.80	3 Level	76892.6	0
542973	HAWTHRN5 161.0	3 Level	54663	61291.1
542980	NASHUA 7 345.0	3 Level	21732.5	17716.2
543644	HAWT T20 13.80	3 Level	21827.7	0
543645	HAWT T22 13.80	3 Level	29768.8	0
583910	GEN-2014-021345.0	3 Level	6938.5	0
584492	G1505&1640S134.50	3 Level	25304.7	0
584495	G1505&1640S234.50	3 Level	14600.3	0
645458	S3458 3 345.0	3 Level	28878.8	28735.2
300044	7MCCRED 345.0	4 Level	17557.9	0
300500	5HUNTSDL 161.0	4 Level	13407.2	0
345221	5MOBERLY 161.0	4 Level	15804.3	50.1
345230	7MONTGMRY 345.0	4 Level	27157.5	0
345411	5OVERTON 2 161.0	4 Level	21709.7	1166
541151	SIBLEY#3 22.00	4 Level	128569.6	84984.1
541162	DOGWDSTG 18.00	4 Level	103224.7	70512.5
541163	DOGWDCT1 18.00	4 Level	87861.8	64974.6
541164	DOGWDCT2 18.00	4 Level	89061.4	65409.4
541199	ST JOE 3 345.0	4 Level	20411.9	19207.3
541235	DUNCAN 5 161.0	4 Level	20806.7	13275.4
541239	HSNVL 5 161.0	4 Level	16962.5	11218.2
541243	LKWINGB5 161.0	4 Level	25002.4	19898.8
541244	ORRICK 5 161.0	4 Level	15498.8	11084.8
541263	SIBLEY 2 69.00	4 Level	16682.2	18990.8
541280	PHILL 2 69.00	4 Level	14450.4	14421
541313	HARRIS 161.0	4 Level	24692.4	21123.1
541342	PECULR 5 161.0	4 Level	26424.2	21881.5
541346	RTCHFLD5 161.0	4 Level	14066.5	7976.5

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
541372	PECULRT 13.80	4 Level	71445.7	0
542951	HAW G5 1 22.00	4 Level	189174.5	122667.8
542961	HAWCT6 1 16.00	4 Level	85281.7	62171.1
542967	HAW G9 1 13.80	4 Level	89056.3	69615.6
542968	STILWEL7 345.0	4 Level	26822.6	22704.5
542976	LEVEE 5 161.0	4 Level	49238.3	50858.7
542982	IATAN 7 345.0	4 Level	27835.8	31685.5
542997	LEEDS 5 161.0	4 Level	33753.3	26540.5
543000	BLUEVLY5 161.0	4 Level	37916.4	34801.2
543011	CHOUTEU5 161.0	4 Level	34634.6	31428.6
543020	BRMGHAM5 161.0	4 Level	27205.1	20548.1
543027	RANDLPH5 161.0	4 Level	32631.6	28327.4
543028	NASHUA-5 161.0	4 Level	28825.1	24546.2
543080	HAWTH 2 69.00	4 Level	13666.7	10898.8
543640	NASH T11 13.80	4 Level	14487.1	0
548808	ECKLES-161 161.0	4 Level	28006.8	22862.9
548814	SUB M-161 161.0	4 Level	21696.6	18744.3
583911	G14-021-XFMR34.50	4 Level	45309.5	0
584493	G1505&1640G10.690	4 Level	981931.8	477573.3
584496	G1505&1640G20.690	4 Level	212682.6	47845.1
640139	COOPER 3 345.0	4 Level	26200.2	25269.6
645011	NEBCTY1G 18.00	4 Level	230270.8	0
645012	NEBCTY2G 23.00	4 Level	196518.1	0
645456	S3456 3 345.0	4 Level	31817.5	27798.9
645740	S3740 3 345.0	4 Level	18299.2	15879.7
650189	103&ROKEBY3 345.0	4 Level	21026.4	17346.7
300039	7FAIRPT 345.0	5 Level	12987.1	7749.4
300043	7KINGDM 345.0	5 Level	15151	0
300049	7THOMHL 345.0	5 Level	14270.2	0

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
300098	5MOCITY 161.0	5 Level	20582.2	15498.1
300126	5MOBTAP 161.0	5 Level	15814.4	0
300320	5LEVASY 161.0	5 Level	10692.7	6638.8
300709	2SHARSNV 69.00	5 Level	6680.8	7985.1
343004	5PERCHE 161.0	5 Level	12878.8	0
344224	7CALAWY 1 345.0	5 Level	24942.5	0
344233	5CALIF UE 161.0	5 Level	10632.3	0
344535	7ENON 345.0	5 Level	18103.3	0
344886	7LABADIE3 345.0	5 Level	37645.1	0
345071	5MCBAIN T 161.0	5 Level	14505.6	0
345222	2MOBERLY 69.00	5 Level	7626	0
345231	5MONTGMRY 161.0	5 Level	18781.3	0
345992	7SPENCER 345.0	5 Level	11756.2	0
532772	STRANGR7 345.0	5 Level	24074.7	21081
541150	IATAN 11 13.80	5 Level	29181.8	0
541152	SIBLEY#2 13.20	5 Level	39213.6	27430.7
541153	SIBLEY#1 13.20	5 Level	40039	28391
541203	NASHUA 5 161.0	5 Level	28825.1	24546.2
541205	BLSPE 5 161.0	5 Level	21838	14150.6
541207	ARCHIE 5 161.0	5 Level	18436.4	12068.6
541215	HLLMRK 5 161.0	5 Level	14157.9	8749.4
541218	GRNWD 5 161.0	5 Level	22413.3	19677.5
541230	RNRIDGE5 161.0	5 Level	23109.6	17512.2
541236	RICHMND5 161.0	5 Level	8528.2	5222.3
541241	SEDEAST5 161.0	5 Level	8018.4	1580.4
541248	LBRTYST5 161.0	5 Level	20041.1	14455.9
541249	HOOKRD 5 161.0	5 Level	23121.5	16875.1
541253	ST JOE 5 161.0	5 Level	21664.4	20308.5
541262	LIBERTY2 69.00	5 Level	10741.4	7070.6

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
541279	RGREEN 2 69.00	5 Level	14559.6	15801.3
541295	HSNVL 2 69.00	5 Level	9797.9	9363
541340	BELTONS5 161.0	5 Level	21657.8	14531.2
541344	PECULRS5 161.0	5 Level	25594.6	20270.6
541347	RAYMORE 69.00	5 Level	9154.1	4816.6
541350	IATAN5 161.0	5 Level	21543.2	21637.2
541370	STJOE 1T 13.80	5 Level	70364.8	0
541371	STJOE 2T 13.80	5 Level	70420.4	0
541400	EASTOWN7 345.0	5 Level	18942.6	16337.5
542957	IAT G1 1 24.00	5 Level	196035	137624.2
542962	IAT G2 1 25.00	5 Level	239787.1	163944.9
542963	HAWCT7 1 13.80	5 Level	54580.3	36998.4
542964	HAWCT8 1 13.80	5 Level	53311.7	34722.3
542965	W.GRDNR7 345.0	5 Level	27664.1	22579.8
542969	STILWEL5 161.0	5 Level	41983.3	37879.5
542981	LACYGNE7 345.0	5 Level	27159.4	30017.1
542985	NEAST 5 161.0	5 Level	41851.7	42730.1
543004	BLUMILS5 161.0	5 Level	18472	14656.5
543009	WINJT N5 161.0	5 Level	19891	13302.1
543010	WINJT S5 161.0	5 Level	23718.4	16026.7
543015	AVONDAL5 161.0	5 Level	29143.4	23115.5
543023	CLAYCM25 161.0	5 Level	14293.8	9353
543029	SHOLCRK5 161.0	5 Level	17655.6	11757.1
543062	SALSBRY5 161.0	5 Level	12195.8	49.7
543091	DUNCNRD2 69.00	5 Level	7034.8	6305.3
543114	PLUMRRD2 69.00	5 Level	12867.8	9225.5
543639	LEEDREAC 161.0	5 Level	24684.5	19119
543647	STIL T11 13.80	5 Level	21700.8	0
543648	STIL T22 13.80	5 Level	29076.6	0

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
548803	SUB F 69.00	5 Level	14992	10830.3
548807	BLUVLY-161 161.0	5 Level	19377.8	17778.2
548815	SUB M 69.00	5 Level	22963.4	16886.6
548820	SUB N-161 161.0	5 Level	16961.3	13552.5
583912	G14-021-GSU134.50	5 Level	39787	0
583916	G14-021-GSU234.50	5 Level	39478.5	0
635000	CBLUFFS3 345.0	5 Level	29961.8	15709
635017	ATCHSNT3 345.0	5 Level	16076.1	0
640009	COOPER1G 22.00	5 Level	281447.8	9.4
640140	COOPER 5 161.0	5 Level	18272.9	20623.5
640142	COOPER T2 913.80	5 Level	49126	0
640277	MOORE 3 345.0	5 Level	22656.3	19977.2
643172	COOPER T5 913.80	5 Level	29325	0
645041	CASS 1G 15.00	5 Level	102842.1	0
645042	CASS 2G 15.00	5 Level	103142.8	0
645111	NBAXT1 9 4.200	5 Level	58391.2	0
645112	NBAXT2 9 4.200	5 Level	58090.8	0
645455	S3455 3 345.0	5 Level	29217.5	26079.8
645459	S3459 3 345.0	5 Level	22792.4	18308.5
646206	S1206 5 161.0	5 Level	42701.2	42121.8
648256	S3456T49 13.80	5 Level	22321.5	0
650185	WAGENER 3 345.0	5 Level	21028.2	18542.8

5.1.2. Short Circuit Result for Paola 161kV (543069)

The results of the short circuit analysis for POI i.e., Paola 161kV (543069) and five bus levels away are tabulated below in Table 5.1.2.

Table 5.1.2: Short circuit results for Paola 161kV (543069) (ASGI-2016-003)

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
543069	PAOLA 5 161.0	0 Level	9137.3	5721.4
543065	CNTRVIL5 161.0	1 Level	10633.3	6449.7
543066	S.OTTWA5 161.0	1 Level	23319.6	18078.3
543067	CENTENL5 161.0	1 Level	8055	0
543112	OSAWAT 5 161.0	1 Level	13327.2	2754.2
587560	ASGI1603 161.0	1 Level	20297.4	19252.8
543055	SEOTTWA5 161.0	2 Level	32253.5	32236.6
543068	WAGSTAF5 161.0	2 Level	77198.8	0
543078	OSAWACT1 13.80	2 Level	10050.2	0
560029	G15-016-TAP 161.0	2 Level	20686.8	0
587561	ASGI1603_XFM12.47	2 Level	23694.1	21998.5
532934	MARMTNE5 161.0	3 Level	10826.7	6418.8
543057	BUCYRUS5 161.0	3 Level	30470.3	0
543077	PLSTVAL5 161.0	3 Level	17604.8	0
584580	GEN-2015-016161.0	3 Level	21729.1	1166
587563	ASGI1603_GEN0.480	3 Level	22390.6	20201
532937	NEOSHO 5 161.0	4 Level	33358.6	35711
532938	FRANKLIN5 161.0	4 Level	34505.7	34645.4
532955	MARMATN1 13.20	4 Level	77010.8	0
533639	MARMATN2 69.00	4 Level	55012.8	61593.4
542966	WGARDNR5 161.0	4 Level	21831	17761.4
542969	STILWEL5 161.0	4 Level	21830	0
543058	NLOUISB5 161.0	4 Level	29778.5	0
584581	G15-016XFMR134.50	4 Level	7757.1	0
532793	NEOSHO 7 345.0	5 Level	25450	0
532825	N345 2 1 13.80	5 Level	14649.8	0
532926	BAKER 5 161.0	5 Level	29342.7	29124.5
532932	LITCH 5 161.0	5 Level	17574.2	0
532958	NEOSH4 1 13.20	5 Level	13413.1	0

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
532959	NEOSH5 1 13.20	5 Level	15808.1	50.1
533020	NEOSHOS4 138.0	5 Level	27165.7	0
533021	NEOSHO 4 138.0	5 Level	21729.1	1166
533122	FRANKLIN1 12.47	5 Level	128781.6	85045.7
533640	MCKEE 2 69.00	5 Level	103267.2	70525.7
533647	UN1ELSM2 69.00	5 Level	87885.2	64983.1
533876	FRANKLIN2 69.00	5 Level	89086.1	65418.3
541341	S.HARP 5 161.0	5 Level	20419.5	19211.8
542965	W.GRDNR7 345.0	5 Level	20869.5	13293.5
542968	STILWEL7 345.0	5 Level	16979.8	11223.2
542994	HICKMAN5 161.0	5 Level	25055.5	19921.5
542995	MONTROS5 161.0	5 Level	15544.1	11101.9
543049	CEDRCRK5 161.0	5 Level	16695.6	19002.4
543050	ANTIOCH5 161.0	5 Level	14454.5	14423.8
543053	REDEL 5 161.0	5 Level	24748	21150.5
543054	CEDARNL5 161.0	5 Level	26474.5	21904.9
543105	BULLCRK5 161.0	5 Level	14094.3	7982.9
543126	LACKMAN5 161.0	5 Level	71504.8	0
543132	BNSF 5 161.0	5 Level	189481.3	122753.6
543647	STIL T11 13.80	5 Level	85307.1	62180.1
543648	STIL T22 13.80	5 Level	89074	69622.8
543649	WGAR T11 13.80	5 Level	26925.2	22753.7
547469	RIV4525 161.0	5 Level	49514.8	51060.4
584582	G15-016-GSU134.50	5 Level	27868.6	31713.9

5.2. Short Circuit Result for 2025 Summer Peak Case

The short circuit results for Summer-2025 scenario (assumed not outage) at each POI are tabulated below

5.2.1. Short Circuit Result for Fort Randall (652509) – Utica Jct (652526) 230kV line (652593)

The results of the short circuit analysis for POI i.e., Nebraska City-Sibley 345kV (G15051640TAP, 560028) and five bus levels away are tabulated below in Table 5.2.1.

Table 5.2.1: Short circuit results for Nebraska City-Sibley 345kV (G15051640TAP, 560028) (GEN-2016-040)

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
560028	G15051640TAP345.0	0 Level	8883.6	5482.5
541197	MULLNCR7 345.0	1 Level	8351.1	4907.7
541201	SIBLEY 7 345.0	1 Level	22442.5	17598.7
584490	G1505&G1640 345.0	1 Level	7859.8	0
345408	7OVERTON 345.0	2 Level	13415.6	2753.8
541200	PHILL 7 345.0	2 Level	20127.5	19147.4
541202	SIBLEY 5 161.0	2 Level	31306.6	31565
541360	SIBLEY T 13.80	2 Level	76713.5	0
541413	MC REAC3 345.0	2 Level	7987.2	0
541414	SIB REA1 345.0	2 Level	19993.6	0
542972	HAWTH 7 345.0	2 Level	23650.5	21991.7
560009	G14-021-TAP 345.0	2 Level	9111.4	5271.4
584491	G1505&1640X134.50	2 Level	30244.9	0
345088	7MCCREDIE 345.0	3 Level	18001.4	0
345409	5OVERTON 161.0	3 Level	21749.1	1166
541198	PECULR 7 345.0	3 Level	22302.3	20164.3
541225	PHILL 5 161.0	3 Level	33527.1	35839.2
541250	SIBLEYPL 161.0	3 Level	33366.9	33855.2
541361	PHILL T 13.80	3 Level	76904.6	0
542973	HAWTHRN5 161.0	3 Level	56758.2	63231.8
542980	NASHUA 7 345.0	3 Level	21842.6	17773.6
543644	HAWT T20 13.80	3 Level	21869	0

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
543645	HAWT T22 13.80	3 Level	29815.5	0
583910	GEN-2014-021345.0	3 Level	6942.3	0
584492	G1505&1640S134.50	3 Level	25305.9	0
584495	G1505&1640S234.50	3 Level	14600.7	0
645458	S3458 3 345.0	3 Level	29104.9	28890.8
300044	7MCCRED 345.0	4 Level	17968.8	0
300500	5HUNTSDL 161.0	4 Level	14362.8	0
345221	5MOBERLY 161.0	4 Level	15943.6	50.1
345230	7MONTGMRY 345.0	4 Level	29591.4	0
345411	5OVERTON 2 161.0	4 Level	21749.1	1166
541151	SIBLEY#3 22.00	4 Level	127749.3	84745.1
541162	DOGWDSTG 18.00	4 Level	103341.1	70548.6
541163	DOGWDCT1 18.00	4 Level	87926	64997.9
541164	DOGWDCT2 18.00	4 Level	89129.2	65433.7
541199	ST JOE 3 345.0	4 Level	19935.8	18926.8
541235	DUNCAN 5 161.0	4 Level	20707.6	13248.6
541239	HSNVL 5 161.0	4 Level	16696.3	11140.1
541243	LKWINGB5 161.0	4 Level	25051.6	19920.2
541244	ORRICK 5 161.0	4 Level	15321.9	11024.3
541263	SIBLEY 2 69.00	4 Level	12658.3	15300.7
541280	PHILL 2 69.00	4 Level	14437.9	14412.9
541313	HARRIS 161.0	4 Level	25201.1	21370.1
541342	PECULR 5 161.0	4 Level	26306	21832.9
541346	RTCHFLD5 161.0	4 Level	14028.7	7968.6
541372	PECULRT 13.80	4 Level	71475.7	0
542951	HAW G5 1 22.00	4 Level	190966.8	123166.8
542961	HAWCT6 1 16.00	4 Level	85428.8	62223.1
542967	HAW G9 1 13.80	4 Level	89159	69657.4
542968	STILWEL7 345.0	4 Level	26967.8	22835.7

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
542976	LEVEE 5 161.0	4 Level	51086.9	52271.3
542982	IATAN 7 345.0	4 Level	29141.8	33059.6
542997	LEEDS 5 161.0	4 Level	34382.5	26817
543000	BLUEVLY5 161.0	4 Level	39270.8	36090.5
543011	CHOUTEU5 161.0	4 Level	36323.4	32366.3
543020	BRMGHAM5 161.0	4 Level	27552.8	20694.1
543027	RANDLPH5 161.0	4 Level	33561.3	28821.4
543028	NASHUA-5 161.0	4 Level	28945.2	24604.7
543080	HAWTH 2 69.00	4 Level	13845	10975.3
543640	NASH T11 13.80	4 Level	14489.7	0
548808	ECKLES-161 161.0	4 Level	27671.1	22714.1
548814	SUB M-161 161.0	4 Level	21952	18874.3
583911	G14-021-XFMR34.50	4 Level	45318.1	0
584493	G1505&1640G10.690	4 Level	981963.8	477578.6
584496	G1505&1640G20.690	4 Level	212684.2	47845.1
640139	COOPER 3 345.0	4 Level	26253	25303.5
645011	NEBCTY1G 18.00	4 Level	230595.6	0
645012	NEBCTY2G 23.00	4 Level	196769.3	0
645456	S3456 3 345.0	4 Level	32803.2	28714
645740	S3740 3 345.0	4 Level	18463.3	15974.7
650189	103&ROKEBY3 345.0	4 Level	21366.7	17524.9
300039	7FAIRPT 345.0	5 Level	12894.9	7727.5
300043	7KINGDM 345.0	5 Level	15447.5	0
300049	7THOMHL 345.0	5 Level	14523.9	0
300098	5MOCITY 161.0	5 Level	20517.2	15475.3
300126	5MOBTAP 161.0	5 Level	15953.9	0
300320	5LEVASY 161.0	5 Level	10612.3	6618.1
300709	2SHARSNV 69.00	5 Level	6648.4	7954.4
343004	5PERCHE 161.0	5 Level	14378.7	0

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
344224	7CALAWY 1 345.0	5 Level	26020	0
344233	5CALIF UE 161.0	5 Level	10644.3	0
344535	7ENON 345.0	5 Level	18414	0
344886	7LABADIE3 345.0	5 Level	38023.4	0
345071	5MCBAIN T 161.0	5 Level	16184.8	0
345222	2MOBERLY 69.00	5 Level	7471.8	0
345231	5MONTGMRY 161.0	5 Level	19176.5	0
345992	7SPENCER 345.0	5 Level	16730.7	0
532772	STRANGR7 345.0	5 Level	26339.2	23815.7
541150	IATAN 11 13.80	5 Level	28756.7	0
541152	SIBLEY#2 13.20	5 Level	21165.3	0
541153	SIBLEY#1 13.20	5 Level	21204.1	0
541203	NASHUA 5 161.0	5 Level	28945.2	24604.7
541205	BLSPE 5 161.0	5 Level	21793.7	14138.6
541207	ARCHIE 5 161.0	5 Level	17960.9	11930.7
541215	HLLMRK 5 161.0	5 Level	14125.8	8741.4
541218	GRNWD 5 161.0	5 Level	23047.7	20000.6
541230	RNRIDGE5 161.0	5 Level	23299.9	17583.6
541236	RICHMND5 161.0	5 Level	8475.4	5209.1
541241	SEDEAST5 161.0	5 Level	7964.5	1579
541248	LBRTYST5 161.0	5 Level	20124.5	14488.9
541249	HOOKRD 5 161.0	5 Level	23095.3	16866.5
541253	ST JOE 5 161.0	5 Level	20302.8	19493.2
541262	LIBERTY2 69.00	5 Level	10620.7	7035.6
541279	RGREEN 2 69.00	5 Level	14544.9	15789.9
541295	HSNVL 2 69.00	5 Level	9780.2	9352.2
541340	BELTONS5 161.0	5 Level	21583.4	14511.4
541344	PECULRS5 161.0	5 Level	25455.4	20215.2
541347	RAYMORE 69.00	5 Level	9172	4821

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
541350	IATAN5 161.0	5 Level	18117	18754.8
541370	STJOE 1T 13.80	5 Level	70169.2	0
541371	STJOE 2T 13.80	5 Level	70223.9	0
541400	EASTOWN7 345.0	5 Level	18584.5	16165.3
542957	IAT G1 1 24.00	5 Level	197879.8	138227.2
542962	IAT G2 1 25.00	5 Level	243263.7	165019.7
542963	HAWCT7 1 13.80	5 Level	54651.9	37020.3
542964	HAWCT8 1 13.80	5 Level	53386.7	34743.5
542965	W.GRDNR7 345.0	5 Level	28415.8	23513.4
542969	STILWEL5 161.0	5 Level	41854	37861.6
542981	LACYGNE7 345.0	5 Level	27289.6	30132
542985	NEAST 5 161.0	5 Level	45523.2	45235.2
543004	BLUMILS5 161.0	5 Level	18520.6	14677.9
543009	WINJT N5 161.0	5 Level	20068.1	13358.7
543010	WINJT S5 161.0	5 Level	23963.4	16106
543015	AVONDAL5 161.0	5 Level	30127.7	23535
543023	CLAYCM25 161.0	5 Level	14389.2	9383.1
543029	SHOLCRK5 161.0	5 Level	17827.7	11809.1
543062	SALSBRY5 161.0	5 Level	12264.6	49.7
543091	DUNCNRD2 69.00	5 Level	7106.6	6344.2
543114	PLUMRRD2 69.00	5 Level	12861.1	9223.5
543639	LEEDREAC 161.0	5 Level	25036.5	19266.9
543647	STIL T11 13.80	5 Level	21697.7	0
543648	STIL T22 13.80	5 Level	29072.8	0
548803	SUB F 69.00	5 Level	15364.2	10959.1
548807	BLUVLY-161 161.0	5 Level	19627.5	17919.2
548815	SUB M 69.00	5 Level	25499.9	17751.8
548820	SUB N-161 161.0	5 Level	18241.5	15839.8
583912	G14-021-GSU134.50	5 Level	39792.9	0

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
583916	G14-021-GSU234.50	5 Level	39484.3	0
635000	CBLUFFS3 345.0	5 Level	30629.8	15955.9
635017	ATCHSNT3 345.0	5 Level	16108.5	0
640009	COOPER1G 22.00	5 Level	281610.4	9.4
640140	COOPER 5 161.0	5 Level	18291.1	20639.3
640142	COOPER T2 913.80	5 Level	49137.4	0
640277	MOORE 3 345.0	5 Level	23079	20245.5
643172	COOPER T5 913.80	5 Level	29329	0
645041	CASS 1G 15.00	5 Level	102906.3	0
645042	CASS 2G 15.00	5 Level	103207.9	0
645111	NBAXT1 9 4.200	5 Level	58396.6	0
645112	NBAXT2 9 4.200	5 Level	58096.1	0
645455	S3455 3 345.0	5 Level	29894.6	26606.5
645459	S3459 3 345.0	5 Level	24498.3	20365.6
646206	S1206 5 161.0	5 Level	43119	42150.4
648256	S3456T49 13.80	5 Level	21397.5	0
650185	WAGENER 3 345.0	5 Level	21431.8	18788.2

5.2.2. Short Circuit Result for Paola 161kV (543069)

The results of the short circuit analysis for POI i.e., Paola 161kV (543069) and five bus levels away are tabulated below in Table 5.2.2.

Table 5.2.2: Short circuit results for Paola 161kV (543069) (ASGI-2016-003)

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
543069	PAOLA 5 161.0	0 Level	10881.1	9040.8
543065	CNTRVIL5 161.0	1 Level	6875.2	4698.6
543066	S.OTTWA5 161.0	1 Level	7235.7	4747.3
543067	CENTENL5 161.0	1 Level	10862	8348.7

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
543112	OSAWAT 5 161.0	1 Level	10449.1	8844.2
587560	ASGI1603 161.0	1 Level	10881.1	9040.8
543055	SEOTTWA5 161.0	2 Level	7358.4	4799.8
543068	WAGSTAF5 161.0	2 Level	14615.2	9908.3
543078	OSAWACT1 13.80	2 Level	54406.6	41315.9
560029	G15-016-TAP 161.0	2 Level	8479.9	6316.5
587561	ASGI1603_XFM12.47	2 Level	7059.5	0
532934	MARMTNE5 161.0	3 Level	9802.3	10320
543057	BUCYRUS5 161.0	3 Level	20879.1	14647.7
543077	PLSTVAL5 161.0	3 Level	10658.4	7160.1
584580	GEN-2015-016161.0	3 Level	7425.4	0
587563	ASGI1603_GEN0.480	3 Level	195298.3	166745.2
532937	NEOSHO 5 161.0	4 Level	23155.6	23205.3
532938	FRANKLIN5 161.0	4 Level	9433	8020.1
532955	MARMATN1 13.20	4 Level	11968.7	0
532961	MARMX4 1 14.40	4 Level	38728.3	0
532998	MARMATN4 138.0	4 Level	7942.1	8097.2
533639	MARMATN2 69.00	4 Level	9218.8	9955.8
542966	WGARDNR5 161.0	4 Level	29350.4	29705.7
542969	STILWEL5 161.0	4 Level	41960.4	37919.9
543058	NLOUISB5 161.0	4 Level	9542.2	6031.4
584581	G15-016XFMR134.50	4 Level	25638	0
532793	NEOSHO 7 345.0	5 Level	18033	14520.3
532825	N345 2 1 13.80	5 Level	58001.1	0
532926	BAKER 5 161.0	5 Level	9222.1	6547.3
532932	LITCH 5 161.0	5 Level	12258.6	10739.2
532958	NEOSH4 1 13.20	5 Level	9907.5	0
532959	NEOSH5 1 13.20	5 Level	13935	0
532997	ALLEN 4 138.0	5 Level	6912.9	8007.4

Bus #	Bus Name	Level Away	Fault Current (Amperes)	
			3 PH	SLG
533020	NEOSHOS4 138.0	5 Level	25720	26090.1
533021	NEOSHO 4 138.0	5 Level	25720	26090.1
533122	FRANKLIN1 12.47	5 Level	13720	0
533640	MCKEE 2 69.00	5 Level	4511.6	3075.5
533647	UN1ELSM2 69.00	5 Level	8461.4	7945.1
533876	FRANKLIN2 69.00	5 Level	9919.6	10064.8
541341	S.HARP 5 161.0	5 Level	26872.5	25785.6
542965	W.GRDNR7 345.0	5 Level	28473.1	23539.6
542968	STILWEL7 345.0	5 Level	27070.6	22885.1
542994	HICKMAN5 161.0	5 Level	20195.8	13227.3
542995	MONTROS5 161.0	5 Level	14611	16752.6
543049	CEDRCRK5 161.0	5 Level	30270.2	22140.8
543050	ANTIOCH5 161.0	5 Level	23939.7	16398.1
543053	REDEL 5 161.0	5 Level	25918.6	17970.9
543054	CEDARNL5 161.0	5 Level	14862.5	9867.7
543105	BULLCRK5 161.0	5 Level	26831.2	27810.5
543126	LACKMAN5 161.0	5 Level	14241.3	10403.8
543132	BNSF 5 161.0	5 Level	21616.1	17267.7
543647	STIL T11 13.80	5 Level	21700.1	0
543648	STIL T22 13.80	5 Level	29077.2	0
543649	WGAR T11 13.80	5 Level	18702	0
547469	RIV4525 161.0	5 Level	25649.5	22723.4
584582	G15-016-GSU134.50	5 Level	25512.5	0

6. Stability Analysis for Cluster Scenario

6.1. Faults Simulated

Thirty six (36) faults were considered for the transient stability simulations which included three phase faults, as well as single phase line faults. Single-phase line faults were simulated by applying fault impedance to the positive

sequence network at the fault location. As per the SPP current practice to compute the fault levels, the fault impedance was computed to give a positive sequence voltage at the specified fault location of approximately 60% of pre-fault voltage.

Concurrently and previously queued projects as respectively shown in Table-1 and Table-2 of the study request i.e., GEN-2008-129, GEN-2010-036, GEN-2011-011, ASGI-2013-007, GEN-2014-021, and GEN-2015-005 as well as areas number 536, 540, 541, 542, 544, 545, 545, 640, 645, 650, 652, 635, 330, and 356 were monitored during all the simulations. Table 6.1.1 shows the list of simulated contingencies. This Table also shows the fault clearing time and the time delay before re-closing for all the study contingencies.

Simulations were performed with a 0.1-second steady-state run followed by the appropriate disturbance as described in Table 6.1.1. Simulations were run for minimum 15-second duration to confirm proper machine damping.

Table 6.1.1 summarizes the overall results for all faults simulations of cluster scenario. Complete sets of plots for Winter-2016, Summer-2017, and Summer-2025 peak seasons for each fault are included in Appendices A, B and C respectively.

Table 6.1.1: List of simulated faults for cluster scenario stability analysis

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
1	FLT01-3PH	3 phase fault on the G15-005 TAP (560028) to Sibley (541201) 345kV line circuit 1, near G15-005 TAP. a. Apply fault at the G15-005 TAP 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
2	FLT02-3PH	3 phase fault on the G15-005 TAP (560028) to Mullin Creek (541197) 345kV line circuit 1, near G15-005 TAP. a. Apply fault at the G15-005 TAP 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
3	FLT03-3PH	3 phase fault on the MULLNCR7 (541197) to G14-021-TAP (560009) 345kV line, near MULLNCR7. a. Apply fault at the MULLNCR7 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
4	FLT04-3PH	3 phase fault on the SIBLEY 7 (541201) to 7OVERTON (345408) 345kV line, near SIBLEY 7. a. Apply fault at the SIBLEY 7 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
5	FLT05-3PH	3 phase fault on the SIBLEY 7 (541201) to HAWTH 7 (542972) 345kV line, near SIBLEY 7 a. Apply fault at the SIBLEY 7 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
6	FLT06-3PH	3 phase fault on the SIBLEY 7 (541201) to PHILL 7 (541200) 345kV line, near SIBLEY 7 a. Apply fault at the SIBLEY 7 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
7	FLT07-3PH	3 phase fault on the SIBLEY 7 (541201) to SIBLEY 5 (541202) to SIBLEY T (541360) 3Phase Transformer, near SIBLEY 7 a. Apply fault at the SIBLEY 7 345kV bus. b. Clear fault after 5 cycles by tripping the faulted Transformer	Stable	Stable	Stable
8	FLT08-3PH	N/A	N/A	N/A	N/A
9	FLT09-3PH	3 phase fault on the G14-021-TAP (560009) to S3458 3 (645458) 345kV line, near G14-021-TAP a. Apply fault at the G14-021-TAP 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
10	FLT10-3PH	3 phase fault on the 7OVERTON (345408) to 7MCCREDIE (345088) 345kV line, near 7OVERTON a. Apply fault at the 7OVERTON 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
11	FLT11-3PH	3 phase fault on the 7OVERTON (345408) to 5OVERTON (345409) 345/161 kV Transformer, near 7OVERTON a. Apply fault at the 7OVERTON 345kV bus. b.Clear fault after 5 cycles by tripping the faulted Transformer	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
12	FLT12-3PH	3 phase fault on the HAWTH 7 (542972) to 7M NASHUA 7 (542980) 345kV line, near HAWTH 7 a. Apply fault at the HAWTH 7 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
13	FLT13-3PH	3 phase fault on the HAWTH 7 (542972) to HAWTHRN5 (542973) to HAWT T20 (543644) 3 Phase Transformer ID-20, near HAWTH 7 a. Apply fault at the HAWTH 7 345kV bus. b. Clear fault after 5 cycles by tripping the faulted Transformer	Stable	Stable	Stable
14	FLT14-3PH	3 phase fault on the PHILL 7 (541200) to PECULR 7 (541198) 345kV line, near PHILL 7 a. Apply fault at the PHILL 7 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
15	FLT15-3PH	3 phase fault on the PAOLA 5 (543069) to CNTRVIL5 (543065) 161kV line, near PAOLA 5 a. Apply fault at the PAOLA 5 161kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
16	FLT16-3PH	3 phase fault on the PAOLA 5 (543069) to S.OTTWA5 (543066) 161kV line, near PAOLA 5 a. Apply fault at the PAOLA 5 161kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
17	FLT17-3PH	3 phase fault on the PAOLA 5 (543069) to CENTENL5 (543067) 161kV line, near PAOLA 5 a. Apply fault at the PAOLA 5 161kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
18	FLT18-3PH	3 phase fault on the CNTRVIL5 (543065) to G15-016-TAP (560029) 161kV line, near CNTRVIL5 a. Apply fault at the CNTRVIL5 161kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
19	FLT19-3PH	3 phase fault on the S.OTTWA5 (543066) to SEOTTWA5 (543055) 161kV line, near S.OTTWA5. a. Apply fault at the S.OTTWA5 161kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
20	FLT20-3PH	3 phase fault on the CENTENL5 (543067) to WAGSTAF5 (543068) 161kV line, near CENTENL5 a. Apply fault at the CENTENL5 161kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
21	FLT21-3PH	3 phase fault on the G15-016-TAP (560029) to MARMTNE5 (532934) 161kV line, near G15-016-TAP. a. Apply fault at the G15-016-TAP 161kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
22	FLT22-PO	**Prior Outage of PAOLA 5 to CNTRVIL5 161kV line** a. Prior Outage PAOLA 5 (543069) to CNTRVIL5 (543065) 161kV line. b. 3 phase fault on the PAOLA 5 (543069) to S.OTTWA5 (543066) 161kV line, near PAOLA 5. c. Clear fault after 5 cycles and trip the faulted line. d. Wait 20 cycles, and then re-close the line in (c) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (c) and remove fault.	Stable	Stable	Stable
23	FLT23-PO	**Prior Outage of PAOLA 5 to CNTRVIL5 161kV line** a. Prior Outage PAOLA 5 (543069) to CNTRVIL5 (543065) 161kV line. b. 3 phase fault on the PAOLA 5 (543069) to CENTENL5 (543067) 161kV line, near PAOLA 5. c. Clear fault after 5 cycles and trip the faulted line. d. Wait 20 cycles, and then re-close the line in (c) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (c) and remove fault.	Stable	Stable	Stable
24	FLT24-PO	**Prior Outage of PAOLA 5 to CENTENL5 161kV line** a. Prior Outage PAOLA 5 (543069) to CENTENL5 (543067) 161kV line. b. 3 phase fault on the PAOLA 5 (543069) to S.OTTWA5 (543066) 161kV line, near PAOLA 5. c. Clear fault after 5 cycles and trip the faulted line. d. Wait 20 cycles, and then re-close the line in (c) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (c) and remove fault.	Stable	Stable	Stable
Additional Faults Simulations					
25	FLT25-SB	**Sibley 345kV Stuck Breaker Scenario 1** a. Apply single phase fault at the Sibley (541201) 345kV bus. b. Wait 13.5 cycles and remove fault. c. Trip Sibley (541201) 345/(541202) 161/(541360) 13.8kV transformer circuit 1. d. Trip Sibley (541201) to Hawthorne (542972) 345kV line circuit 1.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
26	FLT26-SB	**Sibley 345kV Stuck Breaker Scenario 2** a. Apply single phase fault at the Sibley (541201) 345kV bus. b. Wait 13.5 cycles and remove fault. c. Trip Sibley (541201) to Pleasant Hill (541200) 345kV line circuit 1. d. Trip Sibley (541201) to Hawthorne (542972) 345kV line circuit 1.	Stable	Stable	Stable
27	FLT27-SB	**Sibley 345kV Stuck Breaker Scenario 3** a. Apply single phase fault at the Sibley (541201) 345kV bus. b. Wait 13.5 cycles and remove fault. c. Trip Sibley (541201) to Pleasant Hill (541200) 345kV line circuit 1. d. Trip Sibley (541201) to Overton (345408) 345kV line circuit 1.	Stable	Stable	Stable
28	FLT28-SB	**Sibley 345kV Stuck Breaker Scenario 4** e. Apply single phase fault at the Sibley (541201) 345kV bus. f. Wait 13.5 cycles and remove fault. g. Trip Sibley (541201) 345/(541202) 161/(541360) 13.8kV transformer circuit 1. h. Trip Sibley (541201) to Overton (345408) 345kV line circuit 1.	Stable	Stable	Stable
29	FLT29-SB	**Nebraska City/S3458 345kV Stuck Breaker** a. Apply single phase fault at the Nebraska City/S3458 (645458) 345kV bus. b. After 13.5 cycles remove fault.	Stable	Stable	Stable
30	FLT30- PO	**Sibley Prior Outage Scenario 1** a. Prior Outage: Switch out Sibley (541201) to G15-005 TAP (560028) 345kV circuit 1 and solve. b. Apply 3 phase fault on the Nebraska City/S3458 (645458) to Cooper (640139) 345kV line circuit 1, near Nebraska City/S3458. c. Clear fault after 4.5 cycles and trip the faulted line and remove the fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
31	FLT31- PO	**Sibley Prior Outage Scenario 2** a. Prior Outage: Switch out Sibley (541201) to G15-005 TAP (560028) 345kV circuit 1 and solve. b. Apply 3 phase fault on the Nebraska City/S3458 (645458) to 103&Rokeby (650189) 345kV line circuit 1, near Nebraska City/S3458. c. Clear fault after 4.5 cycles and trip the faulted line and remove fault.	Stable	Stable	Stable
32	FLT32- PO	**Sibley Prior Outage Scenario 3** a. Prior Outage: Switch out Sibley (541201) to G15-005 TAP (560028) 345kV circuit 1 and solve. b. Apply 3 phase fault on the Cass/S3740 (645740) to S3455 (645455) 345kV line circuit 1, near Cass/S3740. c. Clear fault after 4.5 cycles and trip the faulted line and remove fault.	Stable	Stable	Stable
33	FLT33- PO	**Sibley Prior Outage Scenario 4** a. Prior Outage: Switch out Sibley (541201) to G15-005 TAP (560028) 345kV circuit 1 and solve. b. Apply 3 phase fault on the Nebraska City/S3458 (645458) to Sarpy/S3456 (645456) 345kV line circuit 1, near Nebraska City/S3458. c. Clear fault after 4.5 cycles and trip the faulted line and remove fault.	Stable	Stable	Stable
34	FLT34- PO	**Nebraska City/S3458 Prior Outage Scenario 1** a. Prior Outage: Switch out Nebraska City/S3458 (645458) to G14-021 TAP (560009) 345kV circuit 1 and solve. b. Apply 3 phase fault on Sibley (541201) to Pleasant Hill (541200) 345kV line circuit 1, near Sibley. c. Clear fault after 4.5 cycles and trip the faulted line.	Stable	Stable	Stable
35	FLT35- PO	**Nebraska City/S3458 Prior Outage Scenario 2** a. Prior Outage: Switch out Nebraska City/S3458 (645458) to G14-021 TAP (560009) 345kV circuit 1 and solve. b. Apply 3 phase fault on Sibley (541201) to Hawthorne (542972) 345kV line circuit 1, near Sibley. c. Clear fault after 4.5 cycles and trip the faulted line.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
36	FLT36- PO	**Nebraska City/S3458 Prior Outage Scenario 3** a. Prior Outage: Switch out Nebraska City/S3458 (645458) to G14-021 TAP (560009) 345kV circuit 1 and solve. b. Apply 3 phase fault on Sibley (541201) to Overton (345408) 345kV line circuit 1, near Sibley. c. Clear fault after 4.5 cycles and trip the faulted line.	Stable	Stable	Stable
37	FLT37- PO	**Nebraska City/S3458 Prior Outage Scenario 4** a. Prior Outage: Switch out Nebraska City/S3458 (645458) to G14-021 TAP (560009) 345kV circuit 1 and solve. b. Apply 3 phase fault on Sibley (541201) 345/(541202) 161/(541360) 13.8kV transformer circuit 1. c. Clear fault after 5 cycles and trip the faulted transformer and remove fault.	Stable	Stable	Stable

6.2. Simulation Results for Cluster Scenario

For cluster scenario, there are no impacts on the stability performance of the SPP system for the contingencies tested on the SPP provided base cases.

7. Stability Analysis for Stand-Alone Scenarios

For stand-alone scenario, selective contingencies are simulated for each interconnection request at 100% capacity of each generator at the POI.

7.1. Fault Simulated for GEN-2016-040 Request

Table 7.1.1, summarizes the overall results for all simulations for GEN-2016-040 request. Complete sets of plots for winter-2016, summer-2017, and summer-2025 peak seasons for each fault for GEN-2016-040 are in Appendices E1, E2, and E3 respectively.

Table 7.1.1: List of simulated faults for stand-alone stability analysis (GEN-2016-040)

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
1	FLT01-3PH	3 phase fault on the G15-005 TAP (560028) to Sibley (541201) 345kV line circuit 1, near G15-005 TAP. a. Apply fault at the G15-005 TAP 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
2	FLT02-3PH	3 phase fault on the G15-005 TAP (560028) to Mullin Creek (541197) 345kV line circuit 1, near G15-005 TAP. a. Apply fault at the G15-005 TAP 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
3	FLT03-3PH	3 phase fault on the MULLNCR7 (541197) to G14-021-TAP (560009) 345kV line, near MULLNCR7. a. Apply fault at the MULLNCR7 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
4	FLT04-3PH	3 phase fault on the SIBLEY 7 (541201) to 7OVERTON (345408) 345kV line, near SIBLEY 7. a. Apply fault at the SIBLEY 7 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
5	FLT05-3PH	3 phase fault on the SIBLEY 7 (541201) to HAWTH 7 (542972) 345kV line, near SIBLEY 7 a. Apply fault at the SIBLEY 7 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
6	FLT06-3PH	3 phase fault on the SIBLEY 7 (541201) to PHILL 7 (541200) 345kV line, near SIBLEY 7 a. Apply fault at the SIBLEY 7 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
7	FLT07-3PH	3 phase fault on the SIBLEY 7 (541201) to SIBLEY 5 (541202) to SIBLEY T (541360) 3Phase Transformer, near SIBLEY 7 a. Apply fault at the SIBLEY 7 345kV bus. b. Clear fault after 5 cycles by tripping the faulted Transformer	Stable	Stable	Stable
8	FLT08-3PH	N/A	N/A	N/A	N/A
9	FLT09-3PH	3 phase fault on the G14-021-TAP (560009) to S3458 3 (645458) 345kV line, near G14-021-TAP a. Apply fault at the G14-021-TAP 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
10	FLT10-3PH	3 phase fault on the 7OVERTON (345408) to 7MCCREDIE (345088) 345kV line, near 7OVERTON a. Apply fault at the 7OVERTON 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
11	FLT11-3PH	3 phase fault on the 7OVERTON (345408) to 5OVERTON (345409) 345/161 kV Transformer, near 7OVERTON a. Apply fault at the 7OVERTON 345kV bus. b.Clear fault after 5 cycles by tripping the faulted Transformer	Stable	Stable	Stable
12	FLT12-3PH	3 phase fault on the HAWTH 7 (542972) to 7M NASHUA 7 (542980) 345kV line, near HAWTH 7 a. Apply fault at the HAWTH 7 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
13	FLT13-3PH	3 phase fault on the HAWTH 7 (542972) to HAWTHRN5 (542973) to HAWT T20 (543644) 3 Phase Transformer ID-20, near HAWTH 7 a. Apply fault at the HAWTH 7 345kV bus. b. Clear fault after 5 cycles by tripping the faulted Transformer	Stable	Stable	Stable
Additional Faults Simulations					
25	FLT25-SB	**Sibley 345kV Stuck Breaker Scenario 1** i. Apply single phase fault at the Sibley (541201) 345kV bus. j. Wait 13.5 cycles and remove fault. k. Trip Sibley (541201) 345/(541202) 161/(541360) 13.8kV transformer circuit 1. l. Trip Sibley (541201) to Hawthorne (542972) 345kV line circuit 1.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
26	FLT26-SB	**Sibley 345kV Stuck Breaker Scenario 2** e. Apply single phase fault at the Sibley (541201) 345kV bus. f. Wait 13.5 cycles and remove fault. g. Trip Sibley (541201) to Pleasant Hill (541200) 345kV line circuit 1. h. Trip Sibley (541201) to Hawthorne (542972) 345kV line circuit 1.	Stable	Stable	Stable
27	FLT27-SB	**Sibley 345kV Stuck Breaker Scenario 3** e. Apply single phase fault at the Sibley (541201) 345kV bus. f. Wait 13.5 cycles and remove fault. g. Trip Sibley (541201) to Pleasant Hill (541200) 345kV line circuit 1. h. Trip Sibley (541201) to Overton (345408) 345kV line circuit 1.	Stable	Stable	Stable
28	FLT28-SB	**Sibley 345kV Stuck Breaker Scenario 4** m. Apply single phase fault at the Sibley (541201) 345kV bus. n. Wait 13.5 cycles and remove fault. o. Trip Sibley (541201) 345/(541202) 161/(541360) 13.8kV transformer circuit 1. p. Trip Sibley (541201) to Overton (345408) 345kV line circuit 1.	Stable	Stable	Stable
29	FLT29-SB	**Nebraska City/S3458 345kV Stuck Breaker** c. Apply single phase fault at the Nebraska City/S3458 (645458) 345kV bus. d. After 13.5 cycles remove fault.	Stable	Stable	Stable
30	FLT30- PO	**Sibley Prior Outage Scenario 1** d. Prior Outage: Switch out Sibley (541201) to G15-005 TAP (560028) 345kV circuit 1 and solve. e. Apply 3 phase fault on the Nebraska City/S3458 (645458) to Cooper (640139) 345kV line circuit 1, near Nebraska City/S3458. f. Clear fault after 4.5 cycles and trip the faulted line and remove the fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
31	FLT31- PO	**Sibley Prior Outage Scenario 2** d. Prior Outage: Switch out Sibley (541201) to G15-005 TAP (560028) 345kV circuit 1 and solve. e. Apply 3 phase fault on the Nebraska City/S3458 (645458) to 103&Rokeby (650189) 345kV line circuit 1, near Nebraska City/S3458. f. Clear fault after 4.5 cycles and trip the faulted line and remove fault.	Stable	Stable	Stable
32	FLT32- PO	**Sibley Prior Outage Scenario 3** d. Prior Outage: Switch out Sibley (541201) to G15-005 TAP (560028) 345kV circuit 1 and solve. e. Apply 3 phase fault on the Cass/S3740 (645740) to S3455 (645455) 345kV line circuit 1, near Cass/S3740. f. Clear fault after 4.5 cycles and trip the faulted line and remove fault.	Stable	Stable	Stable
33	FLT33- PO	**Sibley Prior Outage Scenario 4** d. Prior Outage: Switch out Sibley (541201) to G15-005 TAP (560028) 345kV circuit 1 and solve. e. Apply 3 phase fault on the Nebraska City/S3458 (645458) to Sarpy/S3456 (645456) 345kV line circuit 1, near Nebraska City/S3458. f. Clear fault after 4.5 cycles and trip the faulted line and remove fault.	Stable	Stable	Stable
34	FLT34- PO	**Nebraska City/S3458 Prior Outage Scenario 1** d. Prior Outage: Switch out Nebraska City/S3458 (645458) to G14-021 TAP (560009) 345kV circuit 1 and solve. e. Apply 3 phase fault on Sibley (541201) to Pleasant Hill (541200) 345kV line circuit 1, near Sibley. f. Clear fault after 4.5 cycles and trip the faulted line.	Stable	Stable	Stable
35	FLT35- PO	**Nebraska City/S3458 Prior Outage Scenario 2** d. Prior Outage: Switch out Nebraska City/S3458 (645458) to G14-021 TAP (560009) 345kV circuit 1 and solve. e. Apply 3 phase fault on Sibley (541201) to Hawthorne (542972) 345kV line circuit 1, near Sibley. f. Clear fault after 4.5 cycles and trip the faulted line.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
36	FLT36- PO	**Nebraska City/S3458 Prior Outage Scenario 3** d. Prior Outage: Switch out Nebraska City/S3458 (645458) to G14-021 TAP (560009) 345kV circuit 1 and solve. e. Apply 3 phase fault on Sibley (541201) to Overton (345408) 345kV line circuit 1, near Sibley. f. Clear fault after 4.5 cycles and trip the faulted line.	Stable	Stable	Stable
37	FLT37- PO	**Nebraska City/S3458 Prior Outage Scenario 4** d. Prior Outage: Switch out Nebraska City/S3458 (645458) to G14-021 TAP (560009) 345kV circuit 1 and solve. e. Apply 3 phase fault on Sibley (541201) 345/(541202) 161/(541360) 13.8kV transformer circuit 1. f. Clear fault after 5 cycles and trip the faulted transformer and remove fault.	Stable	Stable	Stable

7.2. Fault Simulated for ASGI-2016-003 Request

Table 7.2.1, summarizes the overall results for all simulations for ASGI-2016-003 request. Complete sets of plots for winter-2016, summer-2017, and summer-2025 peak seasons for each fault for ASGI-2016-003 are in Appendices F1, F2, and F3 respectively.

Table 7.2.1: List of simulated faults for stability analysis (ASGI-2016-003)

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
14	FLT14-3PH	3 phase fault on the PHILL 7 (541200) to PECULR 7 (541198) 345kV line, near PHILL 7 a. Apply fault at the PHILL 7 345kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
15	FLT15-3PH	3 phase fault on the PAOLA 5 (543069) to CNTRVIL5 (543065) 161kV line, near PAOLA 5 a. Apply fault at the PAOLA 5 161kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
16	FLT16-3PH	3 phase fault on the PAOLA 5 (543069) to S.OTTWA5 (543066) 161kV line, near PAOLA 5 a. Apply fault at the PAOLA 5 161kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
17	FLT17-3PH	3 phase fault on the PAOLA 5 (543069) to CENTENL5 (543067) 161kV line, near PAOLA 5 a. Apply fault at the PAOLA 5 161kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
18	FLT18-3PH	3 phase fault on the CNTRVIL5 (543065) to G15-016-TAP (560029) 161kV line, near CNTRVIL5 a. Apply fault at the CNTRVIL5 161kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
19	FLT19-3PH	3 phase fault on the S.OTTWA5 (543066) to SEOTTWA5 (543055) 161kV line, near S.OTTWA5. a. Apply fault at the S.OTTWA5 161kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
20	FLT20-3PH	3 phase fault on the CENTENL5 (543067) to WAGSTAF5 (543068) 161kV line, near CENTENL5 a. Apply fault at the CENTENL5 161kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
21	FLT21-3PH	3 phase fault on the G15-016-TAP (560029) to MARMTNE5 (532934) 161kV line, near G15-016-TAP. a. Apply fault at the G15-016-TAP 161kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.	Stable	Stable	Stable
22	FLT22-PO	**Prior Outage of PAOLA 5 to CNTRVIL5 161kV line** a. Prior Outage PAOLA 5 (543069) to CNTRVIL5 (543065) 161kV line. b. 3 phase fault on the PAOLA 5 (543069) to S.OTTWA5 (543066) 161kV line, near PAOLA 5. c. Clear fault after 5 cycles and trip the faulted line. d. Wait 20 cycles, and then re-close the line in (c) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (c) and remove fault.	Stable	Stable	Stable
23	FLT23-PO	**Prior Outage of PAOLA 5 to CNTRVIL5 161kV line** a. Prior Outage PAOLA 5 (543069) to CNTRVIL5 (543065) 161kV line. b. 3 phase fault on the PAOLA 5 (543069) to CENTENL5 (543067) 161kV line, near PAOLA 5. c. Clear fault after 5 cycles and trip the faulted line. d. Wait 20 cycles, and then re-close the line in (c) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (c) and remove fault.	Stable	Stable	Stable

Cont. #	Contingency Name	Description	2016 Winter Results	2017 Summer Results	2025 Summer Results
24	FLT24-PO	**Prior Outage of PAOLA 5 to CENTENL5 161kV line** a. Prior Outage PAOLA 5 (543069) to CENTENL5 (543067) 161kV line. b. 3 phase fault on the PAOLA 5 (543069) to S.OTTWA5 (543066) 161kV line, near PAOLA 5. c. Clear fault after 5 cycles and trip the faulted line. d. Wait 20 cycles, and then re-close the line in (c) back into the fault. e. Leave fault on for 5 cycles, then trip the line in (c) and remove fault.	Stable	Stable	Stable

7.3.Simulation Results for Stand-Alone Scenarios

There are no impacts on the stability performance for stand-alone scenarios of the SPP system for the contingencies tested on the SPP provided base cases.

8. Conclusions

The findings of the impact study for the proposed interconnection projects under DISIS-2016-001 (Group 13) considered 100% of their proposed installed capacity is as follows:

1. The power factor analysis indicates the DISIS-2016-001 (Group 13) interconnection requests i.e., GEN-2016-040, and ASGI-2016-003 are required to maintain the SPP standard power factor at the point of interconnection i.e., Nebraska City-Sibley 345kV (G15051640TAP, 560028), and Paola 161kV (543069) based on the contingencies studied. Per the SPP OATT, the Interconnection Customer will be required to provide 95% lagging (supplying vars) and 95% leading (absorbing vars) at the POI.

2. To offset the capacitive effects of the collector system and transmission line of the wind farm under low wind or no wind conditions, the inductive reactive support analysis for wind generator GEN-2016-040 performed for Summer-2017 scenario. This analysis indicates that at POI Nebraska City-Sibley 345kV (G15051640TAP, 560028) 9.1 MVAR reactor is required at Bus 584490 to maintain zero MVAR flow at POI. Maintaining zero MVARs flow at the POI at all times is not possible with static reactor banks. It will be determined on a case by case basis for each generator as to whether additional reactor banks are required for low wind conditions.

3. There are no impacts on the stability performance of the SPP system during cluster scenario for the contingencies tested on the provided base cases. The study machines stayed on-line and stable for all simulated faults. The project stability simulations with thirty six (36) specified test disturbances did not show instability problems in the SPP system. Any oscillations were damped out.

9. **Appendix A: 2016 Winter Peak Case Stability Run Plots – Cluster**

10. **Appendix B: 2017 Summer Peak Case Stability Run Plots – Cluster**

11. **Appendix C: 2025 Summer Peak Case Stability Run Plots – Cluster**

12. **Appendix D: Project Model Data**

13. **Appendix E1: 2016 winter Peak Case Stability Run Plots for GEN-2016-040 Stand-Alone Scenario**

14. **Appendix E2: 2017 summer Peak Case Stability Run Plots for GEN-2016-040 Stand-Alone Scenario**

15. **Appendix E3: 2025 Summer Peak Case Stability Run Plots for GEN-2016-040 Stand-Alone Scenario**

16. **Appendix F1: 2016 winter Peak Case Stability Run Plots for ASGI-2016-003 Stand-Alone Scenario**

17. **Appendix F2: 2017 summer Peak Case Stability Run Plots for ASGI-2016-003 Stand-Alone Scenario**

18. **Appendix F3: 2025 Summer Peak Case Stability Run Plots for ASGI-2016-003 Stand-Alone Scenario**

11.17.11 J14: GROUP 14 DYNAMIC STABILITY ANALYSIS REPORT

S&C ELECTRIC COMPANY
Excellence Through Innovation

DISIS-2016-001 (GROUP 14)

LITTLE ROCK, AR

SOUTHWEST POWER POOL

DEFINITIVE INTERCONNECTION SYSTEM IMPACT STUDY

S&C PROJECT NUMBER: 10994

DOCUMENT NUMBER: E-857

REVISION: 0

FINAL REPORT

CONFIDENTIAL

JANUARY 26, 2017

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REPORT REVISION HISTORY:

REV	DATE	PREPARED BY	REVIEWED BY	APPROVED BY	DESCRIPTION
A	01/06/2017	SB & MA	SK	SK	Preliminary report issued
0	01/26/2017	MA	SK	SK	Final report issued

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1. EXECUTIVE SUMMARY

S&C Electric Company (S&C) has performed several analyses as part of a Definitive Interconnection System Impact Study, DISIS-2016-001 (Group 14), in response to a request through Southwest Power Pool (SPP) to administer a subsection of Attachment V to the SPP Open Access Transmission Tariff (Tariff). Group 14 consists of five (5) new generator interconnection requests (GEN-2015-036, GEN-2016-028, GEN-2016-030, GEN-2016-042, and GEN-2016-063).

S&C has performed dynamic stability analysis for Group 14 under Cluster and Stand-Alone (SA) scenarios. The cluster studies were performed using three (3) cluster base cases (2016 Winter Peak (WP), 2017 Summer Peak (SP), and 2025 SP) provided by SPP. In the cluster studies, all five new interconnection requests and prior-queued projects were studied at 100% of nameplate MW capacity. The standalone studies were performed using three (3) standalone base cases (2016 WP, 2017 SP, and 2025 SP) provided by SPP and by placing an interconnection request into service, one at a time. The in-service interconnection project was dispatched at 100% power and the four (4) out of service interconnection projects were set to zero generation or to its pre-project value if the project is an increase to an existing project or facility. The dynamic stability study revealed that Group 14 projects met the SPP transient voltage requirements, with the solutions illustrated in the dynamic stability results section of this report.

S&C has performed power factor analysis on Group 14 Cluster scenarios. Power factor analysis reported the power factors at the study projects point of interconnection (POI) for all N-1 three-phase contingencies and marked the contingency at which the required power factor at the POI of study projects to maintain the voltages at the desired level is beyond the normal required capability (from 0.95 lagging to 0.95 leading) of the studied projects. The power factor requirement for GEN-2015-036, GEN-2016-028, GEN-2016-030, GEN-2016-042, and GEN-2016-063 interconnection requests is from 0.95 lagging to 0.95 leading power factor at the POIs.

S&C has performed an analysis of low wind/low solar irradiance conditions for interconnection requests that are renewable energy projects. The low wind/low solar irradiance analysis was performed only under the cluster cases by taking the interconnection generation out of service

and determining the Mvar size of a shunt reactor to offset the reactive power generated from the capacitance of the project's transmission lines and collector cables. The shunt reactor Mvars are given in Section 8.

S&C has performed a short-circuit analysis for the 2017 Summer Peak and 2025 Summer Peak under Group 14 Cluster and reported short circuit results at all buses up to five (5) levels away from the POI of the study projects.

2. INTRODUCTION

S&C has performed several analyses as part of a Definitive Interconnection System Impact Study, DISIS-2016-001 (Group 14), in response to a request through the SPP to administer a subsection of Attachment V to the SPP Tariff (Tariff). Group 14 consist of five (5) new interconnection requests listed in

Table 1 and eight (8) previously queued projects listed in

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2011-040	110.4	Siemens 2.3MW	Tap Ratliff – Poolville 138 kV (515561)
GEN-2011-050	109.8	Vestas V90 1.8MW	Tap on the Rushspt4 to Ommarlo4 138 kV line (G11_050-TAP 138 kV, 511492)
GEN-2012-004	41.4MW increase (total output 151.8MW)	Siemens 2.3MW	Tap Ratliff – Poolville 138 kV (515561)
GEN-2013-007	100.0	Vestas V100 2.0MW	Arbuckle to Jollyville 138 kV (515575)
GEN-2014-057	250.0	GE 2.1MW	LES (511468) to Sunnyside (515136) 345 kV (Proposed AEP Terry Road 345 kV, 560013)
ASGI-2015-006	9.0	Eaton Xpert Solar 1500kW Inverter (solar)	SWPA Tupelo 138 kV (505600)
GEN-2015-045	20.0	Parker 890GT-B 2.0MW inverters (battery storage)	LES (511468) to Sunnyside (515136) 345 kV (Proposed AEP Terry Road 345 kV, 560013)
GEN-2015-092	250.0	GE 2.0MW (wind)	LES (511468) to Sunnyside (515136) 345 kV (Proposed AEP Terry Road 345 kV, 560013)

Table 2.

Table 1: Group 1 Generation Interconnection Requests

Project	Size (MW)	Generator Model	Generator Bus(es)	Point of Interconnection (POI)	POI Bus
GEN-2015-036	303.6	Siemens 2.3 MW (wind)	584783 / 584786	PSO Johnston County 345 kV	514809
GEN-2016-028	100	Vestas V110 VCSS 2.0 MW (wind)	587183	Clayton 138 kV	510919
GEN-2016-030	100	AE 500NX 0.5MW (solar)	587203	Brown 138 kV	515157
GEN-2016-042	22 uprate to GEN-2014-057 (total = 270.9MW)	GE 2.3MW & 1.79MW (wind)	584073	Tap on LES to Sunnyside 345kV	560013
GEN-2016-063	200	Vestas V110 VCSS 2.0MW	587433 / 587436	Tap on Hugo to Sunnyside 345kV	560088

Table 2: Prior Queued Projects

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2011-040	110.4	Siemens 2.3MW	Tap Ratliff – Poolville 138 kV (515561)
GEN-2011-050	109.8	Vestas V90 1.8MW	Tap on the Rushspt4 to Ommarlo4 138 kV line (G11_050-TAP 138 kV, 511492)
GEN-2012-004	41.4MW increase (total output 151.8MW)	Siemens 2.3MW	Tap Ratliff – Poolville 138 kV (515561)
GEN-2013-007	100.0	Vestas V100 2.0MW	Arbuckle to Jollyville 138 kV (515575)
GEN-2014-057	250.0	GE 2.1MW	LES (511468) to Sunnyside (515136) 345 kV (Proposed AEP Terry Road 345 kV, 560013)
ASGI-2015-006	9.0	Eaton Xpert Solar 1500kW Inverter (solar)	SWPA Tupelo 138 kV (505600)
GEN-2015-045	20.0	Parker 890GT-B 2.0MW inverters (battery storage)	LES (511468) to Sunnyside (515136) 345 kV (Proposed AEP Terry Road 345 kV, 560013)
GEN-2015-092	250.0	GE 2.0MW (wind)	LES (511468) to Sunnyside (515136) 345 kV (Proposed AEP Terry Road 345 kV, 560013)

3. TRANSMISSION SYSTEM AND STUDY AREA

The interconnection requests in Group 14 will interconnect into American Electric Power West (AEPW, Area #520) and Oklahoma Gas & Electric (OKGE, Area #524).

In addition to Areas #520 and #524, the following areas were monitored also:

- Western Farmers Electric Cooperative (WFEC, Area #525)
- Southwestern Public Service (SPS, Area #526)
- Midwest Energy (MIDW, Area #531)
- Sunflower Electric Power Corporation (SUNC, Area #534)
- Westar Energy, Inc. (WERE, Area #536)

4. POWER FLOW BASE CASES

DISIS-2016-001 (Group 14) and prior-queued projects were modeled as aggregated generating units in the base cases from SPP.

Cluster Scenario Base Cases

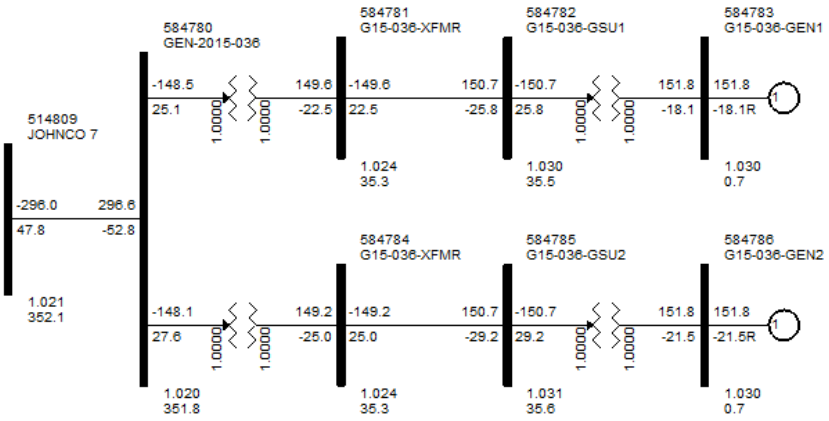
- **MDWG15-16WP_DIS1601_G14.sav** – 2016 Winter Peak Cluster Base Case for Group 14. New interconnection requests and prior queued projects at 100% output power.
- **MDWG15-17SP_DIS1601_G14.sav** – 2017 Summer Peak Cluster Base Case for Group 14. New interconnection requests and prior queued projects at 100% output power.
- **MDWG15-25SP_DIS1601_G14.sav** – 2025 Summer Peak Cluster Base Case for Group 14. New interconnection requests and prior queued projects at 100% output power.

Stand-Alone Scenario Base Cases

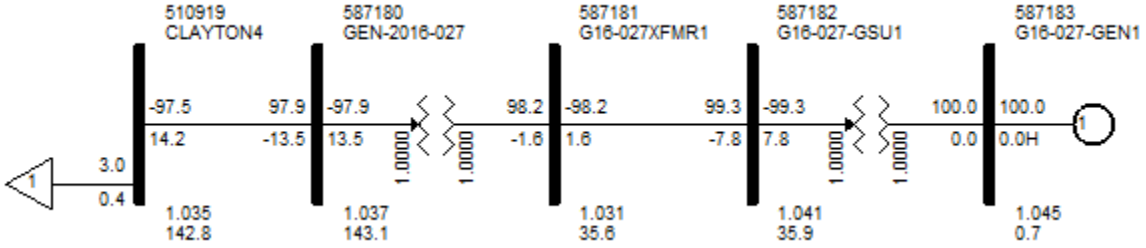
- **MDWG15-16WP_DIS1601_G14_SA.sav** – 2016 Winter Peak SA Base Case for Group 14. New interconnection requests currently out of service.
- **MDWG15-17SP_DIS1601_G14_SA.sav** – 2017 Summer Peak SA Base Case for Group 14. New interconnection requests currently out of service.
- **MDWG15-25SP_DIS1601_G14_SA.sav** – 2025 Summer Peak SA Base Case for Group 14. New interconnection requests currently out of service.

5. POWER FLOW MODEL

SPP's base case power flow models were built in PSS/E 32.2.1. In PSS/E of the same version, S&C created one-line diagrams depicted in Figure 1 for each interconnection request.

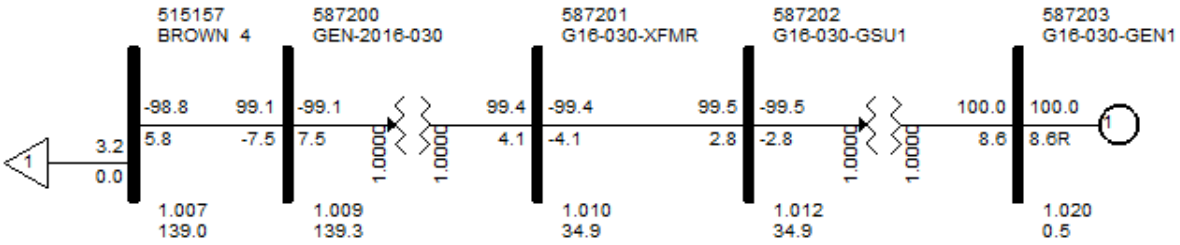


(a) Interconnection request GEN-2015-036

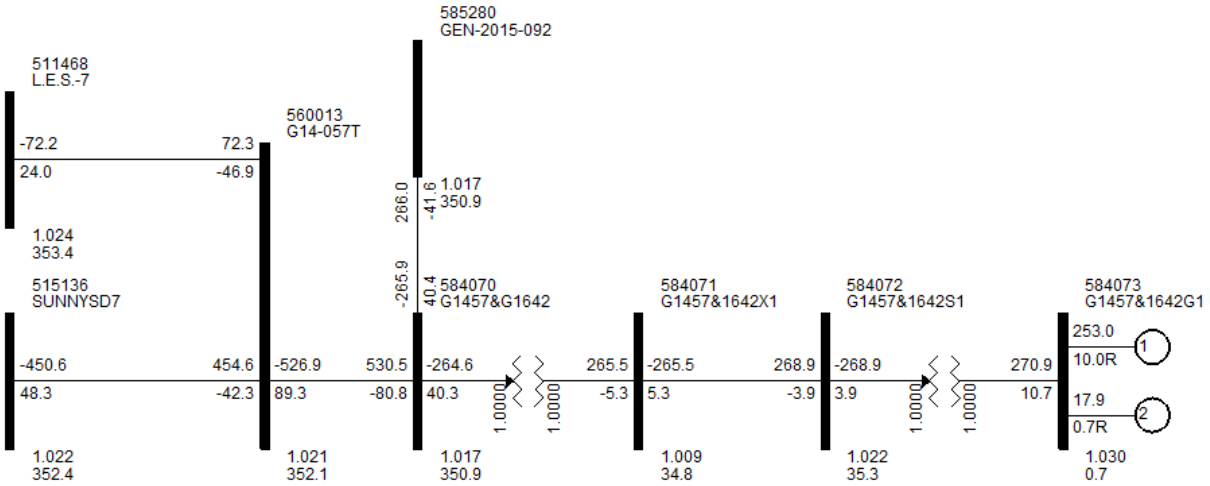


(b) Interconnection request GEN-2016-028

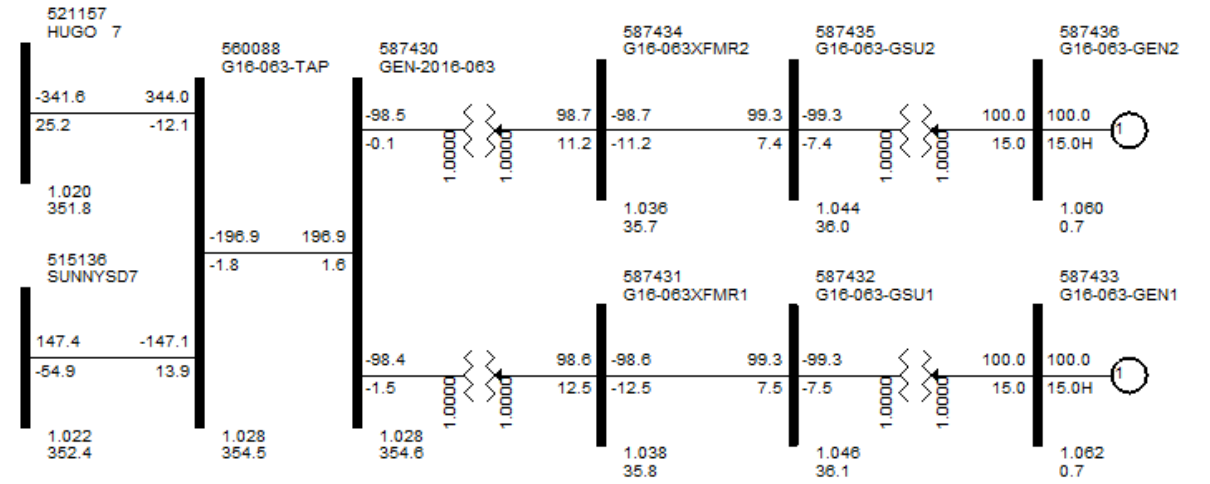
Note: Per SPP, GEN-2016-028 is the correct naming convention (not GEN-2016-027 as shown above)



(c) Interconnection request GEN-2016-030



(d) Interconnection request GEN-2016-042



(e) Interconnection request GEN-2016-063

Figure 1: One-line Diagrams of the Interconnection Request Projects

6. DYNAMIC STABILITY ANALYSIS

6.1. ASSUMPTIONS

Dynamic stability analysis was performed for all the SPP contingencies listed in Appendix A. Three phase faults were simulated as bolted faults, while single line-to-ground faults were simulated under the assumption that a single line-to-ground fault will cause a 40% drop in the positive-sequence voltage at the fault location.

6.2. STABILITY CRITERIA

Dynamic stability studies were performed to ensure system stability following critical faults on the system. The system is considered stable if the following conditions are met:

(1) Disturbances including three-phase and single-phase to ground faults, should not cause synchronous and asynchronous plants to disconnect from the transmission grid.

(2) The angular positions of synchronous machine rotor become constant following an aperiodic system disturbance.

(3) Voltage magnitudes and frequencies at terminals of asynchronous generators should not exceed magnitudes and durations that will cause protection elements to operate. Furthermore, the response after the disturbance needs to be studied at the terminals of the machine to ensure that there are no sustained oscillations in power output, speed, frequency, etc.

(4) Voltage magnitudes and angles after the disturbance should settle to a constant and acceptable operating level. Frequencies should settle to the acceptable range within nominal 60 Hz power frequency.

In addition, performance of the transmission system is measured against the SPP Disturbance Criteria Requirements on Angular oscillations and Transient Voltage Recovery, detailed in Appendix B.

6.3. DYNAMIC STABILITY RESULTS

Some concerns surfaced during preliminary dynamic stability simulations. A detailed list of such concerns and how they were addressed is shown below.

- Generation Interconnection Request GEN-2016-030 (involving AE solar inverters) was tripping offline due to overfrequency during FLTs 38-45 and FLTs 52-56.
    - This issue was also encountered and discussed with SPP in the previous DISIS-2015-002 GR7 study. In this previous study, SPP provided an IDV file titled "GEN-2015-055_AEINX_OverFreq_extended.idv" to change the over-frequency parameters. The same IDV file was also applied during this study.

- High voltage conditions were observed near Generation Interconnection Request GEN-2016-028 in the stand-alone cases.
    - To resolve the issue, the reactive power output of GEN-2016-028 was changed to $Q_{GEN} = Q_{MAX} = Q_{MIN} = 0$ Mvar to match the Cluster cases. Such an adjustment is acceptable for the Vestas turbines (provided a power factor range of +0.98 to -0.96 is maintained).

Dynamic stability simulations were performed once again after implementing the solutions described above. Table 3 below summarizes the dynamic stability results for each contingency and each season.

Table 3: Group 14 Dynamic Stability Results
(YES = STABLE, NO = UNSTABLE)

Cont. No.	Cont. Name	16WP: Cluster	16WP: GEN-15-36	16WP: GEN-16-28	16WP: GEN-16-30	16WP: GEN-16-42	16WP: GEN-16-63	17SP: Cluster	17SP: GEN-15-36	17SP: GEN-16-28	17SP: GEN-16-30	17SP: GEN-16-42	17SP: GEN-16-63	25SP: Cluster	25SP: GEN-15-36	25SP: GEN-16-28	25SP: GEN-16-30	25SP: GEN-16-42	25SP: GEN-16-63
1	FLT01-3PH	YES	YES	-	-	-	-	YES	YES	-	-	-	-	YES	YES	-	-	-	-
2	FLT02-3PH	YES	YES	-	-	-	-	YES	YES	-	-	-	-	YES	YES	-	-	-	-
3	FLT03-3PH	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES
4	FLT04-3PH	YES	YES	-	-	-	-	YES	YES	-	-	-	-	YES	YES	-	-	-	-
5	FLT05-3PH	YES	YES	-	-	-	-	YES	YES	-	-	-	-	YES	YES	-	-	-	-
6	FLT06-3PH	YES	YES	-	-	-	-	YES	YES	-	-	-	-	YES	YES	-	-	-	-
7	FLT07-3PH	YES	YES	-	-	-	-	YES	YES	-	-	-	-	YES	YES	-	-	-	-
8	FLT08-3PH	YES	YES	-	-	-	-	YES	YES	-	-	-	-	YES	YES	-	-	-	-
9	FLT09-3PH	YES	YES	-	-	-	-	YES	YES	-	-	-	-	YES	YES	-	-	-	-
10	FLT10-3PH	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES
11	FLT11-3PH	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES
12	FLT12-3PH	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES
13	FLT13-SB	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES
14	FLT14-SB	YES	YES	-	-			YES	YES	-	-			YES	YES	-	-		
15	FLT15-SB	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES
16	FLT16-SB	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES
17	FLT17-SB	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES
18	FLT18-SB	YES	YES	-	-			YES	YES	-	-			YES	YES	-	-		
19	FLT19-PO	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES
20	FLT20-PO	YES	YES	-	-			YES	YES	-	-			YES	YES	-	-		
21	FLT21-PO	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES
22	FLT22-PO	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES
23	FLT23-PO	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES
24	FLT24-3PH	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-
25	FLT25-3PH	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-
26	FLT26-3PH	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-
27	FLT27-3PH	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-
28	FLT28-SB	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-
29	FLT29-SB	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-
30	FLT30-SB	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-
31	FLT31-SB	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-
32	FLT32-SB	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-
33	FLT33-PO	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-
34	FLT34-PO	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-
35	FLT35-PO	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-
36	FLT36-PO	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-
37	FLT37-PO	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-
38	FLT38-3PH	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
39	FLT39-3PH	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
40	FLT40-3PH	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
41	FLT41-3PH	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
42	FLT42-3PH	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-

Cont. No.	Cont. Name	16WP: Cluster	16WP: GEN-15-36	16WP: GEN-16-28	16WP: GEN-16-30	16WP: GEN-16-42	16WP: GEN-16-63	17SP: Cluster	17SP: GEN-15-36	17SP: GEN-16-28	17SP: GEN-16-30	17SP: GEN-16-42	17SP: GEN-16-63	25SP: Cluster	25SP: GEN-15-36	25SP: GEN-16-28	25SP: GEN-16-30	25SP: GEN-16-42	25SP: GEN-16-63
43	FLT43-3PH	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
44	FLT44-3PH	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
45	FLT45-3PH	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
46	FLT46-SB	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
47	FLT47-SB	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
48	FLT48-SB	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
49	FLT49-SB	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
50	FLT50-SB	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
51	FLT51-SB	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
52	FLT52-PO	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
53	FLT53-PO	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
54	FLT54-PO	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
55	FLT55-PO	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
56	FLT56-PO	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-	YES	-	-
57	FLT57-3PH	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-
58	FLT58-3PH	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-
59	FLT59-3PH	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-
60	FLT60-3PH	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-
61	FLT61-SB	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-
62	FLT62-SB	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-
63	FLT63-SB	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-
64	FLT64-SB	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-
65	FLT65-SB	YES	YES		-	YES	YES	YES	YES		-	YES	YES	YES	YES		-	YES	YES
66	FLT66-PO	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-
67	FLT67-PO	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES[1]	-
68	FLT68-PO	YES	-	-	-	YES	-	YES	-	-	-	YES	-	YES	-	-	-	YES	-
69	FLT69-3PH	YES	-	-	-	-	YES	YES	-	-	-	-	YES	YES	-	-	-	-	YES
70	FLT70-3PH	YES	-	-	-	-	YES	YES	-	-	-	-	YES	YES	-	-	-	-	YES
71	FLT71-3PH	YES	-	-	-	-	YES	YES	-	-	-	-	YES	YES	-	-	-	-	YES
72	FLT72-SB	YES	-	-	-	-	YES	YES	-	-	-	-	YES	YES	-	-	-	-	YES
73	FLT73-SB	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES
74	FLT74-PO	YES	-	-	-	-	YES	YES	-	-	-	-	YES	YES	-	-	-	-	YES
75	FLT75-PO	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES	YES	YES	-	-	YES	YES

[1] To initialize the case, a modification was made to ASGI-2011-001 to correct an issue with the dynamic model of the Suzlon wind turbine. More specifically, “Winding (1-2) Angle” of the GSU transformer attached to bus 579423 was changed to -30°.

In reviewing the results of Table 3, it should be noted that occasional poor damping were witnessed with regards to the terminal voltage of Prior Queued Project GEN-2015-045. The figure below demonstrates some examples of these abnormalities.

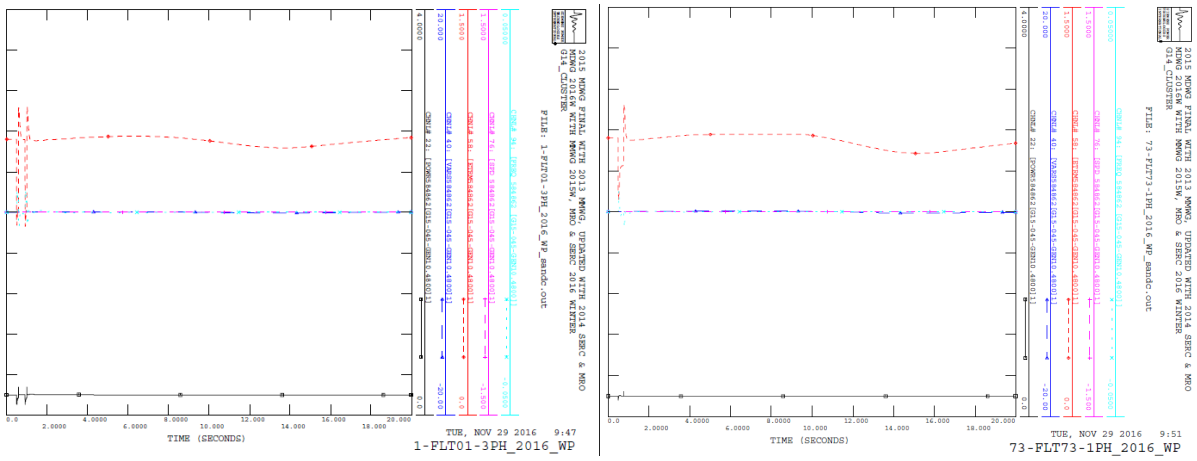


Figure 2: Examples of Voltage Poor Damping With GEN-2015-045 (Red)
Left = FLT01 from 2016WP Cluster Case
Right = FLT73 from 2016WP Cluster Case

However, since the voltage waveforms in the figure above fall within the specified post-transient voltage range, these results were considered stable. As a result, dynamic stability analysis thus concluded that Group 14 is expected to successfully ride-through all contingencies specified by SPP and the nearby areas retained frequency and voltage stability. Detailed plots of cluster dynamic stability results for each contingency and each peak season, are given in Appendix C. Plots of stand-alone dynamic stability result for each contingency and each season are given Appendix D.

7. Power Factor Analysis

The power factor analysis was performed under the cluster bases and for all N-1 three-phase contingencies shown in the Fault Definition table in Appendix A. Single-phase contingencies, N-1-1 contingencies and N-2 contingencies were excluded from the study. Prior to the run, the cluster base cases were slightly altered, by turning off the renewable energy projects and replacing them by a generator at the high voltage bus with the MW rating of the renewable project at that POI and no var capability. A new var generator was placed at each renewable energy project high voltage bus for supporting the reactive power. The var generators were set to hold the voltage schedule at the interconnection project consistent with the voltage schedules in the provided base case or 1.0 p.u. voltage (whichever is higher).

Table 4 gives the voltage schedule at each interconnection request location in the original cluster base cases.

Table 4: Base Case Voltages at the Interconnection Request POI Bus

Request	POI	2016 Winter Peak (p.u.)	2017 Summer Peak (p.u.)	2025 Summer Peak (p.u.)
GEN-2015-036	514809	1.021	1.021	1.023
GEN-2016-028	510919	1.035	1.035	1.032
GEN-2016-030	515157	1.007	1.001	1.000
GEN-2016-042	560013	1.021	1.021	1.019
GEN-2016-063	560088	1.028	1.032	1.038

The power factor analysis results for Group 14 interconnection requests for each N-1 three phase contingency were presented in Appendix E. We marked in pink color the contingencies (if any) at which the required power factor at the POI of the study project is beyond the normal required capability (from 0.95 lagging to 0.95 leading) of the studied renewable energy project. We also provided a summary Table 5 of the maximum leading/lagging reactive power demand and power factor found by the power factor analysis at the POIs.

The power factor requirement for GEN-2015-036, GEN-2016-028, GEN-2016-030, GEN-2016-042, and GEN-2016-063 interconnection requests is from 0.95 lagging to 0.95 leading power factor at the POIs.

Table 5: Summary of Power Factor Analysis at the POI

Request	Capacity	POI	Reactive Power/Power Factor at the POI	
			Leading (absorbing vars)	Lagging (providing vars)
GEN-2015-036	303.6 MW	514809	-79.6 Mvar / 0.967	N/A
GEN-2016-028	100 MW	510919	-18.8 Mvar / 0.983	N/A
GEN-2016-030	100 MW	515157	-15.6 Mvar / 0.988	26.4 Mvar / 0.967
GEN-2016-042	Total = 270.9 MW	560013	-103.4 Mvar / 0.982*	N/A*
GEN-2016-063	200 MW	560088	-26.3 Mvar / 0.991	41.4 Mvar / 0.979

**Bus 584070 is the substation high side bus for GEN-2016-042. Bus 584070 is also connected to the substation high side bus for Prior-Queued Projects GEN-2015-045 and GEN-2015-092. The value shown corresponds to the power factor results for all these projects ($P_{TOTAL} \approx 541$ MW).*

NOTE: Per the SPP Tariff as reactive power is required for all projects, the final requirement in the GIA will be the pro-forma 95% lagging to 95% leading at the point of interconnection.

8. Low Wind/Low Solar irradiance Conditions Analysis

S&C has performed an analysis of low wind/low solar irradiance conditions for the interconnection requests that is a renewable energy project. The low wind/low solar irradiance analysis was performed under the Cluster scenarios by taking the interconnection renewable energy project out of service and placing a shunt reactor at the project substation high side to offset the reactive power generated from the capacitance of the project's transmission lines and collector cables. The size of the shunt reactor was adjusted such that the net Mvar flow into the POI from the studied renewable energy project was approximately zero. Table 6 gives the shunt reactor Mvars for the studied projects.

Table 6: Shunt Reactor Mvar Determined by Low Wind/Low Irradiance Study

Request	POI	2016 Winter Peak	2017 Summer Peak	2025 Summer Peak
GEN-2015-036	514809	20.0	20.0	20.0
GEN-2016-028	510919	8.4	8.4	8.4
GEN-2016-030	515157	4.9	4.9	4.9
GEN-2016-042	560013	33.1*	33.1*	33.1*
GEN-2016-063	560088	10.1	10.1	10.1

**Bus 584070 is the substation high side bus for GEN-2016-042. Bus 584070 is also connected to the substation high side bus for Prior Queued Projects GEN-2015-045 and GEN-2015-092. The value shown corresponds to the reactor requirement for all these projects ($P_{TOTAL} \approx 541$ MW).*

9. SHORT-CIRCUIT STUDY

A short-circuit study has been performed on the power flow models for the 2017 SP and 2025 SP Seasons for each generator using the Cluster Scenario model. Short-circuit analysis includes applying a 3-phase fault on buses up to 5 levels away from the POI of each interconnection request project. PSS/E "Automatic Sequence Fault Calculation (ASCC)" fault analysis module was used for the purpose of short-circuit analysis. The results of the short-circuit analysis have been recorded for all the buses up to five levels away from the point of interconnection of each interconnection request project. Detailed results of the short-circuit study are provided in Appendix F.

10. CONCLUSIONS AND RECOMMENDATIONS

With the adjustments mentioned in Section 6, Group 14's dynamic results (Cluster and Stand-Alone) indicated that the interconnection request projects are expected to successfully ride through all N-1, N-1-1, and N-2 fault contingencies specified by SPP, retaining angular, frequency and voltage stability at the nearby areas and meeting the transient voltage recovery requirement by SPP. It is thus concluded that Group 14 study projects are expected to successfully interconnect into the transmission system at their desired locations for 100% power outputs.

The results of power factor analysis indicate that all the interconnection requests are able to maintain a power factor of 0.95 lagging to 0.95 leading at the POI to meet SPP's requirements.

The project's low wind/low solar irradiance study suggested that to offset the reactive power from the capacitance of the project's transmission lines and collector cables during the low wind/low irradiance conditions, a 20.0 Mvar shunt reactor size is required for the POI bus #514809, 8.4 Mvar for the POI bus #510919, 4.9 Mvar for the POI bus #515157, 33.1 Mvar for the POI bus #560013 (including prior-queued projects), and a 10.1 Mvar for the POI bus #560088.

A short-circuit study has been performed on the power flow models for the 2017 Summer Peak Season and 2025 Summer Peak Season for each generator using the Cluster Scenario model. A 3-phase fault is applied on buses up to 5 levels away from the POI of each interconnection request project and the results of the study have been presented.

APPENDIX A

SPP GROUP 14 FAULT DEFINITIONS

Fault Definitions

Cont. No.	Cont. Name	Description
1	FLT01-3PH	3 phase fault on JOHNCO 7 345 kV (514809) to PITTSB-7 345 kV (510907), near JOHNCO 7. a. Apply fault at the JOHNCO 7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
2	FLT02-3PH	3 phase fault on the JOHNCO 7 345 kV (514809) to JOHNCO 4 138 kV (514808) to JOHNCO11 13.8 kV (514810) XFMR, near JOHNCO 7 345 kV. a. Apply fault at the JOHNCO 7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
3	FLT03-3PH	3 phase fault on JOHNCO 7 345 kV (514809) to SUNNYSD7 345 kV (515136), near JOHNCO 7. a. Apply fault at the JOHNCO 7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
4	FLT04-3PH	3 phase fault on PITTSB-7 345 kV (510907) to VALIANT7 345 kV (510911), near PITTSB-7. a. Apply fault at the PITTSB-7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
5	FLT05-3PH	3 phase fault on PITTSB-7 345 kV (510907) to SEMINOL7 345 kV (515045), near PITTSB-7. a. Apply fault at the PITTSB-7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
6	FLT06-3PH	3 phase fault on PITTSB-7 345 kV (510907) to C-RIVER7 345 kV (515422), near PITTSB-7. a. Apply fault at the PITTSB-7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
7	FLT07-3PH	3 phase fault on JOHNCO 4 138 kV (514808) to RUSSET-4 138 kV (515120), near JOHNCO 4. a. Apply fault at the JOHNCO 4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Fault Definitions

Cont. No.	Cont. Name	Description
8	FLT08-3PH	3 phase fault on JOHNCO 4 138 kV (514808) to SXMLCKT4 138 kV (515122), near JOHNCO 4. a. Apply fault at the JOHNCO 4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
9	FLT09-3PH	3 phase fault on JOHNCO 4 138 kV (514808) to CANEYCK4 138 kV (515150), near JOHNCO 4. a. Apply fault at the JOHNCO 4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
10	FLT10-3PH	3 phase fault on SUNNYSD7 345 kV (515136) to G14-057T 345 kV (560013), near SUNNYSD7. a. Apply fault at the SUNNYSD7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
11	FLT11-3PH	3 phase fault on the SUNNYSD7 345 kV (515136) to SUNNYSD4 138 kV (515135) to SUNNYSD1 13.8 kV (515762) XFMR, near SUNNYSD7 345 kV. a. Apply fault at the SUNNYSD7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
12	FLT12-3PH	3 phase fault on SUNNYSD7 345 kV (515136) to G16-063-TAP 345 kV (560088), near SUNNYSD7. a. Apply fault at the SUNNYSD7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
13	FLT13-SB	**Stuck Breaker at JOHNCO 7 (514809)** a. Apply single phase fault at JOHNCO 7 bus. b. Clear fault after 16 cycles and trip the following elements c. JOHNCO 7 (514809) - PITTSB-7 (510907) d. JOHNCO 7 (514809) - SUNNYSD7 (515136)
14	FLT14-SB	**Stuck Breaker at JOHNCO 7 (514809)** a. Apply single phase fault at JOHNCO 7 bus. b. Clear fault after 16 cycles and trip the following elements c. JOHNCO 7 (514809) - PITTSB-7 (510907) d. JOHNCO 7 345kV (514809) / JOHNCO 4 138 kV (514808) / JOHNCO11 13.8 kV (514810) transformer

Fault Definitions

Cont. No.	Cont. Name	Description
15	FLT15-SB	**Stuck Breaker at JOHNCO 7 (514809)** a. Apply single phase fault at JOHNCO 7 bus. b. Clear fault after 16 cycles and trip the following elements c. JOHNCO 7 (514809) - SUNNYSD7 (515136) d. JOHNCO 7 345kV (514809) / JOHNCO 4 138 kV (514808) / JOHNCO11 13.8 kV (514810) transformer
16	FLT16-SB	**Stuck Breaker at SUNNYSD7 (515136)** a. Apply single phase fault at SUNNYSD7 bus. b. Clear fault after 16 cycles and trip the following elements c. SUNNYSD7 (515136) - JOHNCO 7 (514809) d. SUNNYSD7 (515136) - G14-057T (560013)
17	FLT17-SB	**Stuck Breaker at SUNNYSD7 (515136)** a. Apply single phase fault at SUNNYSD7 bus. b. Clear fault after 16 cycles and trip the following elements c. SUNNYSD7 (515136) - JOHNCO 7 (514809) d. SUNNYSD7 (515136) - G16-063-TAP (560088)
18	FLT18-SB	**Stuck Breaker at PITTSB-7 (510907)** a. Apply single phase fault at PITTSB-7 bus. b. Clear fault after 16 cycles and trip the following elements c. PITTSB-7 (510907) - VALIANT7 (510911) d. PITTSB-7 (510907) - JOHNCO 7 (514809)
19	FLT19-PO	**Prior Outage of JOHNCO 7 (514809) to PITTSB-7 (510907) line;** 3 phase fault on JOHNCO 7 (514809) – SUNNYSD7 (515136) near JOHNCO 7 a. Apply fault at the JOHNCO 7 bus. b. Clear fault after 5 cycles and trip the faulted line.
20	FLT20-PO	**Prior Outage of JOHNCO 7 (514809) to PITTSB-7 (510907) line;** 3 phase fault on the JOHNCO 7 345kV (514809) / JOHNCO 4 138 kV (514808) / JOHNCO11 13.8 kV (514810) transformer near JOHNCO 7 a. Apply fault at the JOHNCO 7 bus. b. Clear fault after 5 cycles and trip the faulted line.
21	FLT21-PO	**Prior Outage of JOHNCO 7 (514809) to SUNNYSD7 (515136) line;** 3 phase fault on the JOHNCO 7 345kV (514809) / JOHNCO 4 138 kV (514808) / JOHNCO11 13.8 kV (514810) transformer near JOHNCO 7 a. Apply fault at the JOHNCO 7 bus. b. Clear fault after 5 cycles and trip the faulted line.
22	FLT22-PO	**Prior Outage of SUNNYSD7 (515136) to G14-057T (560013) line;** 3 phase fault on SUNNYSD7 (515136) – JOHNCO 7 (514809) near SUNNYSD7 a. Apply fault at the SUNNYSD7 bus. b. Clear fault after 5 cycles and trip the faulted line.

Fault Definitions

Cont. No.	Cont. Name	Description
23	FLT23-PO	**Prior Outage of SUNNYSD7 (515136) to G16-063-TAP (560088) line;** 3 phase fault on SUNNYSD7 (515136) – JOHNCO 7 (514809) near SUNNYSD7 a. Apply fault at the SUNNYSD7 bus. b. Clear fault after 5 cycles and trip the faulted line.
24	FLT24-3PH	3 phase fault on CLAYTON4 138 kV (510919) to SARDIS 4 138 kV (510926), near CLAYTON4. a. Apply fault at the CLAYTON4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
25	FLT25-3PH	3 phase fault on CLAYTON4 138 kV (510919) to NASHOBA4 138 kV (510927), near CLAYTON4. a. Apply fault at the CLAYTON4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
26	FLT26-3PH	3 phase fault on SARDIS 4 138 kV (510926) to ENOWILT4 138 kV (510944), near SARDIS 4. a. Apply fault at the SARDIS 4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
27	FLT27-3PH	3 phase fault on NASHOBA4 138 kV (510927) to BETHEL 4 138 kV (510928), near NASHOBA4. a. Apply fault at the NASHOBA4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
28	FLT28-SB	**Stuck Breaker at LONEOAK4 (510897)** a. Apply single phase fault at LONEOAK4 bus. b. Clear fault after 16 cycles and trip the following elements c. LONEOAK4 (510897) - SMCALTP4 (510906) d. LONEOAK4 (510897) - ENOWILT4 (510944)
29	FLT29-SB	**Stuck Breaker at LONEOAK4 (510897)** a. Apply single phase fault at LONEOAK4 bus. b. Clear fault after 16 cycles and trip the following elements c. LONEOAK4 (510897) - HARTSHN4 (520934) d. LONEOAK4 (510897) - ENOWILT4 (510944)
30	FLT30-SB	**Stuck Breaker at LONEOAK4 (510897)** a. Apply single phase fault at LONEOAK4 bus. b. Clear fault after 16 cycles and trip the following elements c. LONEOAK4 (510897) - ENOWILT4 (510944) d. LONEOAK4 (510897) - CARBON 4 (520844)

Fault Definitions

Cont. No.	Cont. Name	Description
31	FLT31-SB	**Stuck Breaker at BRKN BW4 (505614)** a. Apply single phase fault at BRKN BW4 bus. b. Clear fault after 16 cycles and trip the following elements c. BRKN BW4 (505614) - BETHEL 4 (510928) d. BRKN BW4 (505614) - CRAIGJT4 (510890)
32	FLT32-SB	**Stuck Breaker at BRKN BW4 (505614)** a. Apply single phase fault at BRKN BW4 bus. b. Clear fault after 16 cycles and trip the following elements c. BRKN BW4 (505614) - HOCHTWN4 (520943) d. BRKN BW4 (505614) - BETHEL 4 (510928)
33	FLT33-PO	**Prior Outage of LONEOAK4 (510897) to SMCALTP4 (510906) line;** 3 phase fault on LONEOAK4 (510897) – ENOWILT4 (510944) near LONEOAK4 a. Apply fault at the LONEOAK4 bus. b. Clear fault after 5 cycles and trip the faulted line.
34	FLT34-PO	**Prior Outage of LONEOAK4 (510897) to HARTSHN4 (520934) line;** 3 phase fault on LONEOAK4 (510897) – ENOWILT4 (510944) near LONEOAK4 a. Apply fault at the LONEOAK4 bus. b. Clear fault after 5 cycles and trip the faulted line.
35	FLT35-PO	**Prior Outage of LONEOAK4 (510897) to ENOWILT4 (510944) line;** 3 phase fault on LONEOAK4 (510897) – CARBON 4 (520844) near LONEOAK4 a. Apply fault at the LONEOAK4 bus. b. Clear fault after 5 cycles and trip the faulted line.
36	FLT36-PO	**Prior Outage of BRKN BW4 (505614) to BETHEL 4 (510928) line;** 3 phase fault on BRKN BW4 (505614) - CRAIGJT4 (510890) near BRKN BW4 a. Apply fault at the BRKN BW4 bus. b. Clear fault after 5 cycles and trip the faulted line.
37	FLT37-PO	**Prior Outage of BRKN BW4 (505614) to HOCHTWN4 (520943) line;** 3 phase fault on BRKN BW4 (505614) - BETHEL 4 (510928) near BRKN BW4 a. Apply fault at the BRKN BW4 bus. b. Clear fault after 5 cycles and trip the faulted line.
38	FLT38-3PH	3 phase fault on BROWN 4 138 kV (515157) to COLEMNT4 138 kV (515153), near BROWN 4. a. Apply fault at the BROWN 4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Fault Definitions

Cont. No.	Cont. Name	Description
39	FLT39-3PH	3 phase fault on BROWN 4 138 kV (515157) to S BROWN4 138 kV (505602), near BROWN 4. a. Apply fault at the BROWN 4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
40	FLT40-3PH	3 phase fault on COLEMNT4 138 kV (515153) to BROWNTP4 138 kV (515152), near COLEMNT4. a. Apply fault at the COLEMNT4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
41	FLT41-3PH	3 phase fault on S BROWN4 138 kV (505602) to RUSSETT4 138 kV (521044), near S BROWN4. a. Apply fault at the S BROWN4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
42	FLT42-3PH	3 phase fault on S BROWN4 138 kV (505602) to COLBRTP4 138 kV (515159), near S BROWN4. a. Apply fault at the S BROWN4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
43	FLT43-3PH	3 phase fault on S BROWN4 138 kV (505602) to TUPELO 4 138 kV (505600), near S BROWN4. a. Apply fault at the S BROWN4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
44	FLT44-3PH	3 phase fault on S BROWN4 138 kV (505602) to KRSYJCTS4 138 kV (521109), near S BROWN4. a. Apply fault at the S BROWN4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
45	FLT45-3PH	3 phase fault on S BROWN4 138 kV (505602) to KRSYJCTN4 138 kV (521108), near S BROWN4. a. Apply fault at the S BROWN4 138 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Fault Definitions

Cont. No.	Cont. Name	Description
46	FLT46-SB	**Stuck Breaker at S BROWN4 (505602)** a. Apply single phase fault at S BROWN4 bus. b. Clear fault after 16 cycles and trip the following elements c. S BROWN4 (505602) - COLBRTP4 (515159) d. S BROWN4 (505602) - BROWN 4 (515157)
47	FLT47-SB	**Stuck Breaker at S BROWN4 (505602)** a. Apply single phase fault at S BROWN4 bus. b. Clear fault after 16 cycles and trip the following elements c. S BROWN4 (505602) - KRSYJCTS4 (521109) d. S BROWN4 (505602) - BROWN 4 (515157)
48	FLT48-SB	**Stuck Breaker at S BROWN4 (505602)** a. Apply single phase fault at S BROWN4 bus. b. Clear fault after 16 cycles and trip the following elements c. S BROWN4 (505602) - KRSYJCTN4 (521108) d. S BROWN4 (505602) - BROWN 4 (515157)
49	FLT49-SB	**Stuck Breaker at S BROWN4 (505602)** a. Apply single phase fault at S BROWN4 bus. b. Clear fault after 16 cycles and trip the following elements c. S BROWN4 (505602) - RUSSETT4 (521044) d. S BROWN4 (505602) - BROWN 4 (515157)
50	FLT50-SB	**Stuck Breaker at BROWNTP4 (515152)** a. Apply single phase fault at BROWNTP4 bus. b. Clear fault after 16 cycles and trip the following elements c. BROWNTP4 (515152) - BODLE 4 (515155) d. BROWNTP4 (515152) - COLEMNT4 (515153)
51	FLT51-SB	**Stuck Breaker at BROWNTP4 (515152)** a. Apply single phase fault at BROWNTP4 bus. b. Clear fault after 16 cycles and trip the following elements c. BROWNTP4 (515152) - LTLCITY4 (515151) d. BROWNTP4 (515152) - COLEMNT4 (515153)
52	FLT52-PO	**Prior Outage of S BROWN4 (505602) to COLBRTP4 (515159) line;** 3 phase fault on S BROWN4 (505602) - BROWN 4 (515157) near S BROWN4. a. Apply fault at the S BROWN4 bus. b. Clear fault after 5 cycles and trip the faulted line.
53	FLT53-PO	**Prior Outage of S BROWN4 (505602) to KRSYJCTN4 (521108) line;** 3 phase fault on S BROWN4 (505602) - BROWN 4 (515157) near S BROWN4. a. Apply fault at the S BROWN4 bus. b. Clear fault after 5 cycles and trip the faulted line.

Fault Definitions

Cont. No.	Cont. Name	Description
54	FLT54-PO	**Prior Outage of S BROWN4 (505602) to BROWN 4 (515157) line;** 3 phase fault on S BROWN4 (505602) - RUSSETT4 (521044) near S BROWN4. a. Apply fault at the S BROWN4 bus. b. Clear fault after 5 cycles and trip the faulted line.
55	FLT55-PO	**Prior Outage of BROWNTP4 (515152) to BODLE 4 (515155) line;** 3 phase fault on BROWNTP4 (515152) - COLEMNT4 (515153) near BROWNTP4. a. Apply fault at the BROWNTP4 bus. b. Clear fault after 5 cycles and trip the faulted line.
56	FLT56-PO	**Prior Outage of BROWNTP4 (515152) to LTLCITY4 (515151) line;** 3 phase fault on BROWNTP4 (515152) - COLEMNT4 (515153) near BROWNTP4. a. Apply fault at the BROWNTP4 bus. b. Clear fault after 5 cycles and trip the faulted line.
57	FLT57-3PH	3 phase fault on G14-057T 345 kV (560013) to L.E.S.-7 345 kV (511468), near G14-057T. a. Apply fault at the G14-057T 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
58	FLT58-3PH	3 phase fault on L.E.S.-7 345 kV (511468) to GRACMNT7 345 kV (515800), near L.E.S.-7. a. Apply fault at the L.E.S.-7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
59	FLT59-3PH	3 phase fault on L.E.S.-7 345 kV (511468) to O.K.U.-7 345 kV (511456), near L.E.S.-7. a. Apply fault at the L.E.S.-7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
60	FLT60-3PH	3 phase fault on the L.E.S.-7 345 kV (511468) to L.E.S.-4 138 kV (511467) to LES#5-113.8 kV (511411) XFMR, near L.E.S.-7 345 kV. a. Apply fault at the L.E.S.-7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
61	FLT61-SB	**Stuck Breaker at L.E.S.-7 (511468)** a. Apply single phase fault at L.E.S.-7 bus. b. Clear fault after 16 cycles and trip the following elements c. L.E.S.-7 (511468) - GRACMNT7 (515800) d. L.E.S.-7 (511468) - G14-057T (560013)

Fault Definitions

Cont. No.	Cont. Name	Description
62	FLT62-SB	**Stuck Breaker at L.E.S.-7 (511468)** a. Apply single phase fault at L.E.S.-7 bus. b. Clear fault after 16 cycles and trip the following elements c. L.E.S.-7 (511468) - O.K.U.-7 (511456) d. L.E.S.-7 (511468) - G14-057T (560013)
63	FLT63-SB	**Stuck Breaker at L.E.S.-7 (511468)** a. Apply single phase fault at L.E.S.-7 bus. b. Clear fault after 16 cycles and trip the following elements c. L.E.S.-7 (511468) - G14-057T (560013) d. L.E.S.-7 345kV (511468) / L.E.S.-4 138 kV (511467) / LES#5-1 13.8 kV (511411) transformer
64	FLT64-SB	**Stuck Breaker at L.E.S.-7 (511468)** a. Apply single phase fault at L.E.S.-7 bus. b. Clear fault after 16 cycles and trip the following elements c. L.E.S.-7 (511468) - O.K.U.-7 (511456) d. L.E.S.-7 (511468) - GRACMNT7 (515800)
65	FLT65-SB	**Stuck Breaker at SUNNYSD7 (515136)** a. Apply single phase fault at SUNNYSD7 bus. b. Clear fault after 16 cycles and trip the following elements c. SUNNYSD7 (515136) - G14-057T (560013) d. SUNNYSD7 (515136) - G16-063-TAP (560088)
66	FLT66-PO	**Prior Outage of L.E.S.-7 (511468) to GRACMNT7 (515800) line;** 3 phase fault on L.E.S.-7 (511468) - G14-057T (560013) near L.E.S.-7. a. Apply fault at the L.E.S.-7 bus. b. Clear fault after 5 cycles and trip the faulted line.
67	FLT67-PO	**Prior Outage of L.E.S.-7 (511468) to O.K.U.-7 (511456) line;** 3 phase fault on L.E.S.-7 (511468) - G14-057T (560013) near L.E.S.-7. a. Apply fault at the L.E.S.-7 bus. b. Clear fault after 5 cycles and trip the faulted line.
68	FLT68-PO	**Prior Outage of L.E.S.-7 345kV (511468) / L.E.S.-4 138 kV (511467) / LES#5-1 13.8 kV (511411) transformer;** 3 phase fault on L.E.S.-7 (511468) - G14-057T (560013) near L.E.S.-7. a. Apply fault at the L.E.S.-7 bus. b. Clear fault after 5 cycles and trip the faulted line.
69	FLT69-3PH	3 phase fault on G16-063-TAP 345 kV (560088) to HUGO 7 345 kV (521157), near G16-063-TAP. a. Apply fault at the G16-063-TAP 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.

Fault Definitions

Cont. No.	Cont. Name	Description
70	FLT70-3PH	3 phase fault on the HUGO 7 345 kV (521157) to HUGO PP4 138 kV (520948) to HUGO TERTA 13.8 kV (521189) XFMR, near HUGO 7 345 kV. a. Apply fault at the HUGO 7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted transformer.
71	FLT71-3PH	3 phase fault on HUGO 7 345 kV (521157) to VALIANT7 345 kV (510911), near HUGO 7. a. Apply fault at the HUGO 7 345 kV bus. b. Clear fault after 5 cycles and trip the faulted line. c. Wait 20 cycles, and then re-close the line in (b) back into the fault. d. Leave fault on for 5 cycles, then trip the line in (b) and remove fault.
72	FLT72-SB	**Stuck Breaker at HUGO 7 (521157)** a. Apply single phase fault at HUGO 7 bus. b. Clear fault after 16 cycles and trip the following elements c. HUGO 7 (521157) - VALIANT7 (510911) d. HUGO 7 (521157) - G16-063-TAP (560088)
73	FLT73-SB	**Stuck Breaker at SUNNYSD7 (515136)** a. Apply single phase fault at SUNNYSD7 bus. b. Clear fault after 16 cycles and trip the following elements c. SUNNYSD7 (515136) - G16-063-TAP (560088) d. SUNNYSD7 345kV (515136) / SUNNYSD4 138 kV (515135) / SUNYSD 1 13.8 kV (515405) transformer
74	FLT74-PO	**Prior Outage of HUGO 7 (521157) to VALIANT7 (510911) line;** 3 phase fault on HUGO 7 (521157) - G16-063-TAP (560088) near HUGO 7. a. Apply fault at the HUGO 7 bus. b. Clear fault after 5 cycles and trip the faulted line.
75	FLT75-PO	**Prior Outage of SUNNYSD7 345kV (515136) / SUNNYSD4 138 kV (515135) / SUNYSD 1 13.8 kV (515405) transformer;** 3 phase fault SUNNYSD7 (515136) - G16-063-TAP (560088) near SUNNYSD7. a. Apply fault at the SUNNYSD7 bus. b. Clear fault after 5 cycles and trip the faulted line.

APPENDIX B

SOUTHWEST POWER POOL DISTURBANCE PERFORMANCE REQUIREMENTS (SUBMITTED IN A SEPARATE FILE)

APPENDIX C

DYNAMIC STABILITY PLOTS FOR CLUSTER SCENARIO (SUBMITTED IN SEPARATE FILES FROM APPENDIX C-1 TO C-3)

C-1 Group 14 Cluster Dynamic Stability Plots For 2016 Winter Peak Case

C-2 Group 14 Cluster Dynamic Stability Plots For 2017 Summer Peak Case

C-3 Group 14 Cluster Dynamic Stability Plots For 2025 Summer Peak Case

Each contingency consists of (23) subplots:

- Subplot #1 is the system phase angle channels in the snapshot file provided by SPP.
- Subplot #2 to Subplot #19 are results for (18) generators in the scope of study.
- Subplots #20 to Subplot #21 are voltages at the POI buses in the scope of study.
- Subplots #22 to Subplot #23 are frequencies at the POI buses in the scope of study.

APPENDIX D

DYNAMIC STABILITY PLOTS FOR STAND-ALONE SCENARIO (SUBMITTED IN SEPARATE FILE FROM APPENDIX D-1 TO D-15)

D-1 Group14 StandAlone "GEN-2015-036" Dynamic Stability Plots For 2016 Winter Peak Case
D-2 Group14 StandAlone "GEN-2015-036" Dynamic Stability Plots For 2017 Summer Peak Case
D-3 Group14 StandAlone "GEN-2015-036" Dynamic Stability Plots For 2025 Summer Peak Case
D-4 Group14 StandAlone "GEN-2016-028" Dynamic Stability Plots For 2016 Winter Peak Case
D-5 Group14 StandAlone "GEN-2016-028" Dynamic Stability Plots For 2017 Summer Peak Case
D-6 Group14 StandAlone "GEN-2016-028" Dynamic Stability Plots For 2025 Summer Peak Case
D-7 Group14 StandAlone "GEN-2016-030" Dynamic Stability Plots For 2016 Winter Peak Case
D-8 Group14 StandAlone "GEN-2016-030" Dynamic Stability Plots For 2017 Summer Peak Case
D-9 Group14 StandAlone "GEN-2016-030" Dynamic Stability Plots For 2025 Summer Peak Case
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D-14 Group14 StandAlone "GEN-2016-063" Dynamic Stability Plots For 2017 Summer Peak Case
D-15 Group14 StandAlone "GEN-2016-063" Dynamic Stability Plots For 2025 Summer Peak Case

Each contingency consists of (23) subplots:

- Subplot #1 is the system phase angle channels in the snapshot file provided by SPP.
- Subplot #2 to Subplot #19 are results for (18) generators in the scope of study.
- Subplots #20 to Subplot #21 are voltages at the POI buses in the scope of study.
- Subplots #22 to Subplot #23 are frequencies at the POI buses in the scope of study.

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E-2 Group 14 Power Factor Results for Interconnection Request GEN-2016-028 (#510919)

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SHORT-CIRCUIT STUDY RESULTS (SUBMITTED IN A SEPARATE FILE FROM APPENDIX F-1 TO F-2)

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F-2 GROUP 1 25SP Short-Circuit Study Results

11.17.12 J15: GROUP 15 DYNAMIC STABILITY ANALYSIS REPORT

Definitive Interconnection System Impact Study

Southwest Power Pool

DISIS-2016-001 (Group 15)
Project No. 95080

01/26/2017

Definitive Interconnection System Impact Study

prepared for

Southwest Power Pool
DISIS-2016-001 (Group 15)
Little Rock, AR

Project No. 95080

01/26/2017

prepared by

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Houston, Texas

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EXECUTIVE SUMMARY

Southwest Power Pool (SPP) retained Burns & McDonnell to perform a Definitive Interconnection System Impact Study of the DISIS-2016-001 (Group 15) projects. This study included short circuit analysis, power factor analysis, reactive power analysis and stability analysis to find impacts on the transmission system caused by the interconnections of Group 15 requests which includes a single request GEN-2016-017.

The GEN-2016-017 project is proposed to interconnect within SPP control area. The capacity of the project is 250.7 MW consisting of 109 G.E. 2.3 MW wind turbines as shown in Table ES-1. All analyses were performed using the PTI PSS/E software and the results are summarized below.

Table ES-1: GEN-2016-017 Interconnection Project

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2016-017	250.7	109 x G.E. 2.3 MW wind	Tap Fort Thompson (652806) – Leland Olds (659105) 345 kV, (G16-017-TAP, 560074)

ES.1 Short Circuit Analysis

The short circuit analysis was performed using the 2017 and 2025 Summer Peak (SP) models. Three-phase fault currents were calculated for the 69 kV and above buses within 5 buses of generator's point of interconnection. The fault current levels were then compared to the fault currents without the generator to determine the impact of the generation interconnection.

The results from short circuit analysis showed that the maximum change in the fault currents in the immediate systems at or near GEN-2016-017 was 27% for both the 2017 summer peak and 2025 summer peak cases. All three-phase current levels with the GEN-2016-017 generator online was below 34,000 A.

ES.2 Power Factor Analysis

The DISIS-2016-001 (Group 15) request, GEN-2016-017, generator was turned off for the power factor analysis. The interconnection generator was replaced with a generator modeled at the high side bus of the collector substation transformer. The replacement generator was modeled to reflect the real power (MW) output of the interconnection request generator and was set to maintain a voltage schedule at the point of interconnection consistent with the voltage schedule in the provided base case or 1.0 pu voltage, whichever was higher. The replacement generator's reactive power capability was set to +/- 9999 MVAr to find the required power factor. The GEN-2016-017 project was analyzed under numerous single element contingencies and the necessary power factor was calculated.

For the contingencies tested, the most leading power factor (generation facility absorbing reactive power from the network) was found to be 0.957 (-76.388 MVAr contribution) in the 2017 summer peak case for the loss of Leland Olds Generator Step-up (GSU) transformer. The most lagging power factor (generating facility providing reactive power to the network) was found to be 0.995 (24.32 MVAr contribution) in the 2020 Winter Peak case for loss of the Leland Olds to GEN-2016-017 Tap transmission line. Per SPP Tariff requirements, the Generating Facilities will be required to meet the standard 95% power factor requirement at the Point of Interconnection. The customer may be required to add capacitor and/or reactor banks depending upon its final collector system design.

ES.3 Reactive Power Analysis

The reactive power analysis was performed for the DISIS-2016-001 (Group 15) request, GEN-2016-017 to determine the reactive power contribution from the project's interconnection line and collector transformer and cables. The goal of the analysis is to size a shunt reactor at the project substation high side bus to reduce POI reactive power value to approximately zero.

The reactive power analysis results showed that the GEN-2016-017 project requires a shunt reactor with 11.5 MVAr at the high side of the project substation is needed to reduce the reactive power transfer at the POI to approximately zero during low/no wind conditions while the generation interconnection project remains connected to the grid.

ES.4 Stability Analysis

The dynamic stability analysis was performed for the DISIS-2016-001 (Group 15) request GEN-2016-017 project. The stability analysis evaluated the system during five load scenarios (2016 winter peak, 2017 summer peak, 2020 winter peak, 2020 summer peak and 2025 summer peak) simulating up to 22 faults that included three-phase and single-line-to-ground faults including faults on prior outage cases and stuck breakers. The stability analysis showed an equally queued project, GEN-2016-044 included in DISIS-2016-001 (Group 16), tripping off-line due to over voltage for a fault event (FLT07-3PH) in 2020 winter peak case and prior queued projects Bison Units 4, 5 and 6 tripping off-line for a fault event (FLT16-3PH) in all five cases due to over voltage. These faults were re-run with the equally or prior queued project's voltage and frequency tripping disabled. There were no machine rotor angle damping or transient voltage recovery violations within the DISIS-2016-001 (Group 15) study for the simulated fault events.

1.0 INTRODUCTION

Burns & McDonnell was retained by Southwest Power Pool (SPP) to perform a Definitive Interconnection System Impact Study of the DISIS-2016-001 (Group 15). This study included short circuit analysis, power factor analysis, reactive power analysis, and stability analysis to find impacts on the transmission system caused by the interconnections of Group 15 requests which includes a single request GEN-2016-017.

GEN-2016-017 project is proposed to interconnect within SPP footprint. The capacity of the project is 250.7 MW consisting of 109 G.E. 2.3 MW wind turbine generators as shown in Table 1-1.

Table 1-1: GEN-2016-017 Interconnection Project

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2016-017	250.7	109 x G.E. 2.3 MW wind	Tap Fort Thompson (652806) – Leland Olds (659105) 345 kV, (G16-017-TAP, 560074)

1.1 Study Scope

This study is presented in the following seven main parts:

1. Introduction
2. Study Assumptions
3. Short Circuit Analysis
4. Power Factor Analysis
5. Reactive Power Analysis
6. Stability Analysis
7. Conclusions

1.2 Limitations

In the preparation of this report, the information provided to Burns & McDonnell by others was used by Burns & McDonnell to make certain assumptions with respect to conditions which may exist in the future. While Burns & McDonnell believes the assumptions made are reasonable for the purposes of this report, Burns & McDonnell makes no representation that the conditions assumed will, in fact, occur. In addition, while Burns & McDonnell has no reason to believe that the information provided by others, and on which this report is based, is inaccurate in any material respect, Burns & McDonnell has not independently verified such information and cannot guarantee its accuracy or completeness. To the extent that actual future conditions differ from those assumed herein or from the information provided to Burns & McDonnell, the actual results will vary from those presented.

2.0 STUDY ASSUMPTIONS

The short circuit, power factor, reactive power, and stability analyses were performed using the PTI PSS/E software version 32.

2.1 Disturbance Performance Requirement

The following SPP Disturbance Performance Requirements were applied to the Bulk Electric System for the stability analysis. These requirements establish the minimum requirements for machine rotor angle damping and transient voltage recovery.

2.1.1 Rotor Angle Damping Requirement

The machine rotor angles shall exhibit well damped angular oscillations and acceptable power swings following a disturbance on the Bulk Electric System for all NERC events. Well damped angular oscillation is defined as:

1. The Successive Positive Peak Ratio (SPPR) must be less than or equal to 0.95 where SPPR is calculated as:

$$SPPR = \frac{\text{Peak Rotor Angle of 2nd Positive Swing Peak}}{\text{Peak Rotor Angle of 1st Positive Swing Peak}} \leq 0.95$$

Or, Damping Factor % = (1 – SPPR) x 100% ≥ 5%

The machine rotor angle damping ratio may be determined by appropriate modal analysis (i.e. Prony Analysis) where the following equivalent requirement must be met:

Damping Ratio ≥ 0.0081633

2. Successive Positive Peak Ratio Five (SPPR5) must be less than or equal to 0.774 where SPPR5 is calculated as follows:

$$SPPR5 = \frac{\text{Peak Rotor Angle of 5th Positive Swing Peak}}{\text{Peak Rotor Angle of 1st Positive Swing Peak}} \leq 0.774$$

Or, Damping Factor % = (1 – SPPR5) x 100% ≥ 22.6%

The machine rotor angle damping ratio may be determined by appropriate modal analysis (i.e. Prony Analysis) where the following equivalent requirement must be met:

Damping Ratio ≥ 0.0081633.

Burns & McDonnell only calculated these damping values where oscillations were not well damped by the end of the simulation through visual inspection.

2.1.2 Transient Voltage Recovery Requirement:

Any time after a disturbance is cleared; bus voltages on the Bulk Electric System shall not swing outside of the bandwidth of 0.70 per unit to 1.20 per unit. All post-transient voltages must fall between the 0.90 per unit and 1.10 per unit range at the end of simulations. The pre-fault voltages shall be checked to ensure they fall within the 0.90 per unit and 1.10 per unit.

2.2 Study System

The study system consisted of facilities at or above 100 kV within five (5) buses away from the POI. Machines within this study area were monitored for the study.

2.3 Study Models

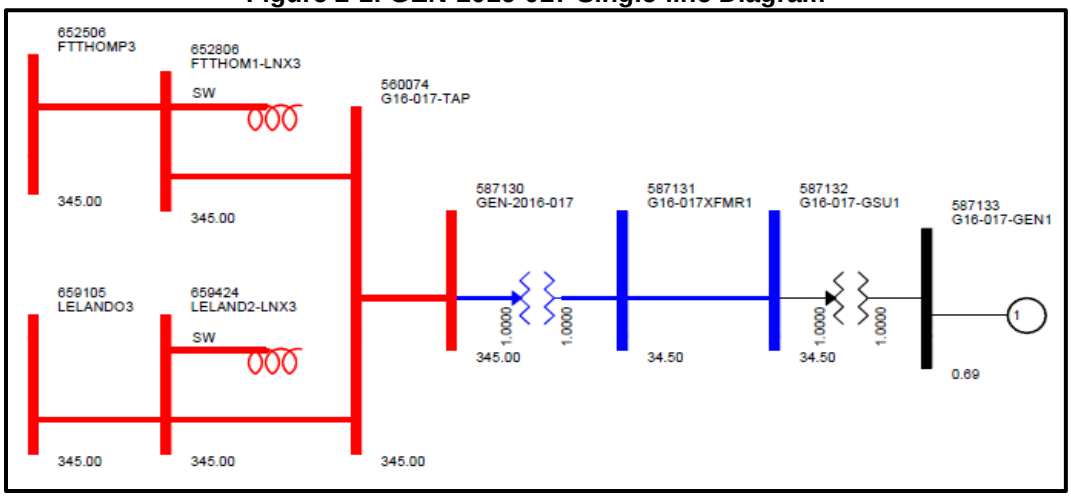
The short circuit, power factor, reactive power and stability analyses were performed using models developed from the 2015 Southwest Power Pool (SPP) Model Development Working Group (MDWG) PSS/E models. The base cases provided by SPP model the 2016 Winter Peak, 2017 Summer Peak, 2020 Winter Peak, 2020 Summer Peak and 2025 Summer Peak study conditions. The cases were developed with a single interconnection request added to the base case with dispatch adjustments made per SPP's supplied dispatch requirements. Table 2-1 summarizes the study models used for the analyses.

Table 2-1: Study Models for Stability Analysis

Model	Short Circuit	Power Factor	Reactive Power	Dynamic Stability
MDWG15-16WP_DIS1601_G15.sav			X	X
MDWG15-17SP_DIS1601_G15.sav	X		X	X
MDWG15-20WP_DIS1601_G15.sav			X	X
MDWG15-20SP_DIS1601_G15.sav			X	X
MDWG15-25SP_DIS1601_G15.sav	X		X	X
MDWG15-16WP_DIS1601_G15_PF.sav		X		
MDWG15-17SP_DIS1601_G15_PF.sav		X		
MDWG15-20WP_DIS1601_G15_PF.sav		X		
MDWG15-20SP_DIS1601_G15_PF.sav		X		
MDWG15-25SP_DIS1601_G15_PF.sav		X		

A single-line diagram for GEN-2016-017 is provided in Figure 2-1.

Figure 2-1: GEN-2016-017 Single-line Diagram



2.4 Prior Queued Projects

All study cases contained the Prior Queued Projects listed in Table 2-2 below.

Table 2-2: Prior Queued Projects

Request	Size (MW)	Generator Model	Point of Interconnection
GI-1401	103	GE 1.7MW wind (652007)	Tap on Newell-Maurine 115kV (652005)
GI-0723	50	WT3 generic wind (652345)	Summit 115kV (652522)
GI-1301	90	Siemens 2.3 WGUR wind (652004)	Tap on Summitt-Watertown 115kV (652001)
GI-1001	99	GENROU (659411)	Mound City 230kV (652499)
GI-0901	200	GE 1.6MW wind (652173)	Tap on Groton-Watertown 345kV (652175)
GI-1214	99 (net zero)	WT3 generic wind (659031)	Groton 115kV (652512)
GI-0209	40	WT3 generic wind (659291)	Fort Thompson 69kV (652276)
GI-0316	110	GENROU (659274)	Groton 115kV (652512)
GI-0713	55	WT3 generic wind (659296)	Wessington Springs 230kV (652607)
GI-0608	106	GENROU (659272)	Groton 115kV (652512)
GI-0704	240	GENROU (659353/ 659354)	White 345kV (652537)
GI-0713/0714	150	WT3 generic wind (659296)	Wessington Springs 230kV (652607)
GI-0716	60	GENROU (659353/ 659354)	White 345kV (652537)
GI-0918	100 (net zero)	WT3 generic wind (659289)	Groton (652512)
GI-1003	34	WT3 generic wind (659296)	Wessington Springs 230kV (652607)
GI-1309	19	WT3 generic wind (660013)	Redfield NW 115kV (660015)
G255	100	WT3 generic wind (600069/ 600078)	Yankee 115kV (603191)
G736	200	GE 1.79MW wind (11123)	Big Stone 230kV (620314)
J442	200	GE 2.0MW wind (11133)	Big Stone 230kV (620314)
J436	150	Vestas V110 VCSS 2.0MW wind (11143)	Big Stone 345kV (620417)
J437	150	Vestas V110 VCSS 2.0MW wind (11153)	Big Stone 345kV (620417)
GEN-2015-097	100	G.E. 2MW wind (585323)	Groton 115kV (652512)
ASGI-2016-005	20	GE 2.5MW (wind)	Mt. Vernon 69kV (652252)
ASGI-2016-006	20	GE 2.5MW (wind)	Mitchell Northwest Substation 115kV (660008)
ASGI-2016-007	20	GE 2.5MW (wind)	Mt. Vernon 69kV (652252)

3.0 SHORT CIRCUIT ANALYSIS

Burns & McDonnell performed the short circuit analysis to determine the impact of the generation interconnection requests on the fault current levels in the study system. The analysis was performed using version 32 of the PTI PSS/E software. The following sections outline the methodology and results of the analysis.

3.1 Methodology

The short circuit analysis was performed using the 2017 and 2025 Summer Peak models. Three-phase fault currents were calculated for the 69 kV and above buses within 5 buses of generator's point of interconnection. The fault current levels were then compared to the fault currents without the generator to determine the impact of the generation interconnection.

3.2 Short Circuit Analysis Results

Table 3-1 through Table 3-2 summarize the three-phase fault currents observed for facilities two buses away from GEN-2016-017 for the 2017 and 2025 Summer Peak cases, respectively. Details of the fault current for facilities within 5 buses from the generator's point of interconnection is provided in Appendix A.

Table 3-1: 2017 Summer Peak GEN-2016-017 Three-Phase Fault Currents

Bus Dist. From POI	BUS NUMBER	BUS NAME	Voltage (kV)	AREA	ZONE	3 Phase Fault Current (kA)		Difference (ON - OFF)	
						GenON	GenOFF	Change (kA)	%
0	560074	G16-017-TAP	345	652	1604	6.545	5.138	1.407	27.39%
1	652806	FTTHOM1-	345	652	1604	9.233	8.307	0.926	11.15%
1	659424	LELAND2-	345	652	1628	17.109	17.022	0.087	0.51%
1	652506	FTTHOMP3	345	652	1604	9.233	8.307	0.926	11.15%
1	659105	LELANDO3	345	652	1628	17.109	17.022	0.087	0.51%
1	652807	FTTHOM2-	345	652	1604	9.233	8.307	0.926	11.15%
1	652507	FTTHOMP4	230	652	1604	19.642	18.741	0.901	4.81%
1	659422	LELAND1-	345	652	1628	17.109	17.022	0.087	0.51%
1	659106	LELANDO4	230	652	1628	23.962	23.893	0.070	0.29%
2	659101	ANTELOP3	345	652	1628	17.153	17.113	0.040	0.23%
2	652833	GRPRAR2-	345	652	1604	5.566	5.601	-0.036	-0.64%
2	652276	FTTHOMP8	69	652	1604	4.334	4.341	-0.008	-0.18%
2	652509	FTRANDL4	230	652	1604	10.796	10.821	-0.025	-0.23%
2	652514	HURON 4	230	652	1604	10.722	10.682	0.040	0.38%
2	652516	LAKPLAT4	230	652	1604	5.574	5.582	-0.009	-0.15%
2	652519	OAHE 4	230	652	1604	13.725	13.525	0.199	1.47%
2	652540	BIGBND14	230	652	1604	11.977	11.715	0.262	2.24%
2	652541	BIGBND24	230	652	1604	11.866	11.585	0.282	2.43%
2	652606	LETCHER4	230	652	1604	4.597	4.626	-0.029	-0.62%
2	652607	WESSINGT	230	652	1604	6.730	6.746	-0.016	-0.24%
2	659218	COTEAU	345	652	1628	17.153	17.113	0.040	0.23%
2	659420	ANTELOP-	345	652	1628	17.153	17.113	0.040	0.23%
2	560079	G16-044-	345	652	1628	5.360	5.370	-0.011	-0.20%
2	587030	GEN-2016	230	652	659	7.811	7.806	0.005	0.06%

Table 3-1: 2017 Summer Peak GEN-2016-017 Three-Phase Fault Currents (cont.)

Bus Dist. From POI	BUS NUMBER	BUS NAME	Voltage (kV)	AREA	ZONE	3 Phase Fault Current (kA)		Difference (ON - OFF)	
						GenON	GenOFF	Change (kA)	%
2	615901	GRE-STAN	230	615	643	18.630	18.630	0.000	0.00%
2	652441	GARRISN4	230	652	1605	11.693	11.689	0.004	0.03%
2	652456	WASHBRN4	230	652	1605	10.366	10.362	0.004	0.04%
2	659108	LOGAN 4	230	652	1628	5.507	5.510	-0.003	-0.06%
2	659109	BASIN 7	115	652	1628	5.556	5.555	0.001	0.01%
2	652532	GR PRAIR	345	652	1604	5.566	5.601	-0.036	-0.64%
2	652832	GRPRAR1-	345	652	1604	5.566	5.601	-0.036	-0.64%

Table 3-2: 2025 Summer Peak GEN-2016-017 Three-Phase Fault Currents

Bus Dist. From POI	BUS NUMBER	BUS NAME	Voltage (kV)	AREA	ZONE	3 Phase Fault Current (kA)		Difference (ON - OFF)	
						GenON	GenOFF	Change (kA)	%
0	560074	G16-017-TAP	345	652	1604	6.593	5.184	1.409	27.18%
1	652806	FTTHOM1-	345	652	1604	9.401	8.473	0.928	10.95%
1	659424	LELAND2-	345	652	1628	17.218	17.135	0.084	0.49%
1	652506	FTTHOMP3	345	652	1604	9.401	8.473	0.928	10.95%
1	659105	LELANDO3	345	652	1628	17.218	17.135	0.084	0.49%
1	652807	FTTHOM2-	345	652	1604	9.401	8.473	0.928	10.95%
1	652507	FTTHOMP4	230	652	1604	20.122	19.226	0.896	4.66%
1	659422	LELAND1-	345	652	1628	17.218	17.135	0.084	0.49%
1	659106	LELANDO4	230	652	1628	24.088	24.022	0.065	0.27%
2	659101	ANTELOP3	345	652	1628	17.264	17.226	0.038	0.22%
2	652833	GRPRAR2-	345	652	1604	6.229	6.265	-0.037	-0.58%
2	652276	FTTHOMP8	69	652	1604	4.331	4.337	-0.006	-0.14%
2	652509	FTRANDL4	230	652	1604	11.066	11.128	-0.062	-0.56%
2	652514	HURON 4	230	652	1604	10.850	10.812	0.039	0.36%
2	652516	LAKPLAT4	230	652	1604	5.598	5.614	-0.016	-0.28%
2	652519	OAHE 4	230	652	1604	13.971	13.781	0.190	1.38%
2	652540	BIGBND14	230	652	1604	12.108	11.851	0.257	2.17%
2	652606	LETCHER4	230	652	1604	4.576	4.605	-0.030	-0.65%
2	652607	WESSINGT	230	652	1604	6.705	6.729	-0.024	-0.35%
2	659312	LOWERBRU	230	652	1628	11.282	11.042	0.240	2.17%
2	659218	COTEAU	345	652	1628	17.264	17.226	0.038	0.22%
2	659420	ANTELOP-	345	652	1628	17.264	17.226	0.038	0.22%
2	560079	G16-044-	345	652	1628	5.485	5.493	-0.007	-0.13%
2	587030	GEN-2016	230	652	659	7.804	7.800	0.004	0.05%
2	615901	GRE-STAN	230	615	643	18.621	18.620	0.001	0.00%
2	652441	GARRISN4	230	652	1605	11.736	11.733	0.004	0.03%
2	652456	WASHBRN4	230	652	1605	10.395	10.392	0.003	0.03%
2	659108	LOGAN 4	230	652	1628	5.553	5.558	-0.005	-0.10%
2	659109	BASIN 7	115	652	1628	5.543	5.542	0.000	0.01%
2	652532	GR PRAIR	345	652	1604	6.229	6.265	-0.037	-0.58%
2	652832	GRPRAR1-	345	652	1604	6.229	6.265	-0.037	-0.58%

As shown in Table 3-1 and Table 3-2, the maximum fault current increase with the addition of GEN-2016-017 was about 27% in both cases at the point of interconnection.

4.0 POWER FACTOR ANALYSIS

Power factor analysis was performed to determine if the power factor requirement for the interconnection request is within the capabilities of the specified generators.

4.1 Methodology

The DISIS-2016-001 (Group 15) request, GEN-2016-017 generator was turned off for the power factor analysis. The interconnection generator was replaced with a generator modeled at the high side bus of the collector substation transformer. The replacement generator was modeled to reflect the real power (MW) output of the interconnection request generator and was set to maintain a voltage schedule at the point of interconnection consistent with the voltage schedule in the provided base case or 1.0 pu voltage, whichever was higher. The replacement generators' reactive power capability was set to +/- 9999 MVAr to find the required power factor.

4.2 Power Factor Analysis Results

The base case voltages at the POI for the GEN-2016-017 project is provided in Table 4-1.

Table 4-1: Base Case GEN-2016-017 POI Voltages

Machine	PF Capability	POI Bus Number	POI Bus Name	Initial POI Voltage (pu)				
				16WP	17SP	20SP	20WP	25SP
GEN-2016-017	±0.95	560074	G16-017-TAP	1.0287	1.0089	1.0077	1.0202	1.0065

The DISIS-2016-001 (Group 15) request, GEN-2016-017 was analyzed under the single element contingency conditions listed in Table 4-2.

Table 4-2: Power Factor Contingency Summary

Outage Label	Outage Description
FLT01-3PH	560074 [G16-017-TAP 345.00] - 652806 [FTTHOM1-LNX3345.00] (1) 652806 [FTTHOM1-LNX3345.00] - 652506 [FTTHOMP3 345.00] (Z)
FLT02-3PH	560074 [G16-017-TAP 345.00] - 659424 [LELAND2-LNX3345.00] (1) 659424 [LELAND2-LNX3345.00] - 659105 [LELANDO3 345.00] (Z)
FLT03-3PH	652506 [FTTHOMP3 345.00] - 652806 [FTTHOM1-LNX3345.00] (Z) 652806 [FTTHOM1-LNX3345.00] - 560074 [G16-017-TAP 345.00] (1)
FLT04-3PH	652506 [FTTHOMP3 345.00] - 652807 [FTTHOM2-LNX3345.00] (Z) 652807 [FTTHOM2-LNX3345.00] - 652833 [GRPRAR2-LNX3345.00] (1) 652833 [GRPRAR2-LNX3345.00] - 652532 [GR PRAIRIE3 345.00] (Z)
FLT05-3PH	652506 [FTTHOMP3 345.00] - 652507 [FTTHOMP4 230.00] - 652274 [FTTHMP29 13.800] (1)
FLT06-3PH	659105 [LELANDO3 345.00] - 659424 [LELAND2-LNX3345.00] (Z) 659424 [LELAND2-LNX3345.00] - 560074 [G16-017-TAP 345.00] (1)
FLT07-3PH	659105 [LELANDO3 345.00] - 659422 [LELAND1-LNX3345.00] (Z) 659422 [LELAND1-LNX3345.00] - 560079 [G16-044-TAP 345.00] (1)
FLT08-3PH	659105 [LELANDO3 345.00] - 659101 [ANTELOP3 345.00] (1)
FLT09-3PH	659105 [LELANDO3 345.00] - 659106 [LELANDO4 230.00] - 659201 [LELNDOLD 19 13.800] (1)

Table 4-2: Power Factor Contingency Summary (cont.)

Outage Label	Outage Description
FLT10-3PH	659105 [LELANDO3 345.00] - 659111 [LELAN32G 20.000] (1)
FLT11-3PH	652532 [GR PRAIRIE3 345.00] - 652833 [GRPRAR2-LNX3345.00] (Z) 652833 [GRPRAR2-LNX3345.00] - 652807 [FTTHOM2-LNX3345.00] (1) 652807 [FTTHOM2-LNX3345.00] - 652506 [FTTHOMP3 345.00] (Z)
FLT12-3PH	652532 [GR PRAIRIE3 345.00] - 652832 [GRPRAR1-LNX3345.00] (Z) 652832 [GRPRAR1-LNX3345.00] - 640510 [HOLT.CO3 345.00] (1)
FLT13-3PH	652532 [GR PRAIRIE3 345.00] - 579450 [G0717WG0718W345.00] (1)
FLT16-3PH	659101 [ANTELOP3 345.00] - 659420 [ANTELOP-LNX3345.00] (Z) 659420 [ANTELOP-LNX3345.00] - 659421 [BRDLAND-LNX3345.00] (1) 659421 [BRDLAND-LNX3345.00] - 659120 [BRDLAND3 345.00] (Z)

The power factor requirements for each contingency event in Table 4-2 for GEN-2016-017 are listed in Table 4-3.

Table 4-3: GEN-2016-017 Factor Requirements

Outage Label	PGEN (MW)	2016WP		2017SP		2020SP		2020WP		2025SP	
		QGEN (MVAr)	PF	QGEN (MVAr)	PF	QGEN (MVAr)	PF	QGEN (MVAr)	PF	QGEN (MVAr)	PF
FLT01-3PH	250.7	-48.43	0.982	-55.87	0.976	-56.40	0.976	-51.15	0.980	-56.70	0.975
FLT02-3PH	250.7	23.71	0.996	8.81	0.999	24.30	0.995	24.32	0.995	22.20	0.996
FLT03-3PH	250.7	-48.43	0.982	-55.87	0.976	-56.40	0.976	-51.15	0.980	-56.70	0.975
FLT04-3PH	250.7	-58.85	0.974	-58.26	0.974	-65.40	0.968	-56.30	0.976	-66.65	0.966
FLT05-3PH	250.7	-26.64	0.994	10.31	0.999	13.16	0.999	-13.35	0.999	16.60	0.998
FLT06-3PH	250.7	23.71	0.996	8.81	0.999	24.30	0.995	24.32	0.995	22.20	0.996
FLT07-3PH	250.7	-38.69	0.988	1.51	1.000	-14.32	0.998	-32.05	0.992	-13.23	0.999
FLT08-3PH	250.7	-41.95	0.986	-18.43	0.997	-16.83	0.998	-31.72	0.992	-15.12	0.998
FLT09-3PH	250.7	-44.20	0.985	-20.80	0.997	-18.67	0.997	-33.77	0.991	-17.01	0.998
FLT10-3PH	250.7	-64.02	0.969	-76.39	**0.957**	-67.93	0.965	-68.89	0.964	-69.16	0.964
FLT11-3PH	250.7	-58.85	0.974	-58.26	0.974	-65.40	0.968	-56.30	0.976	-66.65	0.966
FLT12-3PH	250.7	-58.72	0.974	-50.08	0.981	-56.46	0.976	-53.74	0.978	-60.69	0.972
FLT13-3PH	250.7	-34.38	0.991	-6.90	1.000	-6.40	1.000	-23.81	0.996	-4.75	1.000
FLT16-3PH	250.7	-35.97	0.990	3.98	1.000	-3.40	1.000	-22.68	0.996	-0.85	1.000

For the contingencies tested, the most leading power factor (generation facility absorbing reactive power from the network) was found to be 0.957 (-76.388 MVAr contribution) in the 2017 Summer Peak case for loss of the Leland Olds GSU transformer. The most lagging power factor (generation facility providing reactive power to the network) was found to be 0.995 (24.32 MVAr contribution) in the 2020 Winter Peak case for loss of the Leland Olds to GEN-2016-017 Tap transmission line. Per SPP Tariff requirements, the Generating Facilities will be required to meet the standard 95% power factor requirement at the Point of Interconnection. The customer may be required to add capacitor and/or reactor banks depending upon its final collector system design.

5.0 REACTIVE POWER ANALYSIS

The reactive power analysis was performed for the DISIS-2016-001 (Group 15) request, GEN-2016-017 to determine the reactive power contribution from the project's interconnection line and collector transformer and cables during low/no wind conditions while the project is still connected to the grid. The goal of the analysis is to size shunt reactors at the project substation high side bus to reduce POI reactive power value to approximately zero.

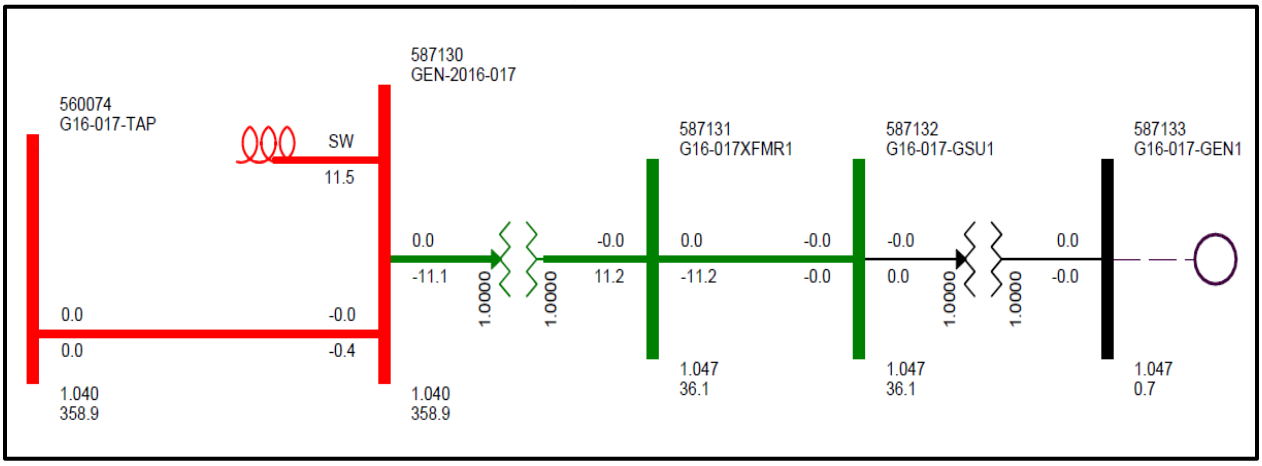
5.1 Methodology

For the GEN-2016-017 project, the generator was switched out of service while other collector system elements remained in-service. Shunt reactor was tested at the study project substation high side bus to bring the MVAr flow into the POI down to approximately zero.

5.2 Reactive Power Analysis Results

The results from the reactive power analysis showed that the GEN-2016-017 project requires approximately 11.5 MVAr shunt reactance at the high side of the project substation, to reduce the POI MVAr to zero. This represents the contributions from the project collector systems. Figure 5-1 illustrates the shunt reactor size required to reduce the POI voltage to approximately zero.

Figure 5-1: GEN-2016-017 Single-line Diagram with Shunt Reactor



6.0 STABILITY ANALYSIS

Burns & McDonnell performed stability analysis to identify impacts on the system stability resulting from the interconnection of DISIS-2016-001 (Group 15) requests.

6.1 Methodology

The Stability Analysis was performed using DISIS-2016-001 (Group 15) study cases. The power flow models and associated dynamics database were initialized (no-fault test) to confirm that there were no errors in the initial conditions of the system and the dynamic data. The dynamics model data for the DISIS-2016-001 (Group 15) request, GEN-2016-017 is provided in Appendix B. The stability analysis was performed using PSS/E version 32.

During the fault simulations, the active power (PELEC), reactive power (QELEC), terminal voltage (ETERM), angle (ANGL) and speed (SPD) were monitored for the GEN-2016-017 generation interconnection request and prior queued projects listed in Table 1-1 and Table 2-2. The study area for the stability analysis is defined as five (5) buses away from the POI of GEN-2016-017. The machine rotor angle for synchronous machines and speed for asynchronous machines within this study area including those within 10 areas, 600 (XEL), 608 (MP), 613 (SMMPA), 615 (GRE), 620 (OTP), 640 (NPPD), 645 (OPPD), 650 (LES), 652 (WAPA) and 661 (MDU) were monitored. In addition, the voltages of all 100 kV and above buses within the study area were monitored.

6.2 Fault Definitions

Burns & McDonnell developed fault description for twenty-two (22) normal clearing, stuck breaker, and prior outage contingency events. All contingency events studied are listed in Table 6-1. These contingencies were applied for the 2016 Winter Peak, 2017 Summer Peak, 2020 Winter Peak, 2020 Summer Peak and the 2025 Summer Peak models.

Table 6-1: Fault Definitions

Fault Name	Contingency (Fault) Description
FLT01-3PH	**3 phase fault on G16-017-TAP (560074) to Fort Thompson (652806) 345 kV Line, CKT 1, near G16-017-TAP Bus**
	a. Apply fault at the G16-017-TAP (560074) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted line and disconnect Fort-Thompson-LNX3 (652806) bus
FLT02-3PH	**3 phase fault on G16-017-TAP (560074) to Leland Olds (659424) 345 kV Line, CKT 1, near G16-017-TAP Bus**
	a. Apply fault at the G16-017-TAP (560074) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted line and disconnect Leland-Olds-LNX3 (659424) bus
FLT03-3PH	**3 phase fault on Fort Thompson (652506) to Fort G16-017-TAP (560074) 345 kV Line, near Fort Thompson Bus**
	a. Apply fault at the Fort Thompson (652506) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted line and disconnect Fort-Thompson-LNX3 (652806) bus

Table 6-1: Fault Definitions (cont.)

Fault Name	Contingency (Fault) Description
FLT04-3PH	**3 phase fault on Fort Thompson (652506) to Grand Prairie (652532) 345 kV Line, near Fort Thompson**
	a. Apply fault at the Fort Thompson (652506) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted line and disconnect Fort-Thompson-LNX3 (652807) and GrandPrairie-LNX3 (652833) bus
FLT05-3PH	**3 phase fault on Fort Thompson 345 kV (652506) to Fort Thompson 230 kV (652507) to Fort Thompson 13.8 kV (652274) XFMR, CKT 1, near Fort Thompson 345 kV**
	a. Apply fault at the Fort Thompson (652506) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted transformer
FLT06-3PH	**3 phase fault on Leland Olds 345 kV (659105) to G16-017-TAP 345 kV (560074), near Leland Olds**
	a. Apply fault at the Leland Olds (659105) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted line and disconnect Leland-Olds-LNX3 (659424) bus
FLT07-3PH	**3 phase fault on Leland Olds 345 kV (659105) to G16-044-TAP 345 kV (560079), near Leland Olds**
	a. Apply fault at the Leland Olds (659105) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted line and disconnect Leland-Olds-LNX3 (659422) bus
FLT08-3PH	**3 phase fault on Leland Olds 345 kV (659105) to Antelop Valley 345 kV (659101) CKT 1, near Leland Olds**
	a. Apply fault at the LELANDO3 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted line
FL09-3PH	**3 phase fault on Leland Olds 345 kV (659105) to Leland Olds 230 kV (659106) to leland Olds 13.8 kV (659201) XFMR, CKT 1, near Leland Olds 345 kV**
	a. Apply fault at the Leland Olds (659105) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted transformer
FLT10-3PH	**3 phase fault on Leland Olds 345 kV (659105) to Leland Olds 20 kV (659111) XFMR, CKT 1, near Leland Olds 345 kV**
	a. Apply fault at the Leland Olds (659105) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted transformer, trip the generator
FLT11-3PH	**3 phase fault on Grand Prairie (652532) to Fort Thompson (652506) 345 kV Line, near Grand Prairie**
	a. Apply fault at the Grand Prarie (652532) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted line and disconnect Grand-Prairie-LNX3 (652833) and Fort-Thompson-LNX3 (652807) bus
FLT12-3PH	**3 phase fault on Grand Prarie (652532) to Holt Co3 (640510) 345 kV Line, near Grand Prarie**
	a. Apply fault at the Grand Prarie (652532) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted line and disconnect Grand-Prairie-LNX3 (652832) bus
FLT13-3PH	**3 phase fault on Grand Prarie (652532) to Grand Prairie Wind (579450) 345 kV Line, CKT 1, near Grand Prarie**
	a. Apply fault at the Grand Prarie (652532) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted line and trip Grand Priaire Wind generators
FLT04-PO1	**Prior Outage of G16-017-TAP (560074) to Leland Olds (659105) 345 kV Line; 3 phase fault on Fort Thompson (652506) to Grand Prairie (652532) 345 kV Line, near Fort Thompson**
	a. Apply fault at the Fort Thompson (652506) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted line and disconnect Fort-Thompson-LNX3 (652807) and GrandPrairie-LNX3 (652833) bus
FLT05-PO1	**Prior Outage of G16-017-TAP (560074) to Leland Olds (659105) 345 kV Line; 3 phase fault on Fort Thompson 345 kV (652506) to Fort Thompson 230 kV (652507) to Fort Thompson 13.8 kV (652274) XFMR, CKT 1, near Fort Thompson 345 kV**
	a. Apply fault at the Fort Thompson (652506) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted transformer

Table 6-1: Fault Definitions (cont.)

Fault Name	Contingency (Fault) Description
FLT07-PO2	**Prior Outage of G16-017-TAP (560074) to Fort Thompson (652506) 345 kV Line; 3 phase fault on Leland Olds 345 kV (659105) to G16-044-TAP 345 kV (560079) CKT 1, near Leland Olds**
	a. Apply fault at the Leland Olds (659105) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted line and disconnect Leland-Olds-LNX3 (659422) bus
FLT08-PO2	**Prior Outage of G16-017-TAP (560074) to Fort Thompson (652506) 345 kV Line; 3 phase fault on Leland Olds 345 kV (659105) to Antelop Valley 345 kV (659101) CKT 1, near Leland Olds**
	a. Apply fault at the Leland Olds (659105) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted line
FL09-PO2	**Prior Outage of G16-017-TAP (560074) to Fort Thompson (652506) 345 kV Line; 3 phase fault on Leland Olds 345 kV (659105) to Leland Olds 230 kV (659106) to leland Olds 13.8 kV (659201) XFMR, CKT 1, near Leland Olds 345 kV**
	a. Apply fault at the Leland Olds (659105) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted transformer
FLT10-PO2	**Prior Outage of G16-017-TAP (560074) to Fort Thompson (652506) 345 kV Line; 3 phase fault on Leland Olds 345 kV (659105) to Leland Olds 20 kV (659111) XFMR, CKT 1, near Leland Olds 345 kV**
	a. Apply fault at the Leland Olds (659105) 345 kV Bus
	b. Clear fault after 6 cycles and trip the faulted transformer, trip the generator
FLT14-SB	**Single Phase Fault with Stuck Breaker at Fort Thompson (652506) 345 kV Bus**
	a. Apply fault at the Fort Thompson (652506) 345 kV Bus
	b. Clear fault after 16 cycles and trip the Following Elements
	2. Fort Thompson to Grand Prarie 345 kV Line
	3. Fort Thompson 345/230/13.8 kV Transformers Trip off only one of these transfomers in addtion to 2 above
FLT15-SB	**Single Phase Fault with Stuck Breaker at leland Olds (659105) 345 kV Bus**
	a. Apply fault at the Leland Olds (659105) 345 kV Bus
	b. Clear fault after 16 cycles and trip the Following Elements
	3. Leland Olds to Antelop Valley 345 kV Lines (CKT 2)
FLT16-3PH	**3 phase fault on Antelope (659101) to Broadland (659120) 345 kV Line, near Antelop**
	a. Apply fault at the Antelop (659101) 345 kV Bus
	b. Clear fault after 6 cycles and disconnect ANTELOP-LNX3 (659420) and BRDLAND-LNX3 (659421)

Single-line-to-ground (SLG) fault impedance values were determined by applying a fault on the base case large enough to produce a 0.6 pu voltage value on the faulted bus. This SLG value was used for the SLG faults in FLT14-SB and FLT15-SB.

6.3 Results

The stability analysis showed an equally queued project, GEN-2016-044 included in DISIS-2016-001 (Group 16), tripping off-line due to over voltage for a fault event (FLT07-3PH) in 2020 winter peak case and prior queued projects Bison Units 4, 5 and 6 tripping off-line for a fault event (FLT16-3PH) in all five cases due to over voltage. These faults were re-run with the equally or prior queued project's voltage and frequency tripping disabled. Table 6-2 summarizes result for the machine rotor angle damping

requirement and transient voltage recovery criteria for all the faults studied. The dynamic stability plots are provided in Appendix C.

Table 6-2: Dynamic Stability Results

Fault	2016WP	2017SP	2020SP	2020WP	2025SP
FLT01-3PH	Stable	Stable	Stable	Stable	Stable
FLT02-3PH	Stable	Stable	Stable	Stable	Stable
FLT03-3PH	Stable	Stable	Stable	Stable	Stable
FLT04-3PH	Stable	Stable	Stable	Stable	Stable
FLT04-PO1	Stable	Stable	Stable	Stable	Stable
FLT05-3PH	Stable	Stable	Stable	Stable	Stable
FLT05-PO1	Stable	Stable	Stable	Stable	Stable
FLT06-3PH	Stable	Stable	Stable	Stable	Stable
FLT07-3PH	Stable	Stable	Stable	Stable	Stable
FLT07-PO2	Stable	Stable	Stable	Stable	Stable
FLT08-3PH	Stable	Stable	Stable	Stable	Stable
FLT08-PO2	Stable	Stable	Stable	Stable	Stable
FLT09-3PH	Stable	Stable	Stable	Stable	Stable
FLT09-PO2	Stable	Stable	Stable	Stable	Stable
FLT10-3PH	Stable	Stable	Stable	Stable	Stable
FLT10-PO2	Stable	Stable	Stable	Stable	Stable
FLT11-3PH	Stable	Stable	Stable	Stable	Stable
FLT12-3PH	Stable	Stable	Stable	Stable	Stable
FLT13-3PH	Stable	Stable	Stable	Stable	Stable
FLT14-SB	Stable	Stable	Stable	Stable	Stable
FLT15-SB	Stable	Stable	Stable	Stable	Stable
FLT16-3PH	Stable	Stable	Stable	Stable	Stable

7.0 CONCLUSIONS

The purpose of this study was to evaluate the impacts of the DISIS-2016-001 (Group 15) generation interconnection project, GEN-2016-017, on the SPP transmission system. Short circuit analysis, power factor analysis, reactive power analysis and stability analysis were performed for the evaluation.

7.1 Short Circuit Analysis

The results from short circuit analysis showed that the maximum change in the fault currents in the immediate systems at or near GEN-2016-017 was 27% for both the 2017 summer peak and 2025 summer peak cases. All three-phase current levels with the GEN-2016-017 generator online was below 34,000 A.

7.2 Power Factor Analysis

For the contingencies tested, the most leading power factor (generation facility absorbing reactive power from the network) was found to be 0.957 (-76.388 MVAr contribution) in the 2017 SP case for loss of the Leland Olds 345/20 kV GSU transformer. The most lagging power factor (generation facility providing reactive power to the network) was found to be 0.995 (24.32 MVAr contribution) in the 2020 Winter Peak case for loss of the Leland Olds to GEN-2016-017 Tap transmission line. Per SPP Tariff requirements, the Generating Facilities will be required to meet the standard 95% power factor requirement at the Point of Interconnection. The customer may be required to add capacitor and/or reactor banks depending upon its final collector system design.

7.3 Reactive Power Analysis

The reactive power analysis results showed that the GEN-2016-017 project requires a shunt reactor approximately 11.5 MVAr at the high side of the project substation to reduce the reactive power transfer at the POI to approximately zero during low/no wind conditions while the generation interconnection project is remains connected to the grid.

7.4 Stability Analysis

The stability analysis showed equally and prior queued projects tripping off-line for two fault events due to over voltage relay. These faults were re-run with the prior queued project's voltage and frequency tripping disabled. There were no machine rotor angle damping or transient voltage recovery violations within the DISIS-2016-001 (Group 15) study for the simulated fault events.

It should be noted that the results of this study are based on available data and assumptions made at the time of this study. If any of the data and/or assumptions change, the results provided in this report may not apply.

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Southwest Power Pool, Inc. (SPP)

DISIS-2016-001 (Group 16)
Definitive Impact Study

Final Report

REP-0045
Revision #00

February 2017

Submitted By:
Mitsubishi Electric Power Products, Inc. (MEPPI)
Power Systems Engineering Services Department
Warrendale, PA

Title: **DISIS-2016-001 (Group 16) Definitive Impact Study: Final Report REP-0045**
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EXECUTIVE SUMMARY

SPP requested a Definitive Interconnection System Impact Study (DISIS). The DISIS required a Stability Analysis, Short-circuit Analysis, Power Factor Analysis, and Low Wind/No Wind Analysis detailing the impacts of the interconnecting projects as shown in Table ES-1.

Table ES-1
Interconnection Projects Evaluated

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2016-004	202	Suzlon S111 2.1 MW wind	BEPC Leland Olds 230kV (659106)
GEN-2016-044	400	Vestas V110 2.0 MW wind	Tap Groton (659160) - Leland Olds (659105) 345kV, (G16-044-TAP, 560079)
GEN-2016-052	3.3 MW uprate to GI-0508 (total = 52.8 MW)	GE 1.6 MW wind	Hilken 230kV (652466)
GEN-2016-053	3.3 MW uprate to GI-0615 (total = 52.8 MW)	GE 1.6 MW wind	Hilken 230kV (652466)
GEN-2016-065	12.5 MW uprate to GI1414 (total = 156.4MW)	GE 1.8 MW & 1.79MW wind	Daglum 230kV (659448)
GEN-2016-066	12.5 MW uprate to GEN-2015-096 (total = 162.0MW)	GE 2.1 MW & 1.79 MW	Daglum 230kV (659448)

SUMMARY OF STABILITY ANALYSIS

Cluster Scenario

The Stability Analysis determined there were multiple contingencies that resulted in voltage instability and low post-fault voltage recovery when all generation interconnection requests were at 100% output.

To mitigate the voltage instability and low post-fault steady-state voltages, the following upgrades were provided by SPP and implemented in all seasons:

- Daglum to Dickson 230 kV circuit #1
- Groton to G16-044 Tap 345 kV circuit #2
- Emmons County to G16-044 Tap 345 kV circuit #1

After applying the above mitigation, the low post-fault steady-state voltages for the 2016 Winter Peak season were mitigated. However, there were several contingencies in the 2017 Summer Peak and 2025 Summer Peak seasons that still resulted in low post-fault steady-state voltages. The following upgrades were applied to the 2017 Summer Peak case and were applied to the 2025 Summer Peak case if they did not exist:

- Broadland to Split Rock345 kV circuit #1
- MISO MVP Project (exists in 2025 Summer Peak case)

Note that the Broadland to Emmons County 345 kV line reactor near Broadland 345 kV was switched out of service during post-fault steady-state conditions (five seconds after the fault is cleared) to mitigate the low voltages observed at Broadland 345 kV in the 2017 and 2025 Summer Peak cases.

After implementing the above upgrades, the contingency analysis was re-simulated for all contingencies. With the upgrades, the Stability Analysis determined that there was no wind turbine tripping or system instability observed as a result of interconnecting all study projects at 100% output.

Stand-Alone Scenario

For GEN-2016-044, low post-fault steady-state violations were observed for several contingencies for all seasonal peak conditions examined. The following upgrades were implemented to mitigate the low voltages observed:

- Daglum to Dickson 230 kV circuit #1 (16WP, 25SP)

- Groton to G16-044 Tap 345 kV circuit #2 (16WP, 25SP)
- Emmons County to G16-044 Tap 345 kV circuit #1 (16WP, 25SP)
- Broadland to Split Rock 345 kV circuit #1(17SP)
- MISO MVP Project (17SP)

After implementing these changes, observed voltage violations were mitigated.

For GEN-2016-065 and GEN-2016-66, voltage instability was observed for all seasonal peak conditions examined. The following upgrades were implemented to mitigate the low voltages observed:

- Daglum to Dickson 230 kV circuit #1 (All seasons)

After implementing the above line upgrade in all seasons, observed voltage violations were mitigated.

SUMMARY OF THE SHORT-CIRCUIT ANALYSIS

The Short-Circuit Analysis was performed on the 2017 Summer Peak and 2025 Summer Peak power flows for all study projects. Refer to Table ES-2 for a list of maximum fault currents observed for each study project for the 2017 Summer Peak case. Refer to Table ES-3 for a list of maximum fault currents observed for each study project for the 2025 Summer Peak case.

Table ES-2
List of Maximum Fault Currents Observed for Each Study Project for the 2017 Summer Peak Case

Study Project	POI Name	Fault Current at POI (kA)	Maximum Fault Current (kA)	Fault Location	Bus Voltage (kV)
GEN-2016-004	BEPC Leland Olds 230kV (659106)	23.75	52.77	COON CK7	115
GEN-2016-044	Tap Groton (659160) - Leland Olds (659105) 345kV, (G16-044-TAP, 560079)	8.06	24.22	RAUN 3	345
GEN-2016-052	Hilken 230kV (652466)	8.71	23.75	LELANDO4	230
GEN-2016-053	Hilken 230kV (652466)	8.71	23.75	LELANDO4	230
GEN-2016-065	Daglum 230kV (659448)	7.33	20.03	CENTER 4	230
GEN-2016-066	Daglum 230kV (659448)	7.33	20.03	CENTER 4	230

Table ES-3
List of Maximum Fault Currents Observed for Each Study Project for the 2025 Summer Peak Case

Study Project	POI Name	Fault Current at POI (kA)	Maximum Fault Current (kA)	Fault Location	Bus Voltage (kV)
GEN-2016-004	BEPC Leland Olds 230kV (659106)	23.91	52.94	COON CK7	115
GEN-2016-044	Tap Groton (659160) - Leland Olds (659105) 345kV, (G16-044-TAP, 560079)	8.28	24.73	RAUN 3	345
GEN-2016-052	Hilken 230kV (652466)	8.79	23.91	LELANDO4	230
GEN-2016-053	Hilken 230kV (652466)	8.79	23.91	LELANDO4	230
GEN-2016-065	Daglum 230kV (659448)	7.35	20.38	HESKETT 7	115
GEN-2016-066	Daglum 230kV (659448)	7.35	20.38	HESKETT 7	115

SUMMARY OF POWER FACTOR ANALYSIS

The upgrades identified in the Stability Analysis were implemented in the power flow cases and utilized for the Power Factor Analysis. Refer to Table ES-4 for the power factor analysis results for each study generator. The table lists the range of power factor required for each study project.

Table ES-4
Power Factor Analysis Summary for Study Projects

Study Project	Power Factor Range for Each Study Project[1]					
	16WP		17SP		25SP	
GEN-2016-004	-0.987	0.995	-0.910	-0.999	-0.920	1.000
GEN-2016-044	-0.987	0.997	-0.850	-0.941	-0.889	-0.952
GEN-2016-052	-0.987	0.988	-0.960	0.991	-0.913	0.997
GEN-2016-053	-0.987	0.988	-0.960	0.991	-0.913	0.997
GEN-2016-065	0.997	1.000	0.998	1.000	0.998	1.000
GEN-2016-066	0.997	1.000	0.998	1.000	0.998	1.000

[1]Lagging power factors are negative and leading power factors are positive

SUMMARY OF THE LOW/NO WIND/SOLAR IRRADIANCE ANALYSIS

The amount of reactive power injected into the transmission network was recorded at the high side of the transformer near the point of interconnection for all study projects for each season. The maximum reactance needed for zero Mvar flow was -39.35 Mvar for GEN-2016-065. The minimum reactance needed for zero Mvar flow was -4.50 Mvar for GEN-2016-052 and GEN-2016-053.

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SECTION 1: OBJECTIVES

The objective of this report is to provide Southwest Power Pool, Inc. (SPP) with the deliverables for the DISIS-2016-001 (Group 16) Definitive Impact Study. SPP requested an Interconnection System Impact Study for six (6) generation interconnections for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak, which requires a Stability Analysis, Short-circuit Analysis, Power Factor Analysis, Low/No Wind/Solar Irradiance Analysis, and an Impact Study Report.

SECTION 2: BACKGROUND

The Siemens Power Technologies International PSS/E power system simulation program Version 32.2.0 was used for this study. SPP provided the stability database cases for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and a list of contingencies to be examined. The model includes the study projects shown in Table 2-1 and the previously queued projects listed in Table 2-2. Refer to Appendix A for the steady-state and dynamic model data for the study projects. A power flow one-line diagram for each generation interconnection project is shown in Figures 2-1 through 2-4. Note that the one-line diagrams represent the 2016 Winter Peak case.

The Stability Analysis determined the impacts of the new interconnecting projects on the stability and voltage recovery of the nearby system and the ability of the interconnecting projects to meet FERC Order 661A. If problems with stability or voltage recovery are identified, the need for reactive compensation or system upgrades will be investigated. Three-phase faults and single line-to-ground faults will be examined as listed in Table 2-3. Note that all contingencies listed were examined for the Cluster Scenario, and specified contingencies (indicated by an X) were examined for each Stand Alone generator.

A Short-Circuit Analysis was performed on the 2017 Summer Peak and 2025 Summer Peak study years for each study generator. The study was performed five buses out from the study generator's point of interconnection and results were documented.

The Power Factor Analysis determined the power factor at the high side of the transformer near the point of interconnection for the wind or solar interconnection projects for pre-contingency and post-contingency conditions. The N-1, three phase contingencies listed in Table 2-3 were used in the Power Factor analysis.

The Summary of the Low/No Wind/Solar Irradiance Analysis was completed for all wind and solar farm interconnections. This analysis determined if reactive support is needed to have a Mvar flow of approximately zero at the point of interconnection (POI).

Table 2-1
Interconnection Projects Evaluated

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2016-004	202	Suzlon S111 2.1 MW wind	BEPC Leland Olds 230kV (659106)
GEN-2016-044	400	Vestas V110 2.0 MW wind	Tap Groton (659160) - Leland Olds (659105) 345kV, (G16-044-TAP, 560079)
GEN-2016-052	3.3 MW uprate to GI-0508 (total = 52.8 MW)	GE 1.6 MW wind	Hilken 230kV (652466)
GEN-2016-053	3.3 MW uprate to GI-0615 (total = 52.8 MW)	GE 1.6 MW wind	Hilken 230kV (652466)
GEN-2016-065	12.5 MW uprate to GI1414 (total = 156.4MW)	GE 1.8 MW & 1.79MW wind	Daglum 230kV (659448)
GEN-2016-066	12.5 MW uprate to GEN-2015-096 (total = 162.0MW)	GE 2.1 MW & 1.79 MW	Daglum 230kV (659448)

Table 2-2
Previously Queued Nearby Interconnection Projects Included

Request	Size (MW)	Generator Model	Point of Interconnection
GI-0708	120	GENROU (659270, ID 1)	Culbertson 115kV (661012)
G645/G788	102.6	GENROU (615015, ID 1)	Spiritwd 115kV (620270)
G752	150	WT3 generic wind (661989)	Hettinger 230kV (661047) 230kV
G723	7	GENSAL (661046)	Heskett 115kV (661043)
J003	19.5	WT3 generic wind (661317)	Baker 60kV (661300)
G502	50.6	W4GUR wind (608603)	SQBUTTE 230kV (657756)
G408	12	WT1 generic wind (600059)	Velva Tap 115kV (605634)
G380	149.2	WT1 generic wind (620115)	Rugby 230kV (620379)
J262/J263	200	GENCLS (11104/ 11108)	Jamestown 115kV (620269)
G830	99	GENCLS (10648)	McHenry 115kV (615348)
GI-0614A	7.5	GENSAL (659270, ID 2)	Culbertson 115kV (661012)
GI-0508	49.5	WT3 generic wind (659294)	Hilken 230kV (652466)
GI-0615	49.5	WT3 generic wind (659273)	Hilken 230kV (652466)
GI-0715	100	WT3 generic wind (659366)	Hilken 230kV (652466)
GI-0727	99	WT3 generic wind (659010)	Hilken 230kV (652466)

Request	Size (MW)	Generator Model	Point of Interconnection
GI-0926	106.5	GENROU (659403)	Hebron 230kV (652468)
GI-1001	99	GENROU (659411)	Mound City 230kV (652499)
GI-1007	172.5	GENROU (659407)	Antelope Valley 345kV (659101)
GI-1105, GI-1205, GI-1207	150	GENROU (659147/ 659158/ 659159)	Williston 115kV (652421)
GI-1202, GI-1204, GI-1208	150	GENROU (659148/ 659156/ 659157)	EASTHYBT-MK 115kV (659587
GI-1206	141	GENROU (659162/ 659163/ 659192)	Patentgate 115kV (659391)
GI-1404	384.2	GE 1.7MW (659125)	Charlie Creek 345kV (659183)
GI-1406	113.3	GENSAL (659431 ID's A1-A6/ 659432 ID's B1-B6)	PNSCOLLECTR 115kV (659430)
GI-1410	150	Vestas V110 VCSS 2.0MW (659141)	Neset 115kV (659139)
GI-1414	149.6	GE 1.7MW wind (659453)	Daglum 230kV (659448)
GEN-2014-003IS	88.23	WT3 generic wind (659018)	Culbertson 115kV (661012)
GEN-2015-046	300	Vestes V110 2MW wind (584873)	Tandee (Neset) 345kV (659336)
GEN-2015-091	101.2	Siemens 2.3MW wind (585263)	Daglum 230kV (659448)
GEN-2015-096	150	G.E. 2MW wind (585313)	Daglum 230kV (659448)
GEN-2015-098	100	G.E. 2MW wind (585343)	Beaverhill 230kV (652616)

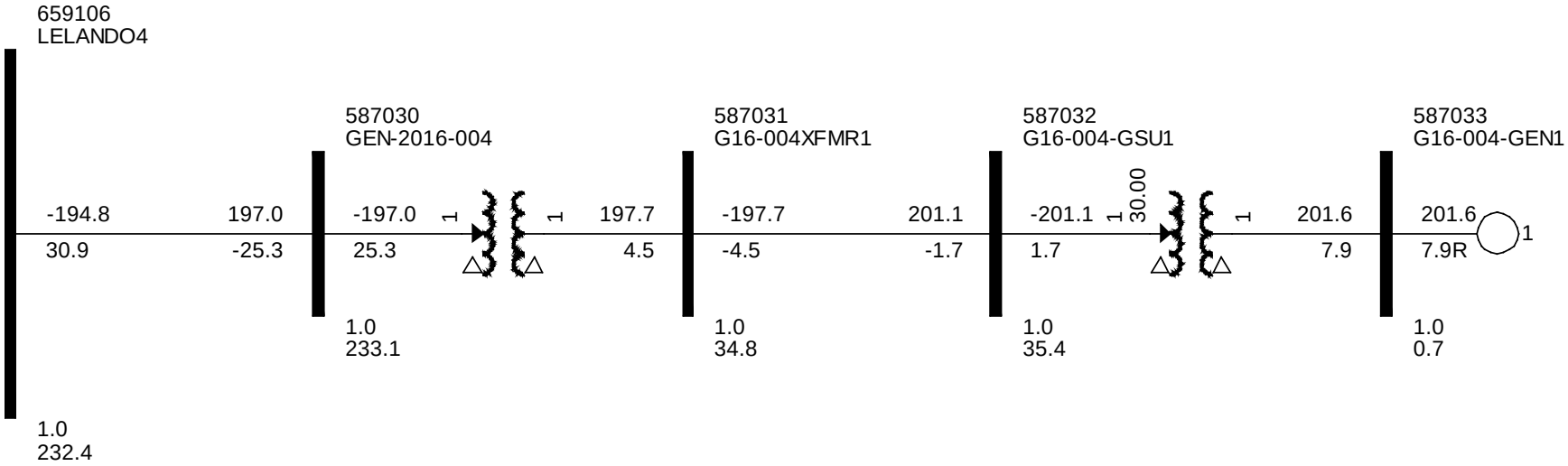


Figure 2-1. Power flow one-line diagram for interconnection project at the BEPC Leland Olds 230kV POI (GEN-2016-004).

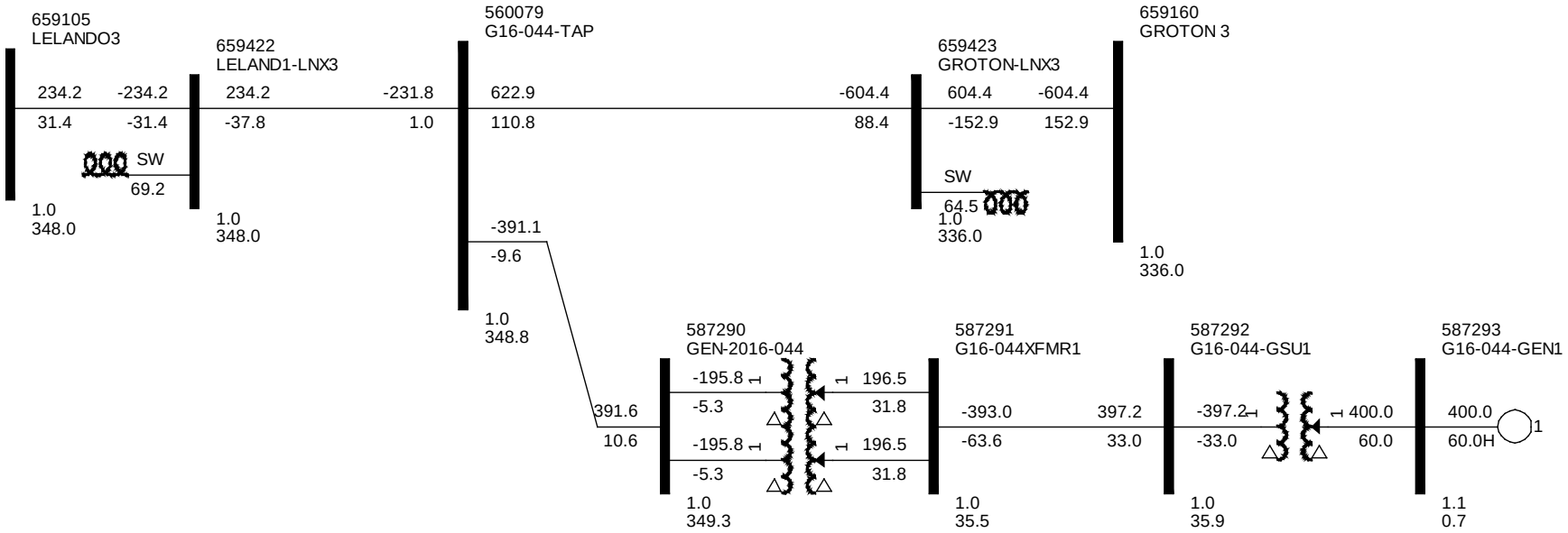


Figure 2-2. Power flow one-line diagram for interconnection project at the Tap Groton – Leland Olds 345kV POI (GEN-2016-044).

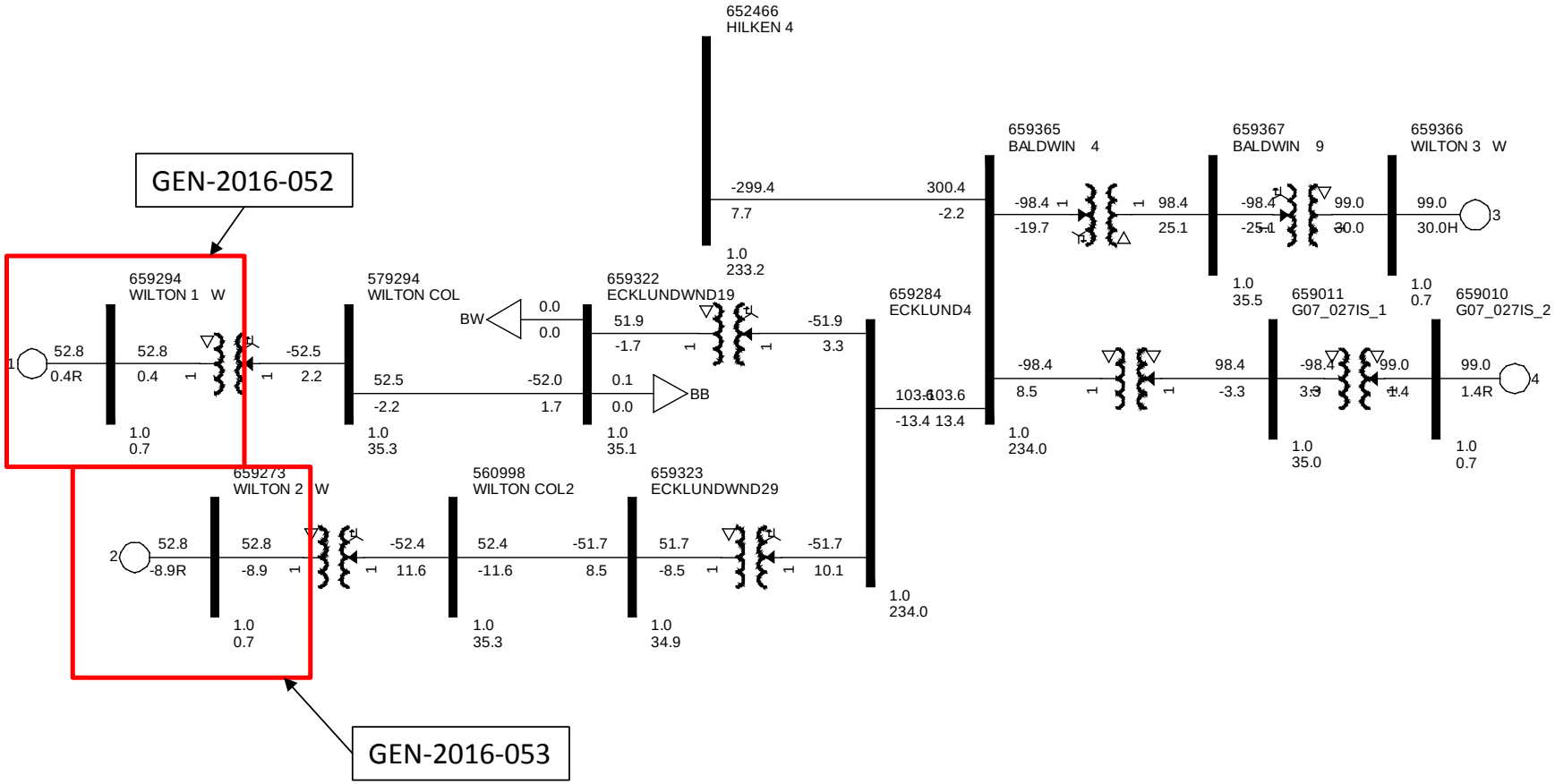


Figure 2-3. Power flow one-line diagram for interconnection project at the Hilken 230kV POI (GEN-2016-052 and GEN-2016-053).

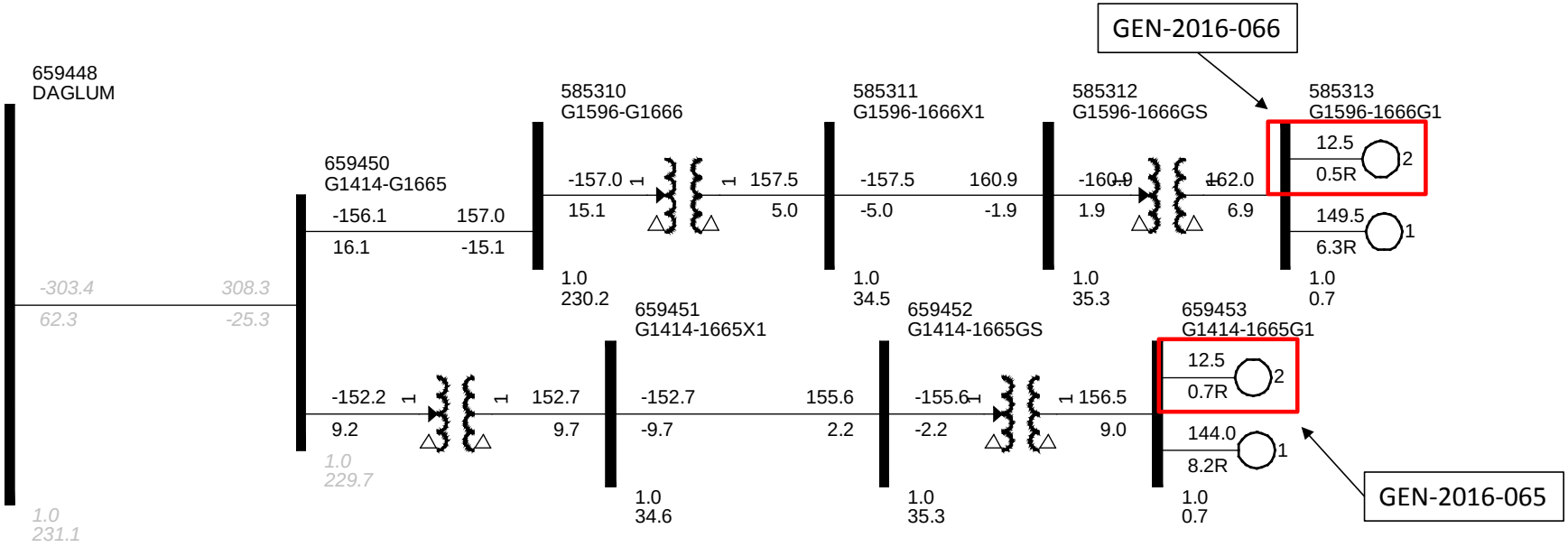


Figure 2-4. Power flow one-line diagram for interconnection project at the Daglum 230kV POI (GEN-2016-065 and GEN-2016-066).

Table 2-3
Case List with Contingency Description

Cont. No.	Fault Name	Description	GEN-2016-004	GEN-2016-044	GEN-2016-052	GEN-2016-053	GEN-2016-065	GEN-2016-066
1	FLT01-3PH	3 phase fault on the Leland Olds (659106) to Garrison (652441) 230kV line circuit 1, near Leland Olds. a. Apply fault at the Leland Olds 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X		X	X		
2	FLT02-3PH	3 phase fault on the Leland Olds (659106) to Washburn (652456) 230kV line circuit 1, near Leland Olds. a. Apply fault at the Leland Olds 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X					
3	FLT03-3PH	3 phase fault on the Leland Olds (659106) to Logan (659108) 230kV line circuit 1, near Leland Olds. a. Apply fault at the Leland Olds 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X					
4	FLT04-3PH	3 phase fault on the Leland Olds (659106) to Stanton (615901) 230kV line circuit 1, near Leland Olds. a. Apply fault at the Leland Olds 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X					
5	FLT05-3PH	3 phase fault on the Leland Olds 345/230/13.8kV (659105/659106/659201) transformer circuit 1, near Leland Olds. a. Apply fault at the Leland Olds 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	X				
6	FLT06-3PH	3 phase fault on the Garrison (652441) to Hilken (652466) 230kV line circuit 1, near Garrison. a. Apply fault at the Garrison 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X					
7	FLT07-3PH	3 phase fault on the Garrison (652441) to Jamestown (652444) 230kV line circuit 1, near Garrison. a. Apply fault at the Garrison 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X		X	X		
8	FLT08-3PH	3 phase fault on the Washburn (652456) to Bismark (652426) 230kV line circuit 1, near Washburn. a. Apply fault at the Washburn 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X		X	X		
9	FLT09-3PH	3 phase fault on the Logan (659108) to Blaisdell (659143) 230kV line circuit 1, near Logan. a. Apply fault at the Logan 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X					
10	FLT10-3PH	3 phase fault on the Stanton (615901) to Coal Creek Tap (615900) 230kV line circuit 1, near Stanton. a. Apply fault at the Stanton 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X					

Table 2-3 (Continued)
Case List with Contingency Description

Cont. No.	Fault Name	Description	GEN-2016-004	GEN-2016-044	GEN-2016-052	GEN-2016-053	GEN-2016-065	GEN-2016-066
11	FLT11-3PH	3 phase fault on the Leland Olds (659105) to Antelope (659101) 345kV line circuit 1, near Leland Olds. a. Apply fault at the Leland Olds 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	X				
12	FLT12-SB	**Leland Olds 230 kV Stuck Breaker Scenario 1** a. Apply fault at the Leland Olds 230kV bus. b. Clear fault after 16 cycles and trip the following elements c. Leland Olds (659106) – Washburn (652456) 230kV d. Leland Olds (659106) – Garrison (652441) 230kV	X					
13	FLT13-SB	**Leland Olds 230 kV Stuck Breaker Scenario 2** a. Apply fault at the Leland Olds 230kV bus. b. Clear fault after 16 cycles and trip the following elements c. Leland Olds (659106) – Logan (659108) 230kV d. Leland Olds (659106) – Stanton (615901) 230kV	X					
14	FLT14-SB	**Leland Olds 230 kV Stuck Breaker Scenario 3** a. Apply fault at the Leland Olds 230kV bus. b. Clear fault after 16 cycles and trip the following elements c. Leland Olds 345/230/13.8kV (659105/659106/659202) transformer, circuit 1 d. Leland Olds 345/230/13.8kV (659105/659106/659202) transformer, circuit 2	X					
15	FLT15-PO	**Prior Outage of Leland Olds 230 kV (659106) to Washburn 230 kV (652456) CKT 1;** 3 phase fault on Leland Olds 230kV (659106) to Logan 230kV (659108), near Leland Olds. a. Apply fault at the Leland Olds 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X					
16	FLT16-PO	**Prior Outage of Leland Olds 230 kV (659106) to Washburn 230 kV (652456) CKT 1;** 3 phase fault on Leland Olds 230kV (659106) to Garrison 230kV (652441), near Leland Olds. a. Apply fault at the Leland Olds 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X					
17	FLT17-PO	**Prior Outage of Leland Olds 230 kV (659106) to Washburn 230 kV (652456) CKT 1;** 3 phase fault on Leland Olds 345/230/13.8kV (659105/659106/659201) transformer, near Leland Olds. a. Apply fault at the Leland Olds 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X					
18	FLT18-PO	**Prior Outage of Leland Olds 230 kV (659106) to Logan 230 kV (659108) CKT 1;** 3 phase fault on Leland Olds 230kV (659106) to Washburn 230kV (652456), near Leland Olds. a. Apply fault at the Leland Olds 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X					

Table 2-3 (Continued)
Case List with Contingency Description

Cont. No.	Fault Name	Description	GEN-2016-004	GEN-2016-044	GEN-2016-052	GEN-2016-053	GEN-2016-065	GEN-2016-066
19	FLT19-PO	**Prior Outage of Leland Olds 230 kV (659106) to Logan 230 kV (659108) CKT 1;** 3 phase fault on Leland Olds 230kV (659106) to Garrison 230kV (652441), near Leland Olds. a. Apply fault at the Leland Olds 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X					
20	FLT20-PO	**Prior Outage of Leland Olds 230 kV (659106) to Logan 230 kV (659108) CKT 1;** 3 phase fault on Leland Olds 345/230/13.8kV (659105/659106/659201) transformer, near Leland Olds. a. Apply fault at the Leland Olds 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X					
21	FLT21-3PH	3 phase fault on the G16-044-Tap (560079) to LELAND1-LNX3 (659422) to LELANDO3 (659105) 345kV line circuit 1, near G16-044-Tap. a. Apply fault at the G16-044-Tap 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				
22	FLT22-3PH	3 phase fault on the G16-044-Tap (560079) to GROTON-LNX3 (659422) to GROTON3 (659160) 345kV line circuit 1, near G16-044-Tap. a. Apply fault at the G16-044-Tap 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				
23	FLT23-3PH	3 phase fault on the Leland Olds (659105) to LELAND2-LNX3 (659424) to G16-017-TAP (560074) 345kV line circuit 1, near Leland Olds. a. Apply fault at the Leland Olds 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				
24	FLT24-3PH	3 phase fault on the Groton (659160) to G09_001IST (652175) 345kV line circuit 1, near Groton. a. Apply fault at the Groton 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				
25	FLT25-3PH	3 phase fault on the Groton 345/115/13.8kV (659160/652512/659161) transformer, near Groton. a. Apply fault at the Groton 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				
26	FLT26-3PH	3 phase fault on the G09_001IST (652175) to Watertown (652529) 345kV line circuit 1, near G09_001IST. a. Apply fault at the G09_001IST 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				

Table 2-3 (Continued)
Case List with Contingency Description

Cont. No.	Fault Name	Description	GEN-2016-004	GEN-2016-044	GEN-2016-052	GEN-2016-053	GEN-2016-065	GEN-2016-066
29	FLT29-PO	**Prior Outage of Leland Olds 345 kV (659105) to LELAND1-LNX3 345 kV (659422) to G16-044-TAP (560079) CKT 1;** 3 phase fault on the Groton (659160) to G09_001IST (652175) 345kV line circuit 1, near Groton. a. Apply fault at the Groton 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				
30	FLT30-PO	**Prior Outage of Leland Olds 345 kV (659105) to LELAND1-LNX3 345 kV (659422) to G16-044-TAP (560079) CKT 1;** 3 phase fault on the Groton 345/115/13.8kV (659160/652512/659161) transformer, near Groton. a. Apply fault at the Groton 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				
31	FLT31-PO	**Prior Outage of Leland Olds 345 kV (659105) to LELAND1-LNX3 345 kV (659422) to G16-044-TAP (560079)CKT 1;** 3 phase fault on the G09_001IST (652175) to Watertown (652529) 345kV line circuit 1, near G09_001IST. a. Apply fault at the G09_001IST 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				
32	FLT32-PO	**Prior Outage of G16-044-Tap 345 kV (560079) to GROTON-LNX3 345 kV (659423) to GROTON3 (659160) CKT 1;** 3 phase fault on the Leland Olds (659105) to Antelope (659101) 345kV line circuit 1, near Leland Olds. a. Apply fault at the Leland Olds 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				
33	FLT33-PO	**Prior Outage of G16-044-Tap 345 kV (560079) to GROTON-LNX3 345 kV (659423) to GROTON3 (659160) CKT 1;** 3 phase fault on the Leland Olds 345/230/13.8kV (659105/659106/659201) transformer circuit 1, near Leland Olds. a. Apply fault at the Leland Olds 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X				
36	FLT36-3PH	3 phase fault on the Hilken (652466) to Garrison (652441) 230kV a. Apply fault at the Hilken 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.			X	X		
37	FLT37-3PH	3 phase fault on the Hilken (652466) to Bismark (652426) 230kV line circuit 1, near Hilken. a. Apply fault at the Hilken 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.			X	X		
38	FLT38-3PH	3 phase fault on the Bismark (652426) to Jamestown (652444) 230kV line circuit 1, near Bismark. a. Apply fault at the Bismark 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.			X	X		

Cont. No.	Fault Name	Description	GEN-2016-004	GEN-2016-044	GEN-2016-052	GEN-2016-053	GEN-2016-065	GEN-2016-066
39	FLT39-3PH	3 phase fault on the Bismark (652426) to Weber (661028) 230kV line circuit 1, near Bismark. a. Apply fault at the Bismark 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.			X	X		
40	FLT40-3PH	3 phase fault on the Bismark (652426) to Mound City (652499) 230kV line circuit 1, near Bismark. a. Apply fault at the Bismark 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.			X	X		
41	FLT41-3PH	3 phase fault on the Bismark (652426) to Ward (652296) 230kV line circuit 1, near Bismark. a. Apply fault at the Bismark 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.			X	X		
42	FLT42-3PH	3 phase fault on the Bismark 230/115/12.4kV (652426/652427/652392) transformer circuit 1, near Bismark. a. Apply fault at the Bismark 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.			X	X		
43	FLT43-3PH	3 phase fault on the Baldwin (659365) to Ecklund (659284) 230kV line circuit 1, near Baldwin. a. Apply fault at the Baldwin 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.			X	X		
47	FLT47-SB	**Garrison 230 kV Stuck Breaker Scenario 1** a. Apply fault at the Garrison 230kV bus. b. Clear fault after 16 cycles and trip the following elements c. Garrison (652441) – Leland Olds (659106) 230kV d. Garrison (652441) – Jamestown (652444) 230kV			X	X		
48	FLT48-SB	**Bismark 230 kV Stuck Breaker Scenario 1** a. Apply fault at the Bismark 230kV bus. b. Clear fault after 16 cycles and trip the following elements c. Bismark (652426) – Weber (661028) 230kV d. Bismark (652426) – Jamestown (652444) 230kV			X	X		
57	FLT57-PO	**Prior Outage of Hilken 230 kV (652466) to Bismark 230 kV (652426) CKT 1;** 3 phase fault on the Baldwin (659365) to Ecklund (659284) 230kV line circuit 1, near Baldwin. a. Apply fault at the Baldwin 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.			X	X		
58	FLT58-PO	**Prior Outage of Hilken 230 kV (652466) to Bismark 230 kV (652426) CKT 1;** 3 phase fault on the Garrison (652441) to Jamestown (652444) 230kV line circuit 1, near Garrison. a. Apply fault at the Garrison 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.			X	X		
59	FLT59-3PH	3 phase fault on the Daglum (659448) to Rhame (659266) 230kV line circuit 1, near Daglum. a. Apply fault at the Daglum 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.					X	X

Table 2-3 (Continued)
Case List with Contingency Description

Cont. No.	Fault Name	Description	GEN-2016-004	GEN-2016-044	GEN-2016-052	GEN-2016-053	GEN-2016-065	GEN-2016-066
60	FLT60-3PH	3 phase fault on the Daglum (659448) to Belfield (652425) 230kV line circuit 1, near Daglum. a. Apply fault at the Daglum 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.					X	X
61	FLT61-3PH	3 phase fault on the Belfield (652425) to Dickinson (652417) 230kV line circuit 1, near Belfield. a. Apply fault at the Belfield 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.					X	X
62	FLT62-3PH	3 phase fault on the Belfield (652425) to Medora (652413) 230kV line circuit 1, near Belfield. a. Apply fault at the Belfield 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.					X	X
63	FLT63-3PH	3 phase fault on the Belfield (652425) to South Heart River (659309) 230kV line circuit 1, near Belfield. a. Apply fault at the Belfield 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.					X	X
64	FLT64-3PH	3 phase fault on the Belfield 345/230/13.8kV (652424/652425/652221) transformer circuit 1, near Belfield. a. Apply fault at the Belfield 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.					X	X
65	FLT65-3PH	3 phase fault on the Rhame (659266) to Bowman (661010) 230kV line circuit 1, near Rhame. a. Apply fault at the Rhame 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.					X	X
66	FLT66-3PH	3 phase fault on the Rhame (659266) to Little Missouri (659265) 230kV line circuit 1, near Rhame. a. Apply fault at the Rhame 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.					X	X
67	FLT67-3PH	3 phase fault on the Rhame 230/115kV (659266/659267) transformer circuit 1, near Rhame. a. Apply fault at the Rhame 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.					X	X
68	FLT68-SB	**Belfield 230 kV Stuck Breaker Scenario 1** a. Apply fault at the Belfield 230kV bus. b. Clear fault after 16 cycles and trip the following elements c. Belfield (652425) – Daglum (659448) 230kV d. Belfield (652425) – Medora (652413) 230kV					X	X
69	FLT69-SB	**Belfield 230 kV Stuck Breaker Scenario 2** a. Apply fault at the Belfield 230kV bus. b. Clear fault after 16 cycles and trip the following elements c. Belfield (652425) – Dickinson (652417) 230kV d. Belfield (652425) – Medora (652413) 230kV					X	X

Table 2-3 (Continued)
Case List with Contingency Description

Cont. No.	Fault Name	Description	GEN-2016-004	GEN-2016-044	GEN-2016-052	GEN-2016-053	GEN-2016-065	GEN-2016-066
70	FLT70-SB	**Belfield 230 kV Stuck Breaker Scenario 3** a. Apply fault at the Belfield 230kV bus. b. Clear fault after 16 cycles and trip the following elements c. Belfield (652425) – South Heart River (659309) 230kV d. Belfield (652425) – Medora (652413) 230kV					X	X
71	FLT71-SB	**Belfield 230 kV Stuck Breaker Scenario 4** a. Apply fault at the Belfield 230kV bus. b. Clear fault after 16 cycles and trip the following elements c. Belfield (652425) – Dickinson (652417) 230kV d. Belfield (652425) – South Heart River (659309) 230kV					X	X
72	FLT72-SB	**Belfield 230 kV Stuck Breaker Scenario 5** a. Apply fault at the Belfield 230kV bus. b. Clear fault after 16 cycles and trip the following elements c. Belfield 345/230/13.8kV (652424/652425/652413) transformer, circuit 1 d. Belfield 345/230/13.8kV (652424/652425/652220) transformer, circuit 1					X	X
73	FLT73-SB	**Rhame 230 kV Stuck Breaker Scenario 1** a. Apply fault at the Rhame 230kV bus. b. Clear fault after 16 cycles and trip the following elements c. Rhame (659266) – Daglum (659448) 230kV d. Rhame (659266) – Little Missouri (659265) 230kV					X	X
74	FLT74-SB	**Rhame 230 kV Stuck Breaker Scenario 2** a. Apply fault at the Rhame 230kV bus. b. Clear fault after 16 cycles and trip the following elements c. Rhame (659266) – Bowman (661010) 230kV d. Rhame (659266) – Little Missouri (659265) 230kV					X	X
75	FLT75-SB	**Rhame 230 kV Stuck Breaker Scenario 3** a. Apply fault at the Rhame 230kV bus. b. Clear fault after 16 cycles and trip the following elements c. Rhame 230/115kV (659266/659267) transformer d. Rhame (659266) – Little Missouri (659265) 230kV					X	X
76	FLT76-SB	**Rhame 230 kV Stuck Breaker Scenario 4** a. Apply fault at the Rhame 230kV bus. b. Clear fault after 16 cycles and trip the following elements c. Rhame 230/115kV (659266/659267) transformer d. Rhame (659266) – Bowman (661010) 230kV					X	X
77	FLT77-PO	**Prior Outage of Daglum 230 kV (659448) to Rhame 230 kV (659266) CKT 1; 3 phase fault on the Belfield (652425) to Dickinson (652417) 230kV line circuit 1, near Belfield.** a. Apply fault at the Belfield 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.					X	X

Table 2-3 (Continued)
Case List with Contingency Description

Cont. No.	Fault Name	Description	GEN-2016-004	GEN-2016-044	GEN-2016-052	GEN-2016-053	GEN-2016-065	GEN-2016-066
78	FLT78-PO	**Prior Outage of Daglum 230 kV (659448) to Rhame 230 kV (659266) CKT 1; 3 phase fault on the Belfield (652425) to Medora (652413) 230kV line circuit 1, near Belfield.** a. Apply fault at the Belfield 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.					X	X
79	FLT79-PO	**Prior Outage of Daglum 230 kV (659448) to Rhame 230 kV (659266) CKT 1; 3 phase fault on the Belfield (652425) to South Daglum (659309) 230kV line circuit 1, near Belfield.** a. Apply fault at the Belfield 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.					X	X
80	FLT80-PO	**Prior Outage of Daglum 230 kV (659448) to Rhame 230 kV (659266) CKT 1; 3 phase fault on the Belfield 345/230/13.8kV (652424/652425/652221) transformer circuit 1, near Belfield.** a. Apply fault at the Belfield 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.					X	X
81	FLT81-PO	**Prior Outage of Daglum 230 kV (659448) to Belfield 230 kV (652425) CKT 1; 3 phase fault on the Rhame (659266) to Bowman (661010) 230kV line circuit 1, near Rhame.** a. Apply fault at the Rhame 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.					X	X
82	FLT82-PO	**Prior Outage of Daglum 230 kV (659448) to Belfield 230 kV (652425) CKT 1; 3 phase fault on the Rhame (659266) to Little Missouri (6529265) 230kV line circuit 1, near Rhame.** a. Apply fault at the Rhame 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.					X	X
83	FLT83-PO	**Prior Outage of Daglum 230 kV (659448) to Belfield 230 kV (652425) CKT 1; 3 phase fault on the Rhame 230/115kV (659266/659267) transformer circuit 1, near Rhame.** a. Apply fault at the Rhame 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.					X	X

SECTION 3: STABILITY ANALYSIS

The objective of the Stability Analysis was to determine the impacts of the generator interconnections on the stability and voltage recovery on the SPP transmission system. If problems with stability or voltage recovery were identified, the need for reactive compensation or system upgrades was investigated.

3.1 Approach

SPP provided MEPPI with the following three power flow cases:

- MDWG15-16WP_DIS1601_G16
- MDWG15-17SP_DIS1601_G16
- MDWG15-25SP_DIS1601_G16

Each case was examined prior to the Stability Analysis to ensure the case contained the proposed study projects and any previously queued projects listed in Tables 2-1 and 2-2 respectively. There was no suspect power flow data in the study area. The dynamic datasets were also verified and stable initial system conditions (i.e., “flat lines”) were achieved. Three-phase and single phase-to-ground faults listed in Table 2-3 were examined. Single-phase fault impedances were calculated for each season to result in a voltage of approximately 60% of the pre-fault voltage. Refer to Table 3-1 for a list of the calculated single-phase fault impedances. Refer to Tables 3-2 through 3-5 for the calculated single-phase fault impedances for the Stand Alone scenarios.

Table 3-1
Calculated Single-Phase Fault Impedances

[1]Ref. No.	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
1	FLT12-SB	-6062.5	-5656.3	-6062.5
2	FLT13-SB	-6062.5	-5656.3	-6062.5
3	FLT14-SB	-6062.5	-5656.3	-6062.5
4	FLT47-SB	-2812.5	-3015.6	-3015.6
5	FLT48-SB	-3218.8	-3015.6	-3218.8
6	FLT68-SB	-2609.4	-2406.3	-2507.8
7	FLT69-SB	-2609.4	-2406.3	-2507.8
8	FLT70-SB	-2609.4	-2406.3	-2507.8
9	FLT71-SB	-2609.4	-2406.3	-2507.8
10	FLT72-SB	-2609.4	-2406.3	-2507.8
11	FLT73-SB	-1125.0	-1062.5	-1125.0
12	FLT74-SB	-1125.0	-1062.5	-1125.0
13	FLT75-SB	-1125.0	-1062.5	-1125.0
14	FLT76-SB	-1125.0	-1062.5	-1125.0

(1) Refer to Table 2-3 for a description of the contingency scenario

Table 3-2
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-004

[1]Ref. No.	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
1	FLT12-SB	-6062.5	-5656.3	-5656.3
2	FLT13-SB	-6062.5	-5656.3	-5656.3
3	FLT14-SB	-6062.5	-5656.3	-5656.3

(1) Refer to Table 2-3 for a description of the contingency scenario

Table 3-3
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-052 and GEN-2016-053

[1]Ref. No.	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
1	FLT47-SB	-2812.5	-2812.5	-3015.6
2	FLT48-SB	-3218.8	-3218.8	-3421.9

(1) Refer to Table 2-3 for a description of the contingency scenario

Table 3-4
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-065

[1]Ref. No.	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
1	FLT68-SB	-2609.4	-2406.3	-2507.8
2	FLT69-SB	-2609.4	-2406.3	-2507.8
3	FLT70-SB	-2609.4	-2406.3	-2507.8
4	FLT71-SB	-2609.4	-2406.3	-2507.8
5	FLT72-SB	-2609.4	-2406.3	-2507.8
6	FLT73-SB	-1125.0	-1125.0	-1125.0
7	FLT74-SB	-1125.0	-1125.0	-1125.0
8	FLT75-SB	-1125.0	-1125.0	-1125.0
9	FLT76-SB	-1125.0	-1125.0	-1125.0

(1) Refer to Table 2-3 for a description of the contingency scenario

Table 3-5
Calculated Single-Phase Fault Impedances for Stand Alone Scenario: GEN-2016-066

[1]Ref. No.	Cont. Name	Single-Phase Fault Impedance (MVA)		
		2016 Winter	2017 Summer	2025 Summer
1	FLT68-SB	-2507.8	-2406.3	-2406.3
2	FLT69-SB	-2507.8	-2406.3	-2406.3
3	FLT70-SB	-2507.8	-2406.3	-2406.3
4	FLT71-SB	-2507.8	-2406.3	-2406.3
5	FLT72-SB	-2507.8	-2406.3	-2406.3
6	FLT73-SB	-1125.0	-1125.0	-1125.0
7	FLT74-SB	-1125.0	-1125.0	-1125.0
8	FLT75-SB	-1125.0	-1125.0	-1125.0
9	FLT76-SB	-1125.0	-1125.0	-1125.0

(1) Refer to Table 2-3 for a description of the contingency scenario

Bus voltages, machine rotor angles, and previously queued generation in the study area were monitored in addition to bus voltages and machine rotor angles in the following areas:

- 640 NPPD
- 645 OPPD
- 650 LES
- 652 WAPA
- 600 XEL
- 608 MP
- 613 SMMPA
- 615 GRE

- 620 OTP
- 661 MDU

Requested and previously queued generation outside the above study area was also monitored.

The results of the analysis determined if reactive compensation or system upgrades were required to obtain acceptable system performance. If additional reactive compensation was required, the size, type, and location were determined. The proposed reactive reinforcements would ensure the wind or solar farm meets FERC Order 661A low voltage requirements and return the wind or solar farm to its pre-disturbance operating voltage. If the results indicated the need for fast responding reactive support, dynamic support such as an SVC or STATCOM was investigated. If tripping of the prior queued projects was observed during the stability analysis (for under/over voltage or under/over frequency) the simulations were re-simulated with the prior queued project's voltage and frequency tripping disabled.

3.2 Cluster Scenario Stability Analysis Results

The Stability Analysis determined there were no contingencies that resulted in system instability or generation tripping offline for the examined seasonal peak conditions when all generation interconnection requests were at 100% output.

However, voltage violations were observed for the Cluster Scenario for the 2016 Winter Peak case. Contingencies FLT21-3PH, FLT22-3PH, and LT60-3PH, FLT68-SB, FLT70-SB were observed to have overvoltage and undervoltage violations, respectively. After discussion with SPP, it was determined that a line from Daglum (659448) to Dickson (652417) 230 kV circuit #1, G16-044-TAP (560079) to Groton (659160) 345 kV circuit #2, and G16-044-TAP (560079) to Emmons County (561001) 345 kV circuit #1 should be implemented in the 2016 Winter Peak case. After implementing these changes, the voltage violations that were observed were mitigated.

For the 2017 and 2025 Summer Peak case, voltage instability was observed for several contingencies. The addition of the new lines from Daglum (659448) to Dickson (652417) 230 kV circuit #1, G16-044-TAP (560079) to Groton (659160) 345 kV circuit #2, and G16-044-TAP (560079) to Emmons County (561001) 345 kV circuit #1 helped mitigate all but five contingencies.

Contingencies FLT23-3PH, FLT24-3PH, FLT26-3PH, FLT29-PO and FLT31-PO were observed to have post-contingency voltages below 0.9 p.u. After discussion with SPP, a line from Split Rock (601006) to Broadland (659120) 345 kV circuit #1 is required to be implemented. Additionally, the MISO MVP Project was added only for the 2017 Summer Peak case. Note that the Broadland to Emmons County 345 kV line reactor near Broadland 345 kV was switched out

of service during post-fault steady-state conditions (five seconds after the fault is cleared) to mitigate the low voltages observed at Broadland 345 kV in the 2017 and 2025 Summer Peak cases.

After implementing these changes, observed voltage violations were mitigated. Plots of the bus voltages observed for the five cases with and without system upgrades are shown in Figures 3-1 through 3-5.

Refer to Table 3-6 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3. Table 3-6 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline, if acceptable voltage recovery was observed after the fault was cleared, and if the voltage recovered to above 0.9 p.u. and below 1.1 p.u. post fault steady-state conditions. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady-state voltage (for N-1 contingencies) at the pre-contingent level or at least above 0.9 p.u. and below 1.1. p.u.

Refer to Appendix B, Appendix C, and Appendix D for a complete set of plots for all contingencies for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions, respectively.

Table 3-6
Cluster Scenario: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

[1]Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT01-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT02-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
3	FLT03-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
4	FLT04-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
5	FLT05-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
6	FLT06-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
7	FLT07-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
8	FLT08-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
9	FLT09-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
10	FLT10-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
11	FLT11-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
12	FLT12-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
13	FLT13-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
14	FLT14-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
15	FLT15-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
16	FLT16-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
17	FLT17-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
18	FLT18-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
19	FLT19-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
20	FLT20-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
21	FLT21-3PH	No	Yes	Not Compliant	Stable	No	Yes	Not Compliant	Stable	No	Yes	Not Compliant	Stable
22	FLT22-3PH	No	No	Not Compliant	Stable	No	Yes	Not Compliant	Stable	No	Yes	Not Compliant	Stable
23	FLT23-3PH	No	No	Compliant	Stable	No	No	Not Compliant	Stable	No	No	Not Compliant	Stable
24	FLT24-3PH	No	No	Compliant	Stable	No	No	Not Compliant	Stable	No	No	Not Compliant	Stable
25	FLT25-3PH	No	No	Compliant	Stable	No	No	Not Compliant	Stable	No	No	Compliant	Stable
26	FLT26-3PH	No	No	Compliant	Stable	No	No	Not Compliant	Stable	No	No	Not Compliant	Stable
29	FLT29-PO	No	No	Compliant	Stable	No	No	Not Compliant	Stable	No	No	Not Compliant	Stable
30	FLT30-PO	No	No	Compliant	Stable	Yes	No	Compliant	Stable	No	No	Compliant	Stable
31	FLT31-PO	No	No	Compliant	Stable	No	No	Not Compliant	Stable	No	No	Not Compliant	Stable
32	FLT32-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
33	FLT33-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
36	FLT36-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
37	FLT37-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
38	FLT38-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
39	FLT39-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
40	FLT40-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
41	FLT41-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
42	FLT42-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
43	FLT43-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
47	FLT47-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
48	FLT48-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
57	FLT57-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
58	FLT58-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
59	FLT59-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
60	FLT60-3PH	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable
61	FLT61-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
62	FLT62-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
63	FLT63-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
64	FLT64-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
65	FLT65-3PH	No	No	Compliant	Stable	No	Yes	Compliant	Stable	No	No	Compliant	Stable
66	FLT66-3PH	No	No	Compliant	Stable	No	Yes	Compliant	Stable	No	Yes	Compliant	Stable

(1) Refer to Tabel 2-3 for a description of the contingency scenario

Table 3-7 (Continued)
Cluster Scenario: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

[1]Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
67	FLT67-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
68	FLT68-SB	Yes	No	Not Compliant	Unstable	No	Yes	Not Compliant	Stable	Yes	No	Not Compliant	Unstable
69	FLT69-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
70	FLT70-SB	Yes	No	Not Compliant	Unstable	No	Yes	Not Compliant	Stable	Yes	No	Not Compliant	Unstable
71	FLT71-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
72	FLT72-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
73	FLT73-SB	No	No	Compliant	Stable	No	Yes	Compliant	Stable	No	Yes	Compliant	Stable
74	FLT74-SB	No	No	Compliant	Stable	No	Yes	Compliant	Stable	No	Yes	Compliant	Stable
75	FLT75-SB	No	No	Compliant	Stable	No	Yes	Compliant	Stable	No	Yes	Compliant	Stable
76	FLT76-SB	No	No	Compliant	Stable	No	Yes	Compliant	Stable	No	No	Compliant	Stable
77	FLT77-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
78	FLT78-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
79	FLT79-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
80	FLT80-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
81	FLT81-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
82	FLT82-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
83	FLT83-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable

(1) Refer to Tabel 2-3 for a description of the contingency scenario

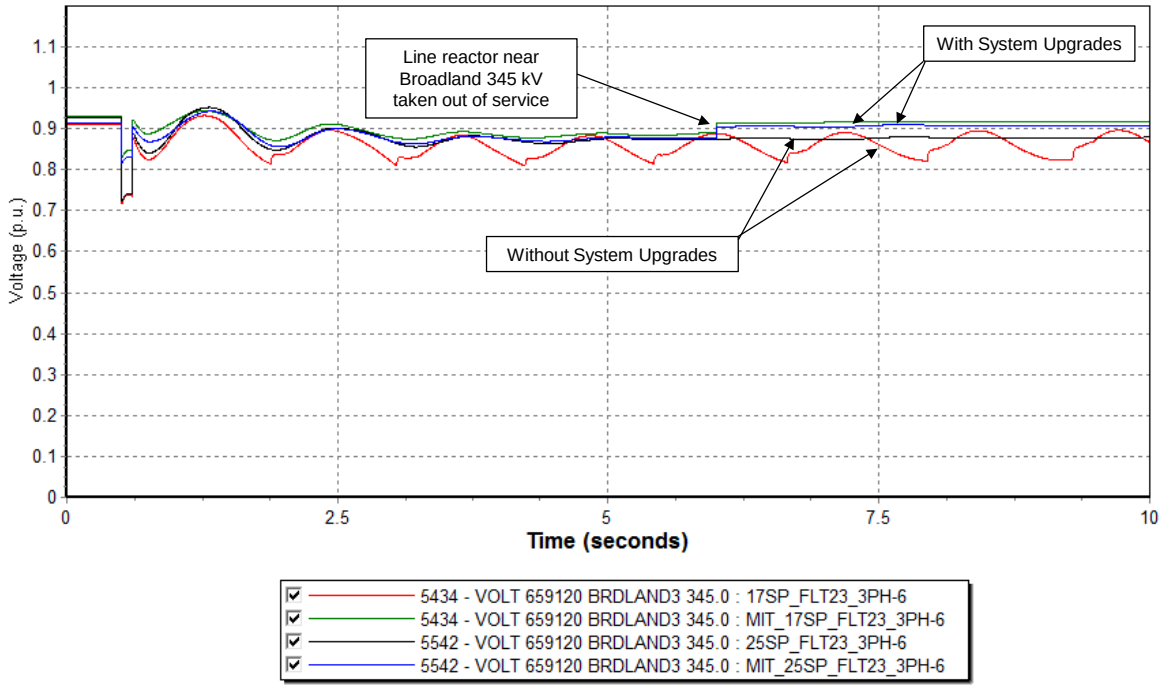


Figure 3-1. Plot of the voltage at BRDLAND3 345 kV for FLT23-3PH for 2017 and 2025 Summer Peak case with and without system upgrades.

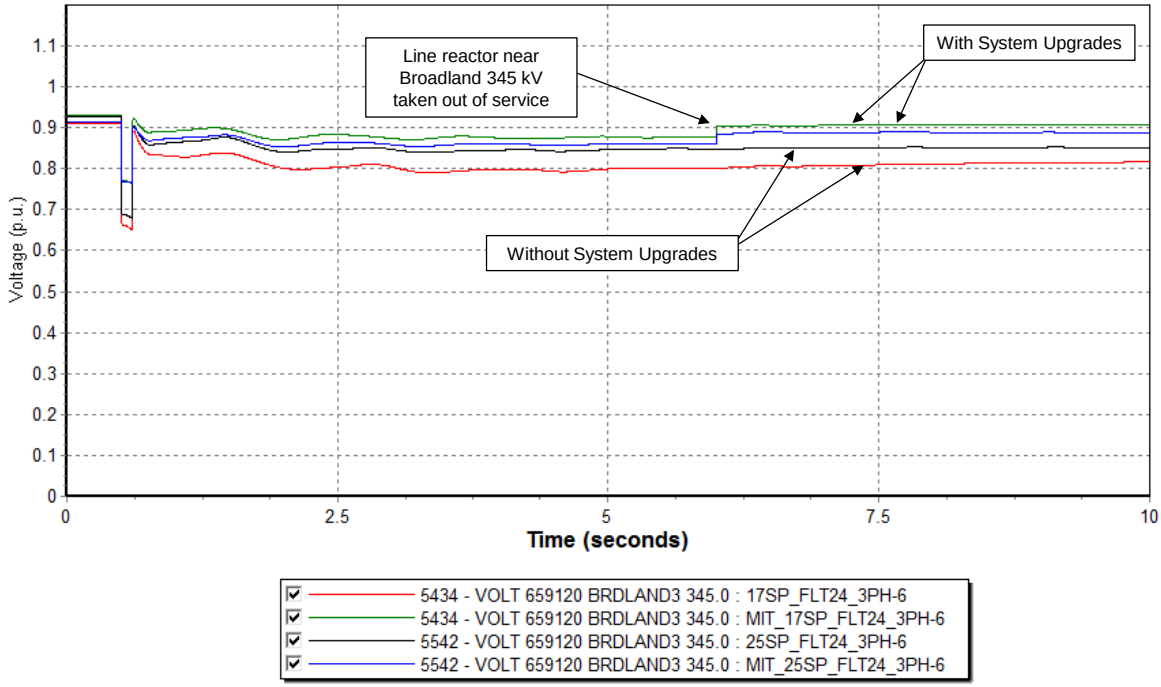


Figure 3-2. Plot of the voltage at BRDLAND3 345 kV for FLT24-3PH for 2017 and 2025 Summer Peak case with and without system upgrades.

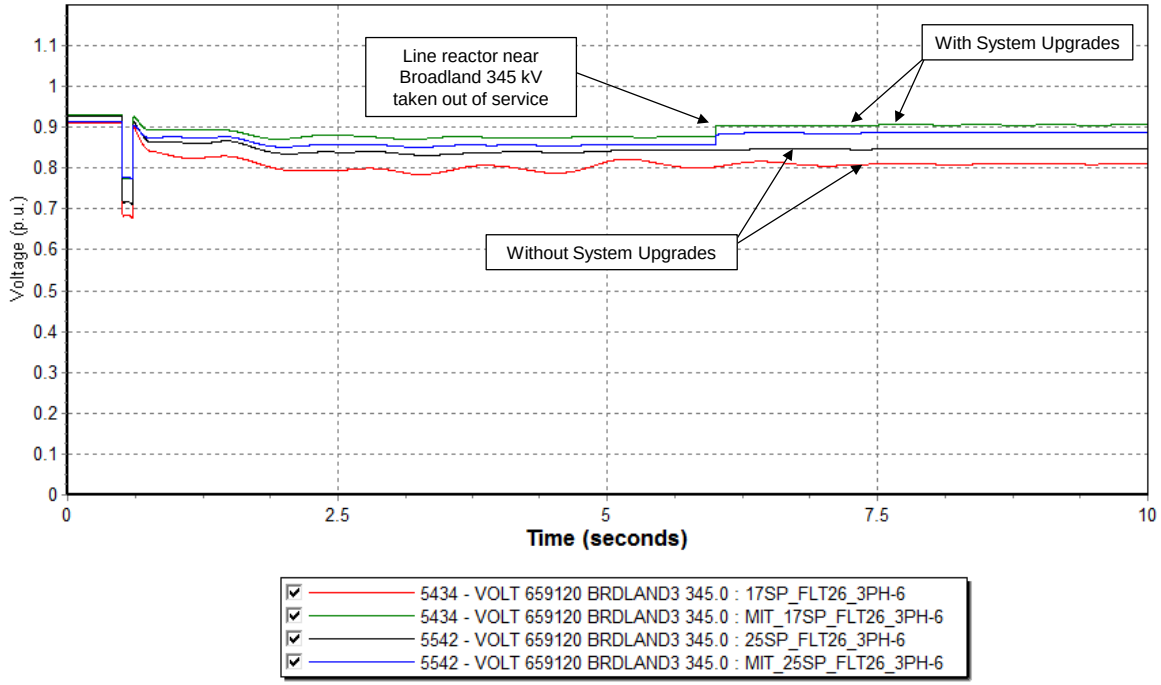


Figure 3-3. Plot of the voltage at BRDLAND3 345 kV for FLT26-3PH for 2017 and 2025 Summer Peak case with and without system upgrades.

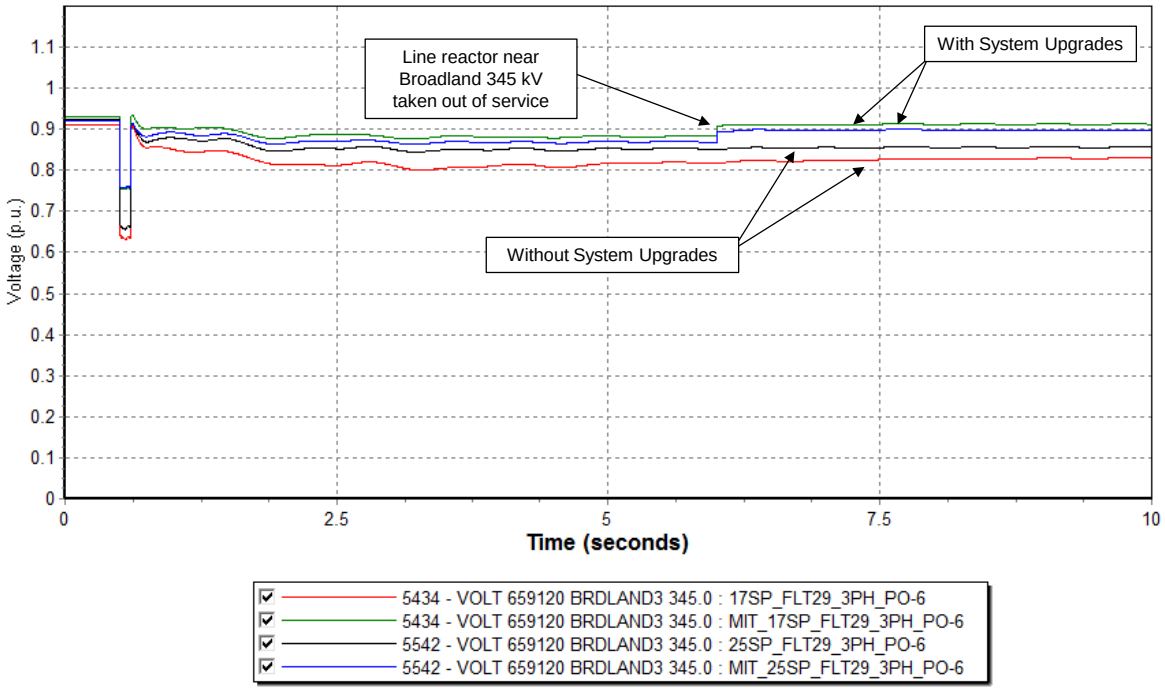


Figure 3-4. Plot of the voltage at BRDLAND3 345 kV for FLT29-3PH-PO for 2017 and 2025 Summer Peak case with and without system upgrades.

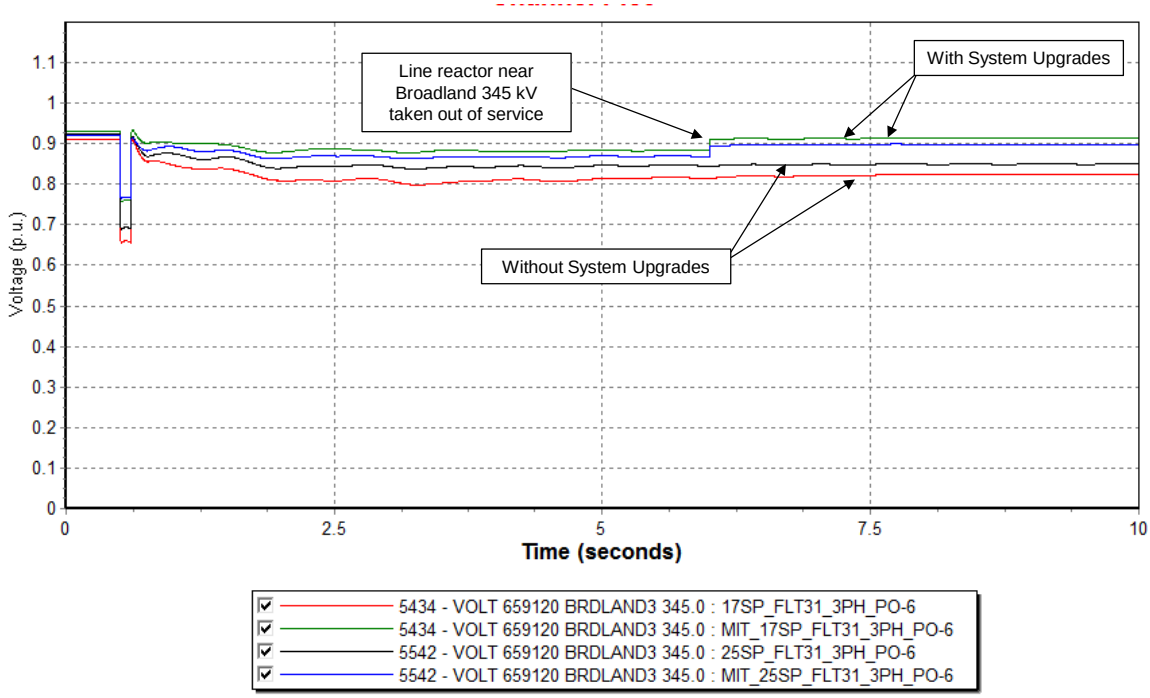


Figure 3-5. Plot of the voltage at BRDLAND3 345 kV for FLT31-3PH-PO for 2017 and 2025 Summer Peak case with and without system upgrades.

3.3 Stand Alone Scenario Stability Analysis Results: GEN-2016-004

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability or generation tripping offline for all examined seasonal peak conditions when GEN-2016-004 was interconnected at 100% output. However, four contingencies (FLT06-3PH, FLT07-3PH, FLT08-3PH and FLT10-3PH) resulted in final voltages exceeding 1.1 p.u. at the ROSEAUN2 500kV bus (601012) for 2017 Summer Peak case. After discussion with SPP, it was determined that this was a pre-existing issue.

Refer to Table 3-8 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-004 Stand Alone Analysis. Table 3-8 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

Refer to Appendix E, Appendix F, and Appendix G for a complete set of plots for all Stand Alone Scenario contingencies for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions, respectively.

Table 3-8
Stand Alone Scenario GEN-2016-004: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT01-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT02-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
3	FLT03-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
4	FLT04-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
5	FLT05-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
6	FLT06-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
7	FLT07-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
8	FLT08-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
9	FLT09-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
10	FLT10-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
11	FLT11-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
12	FLT12-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
13	FLT13-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
14	FLT14-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
15	FLT15-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
16	FLT16-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
17	FLT17-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
18	FLT18-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
19	FLT19-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
20	FLT20-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable

(1) Final voltage at ROSNEAUN2 500kV exceeded 1.1 p.u. However, this was determined to be a pre-existing condition.

3.4 Stand Alone Scenario Stability Analysis Results: GEN-2016-044

The Stand Alone Scenario Stability Analysis determined that there were several contingencies that resulted in voltage violations for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak when GEN-2016-044 was interconnected at 100% output.

Refer to Table 3-9 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-044 Stand Alone Analysis. Table 3-9 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

It was determined that the following upgrades were required to mitigate the violations observed for all examined seasonal peak conditions:

- Daglum to Dickson 230 kV circuit #1
- G16-044-TAP to Groton 345 kV circuit #2
- G16-044-TAP to Emmons County 345 kV circuit #1
- Broadland to Split Rock 345 kV circuit #1 (2017 Summer Peak only)
- MISO MVP Project (Big Stone 345 kV) (2017 Summer Peak only)

After the above upgrades were implemented, there were no additional voltage violations or system instability and all voltages and generators recovered within SPP criteria. Figure 3-6 is a plot of bus voltages for FLT24-3PH with and without system upgrades.

Table 3-9
Stand Alone Scenario GEN-2016-044: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT05-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT11-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
3	FLT21-3PH	No	Yes	Not Compliant	Stable	No	Yes	Not Compliant	Stable	No	Yes	Not Compliant	Stable
4	FLT22-3PH	No	No	Compliant	Stable	No	Yes	Not Compliant	Stable	No	Yes	Not Compliant	Stable
5	FLT23-3PH	No	No	Compliant	Stable	No	No	Not Compliant	Stable	No	No	Compliant	Stable
6	FLT24-3PH	No	No	Compliant	Stable	No	No	Not Compliant	Stable	No	No	Compliant	Stable
7	FLT25-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
8	FLT26-3PH	No	No	Compliant	Stable	No	No	Not Compliant	Stable	No	No	Compliant	Stable
9	FLT29-PO	No	No	Compliant	Stable	No	No	Not Compliant	Stable	No	No	Compliant	Stable
10	FLT30-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
11	FLT31-PO	No	No	Compliant	Stable	No	No	Not Compliant	Stable	No	No	Compliant	Stable
12	FLT32-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
13	FLT33-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable

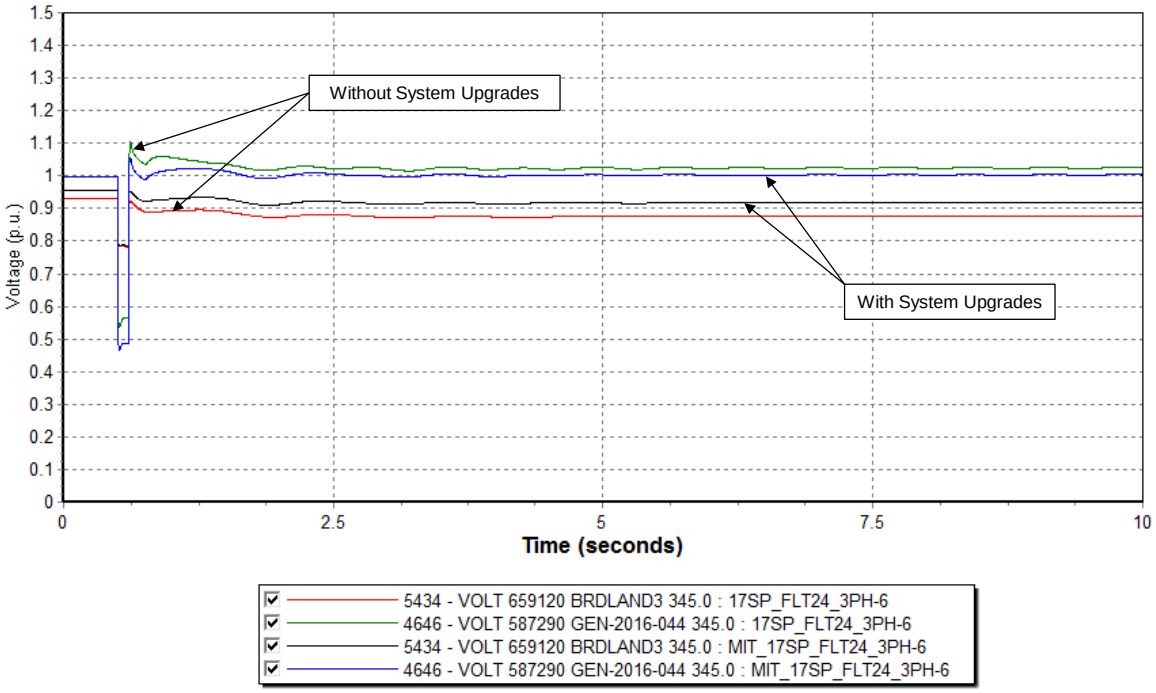


Figure 3-6. Plot of the BRDLAND3 and GEN-2016-044 bus voltages for FLT24-3PH for the 2017 Summer Peak case with and without system upgrades.

3.5 Stand Alone Scenario Stability Analysis Results: GEN-2016-052

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability or generation tripping offline for all examined seasonal peak conditions when GEN-2016-052 was interconnected at 100% output. However, several contingencies resulted in final voltages exceeding 1.1 p.u. at the ROSEAUN2 500kV bus (601012) for 2017 Summer Peak. After discussion with SPP, it was determined that this was a pre-existing issue.

Refer to Table 3-10 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-052 Stand Alone Analysis. Table 3-10 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

Table 3-10
Stand Alone Scenario GEN-2016-052: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT01-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT07-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
3	FLT08-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
4	FLT36-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
5	FLT37-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
6	FLT38-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
7	FLT39-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
8	FLT40-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
9	FLT41-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
10	FLT42-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
11	FLT43-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
12	FLT47-SB	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
13	FLT48-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
14	FLT57-PO	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
15	FLT58-PO	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable

(1) Final voltage at ROSNEAUN2 500kV exceeded 1.1 p.u. However, this was determined to be a pre-existing condition.

3.6 Stand Alone Scenario Stability Analysis Results: GEN-2016-053

The Stand Alone Scenario Stability Analysis determined that there were no contingencies that resulted in system instability or generation tripping offline for all examined seasonal peak conditions when GEN-2016-053 was interconnected at 100% output. However, several contingencies resulted in final voltages exceeding 1.1 p.u. at the ROSEAUN2 500kV bus (601012) for 2017 Summer Peak. After discussion with SPP, it was determined that this was a pre-existing issue.

Refer to Table 3-11 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-053 Stand Alone Analysis. Table 3-11 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

Table 3-11
Stand Alone Scenario GEN-2016-053: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT01-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
2	FLT07-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
3	FLT08-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
4	FLT36-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
5	FLT37-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
6	FLT38-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
7	FLT39-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
8	FLT40-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
9	FLT41-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
10	FLT42-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
11	FLT43-3PH	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
12	FLT47-SB	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
13	FLT48-SB	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
14	FLT57-PO	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable
15	FLT58-PO	No	No	Compliant	Stable	No	No	Compliant[1]	Stable	No	No	Compliant	Stable

(1) Final voltage at ROSNEAUN2 500kV exceeded 1.1 p.u. However, this was determined to be a pre-existing condition.

3.7 Stand Alone Scenario Stability Analysis Results: GEN-2016-065

The Stand Alone Scenario Stability Analysis determined that contingencies FLT81-PO, FLT82-PO and FLT83-PO resulted in voltage instability for 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak when GEN-2016-065 was interconnected at 100% output.

Refer to Table 3-12 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-065 Stand Alone Analysis. Table 3-12 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

It was determined that the following upgrade was required to mitigate the violations observed for all examined seasonal peak conditions:

- Daglum to Dickson 230 kV circuit #1

After the above upgrade was implemented, there were no additional voltage violations or system instability and all voltages and generators recovered within SPP criteria. Figure 3-7 is a plot of bus voltages for FLT82-3PH-PO with and without system upgrades.

Table 3-12
Stand Alone Scenario GEN-2016-065: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT59-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT60-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
3	FLT61-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
4	FLT62-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
5	FLT63-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
6	FLT64-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
7	FLT65-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
8	FLT66-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
9	FLT67-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
10	FLT68-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
11	FLT69-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
12	FLT70-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
13	FLT71-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
14	FLT72-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
15	FLT73-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
16	FLT74-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
17	FLT75-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
18	FLT76-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
19	FLT77-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
20	FLT78-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
21	FLT79-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
22	FLT80-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
23	FLT81-PO	No	No	Compliant	Stable	No	Yes	Compliant	Stable	No	Yes	Compliant	Stable
24	FLT82-PO	Yes	No	Not Compliant	Unstable	Yes	No	Not Compliant	Unstable	No	Yes	Not Compliant	Unstable
25	FLT83-PO	No	No	Compliant	Stable	No	Yes	Compliant	Stable	No	Yes	Compliant	Stable

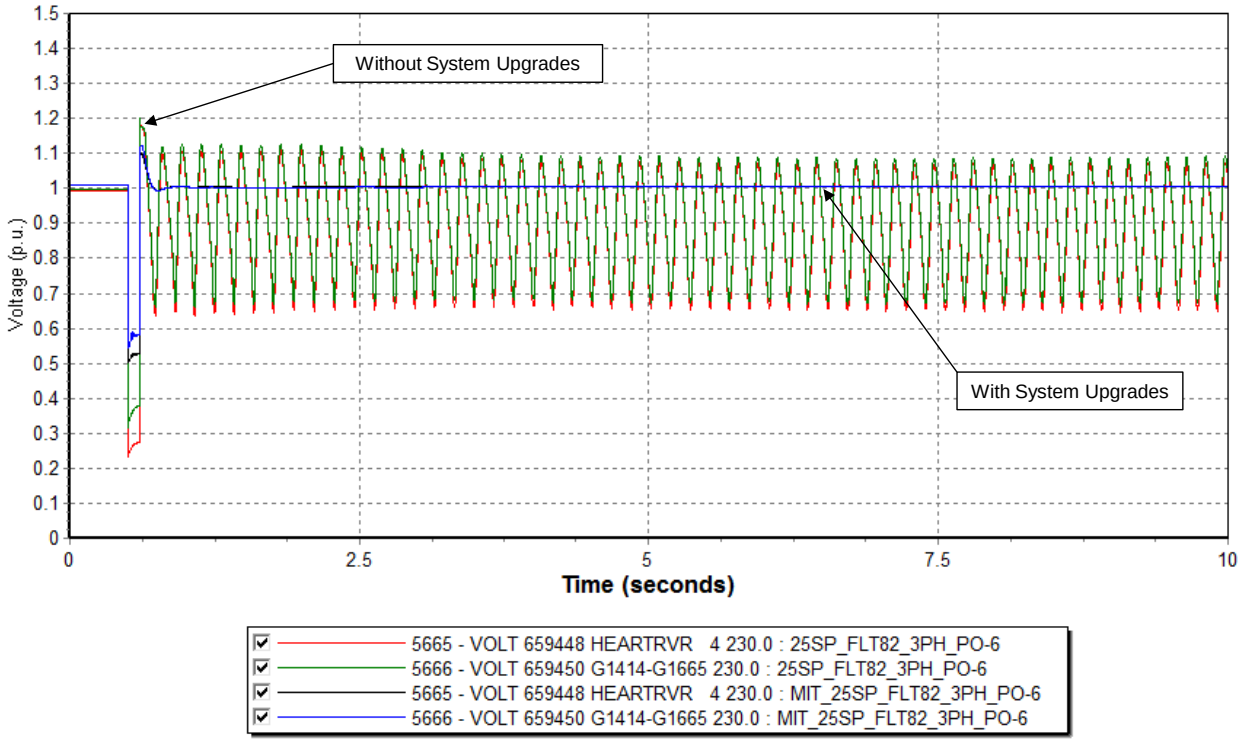


Figure 3-7. Plot of the DAGLUM4 and GEN-2016-065 bus voltages for FLT82-3PH-PO for the 2025 Summer Peak case with and without system upgrades.

3.8 Stand Alone Scenario Stability Analysis Results: GEN-2016-066

The Stand Alone Scenario Stability Analysis determined that contingencies FLT81-PO, FLT82-PO and FLT83-PO resulted in voltage instability for 2017 Summer Peak, and 2025 Summer Peak when GEN-2016-066 was interconnected at 100% output.

Refer to Table 3-13 for a summary of the Stability Analysis results for the contingencies listed in Table 2-3 that corresponds to the GEN-2016-066 Stand Alone Analysis. Table 3-13 is a summary of the stability results for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions and states whether the system remained stable or generation tripped offline and if acceptable voltage recovery was observed after the fault was cleared. Voltage recovery criteria includes ensuring that the transient voltage recovery is between 0.7 p.u. and 1.2 p.u. and ending in a steady state voltage (for N-1 contingencies) at the pre-contingent level or at least 0.9 p.u.

It was determined that the following upgrade was required to mitigate the violations observed for all examined seasonal peak conditions:

- Daglum to Dickson 230 kV circuit #1 (2017 and 2025 Summer Peak only)

After the above upgrade was implemented, there were no additional voltage violations or system instability and all voltages and generators recovered within SPP criteria. Figure 3-8 is a plot of bus voltages for FLT82-3PH-PO with and without system upgrades.

Table 3-13
Stand Alone Scenario GEN-2016-066: Stability Analysis Summary of Results for 2016 Winter, 2017 Summer, and 2025 Summer Peak Conditions

Ref. No.	Cont. Name	2016 Winter Peak				2017 Summer Peak				2025 Summer Peak			
		Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability	Voltage		Post Fault Steady-State Voltage	System Stability
		Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.			Less than 0.70 p.u.	Greater than 1.2 p.u.		
1	FLT59-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
2	FLT60-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
3	FLT61-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
4	FLT62-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
5	FLT63-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
6	FLT64-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
7	FLT65-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
8	FLT66-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
9	FLT67-3PH	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
10	FLT68-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
11	FLT69-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
12	FLT70-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
13	FLT71-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
14	FLT72-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
15	FLT73-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
16	FLT74-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
17	FLT75-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
18	FLT76-SB	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
19	FLT77-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
20	FLT78-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
21	FLT79-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
22	FLT80-PO	No	No	Compliant	Stable	No	No	Compliant	Stable	No	No	Compliant	Stable
23	FLT81-PO	No	No	Compliant	Stable	No	Yes	Compliant	Stable	No	Yes	Compliant	Stable
24	FLT82-PO	No	No	Compliant	Stable	Yes	No	Not Compliant	Unstable	No	Yes	Not Compliant	Unstable
25	FLT83-PO	No	No	Compliant	Stable	No	Yes	Compliant	Stable	No	Yes	Compliant	Stable

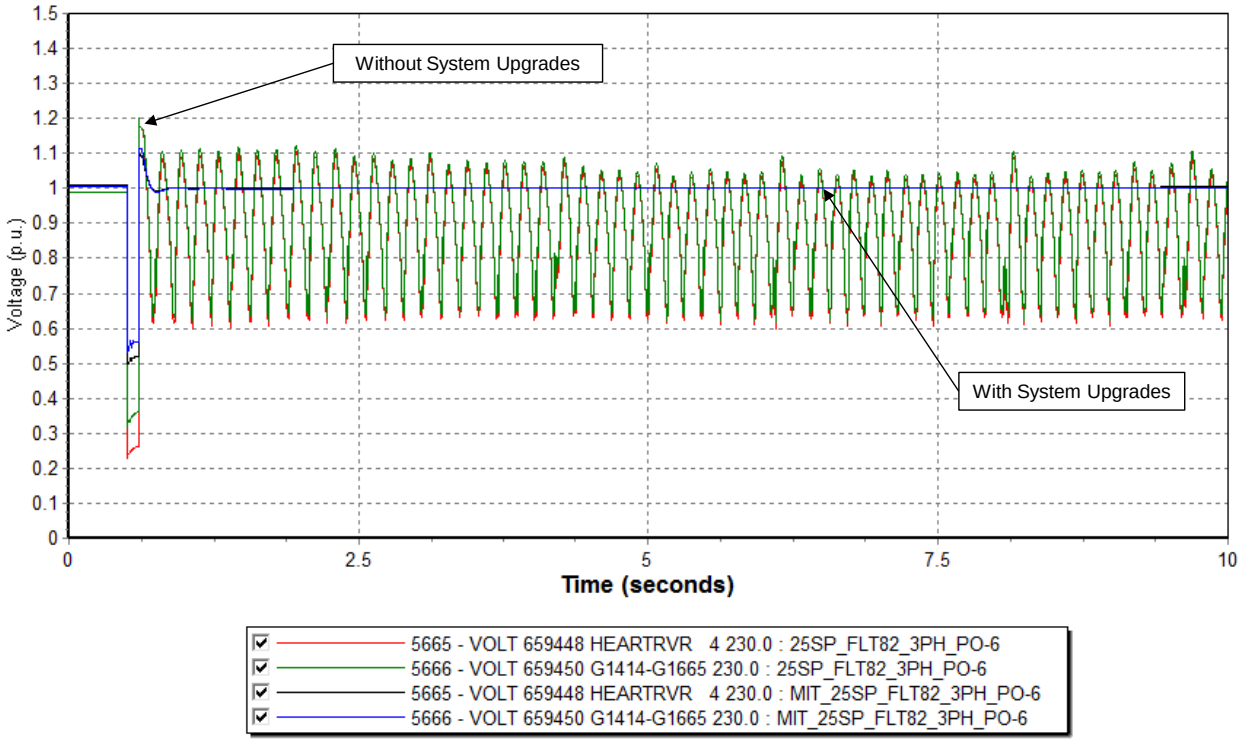


Figure 3-8. Plot of the DAGLUM4 and GEN-2016-066 bus voltages for FLT82-3PH-PO for the 2025 Summer Peak case with and without system upgrades.

SECTION 4: SHORT-CIRCUIT ANALYSIS

The objective of this task is to quantify the three-phase to ground fault currents for the 2017 and 2025 Summer Peak season for each interconnecting generator.

4.1 Approach

The Short-Circuit analysis will assess breaker adequacy and fault duties for the generator interconnection bus and five buses away from the point of interconnection. MEPPI will assume no outages to find maximum short-circuit currents that flow through the breaker. The Automatic Sequencing Fault Calculation (ASCC) function in PSS/E was utilized to perform this task. FLAT conditions were applied to pre-fault conditions and the following adjustments were utilized:

- All synchronous and asynchronous machine P and Q output was set to zero
- All transformer tap ratios were set to 1.0 p.u. and all phase shift angles were set to zero
- All generator reactance's were fixed to the subtransient reactance
- All line charging was set to zero
- All shunts were set to zero
- All loads were set to zero
- All pre-fault bus voltages were set to 1.0 p.u. and a phase shift angle of zero

4.2 Short-Circuit Results: 2017 Summer Peak

The maximum fault current for each bus is provided for the 2017 Summer Peak conditions. The following tables show the short circuit results for the study generators for the 2017 Summer Peak condition:

- Table 4-1: Short-circuit Analysis for GEN-2016-004
- Table 4-2: Short-circuit Analysis for GEN-2016-044
- Table 4-3: Short-circuit Analysis for GEN-2016-052 and GEN-2016-053
- Table 4-4: Short-circuit Analysis for GEN-2016-065 and GEN-2016-066

Table 4-1
Short-Circuit Analysis for Study Project GEN-2016-004 (17SP)

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
10651	G830_SUB	115	5.14	615600	GRE-COAL CR4	230	17.37	652468	HEBRON 4	230	5.29
560074	G16-017-TAP	345	6.63	615601	GRE-COAL FM8	69	8.55	652499	MOUNDCITY 4	230	3.64
560079	G16-044-TAP	345	8.06	615900	GRE-COAL TP4	230	15.00	652506	FTTHOMP3	345	9.33
561001	EMMONSCO	345	6.85	615901	GRE-STANTON4	230	17.72	652512	GROTON 7	115	15.51
587030	GEN-2016-004	230	7.58	615903	GRE-BALTA 4	230	6.30	652527	WHITLOK4	230	4.33
587050	GEN-2016-007	115	3.92	618001	GRE-BERGNTP7	115	5.72	652534	ORDWAY 7	115	5.09
587130	GEN-2016-017	345	6.59	619804	GRE-DCKSNSS7	115	24.96	652553	MOORHED4	230	6.87
587290	GEN-2016-044	345	7.56	619843	GRE-DICKIN 8	69	11.35	652554	MORRIS 4	230	4.63
601001	FORBES 2	500	9.56	620269	JAMSTWN7	115	8.27	652587	MOORHED7	115	6.18
601005	ELM CRK3	345	20.92	620290	HARVEY 4	230	4.78	652590	SNAKECR7	115	5.18
601011	SHERCO 3	345	35.16	620336	AUDUBON4	230	5.21	652638	ENDERLIN 7	115	3.26
601015	BLUE LK3	345	30.03	620358	BUFFALO3	345	6.07	652806	FTTHOM1-LNX3	345	9.33
601019	COON CK3	345	30.34	620369	JAMESTN3	345	5.42	657707	CALEDON7	115	3.33
601021	KOLMNLK3	345	26.97	620379	RUGBY 4	230	5.62	657741	MPC02100TAP4	230	15.27
601022	PARKERS3	345	26.95	620381	UNDERWD4	230	13.83	657742	MPC2100WIND4	230	12.79
601024	TERMINL3	345	24.30	652175	G09_001IST	345	6.63	657751	CENTER 4	230	20.03
601025	EDEN PR3	345	25.75	652203	FARGO 8	69	11.72	657754	MAPLE R4	230	11.94
602006	SHEYNNE4	230	10.83	652204	VALLEYC8	69	2.52	657755	PRAIRIE4	230	7.49
602037	ROCKCR 4	230	5.91	652216	WATFORD4	230	6.17	657756	SQBUTTE4	230	22.28
603018	SHEYNNE7	115	12.55	652257	DEVAUL 8	69	1.51	657759	PICKERT4	230	4.19
603022	SOURIS 7	115	6.91	652296	WARD 4	230	11.41	657791	CENTER 3	345	11.85
603023	MALLARD7	115	9.05	652400	WILISTN4	230	8.08	657848	YNG2 4	230	18.25
603068	COON CK7	115	52.77	652416	DEVAUL 7	115	1.48	657923	PICKERT8	69	3.11
603095	PARKERS7	115	42.46	652419	KILDEER7	115	7.84	657946	PRAIRIE3	345	4.26
605634	VELVA TAP	115	6.71	652420	NSALEM 7	115	1.97	657951	CNTSHNT3	345	11.85
608600	BISONMP4	230	7.64	652422	HALIDAY7	115	4.70	658080	MPSBROOK	115	6.43
608614	98L TAP4	230	11.13	652423	BARLOW 7	115	2.58	659101	ANTELOP3	345	17.46
608615	ARROWHD4	230	11.40	652424	BELFELD3	345	6.57	659105	LELANDO3	345	17.20
608616	HILLTOP4	230	8.28	652425	BELFELD4	230	9.16	659106	LELANDO4	230	23.75
608623	MINNTAC4	230	10.69	652426	BISMARK4	230	13.22	659108	LOGAN 4	230	5.28
608624	FORBES 4	230	18.90	652427	BISMARK7	115	14.13	659109	BASIN 7	115	5.35
608625	BLCKBRY4	230	15.64	652428	CARNGTN7	115	2.59	659113	VOLTAIR7	115	8.14
608634	131L_TP7	115	12.66	652432	EDGELEY7	115	3.90	659138	NESET 4	230	7.76
608673	ARROWHD7	115	19.26	652433	EDGELEY8	69	2.29	659139	NESET 7	115	9.49
608674	HANESRD7	115	8.67	652435	FARGO 4	230	9.97	659143	BLAISDELL 4	230	4.94
608676	HIBBARD7	115	13.39	652436	FARGO 7	115	10.42	659144	BLAISDELL 7	115	6.70
608686	15TH AV7	115	10.53	652437	GRNDFKS4	230	6.71	659155	LOGAN 7	115	8.93
608688	COLBYVL7	115	7.10	652440	NELSON 7	115	7.73	659160	GROTON 3	345	6.93
608722	FORBES 7	115	21.70	652441	GARRISN4	230	11.45	659165	RUTHVILLECP7	115	4.47
608916	CANOSIA7	115	10.52	652442	GARRISN7	115	12.62	659166	DUNNING7	115	1.56
615327	GRE-BUNKER 3	345	22.79	652443	GRNDFKS7	115	10.48	659182	CHAR.CK7	115	14.08
615335	GRE-RAMSEY 4	230	3.96	652444	JAMESTN4	230	8.24	659183	CHAR.CK3	345	10.64
615347	GRE-MCHENRY4	230	5.68	652445	JAMESTN7	115	9.92	659184	R.RIDER7	115	4.29
615348	GRE-MCHENRY7	115	8.20	652446	PLEASANT LK7	115	5.08	659185	FOUREYES 7	115	3.60
615353	GRE-DICKNSN3	345	16.87	652449	MAX 7	115	5.25	659190	NDPRAIRWND 7	115	7.72
615354	GRE-DICKNSN7	115	26.25	652452	RUGBY 7	115	6.48	659212	DGC 3	345	16.59
615466	GRE-BEARCK 4	230	5.11	652453	TOWNER 7	115	3.87	659218	COTEAU 3	345	17.46
615467	GRE-BEAR CK8	69	5.31	652454	VALLEYC7	115	4.34	659222	COTEAU1 8	69	9.31
615517	GRE-4CORNRS7	115	9.01	652456	WASHBRN4	230	10.10	659233	DGC 4	230	7.13
615548	GRE-ST BONI7	115	11.44	652464	DENBIGH TAP7	115	3.86	659236	DGC UREA 8	69	7.00
615590	GRE-CROWRIV7	115	18.22	652466	HILKEN 4	230	8.71	659261	BTHOLD 7	115	5.31
659280	POMONA 7	115	3.20	659420	ANTELOP-LNX3	345	17.46	661018	COYOTE 7	115	10.12
659282	BIS EA CEPC7	115	14.13	659421	BRDLAND-LNX3	345	6.86	661021	WSTMD1 7	115	8.02
659284	ECKLUND4	230	7.72	659422	LELAND1-LNX3	345	17.20	661028	WEBER 4	230	4.79
659297	BIS WARD 7	115	4.18	659423	GROTON-LNX3	345	6.93	661029	ESTBMRK7	115	14.11
659302	CHAR.CK4	230	11.31	659424	LELAND2-LNX3	345	17.20	661035	GLENHAM7	115	4.10
659305	NWMANDANMGS7	115	17.57	659544	PLAZA MW7	115	4.74	661038	GLENHAM4	230	3.61
659307	SWMINOT CP7	115	6.29	659553	BEARCREK-MK7	115	9.68	661042	HESKETT4	230	12.96
659308	KENASTON 7	115	3.08	659593	DUNNCENTRMK7	115	5.03	661043	HESKETT7	115	17.54
659333	JUDSON 3	345	6.39	659594	HALLIDAY-MK7	115	3.54	661053	MANDAN 4	230	13.66
659337	TANDE 4	230	7.46	659608	PARSHALL-MW7	115	3.73	661054	MANDAN 7	115	17.57
659362	WHEELOCK 4	230	5.97	659616	PALERMO -MW7	115	4.98	661060	LINTON 7	115	1.32
659363	WHEELOCK 7	115	5.38	659617	STANLEY -MW7	115	4.42	661067	MANDANW7	115	12.62
659365	BALDWIN 4	230	7.72	659653	GRSYBUTTAP 7	115	13.10	661080	STANLEY7	115	3.45
659384	ROUNDUP 3	345	9.51	659661	DGLASCRK-CP7	115	3.61	661084	TIOGA4 4	230	7.77
659385	ROUNDUP 7	115	12.96	659662	ROSEGLEN-CP7	115	3.48	661085	TIOGA4 7	115	9.28
659387	KUMMERRIDGE3	345	6.77	659664	MAKOTI -CP7	115	4.34	661086	TIOGA7 7	115	7.75
659388	KUMMERRIDGE7	115	9.87	659665	RUGBY TAP 7	115	6.48	661119	26TH&D 7	115	12.96
659390	PATENTGATE 3	345	7.61	659695	HARVEY Y	230	1.76	672602	BDX 4	230	4.08
659391	PATENTGATE 7	115	12.95	661008	BEULAH 7	115	9.65	672603	BDV 4	230	4.07
659404	ANTELPHILLS3	345	11.63	661009	BISEXP 7	115	11.97	699448	AWHD PST	230	8.39
659408	CAMPBLCNTY 4	230	3.38	661016	COYOTE 3	345	8.06	699449	ARROWHD	345	4.70

Table 4-2
Short-Circuit Analysis for Study Projects GEN-2016-044 (17SP)

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
560074	G16-017-TAP	345	6.63	652503	BLAIR 4	230	9.37	659160	GROTON 3	345	6.93
560079	G16-044-TAP	345	8.06	652512	GROTON 7	115	15.51	659171	ROBERTS CO 7	115	3.25
561001	EMMONSCO	345	6.85	652514	HURON 4	230	12.57	659174	GRTKEYPS20 7	115	6.31
585320	GEN-2015-097	115	5.04	652515	HURON 7	115	16.14	659182	CHAR.CK7	115	14.08
587030	GEN-2016-004	230	7.58	652522	SUMMIT-7	115	5.12	659183	CHAR.CK3	345	10.64
587130	GEN-2016-017	345	6.59	652528	WOONSKT7	115	5.29	659205	BRDLAND4	230	11.73
587290	GEN-2016-044	345	7.56	652529	WATERTN3	345	9.89	659212	DGC 3	345	16.59
615600	GRE-COAL CR4	230	17.37	652530	WATERTN4	230	13.81	659218	COTEAU 3	345	17.46
615900	GRE-COAL TP4	230	15.00	652531	WATERTN7	115	12.24	659222	COTEAU1 8	69	9.31
615901	GRE-STANTON4	230	17.72	652533	BRISTOL7	115	4.62	659233	DGC 4	230	7.13
635200	RAUN 3	345	24.22	652534	ORDWAY 7	115	5.09	659275	GROTONB7	115	14.79
652001	G13_001IST	115	5.14	652535	REDFELD7	115	4.12	659280	POMONA 7	115	3.20
652175	G09_001IST	345	6.63	652537	WHITE 3	345	16.08	659287	DAYCNTYTAP 7	115	6.59
652209	SUMMIT-8	69	2.77	652564	SIOUXCY3	345	15.98	659288	DAYCNTYWND 7	115	5.38
652250	GROTON18	69	4.03	652565	SIOUXCY4	230	19.77	659302	CHAR.CK4	230	11.31
652253	GROTON28	69	1.84	652582	APPLEDORN 4	230	6.99	659384	ROUNDUP 3	345	9.51
652284	HURON 8	69	3.68	652614	CARPENTER 4	230	7.23	659385	ROUNDUP 7	115	12.96
652289	BRISTOL8	69	2.73	652630	WATERTNCAP 4	230	13.81	659387	KUMMERRIDGE3	345	6.77
652290	ORDWAY 8	69	4.33	652806	FTTHOM1-LNX3	345	9.33	659390	PATENTGATE 3	345	7.61
652291	REDFELD8	69	2.85	652829	WATERTN-LNX3	345	9.89	659404	ANTELPHILLS3	345	11.63
652420	NSALEM 7	115	1.97	652864	SIOUXCY-LNX3	345	15.98	659420	ANTELOP-LNX3	345	17.46
652424	BELFELD3	345	6.57	657756	SQBUTTE4	230	22.28	659421	BRDLAND-LNX3	345	6.86
652426	BISMARK4	230	13.22	659028	G12_014IS_1	115	5.26	659422	LELAND1-LNX3	345	17.20
652432	EDGELEY7	115	3.90	659101	ANTELOP3	345	17.46	659423	GROTON-LNX3	345	6.93
652433	EDGELEY8	69	2.29	659105	LELANDO3	345	17.20	659424	LELAND2-LNX3	345	17.20
652441	GARRISN4	230	11.45	659106	LELANDO4	230	23.75	660000	ABDNJCT7	115	5.26
652442	GARRISN7	115	12.62	659108	LOGAN 4	230	5.28	660001	ABDNSBT7	115	6.95
652444	JAMESTN4	230	8.24	659109	BASIN 7	115	5.35	660002	REDFLD 7	115	3.90
652445	JAMESTN7	115	9.92	659120	BRDLAND3	345	6.86	660003	HURONWP7	115	10.33
652456	WASHBRN4	230	10.10	659143	BLAISDELL 4	230	4.94	660009	BTAP WP7	115	15.63
652466	HILKEN 4	230	8.71	659155	LOGAN 7	115	8.93	661027	ELLENDL7	115	6.70

Table 4-3
Short-Circuit Analysis for Study Projects GEN-2016-052 and GEN-2016-053 (17SP)

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
10651	G830_SUB	115	5.14	652445	JAMESTN7	115	9.92	659218	COTEAU 3	345	17.46
560074	G16-017-TAP	345	6.63	652449	MAX 7	115	5.25	659280	POMONA 7	115	3.20
560079	G16-044-TAP	345	8.06	652453	TOWNER 7	115	3.87	659282	BIS EA CEPC7	115	14.13
587030	GEN-2016-004	230	7.58	652454	VALLEYC7	115	4.34	659284	ECKLUND4	230	7.72
587050	GEN-2016-007	115	3.92	652456	WASHBRN4	230	10.10	659297	BIS WARD 7	115	4.18
602006	SHEYNNE4	230	10.83	652464	DENBIGH TAP7	115	3.86	659305	NWMANDANMGS7	115	17.57
603018	SHEYNNE7	115	12.55	652466	HILKEN 4	230	8.71	659307	SWMINOT CP7	115	6.29
603023	MALLARD7	115	9.05	652468	HEBRON 4	230	5.29	659365	BALDWIN 4	230	7.72
605634	VELVA TAP	115	6.71	652499	MOUNDCITY 4	230	3.64	659384	ROUNDUP 3	345	9.51
608600	BISONMP4	230	7.64	652527	WHITLOK4	230	4.33	659400	NDSUNFLWR 4	230	4.74
608615	ARROWHD4	230	11.40	652534	ORDWAY 7	115	5.09	659404	ANTELPHILLS3	345	11.63
615347	GRE-MCHENRY4	230	5.68	652553	MOORHED4	230	6.87	659408	CAMPBLCNTY 4	230	3.38
615348	GRE-MCHENRY7	115	8.20	652554	MORRIS 4	230	4.63	659420	ANTELOP-LNX3	345	17.46
615353	GRE-DICKNSN3	345	16.87	652587	MOORHED7	115	6.18	659422	LELAND1-LNX3	345	17.20
615600	GRE-COAL CR4	230	17.37	652590	SNAKECR7	115	5.18	659424	LELAND2-LNX3	345	17.20
615601	GRE-COAL FM8	69	8.55	652638	ENDERLIN 7	115	3.26	659594	HALLIDAY-MK7	115	3.54
615900	GRE-COAL TP4	230	15.00	652821	SULLYBT-LNX3	230	6.15	659661	DGLASCRK-CP7	115	3.61
615901	GRE-STANTON4	230	17.72	657707	CALEDON7	115	3.33	659662	ROSEGLEN-CP7	115	3.48
620336	AUDUBON4	230	5.21	657741	MPC02100TAP4	230	15.27	661008	BEULAH 7	115	9.65
620381	UNDERWD4	230	13.83	657742	MPC2100WIND4	230	12.79	661009	BISEXP 7	115	11.97
652203	FARGO 8	69	11.72	657751	CENTER 4	230	20.03	661016	COYOTE 3	345	8.06
652204	VALLEYC8	69	2.52	657754	MAPLE R4	230	11.94	661018	COYOTE 7	115	10.12
652296	WARD 4	230	11.41	657755	PRAIRIE4	230	7.49	661021	WSTMD1 7	115	8.02
652416	DEVAUL 7	115	1.48	657756	SQBUTTE4	230	22.28	661028	WEBER 4	230	4.79
652417	DICKNSN4	230	7.46	657759	PICKERT4	230	4.19	661029	ESTBMRK7	115	14.11
652419	KILDEER7	115	7.84	657791	CENTER 3	345	11.85	661030	STEIN 7	115	12.16
652420	NSALEM 7	115	1.97	657848	YNG2 4	230	18.25	661035	GLENHAM7	115	4.10
652422	HALIDAY7	115	4.70	657923	PICKERT8	69	3.11	661037	BOWDLE 7	115	1.59
652423	BARLOW 7	115	2.58	658080	MPSBROOK	115	6.43	661038	GLENHAM4	230	3.61
652426	BISMARK4	230	13.22	659101	ANTELOP3	345	17.46	661039	MOBRIDG7	115	2.68
652427	BISMARK7	115	14.13	659105	LELANDO3	345	17.20	661042	HESKETT4	230	12.96
652428	CARNGTN7	115	2.59	659106	LELANDO4	230	23.75	661043	HESKETT7	115	17.54
652432	EDGELEY7	115	3.90	659108	LOGAN 4	230	5.28	661051	STH9TH 7	115	10.74
652433	EDGELEY8	69	2.29	659109	BASIN 7	115	5.35	661053	MANDAN 4	230	13.66
652435	FARGO 4	230	9.97	659113	VOLTAIR7	115	8.14	661054	MANDAN 7	115	17.57
652436	FARGO 7	115	10.42	659143	BLAISDELL 4	230	4.94	661060	LINTON 7	115	1.32
652437	GRNDFKS4	230	6.71	659144	BLAISDELL 7	115	6.70	661067	MANDANW7	115	12.62
652440	NELSON 7	115	7.73	659155	LOGAN 7	115	8.93	661084	TIOGA4 4	230	7.77
652441	GARRISN4	230	11.45	659183	CHAR.CK3	345	10.64	661094	WISHEK 4	230	4.38
652442	GARRISN7	115	12.62	659190	NDPRAIRWND 7	115	7.72	661095	WISHEK 7	115	2.58
652443	GRNDFKS7	115	10.48	659212	DGC 3	345	16.59	661119	26TH&D 7	115	12.96
652444	JAMESTN4	230	8.24								

Table 4-4
Short-Circuit Analysis for Study Project GEN-2016-065 and GEN-2016-066 (17SP)

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
585260	GEN-2015-091	230	7.28	659105	LELANDO3	345	17.20	659404	ANTELPHILLS3	345	11.63
585310	G1596-G1666	230	2.97	659182	CHAR.CK7	115	14.08	659420	ANTELOP-LNX3	345	17.46
585340	GEN-2015-098	230	3.82	659183	CHAR.CK3	345	10.64	659448	DAGLUM 4	230	7.33
652111	COALHILL4	230	2.33	659184	R.RIDER7	115	4.29	659450	G1414-G1665	230	3.72
652216	WATFORD4	230	6.17	659185	FOUREYES 7	115	3.60	659653	GRSYBUTTAP 7	115	13.10
652258	BISON 8	69	2.07	659212	DGC 3	345	16.59	661004	BAKER 4	230	3.16
652296	WARD 4	230	11.41	659218	COTEAU 3	345	17.46	661005	BAKER 7	115	3.58
652402	MI CTYW4	230	11.37	659263	LTLMISS7	115	1.82	661008	BEULAH 7	115	9.65
652403	DAWSONC4	230	4.23	659265	LTLMISS4	230	3.34	661010	BOWMAN 4	230	3.60
652404	DAWSONC7	115	7.71	659266	RHAME 4	230	4.12	661019	MATHSON7	115	5.64
652411	MI CTYE4	230	2.78	659267	RHAME 7	115	3.11	661020	DIXGREENRVR7	115	5.14
652412	MI CTYE7	115	3.89	659297	BIS WARD 7	115	4.18	661021	WSTMD17	115	8.02
652413	MEDORA 4	230	5.05	659302	CHAR.CK4	230	11.31	661022	DICKNTH7	115	4.79
652417	DICKNSN4	230	7.46	659305	NWMANDANMGS7	115	17.57	661024	WDICKSN7	115	4.98
652418	DKSN-ND7	115	6.03	659306	S HEART 7	115	2.20	661034	KPS14-BAK7	115	3.23
652419	KILDEER7	115	7.84	659309	S HEART 4	230	9.16	661042	HESKETT4	230	12.96
652424	BELFELD3	345	6.57	659333	JUDSON 3	345	6.39	661043	HESKETT7	115	17.54
652425	BELFELD4	230	9.16	659340	BOWMAN 7	115	3.32	661047	HETINGR4	230	3.45
652426	BISMARK4	230	13.22	659341	NBURR 7	115	1.73	661048	HETINGR7	115	3.22
652468	HEBRON 4	230	5.29	659342	KPS15-BOW7	115	1.15	661050	GASCOYN7	115	1.77
652470	BISON 4	230	2.76	659350	BISON 7	115	1.40	661053	MANDAN 4	230	13.66
652497	MAURINE4	230	2.74	659384	ROUNDUP 3	345	9.51	661054	MANDAN 7	115	17.57
652616	BEAVERHILL4	230	3.90	659385	ROUNDUP 7	115	12.96	661067	MANDANW7	115	12.62
657741	MPC02100TAP4	230	15.27	659387	KUMMERRIDGE3	345	6.77	661070	N ENGLN7	115	3.25
657742	MPC2100WIND4	230	12.79	659390	PATENTGATE 3	345	7.61	661094	WISHEK 4	230	4.38
657751	CENTER 4	230	20.03	659391	PATENTGATE 7	115	12.95	661300	BAKER 8	60	3.09
659101	ANTELOP3	345	17.46	659400	NDSUNFLWR 4	230	4.74	661987	G752CLC4	230	3.01

4.3 Short-Circuit Results: 2025 Summer Peak

The maximum fault current for each bus is provided for the 2025 Summer Peak conditions. The following tables show the short circuit results for the study generators for the 2025 Summer Peak conditions:

- Table 4-5: Short-circuit Analysis for GEN-2016-004
- Table 4-6: Short-circuit Analysis for GEN-2016-044
- Table 4-7: Short-circuit Analysis for GEN-2016-052 and GEN-2016-053
- Table 4-8: Short-circuit Analysis for GEN-2016-065 and GEN-2016-066

Table 4-5
Short-Circuit Analysis for Study Projects GEN-2016-004 (25SP)

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
10651	G830_SUB	115	5.15	615600	GRE-COAL CR4	230	17.40	652466	HILKEN 4	230	8.79
560074	G16-017-TAP	345	6.69	615601	GRE-COAL FM8	69	8.55	652468	HEBRON 4	230	5.33
560079	G16-044-TAP	345	8.28	615900	GRE-COAL TP4	230	15.02	652499	MOUNDCITY 4	230	3.65
561001	EMMONSCO	345	6.93	615901	GRE-STANTON4	230	17.77	652506	FTTHOMP3	345	9.53
587030	GEN-2016-004	230	7.59	615903	GRE-BALTA 4	230	6.32	652512	GROTON 7	115	20.17
587050	GEN-2016-007	115	3.93	618001	GRE-BERGNTP7	115	5.73	652527	WHITLOK4	230	4.35
587130	GEN-2016-017	345	6.65	619804	GRE-DCKSNSS7	115	24.99	652534	ORDWAY 7	115	8.15
587290	GEN-2016-044	345	7.75	619843	GRE-DICKIN 8	69	11.36	652553	MOORHED4	230	6.89
601001	FORBES 2	500	9.80	620269	JAMSTWN7	115	8.46	652554	MORRIS 4	230	4.65
601005	ELM CRK3	345	20.99	620290	HARVEY 4	230	4.79	652587	MOORHED7	115	6.18
601011	SHERCO 3	345	35.27	620336	AUDUBON4	230	5.19	652590	SNAKECR7	115	5.18
601015	BLUE LK3	345	30.25	620358	BUFFALO3	345	6.09	652638	ENDERLIN 7	115	3.28
601019	COON CK3	345	30.49	620369	JAMESTN3	345	5.45	652806	FTTHOM1-LNX3	345	9.53
601021	KOLMNLK3	345	27.12	620379	RUGBY 4	230	5.64	657707	CALEDON7	115	3.35
601022	PARKERS3	345	27.09	620381	UNDERWD4	230	13.85	657741	MPC02100TAP4	230	15.52
601024	TERMINL3	345	24.41	652175	G09_001IST	345	7.06	657742	MPC2100WIND4	230	12.97
601025	EDEN PR3	345	25.89	652203	FARGO 8	69	11.74	657751	CENTER 4	230	20.25
602006	SHEYNNE4	230	10.87	652204	VALLEYC8	69	2.52	657754	MAPLE R4	230	12.00
602037	ROCKCR 4	230	6.04	652216	WATFORD4	230	6.46	657755	PRAIRIE4	230	7.89
603018	SHEYNNE7	115	12.57	652257	DEVAUL 8	69	1.51	657756	SQBUTTE4	230	22.50
603022	SOURIS 7	115	7.05	652296	WARD 4	230	11.79	657759	PICKERT4	230	4.25
603023	MALLARD7	115	9.36	652400	WILISTN4	230	8.70	657791	CENTER 3	345	11.94
603068	COON CK7	115	52.94	652416	DEVAUL 7	115	1.48	657848	YNG2 4	230	18.38
603095	PARKERS7	115	42.57	652419	KILDEER7	115	7.86	657923	PICKERT8	69	3.12
605634	VELVA TAP	115	6.74	652420	NSALEM 7	115	1.97	657946	PRAIRIE3	345	4.43
608600	BISONMP4	230	7.66	652422	HALIDAY7	115	4.70	657951	CNTSHNT3	345	11.94
608614	98L TAP4	230	11.18	652423	BARLOW 7	115	2.58	658080	MPSBROOK	115	6.43
608615	ARROWHD4	230	11.45	652424	BELFELD3	345	6.62	659101	ANTELOP3	345	17.59
608616	HILLTOP4	230	8.30	652425	BELFELD4	230	9.20	659105	LELANDO3	345	17.32
608623	MINNTAC4	230	10.74	652426	BISMARK4	230	13.63	659106	LELANDO4	230	23.91
608624	FORBES 4	230	19.15	652427	BISMARK7	115	14.77	659108	LOGAN 4	230	5.42
608625	BLCKBRY4	230	15.69	652428	CARNGTN7	115	2.60	659109	BASIN 7	115	5.36
608634	131L_TP7	115	12.68	652432	EDGELEY7	115	4.00	659113	VOLTAIR7	115	8.17
608673	ARROWHD7	115	19.32	652433	EDGELEY8	69	2.30	659138	NESET 4	230	8.09
608674	HANESRD7	115	8.68	652435	FARGO 4	230	10.01	659139	NESET 7	115	9.66
608676	HIBBARD7	115	13.42	652436	FARGO 7	115	10.45	659143	BLAISDELL 4	230	5.03
608686	15TH AV7	115	10.55	652437	GRNDFKS4	230	7.03	659144	BLAISDELL 7	115	6.75
608688	COLBYVL7	115	7.11	652440	NELSON 7	115	7.83	659150	WHITBY -CP7	115	3.04
608722	FORBES 7	115	21.80	652441	GARRISN4	230	11.49	659151	BOTNO_SE_CP7	115	1.31
608916	CANOSIA7	115	10.54	652442	GARRISN7	115	12.64	659155	LOGAN 7	115	8.97
615327	GRE-BUNKER 3	345	22.88	652443	GRNDFKS7	115	10.96	659160	GROTON 3	345	7.70
615335	GRE-RAMSEY 4	230	4.00	652444	JAMESTN4	230	8.31	659165	RUTHVILLECP7	115	5.04
615347	GRE-MCHENRY4	230	5.69	652445	JAMESTN7	115	9.99	659166	DUNNING7	115	2.76
615348	GRE-MCHENRY7	115	8.23	652446	PLEASANT LK7	115	5.09	659182	CHAR.CK7	115	14.18
615353	GRE-DICKNSN3	345	16.92	652449	MAX 7	115	5.26	659183	CHAR.CK3	345	10.81
615354	GRE-DICKNSN7	115	26.29	652452	RUGBY 7	115	6.50	659184	R.RIDER7	115	4.30
615466	GRE-BEARCK 4	230	5.16	652453	TOWNER 7	115	3.88	659185	FOUREYES 7	115	3.60
615467	GRE-BEAR CK8	69	5.33	652454	VALLEYC7	115	4.35	659190	NDPRAIRWND 7	115	7.82
615517	GRE-4CORNRS7	115	9.02	652455	BOTTNO 7	115	1.28	659212	DGC 3	345	16.71
615548	GRE-ST BONI7	115	11.45	652456	WASHBRN4	230	10.16	659218	COTEAU 3	345	17.59
615590	GRE-CROWRIV7	115	18.24	652464	DENBIGH TAP7	115	3.87	659222	COTEAU1 8	69	9.31
659233	DGC 4	230	7.15	659390	PATENTGATE 3	345	7.73	661009	BISEXP 7	115	12.48
659236	DGC UREA 8	69	7.00	659391	PATENTGATE 7	115	13.04	661016	COYOTE 3	345	8.10
659261	BTHOLD 7	115	5.34	659404	ANTELPHILLS3	345	11.68	661018	COYOTE 7	115	10.15
659280	POMONA 7	115	3.26	659408	CAMPBLCNTY 4	230	3.39	661021	WSTMD1 7	115	8.03
659282	BIS EA CEPC7	115	14.77	659420	ANTELOP-LNX3	345	17.59	661028	WEBER 4	230	4.83
659284	ECKLUND4	230	7.78	659421	BRDLAND-LNX3	345	6.92	661029	ESTBMRK7	115	14.76
659297	BIS WARD 7	115	4.21	659422	LELAND1-LNX3	345	17.32	661035	GLENHAM7	115	4.11
659302	CHAR.CK4	230	11.49	659423	GROTON-LNX3	345	7.70	661038	GLENHAM4	230	3.62
659305	NWMANDANMGS7	115	19.94	659424	LELAND2-LNX3	345	17.32	661042	HESKETT4	230	13.66
659307	SWMINOT CP7	115	6.31	659544	PLAZA MW7	115	4.76	661043	HESKETT7	115	20.38
659308	KENASTON 7	115	3.09	659553	BEARCREK-MK7	115	9.71	661053	MANDAN 4	230	14.41
659333	JUDSON 3	345	6.54	659593	DUNNCENTRMK7	115	5.04	661054	MANDAN 7	115	19.94
659337	TANDE 4	230	7.75	659594	HALLIDAY-MK7	115	3.55	661060	LINTON 7	115	1.33
659362	WHEELOCK 4	230	6.53	659608	PARSHALL-MW7	115	3.75	661067	MANDANW7	115	13.68
659363	WHEELOCK 7	115	6.72	659616	PALERMO -MW7	115	5.01	661080	STANLEY7	115	3.47
659365	BALDWIN 4	230	7.78	659617	STANLEY -MW7	115	4.45	661084	TIOGA4 4	230	8.09
659372	LARSON 4	230	5.17	659653	GRSYBUTTAP 7	115	13.18	661085	TIOGA4 7	115	9.47
659373	LARSON 7	115	3.83	659661	DGLASCRK-CP7	115	3.62	661086	TIOGA7 7	115	7.89
659375	WHITBY 4	230	1.98	659662	ROSEGLEN-CP7	115	3.48	661119	26TH&D 7	115	13.55
659384	ROUNDUP 3	345	9.63	659664	MAKOTI -CP7	115	4.36	672603	BDV 4	230	4.14
659385	ROUNDUP 7	115	13.03	659665	RUGBY TAP 7	115	6.50	699448	AWHD PST	230	8.42
659387	KUMMERRIDGE3	345	6.84	659695	HARVEY Y	230	1.77	699449	ARROWHD	345	4.72
659388	KUMMERRIDGE7	115	9.93	661008	BEULAH 7	115	9.68				

Table 4-6
Short-Circuit Analysis for Study Projects GEN-2016-044 (25SP)

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
560074	G16-017-TAP	345	6.69	652512	GROTON 7	115	20.17	659171	ROBERTS CO 7	115	3.28
560079	G16-044-TAP	345	8.28	652514	HURON 4	230	12.77	659174	GRTKEYPS20 7	115	6.71
561001	EMMONSCO	345	6.93	652515	HURON 7	115	16.33	659182	CHAR.CK7	115	14.18
585320	GEN-2015-097	115	5.38	652522	SUMMIT-7	115	5.24	659183	CHAR.CK3	345	10.81
587030	GEN-2016-004	230	7.59	652528	WOONSKT7	115	5.30	659205	BRDLAND4	230	11.90
587130	GEN-2016-017	345	6.65	652529	WATERTN3	345	10.43	659212	DGC 3	345	16.71
587290	GEN-2016-044	345	7.75	652530	WATERTN4	230	14.70	659218	COTEAU 3	345	17.59
615600	GRE-COAL CR4	230	17.40	652531	WATERTN7	115	13.75	659222	COTEAU1 8	69	9.31
615900	GRE-COAL TP4	230	15.02	652533	BRISTOL7	115	4.81	659233	DGC 4	230	7.15
615901	GRE-STANTON4	230	17.77	652534	ORDWAY 7	115	8.15	659275	GROTONB7	115	19.49
635200	RAUN 3	345	24.73	652535	REDFELD7	115	4.18	659280	POMONA 7	115	3.26
652001	G13_001IST	115	5.26	652537	WHITE 3	345	17.06	659287	DAYCNTYTAP 7	115	7.02
652175	G09_001IST	345	7.06	652564	SIOUXCY3	345	16.21	659288	DAYCNTYWND 7	115	5.56
652209	SUMMIT-8	69	2.79	652565	SIOUXCY4	230	20.07	659302	CHAR.CK4	230	11.49
652250	GROTON18	69	4.18	652582	APPLEDORN 4	230	7.09	659375	WHITBY 4	230	1.98
652253	GROTON28	69	1.87	652614	CARPENTER 4	230	7.32	659384	ROUNDUP 3	345	9.63
652284	HURON 8	69	3.69	652630	WATERTNCAP 4	230	14.70	659385	ROUNDUP 7	115	13.03
652289	BRISTOL8	69	2.77	652806	FTTHOM1-LNX3	345	9.53	659387	KUMMERRIDGE3	345	6.84
652290	ORDWAY 8	69	5.24	652829	WATERTN-LNX3	345	10.43	659390	PATENTGATE 3	345	7.73
652291	REDFELD8	69	2.86	652864	SIOUXCY-LNX3	345	16.21	659404	ANTELPHILLS3	345	11.68
652420	NSALEM 7	115	1.97	657756	SQBUTTE4	230	22.50	659420	ANTELOP-LNX3	345	17.59
652424	BELFELD3	345	6.62	659028	G12_014IS_1	115	5.66	659421	BRDLAND-LNX3	345	6.92
652426	BISMARK4	230	13.63	659101	ANTELOP3	345	17.59	659422	LELAND1-LNX3	345	17.32
652432	EDGELEY7	115	4.00	659105	LELANDO3	345	17.32	659423	GROTON-LNX3	345	7.70
652433	EDGELEY8	69	2.30	659106	LELANDO4	230	23.91	659424	LELAND2-LNX3	345	17.32
652441	GARRISN4	230	11.49	659108	LOGAN 4	230	5.42	660000	ABDNJCT7	115	5.56
652442	GARRISN7	115	12.64	659109	BASIN 7	115	5.36	660001	ABDNSBT7	115	7.59
652444	JAMESTN4	230	8.31	659120	BRDLAND3	345	6.92	660002	REDFLD 7	115	3.95
652445	JAMESTN7	115	9.99	659143	BLAISDELL 4	230	5.03	660003	HURONWP7	115	10.40
652456	WASHBRN4	230	10.16	659155	LOGAN 7	115	8.97	660009	BTAP WP7	115	15.82
652466	HILKEN 4	230	8.79	659160	GROTON 3	345	7.70	661027	ELLENDL7	115	7.07
652503	BLAIR 4	230	9.84								

Table 4-7
Short-Circuit Analysis for Study Projects GEN-2016-052 and GEN-2016-053 (25SP)

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
10651	G830_SUB	115	5.15	652445	JAMESTN7	115	9.99	659218	COTEAU 3	345	17.59
560074	G16-017-TAP	345	6.69	652449	MAX 7	115	5.26	659280	POMONA 7	115	3.26
560079	G16-044-TAP	345	8.28	652453	TOWNER 7	115	3.88	659282	BIS EA CEPC7	115	14.77
587030	GEN-2016-004	230	7.59	652454	VALLEYC7	115	4.35	659284	ECKLUND4	230	7.78
587050	GEN-2016-007	115	3.93	652456	WASHBRN4	230	10.16	659297	BIS WARD 7	115	4.21
602006	SHEYNNE4	230	10.87	652464	DENBIGH TAP7	115	3.87	659305	NWMANDANMGS7	115	19.94
603018	SHEYNNE7	115	12.57	652466	HILKEN 4	230	8.79	659307	SWMINOT CP7	115	6.31
603023	MALLARD7	115	9.36	652468	HEBRON 4	230	5.33	659365	BALDWIN 4	230	7.78
605634	VELVA TAP	115	6.74	652499	MOUNDCITY 4	230	3.65	659375	WHITBY 4	230	1.98
608600	BISONMP4	230	7.66	652527	WHITLOK4	230	4.35	659384	ROUNDUP 3	345	9.63
608615	ARROWHD4	230	11.45	652534	ORDWAY 7	115	8.15	659400	NDSUNFLWR 4	230	4.77
615347	GRE-MCHENRY4	230	5.69	652553	MOORHED4	230	6.89	659404	ANTELPHILLS3	345	11.68
615348	GRE-MCHENRY7	115	8.23	652554	MORRIS 4	230	4.65	659408	CAMPBLCNTY 4	230	3.39
615353	GRE-DICKNSN3	345	16.92	652587	MOORHED7	115	6.18	659420	ANTELOP-LNX3	345	17.59
615600	GRE-COAL CR4	230	17.40	652590	SNAKECR7	115	5.18	659422	LELAND1-LNX3	345	17.32
615601	GRE-COAL FM8	69	8.55	652638	ENDERLIN 7	115	3.28	659424	LELAND2-LNX3	345	17.32
615900	GRE-COAL TP4	230	15.02	652821	SULLYBT-LNX3	230	6.19	659594	HALLIDAY-MK7	115	3.55
615901	GRE-STANTON4	230	17.77	657707	CALEDON7	115	3.35	659661	DGLASCRK-CP7	115	3.62
620336	AUDUBON4	230	5.19	657741	MPC02100TAP4	230	15.52	659662	ROSEGLEN-CP7	115	3.48
620381	UNDERWD4	230	13.85	657742	MPC2100WIND4	230	12.97	661008	BEULAH 7	115	9.68
652203	FARGO 8	69	11.74	657751	CENTER 4	230	20.25	661009	BISEXP 7	115	12.48
652204	VALLEYC8	69	2.52	657754	MAPLE R4	230	12.00	661016	COYOTE 3	345	8.10
652296	WARD 4	230	11.79	657755	PRAIRIE4	230	7.89	661018	COYOTE 7	115	10.15
652416	DEVAUL 7	115	1.48	657756	SQBUTTE4	230	22.50	661021	WSTMD1 7	115	8.03
652417	DICKNSN4	230	7.49	657759	PICKERT4	230	4.25	661028	WEBER 4	230	4.83
652419	KILDEER7	115	7.86	657791	CENTER 3	345	11.94	661029	ESTBMRK7	115	14.76
652420	NSALEM 7	115	1.97	657848	YNG2 4	230	18.38	661030	STEIN 7	115	12.73
652422	HALIDAY7	115	4.70	657923	PICKERT8	69	3.12	661035	GLENHAM7	115	4.11
652423	BARLOW 7	115	2.58	658080	MPSBROOK	115	6.43	661037	BOWDLE 7	115	1.59
652426	BISMARK4	230	13.63	659101	ANTELOP3	345	17.59	661038	GLENHAM4	230	3.62
652427	BISMARK7	115	14.77	659105	LELANDO3	345	17.32	661039	MOBRIDG7	115	2.68
652428	CARNGTN7	115	2.60	659106	LELANDO4	230	23.91	661042	HESKETT4	230	13.66
652432	EDGELEY7	115	4.00	659108	LOGAN 4	230	5.42	661043	HESKETT7	115	20.38
652433	EDGELEY8	69	2.30	659109	BASIN 7	115	5.36	661051	STH9TH 7	115	11.19
652435	FARGO 4	230	10.01	659113	VOLTAIR7	115	8.17	661053	MANDAN 4	230	14.41
652436	FARGO 7	115	10.45	659143	BLAISDELL 4	230	5.03	661054	MANDAN 7	115	19.94
652437	GRNDFKS4	230	7.03	659144	BLAISDELL 7	115	6.75	661060	LINTON 7	115	1.33
652440	NELSON 7	115	7.83	659150	WHITBY -CP7	115	3.04	661067	MANDANW7	115	13.68
652441	GARRISN4	230	11.49	659155	LOGAN 7	115	8.97	661084	TIOGA4 4	230	8.09
652442	GARRISN7	115	12.64	659183	CHAR.CK3	345	10.81	661094	WISHEK 4	230	4.53
652443	GRNDFKS7	115	10.96	659190	NDPRAIRWND 7	115	7.82	661095	WISHEK 7	115	2.61
652444	JAMESTN4	230	8.31	659212	DGC 3	345	16.71	661119	26TH&D 7	115	13.55

Table 4-8
Short-Circuit Analysis for Study Project GEN-2016-065 and GEN-2016-066 (25SP)

Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)	Bus Number	Bus Name	Bus Voltage (kV)	Fault Current 3-LG (kA)
585260	GEN-2015-091	230	7.31	659105	LELANDO3	345	17.32	659404	ANTELPHILLS3	345	11.68
585310	G1596-G1666	230	2.97	659182	CHAR.CK7	115	14.18	659420	ANTELOP-LNX3	345	17.59
585340	GEN-2015-098	230	3.83	659183	CHAR.CK3	345	10.81	659448	DAGLUM 4	230	7.35
652111	COALHILL4	230	2.33	659184	R.RIDER7	115	4.30	659450	G1414-G1665	230	3.72
652216	WATFORD4	230	6.46	659185	FOUREYES 7	115	3.60	659653	GRSYBUTTAP 7	115	13.18
652258	BISON 8	69	2.07	659212	DGC 3	345	16.71	661004	BAKER 4	230	3.17
652296	WARD 4	230	11.79	659218	COTEAU 3	345	17.59	661005	BAKER 7	115	3.58
652402	MI CTYW4	230	11.37	659263	LTLMISS7	115	1.82	661008	BEULAH 7	115	9.68
652403	DAWSONC4	230	4.23	659265	LTLMISS4	230	3.34	661010	BOWMAN 4	230	3.60
652404	DAWSONC7	115	7.72	659266	RHAME 4	230	4.13	661019	MATHSON7	115	5.65
652411	MI CTYE4	230	2.78	659267	RHAME 7	115	3.11	661020	DIXGREENRVR7	115	5.15
652412	MI CTYE7	115	3.89	659297	BIS WARD 7	115	4.21	661021	WSTMD17	115	8.03
652413	MEDORA 4	230	5.06	659302	CHAR.CK4	230	11.49	661022	DICKNTH7	115	4.79
652417	DICKNSN4	230	7.49	659305	NWMANDANMGS7	115	19.94	661024	WDICKSN7	115	4.98
652418	DKSN-ND7	115	6.04	659306	S HEART 7	115	2.20	661034	KPS14-BAK7	115	3.23
652419	KILDEER7	115	7.86	659309	S HEART 4	230	9.20	661042	HESKETT4	230	13.66
652424	BELFELD3	345	6.62	659333	JUDSON 3	345	6.54	661043	HESKETT7	115	20.38
652425	BELFELD4	230	9.20	659340	BOWMAN 7	115	3.32	661047	HETINGR4	230	3.46
652426	BISMARK4	230	13.63	659341	NBURR 7	115	1.73	661048	HETINGR7	115	3.22
652468	HEBRON 4	230	5.33	659342	KPS15-BOW7	115	1.15	661050	GASCOYN7	115	1.77
652470	BISON 4	230	2.77	659350	BISON 7	115	1.40	661053	MANDAN 4	230	14.41
652497	MAURINE4	230	2.75	659384	ROUNDUP 3	345	9.63	661054	MANDAN 7	115	19.94
652616	BEAVERHILL4	230	3.91	659385	ROUNDUP 7	115	13.03	661067	MANDANW7	115	13.68
657741	MPC02100TAP4	230	15.52	659387	KUMMERRIDGE3	345	6.84	661070	N ENGLN7	115	3.25
657742	MPC2100WIND4	230	12.97	659390	PATENTGATE 3	345	7.73	661094	WISHEK 4	230	4.53
657751	CENTER 4	230	20.25	659391	PATENTGATE 7	115	13.04	661987	G752CLC4	230	3.01
659101	ANTELOP3	345	17.59	659400	NDSUNFLWR 4	230	4.77				

SECTION 5: POWER FACTOR ANALYSIS

The objective of this task is to quantify the power factor at the point of interconnection for the wind farms during base case and system contingencies. SPP transmission planning practice requires interconnecting generation projects to maintain the power factor (pf) at the Point of Interconnection (POI) within +/- 0.95 pf for system intact conditions and for post-contingency conditions. This is analyzed by having the wind/solar farm maintain a prescribed voltage schedule at the point of interconnection of 1.0 p.u. voltage or higher.

The 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak power flows provided by SPP were examined prior to the Power Factor Analysis to ensure they contained the proposed study project modeled at 100% of the nameplate rating and any previously queued projects listed in Table 2-2. There was no suspect power flow data in the study area. The proposed study project and any previously queued projects at the same point of interconnection were turned off during the power factor analysis. The wind farm(s) were then replaced by a generator modeled at the high side bus with the same real power (MW) capability as the wind farm(s) and open limits for the reactive power set points (Mvar). The generator was set to hold the POI scheduled bus voltage. All N-1, three-phase fault contingencies from Table 2-3 were then applied and the reactive power required to maintain the bus voltage was recorded.

5.1 Approach

The upgrades that were identified in the Stability Analysis were implemented to each power case for the power factor analysis. Refer to Section 3 for the necessary upgrades and Table 5-1 for the scheduled voltage each study generator was set to hold at the point of interconnection for each season.

GEN-2016-004 and Lelando Generation (659110) were disabled in the power flow case. A generator was placed at the high side bus of GEN-2016-004 and modeled with PGEN = 201.6 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. A second generator was placed at the high side bus of the Lelando Generation and was modeled with PGEN = 170.6 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar for the 2016 Winter Peak case. For the 2017 Summer Peak case, PGEN = 144.54 MW and for the 2025 Summer Peak case, PGEN = 206.6 MW. All buses and transformers connected from the high side bus of each project to the corresponding generator were disabled.

GEN-2016-044 was disabled and a generator was placed at the study project's high side bus. The generator was modeled with PGEN = 400.0 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the study project's high side bus to GEN-2016-044 were disabled.

GEN-2016-052, GEN-2016-053, GI-0715, and GI-0727 were all disabled in the power flow case. Since GEN-2016-052 and GEN-2016-053 share the same step-up transformer, two generators were placed at the shared high side bus of GEN-2016-052 and GEN-2016-053. Both generators were modeled with PGEN = 52.8 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. Similarly, GI-0715 and GI-0727 share the same step-up transformer and thus, two generators were placed at the shared high side bus of GI-0715 and GI-0727. Both generators were modeled with PGEN = 99 MW, Qmin = -9999 Mvar, Qmax = 9999 Mvar. All buses and transformers connected from the project's high side bus to the corresponding generator were disabled. Note the Power Factor Analysis was performed separately for GEN-2016-052 and GEN-2016-053.

GEN-2016-065, GEN-2016-066, and GEN-2015-091 all share the same point of interconnection, Daglum 230 kV, and were all disabled in the power flow case. A generator was placed at the high side bus of GEN-2016-065 and modeled with PGEN = 156.5 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. A second generator was placed at the high side bus of GEN-2016-066 and modeled with PGEN = 162.0 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. A third generator was placed at the high side bus of GEN-2015-091 and modeled with PGEN = 101.2 MW, QMin = -9999 Mvar, and QMax = 9999 Mvar. All buses and transformers connected from the high side bus of each project to the corresponding generator were disabled. Note the Power Factor Analysis was performed separately for GEN-2016-065 and GEN-2016-066.

Table 5-1
Voltage Schedule of All Study Generators for All Seasons

Point of Interconnection Voltage (p.u.)				
Request	**POI**	**16WP**	**17SP**	**25SP**
GEN-2016-004	BEPC Leland Olds 230kV (659106)	1.011	1.000	1.000
GEN-2016-044	Tap Groton (659160) - Leland Olds (659105) 345kV, (G16-044-TAP, 560079)	1.001	1.000	1.000
GEN-2016-052	Hilken 230kV (652466)	1.016	1.009	1.012
GEN-2016-053	Hilken 230kV (652466)	1.016	1.009	1.012
GEN-2016-065	Daglum 230kV (659448)	1.011	1.001	1.000
GEN-2016-066	Daglum 230kV (659448)	1.011	1.001	1.000

5.2 Power Factor Analysis Results

The power factor was calculated for the 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak conditions. The following tables show the power factor results for the study generators:

- Table 5-1: Power Factor Analysis for GEN-2016-004
- Table 5-2: Power Factor Analysis for GEN-2016-044
- Table 5-3: Power Factor Analysis for GEN-2016-052
- Table 5-4: Power Factor Analysis for GEN-2016-053
- Table 5-5: Power Factor Analysis for GEN-2016-065
- Table 5-6: Power Factor Analysis for GEN-2016-066

Note that a positive Q (Mvar) output illustrates that the generator is absorbing reactive power from the system, implying a leading power factor; a negative Q (Mvar) illustrates that the generator is supplying reactive power to the system, implying a lagging power factor.

Table 5-1
Power Factor Analysis: GEN-2015-053

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	1.000	Lagging	-3.576	0.978	Lagging	-43.000	0.987	Lagging	-32.273
1	FLT01-3PH	0.991	Lagging	-27.189	0.935	Lagging	-76.653	0.950	Lagging	-66.544
2	FLT02-3PH	0.999	Lagging	-9.281	0.973	Lagging	-48.227	0.983	Lagging	-37.822
3	FLT03-3PH	0.996	Lagging	-16.930	0.973	Lagging	-47.708	0.977	Lagging	-44.323
4	FLT04-3PH	0.996	Lagging	-18.294	0.968	Lagging	-52.508	0.963	Lagging	-56.156
5	FLT05-3PH	0.995	Leading	19.853	0.999	Lagging	-6.643	1.000	Leading	2.575
6	FLT06-3PH	0.999	Lagging	-6.610	0.971	Lagging	-49.245	0.982	Lagging	-38.266
7	FLT07-3PH	0.991	Lagging	-27.836	0.932	Lagging	-78.295	0.948	Lagging	-67.545
8	FLT08-3PH	0.999	Lagging	-8.033	0.974	Lagging	-47.049	0.986	Lagging	-33.739
9	FLT09-3PH	0.999	Lagging	-8.402	0.983	Lagging	-38.132	0.985	Lagging	-35.039
10	FLT10-3PH	1.000	Lagging	-4.027	0.979	Lagging	-42.122	0.987	Lagging	-32.389
11	FLT11-3PH	0.998	Lagging	-11.998	0.965	Lagging	-54.569	0.978	Lagging	-42.838
21	FLT21-3PH	1.000	Lagging	-3.576	0.980	Lagging	-41.375	0.987	Lagging	-32.273
22	FLT22-3PH	1.000	Lagging	-3.576	0.980	Lagging	-41.375	0.987	Lagging	-32.273
23	FLT23-3PH	1.000	Lagging	-3.576	0.980	Lagging	-41.375	0.987	Lagging	-32.273
24	FLT24-3PH	0.995	Lagging	-20.866	0.934	Lagging	-77.028	0.934	Lagging	-77.171
25	FLT25-3PH	0.999	Lagging	-9.852	0.977	Lagging	-43.964	0.973	Lagging	-48.040
26	FLT26-3PH	0.995	Lagging	-20.946	0.949	Lagging	-66.796	0.938	Lagging	-74.550
36	FLT36-3PH	0.999	Lagging	-6.610	0.971	Lagging	-49.245	0.982	Lagging	-38.266
37	FLT37-3PH	0.987	Lagging	-32.459	0.910	Lagging	-92.101	0.920	Lagging	-85.932
38	FLT38-3PH	0.999	Lagging	-8.108	0.970	Lagging	-50.885	0.981	Lagging	-39.358
39	FLT39-3PH	0.999	Lagging	-7.321	0.971	Lagging	-49.792	0.982	Lagging	-38.284
40	FLT40-3PH	0.997	Lagging	-16.346	0.938	Lagging	-74.381	0.963	Lagging	-56.564
41	FLT41-3PH	1.000	Lagging	-4.483	0.988	Lagging	-30.891	0.985	Lagging	-35.035
42	FLT42-3PH	1.000	Lagging	-3.862	0.978	Lagging	-43.053	0.987	Lagging	-32.226
43	FLT43-3PH	0.999	Leading	7.019	0.991	Lagging	-27.868	0.994	Lagging	-22.354
59	FLT59-3PH	0.998	Lagging	-12.063	0.964	Lagging	-55.660	0.974	Lagging	-46.693
60	FLT60-3PH	1.000	Lagging	-2.036	0.979	Lagging	-41.535	0.988	Lagging	-30.867
61	FLT61-3PH	1.000	Lagging	-4.672	0.975	Lagging	-45.468	0.986	Lagging	-34.273
62	FLT62-3PH	1.000	Lagging	-4.259	0.977	Lagging	-43.642	0.990	Lagging	-29.074
63	FLT63-3PH	1.000	Lagging	-4.767	0.977	Lagging	-44.109	0.986	Lagging	-34.140
64	FLT64-3PH	1.000	Lagging	-3.265	0.978	Lagging	-42.926	0.987	Lagging	-32.384
65	FLT65-3PH	0.998	Lagging	-12.826	0.952	Lagging	-64.778	0.971	Lagging	-49.250
66	FLT66-3PH	1.000	Lagging	-2.336	0.989	Lagging	-29.759	0.988	Lagging	-31.363
67	FLT67-3PH	1.000	Lagging	-3.576	0.980	Lagging	-41.375	0.987	Lagging	-32.273

Study Generator GEN-2016-004

The Power Factor Analysis shows that GEN-2016-004 has a power factor range of 0.995 leading (absorbing) to 0.987 lagging (supplying) for the 2016 Winter Peak conditions, a power factor range of 0.910 to 0.999 lagging (supplying) for the 2017 Summer Peak conditions, and a power factor range of 0.920 lagging (supplying) to unity for the 2025 Summer Peak conditions.

Table 5-2
Power Factor Analysis: GEN-2016-044

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.997	Lagging	-30.129	0.900	Lagging	-193.968	0.931	Lagging	-156.313
1	FLT01-3PH	0.996	Lagging	-37.942	0.892	Lagging	-202.927	0.924	Lagging	-165.497
2	FLT02-3PH	0.993	Lagging	-47.549	0.876	Lagging	-219.757	0.918	Lagging	-172.810
3	FLT03-3PH	0.996	Lagging	-37.284	0.902	Lagging	-191.755	0.925	Lagging	-164.426
4	FLT04-3PH	0.995	Lagging	-39.210	0.892	Lagging	-202.545	0.920	Lagging	-170.264
5	FLT05-3PH	0.996	Lagging	-35.205	0.897	Lagging	-197.392	0.927	Lagging	-162.330
6	FLT06-3PH	0.997	Lagging	-32.540	0.895	Lagging	-199.844	0.927	Lagging	-161.868
7	FLT07-3PH	0.987	Lagging	-64.313	0.859	Lagging	-238.122	0.894	Lagging	-200.519
8	FLT08-3PH	0.993	Lagging	-47.462	0.876	Lagging	-219.808	0.911	Lagging	-180.545
9	FLT09-3PH	0.997	Lagging	-31.680	0.901	Lagging	-192.168	0.931	Lagging	-156.462
10	FLT10-3PH	0.997	Lagging	-30.522	0.899	Lagging	-194.496	0.931	Lagging	-156.824
11	FLT11-3PH	0.996	Lagging	-36.506	0.892	Lagging	-202.337	0.926	Lagging	-163.594
21	FLT21-3PH	0.997	Lagging	-30.129	0.900	Lagging	-193.968	0.931	Lagging	-156.313
22	FLT22-3PH	0.997	Lagging	-30.129	0.900	Lagging	-193.968	0.931	Lagging	-156.313
23	FLT23-3PH	0.997	Lagging	-30.129	0.900	Lagging	-193.968	0.931	Lagging	-156.313
24	FLT24-3PH	1.000	Leading	2.908	0.922	Lagging	-168.281	0.939	Lagging	-146.214
25	FLT25-3PH	0.990	Lagging	-58.083	0.854	Lagging	-243.414	0.889	Lagging	-206.036
26	FLT26-3PH	0.997	Leading	30.515	0.941	Lagging	-144.400	0.950	Lagging	-132.065
36	FLT36-3PH	0.997	Lagging	-32.540	0.895	Lagging	-199.844	0.927	Lagging	-161.868
37	FLT37-3PH	0.992	Lagging	-51.349	0.868	Lagging	-228.732	0.902	Lagging	-191.419
38	FLT38-3PH	0.992	Lagging	-49.278	0.881	Lagging	-215.124	0.913	Lagging	-178.460
39	FLT39-3PH	0.993	Lagging	-48.239	0.882	Lagging	-213.800	0.915	Lagging	-176.961
40	FLT40-3PH	0.990	Lagging	-56.925	0.850	Lagging	-248.166	0.892	Lagging	-202.229
41	FLT41-3PH	0.997	Lagging	-29.676	0.901	Lagging	-192.577	0.932	Lagging	-155.569
42	FLT42-3PH	0.997	Lagging	-30.187	0.900	Lagging	-193.196	0.931	Lagging	-156.367
43	FLT43-3PH	1.000	Lagging	-9.963	0.925	Lagging	-164.214	0.952	Lagging	-128.480
59	FLT59-3PH	0.994	Lagging	-44.030	0.883	Lagging	-212.966	0.923	Lagging	-166.697
60	FLT60-3PH	0.998	Lagging	-27.129	0.902	Lagging	-191.155	0.933	Lagging	-153.854
61	FLT61-3PH	0.997	Lagging	-32.362	0.896	Lagging	-198.323	0.929	Lagging	-159.726
62	FLT62-3PH	0.997	Lagging	-30.865	0.900	Lagging	-194.214	0.930	Lagging	-157.550
63	FLT63-3PH	0.997	Lagging	-32.774	0.899	Lagging	-195.224	0.928	Lagging	-160.409
64	FLT64-3PH	0.997	Lagging	-29.822	0.900	Lagging	-194.023	0.931	Lagging	-156.693
65	FLT65-3PH	0.993	Lagging	-46.823	0.868	Lagging	-228.987	0.904	Lagging	-189.175
66	FLT66-3PH	0.998	Lagging	-27.325	0.900	Lagging	-193.908	0.933	Lagging	-154.075
67	FLT67-3PH	0.997	Lagging	-30.129	0.900	Lagging	-193.968	0.931	Lagging	-156.313

Study Generator GEN-2016-044

The Power Factor Analysis shows that GEN-2016-044 has a power factor range of 0.997 leading to 0.987 lagging for the 2016 Winter Peak conditions, a power factor range of 0.850 to 0.941 lagging for the 2017 Summer Peak conditions, and a power factor range of 0.889 to 0.952 lagging for the 2025 Summer Peak conditions.

Table 5-3
Power Factor Analysis: GEN-2016-052

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.999	Leading	1.755	1.000	Lagging	-1.340	0.988	Lagging	-8.283
1	FLT01-3PH	1.000	Leading	1.666	0.999	Lagging	-2.002	0.987	Lagging	-8.711
2	FLT02-3PH	1.000	Leading	1.213	0.999	Lagging	-2.410	0.985	Lagging	-9.220
3	FLT03-3PH	1.000	Leading	1.255	1.000	Lagging	-1.339	0.986	Lagging	-8.846
4	FLT04-3PH	1.000	Leading	1.241	0.999	Lagging	-1.899	0.985	Lagging	-9.404
5	FLT05-3PH	0.999	Leading	2.196	1.000	Lagging	-0.976	0.989	Lagging	-7.727
6	FLT06-3PH	0.997	Lagging	-4.379	0.983	Lagging	-9.996	0.965	Lagging	-14.275
7	FLT07-3PH	0.987	Lagging	-8.515	0.967	Lagging	-13.860	0.925	Lagging	-21.665
8	FLT08-3PH	1.000	Leading	0.072	0.999	Lagging	-1.706	0.982	Lagging	-10.213
9	FLT09-3PH	1.000	Leading	1.627	1.000	Lagging	-0.765	0.988	Lagging	-8.177
10	FLT10-3PH	0.999	Leading	1.686	1.000	Lagging	-1.478	0.988	Lagging	-8.338
11	FLT11-3PH	0.999	Leading	1.720	1.000	Lagging	-1.391	0.988	Lagging	-8.266
21	FLT21-3PH	0.999	Leading	1.755	1.000	Lagging	-1.340	0.990	Lagging	-7.693
22	FLT22-3PH	0.999	Leading	1.755	1.000	Lagging	-1.340	0.990	Lagging	-7.693
23	FLT23-3PH	0.999	Leading	1.755	1.000	Lagging	-1.340	0.990	Lagging	-7.693
24	FLT24-3PH	0.994	Lagging	-5.935	0.960	Lagging	-15.426	0.918	Lagging	-22.873
25	FLT25-3PH	1.000	Leading	0.676	0.997	Lagging	-3.818	0.985	Lagging	-9.301
26	FLT26-3PH	0.994	Lagging	-5.879	0.963	Lagging	-14.847	0.913	Lagging	-23.545
36	FLT36-3PH	0.997	Lagging	-4.379	0.983	Lagging	-9.996	0.965	Lagging	-14.275
37	FLT37-3PH	0.988	Leading	8.284	0.991	Leading	6.952	0.997	Leading	3.887
38	FLT38-3PH	0.999	Leading	2.833	1.000	Lagging	-0.758	0.991	Lagging	-7.094
39	FLT39-3PH	0.998	Leading	3.264	1.000	Lagging	-0.136	0.993	Lagging	-6.391
40	FLT40-3PH	1.000	Lagging	-0.880	0.998	Lagging	-3.523	0.981	Lagging	-10.453
41	FLT41-3PH	1.000	Leading	0.136	0.998	Lagging	-3.490	0.976	Lagging	-11.831
42	FLT42-3PH	1.000	Leading	1.456	1.000	Lagging	-1.413	0.988	Lagging	-8.201
43	FLT43-3PH	0.999	Leading	1.755	1.000	Lagging	-1.340	0.988	Lagging	-8.283
59	FLT59-3PH	1.000	Leading	0.301	0.997	Lagging	-3.751	0.980	Lagging	-10.649
60	FLT60-3PH	0.999	Leading	1.762	1.000	Lagging	-1.359	0.988	Lagging	-8.255
61	FLT61-3PH	1.000	Leading	1.639	1.000	Leading	0.427	0.988	Lagging	-8.398
62	FLT62-3PH	1.000	Leading	1.644	1.000	Lagging	-1.398	0.987	Lagging	-8.452
63	FLT63-3PH	1.000	Leading	1.558	1.000	Lagging	-1.511	0.987	Lagging	-8.574
64	FLT64-3PH	0.999	Leading	1.729	1.000	Lagging	-1.357	0.988	Lagging	-8.305
65	FLT65-3PH	1.000	Leading	0.311	0.996	Lagging	-4.489	0.980	Lagging	-10.738
66	FLT66-3PH	0.999	Leading	1.888	1.000	Lagging	-1.425	0.990	Lagging	-7.575
67	FLT67-3PH	0.999	Leading	1.755	1.000	Lagging	-1.340	0.990	Lagging	-7.693

Study Generator GEN-2016-052

The Power Factor Analysis shows that GEN-2016-052 has a power factor range of 0.988 leading to 0.987 lagging for the 2016 Winter Peak conditions, a power factor range of 0.991 leading to 0.960 lagging for the 2017 Summer Peak conditions, and a power factor range of 0.997 leading to 0.913 lagging for the 2025 Summer Peak conditions.

Table 5-4
Power Factor Analysis: GEN-2016-053

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.999	Leading	1.755	1.000	Lagging	-1.340	0.988	Lagging	-8.283
1	FLT01-3PH	1.000	Leading	1.666	0.999	Lagging	-2.002	0.987	Lagging	-8.711
2	FLT02-3PH	1.000	Leading	1.213	0.999	Lagging	-2.410	0.985	Lagging	-9.220
3	FLT03-3PH	1.000	Leading	1.255	1.000	Lagging	-1.339	0.986	Lagging	-8.846
4	FLT04-3PH	1.000	Leading	1.241	0.999	Lagging	-1.899	0.985	Lagging	-9.404
5	FLT05-3PH	0.999	Leading	2.196	1.000	Lagging	-0.976	0.989	Lagging	-7.727
6	FLT06-3PH	0.997	Lagging	-4.379	0.983	Lagging	-9.996	0.965	Lagging	-14.275
7	FLT07-3PH	0.987	Lagging	-8.515	0.967	Lagging	-13.860	0.925	Lagging	-21.665
8	FLT08-3PH	1.000	Leading	0.072	0.999	Lagging	-1.706	0.982	Lagging	-10.213
9	FLT09-3PH	1.000	Leading	1.627	1.000	Lagging	-0.765	0.988	Lagging	-8.177
10	FLT10-3PH	0.999	Leading	1.686	1.000	Lagging	-1.478	0.988	Lagging	-8.338
11	FLT11-3PH	0.999	Leading	1.720	1.000	Lagging	-1.391	0.988	Lagging	-8.266
21	FLT21-3PH	0.999	Leading	1.755	1.000	Lagging	-1.340	0.990	Lagging	-7.693
22	FLT22-3PH	0.999	Leading	1.755	1.000	Lagging	-1.340	0.990	Lagging	-7.693
23	FLT23-3PH	0.999	Leading	1.755	1.000	Lagging	-1.340	0.990	Lagging	-7.693
24	FLT24-3PH	0.994	Lagging	-5.935	0.960	Lagging	-15.426	0.918	Lagging	-22.873
25	FLT25-3PH	1.000	Leading	0.676	0.997	Lagging	-3.818	0.985	Lagging	-9.301
26	FLT26-3PH	0.994	Lagging	-5.879	0.963	Lagging	-14.847	0.913	Lagging	-23.545
36	FLT36-3PH	0.997	Lagging	-4.379	0.983	Lagging	-9.996	0.965	Lagging	-14.275
37	FLT37-3PH	0.988	Leading	8.284	0.991	Leading	6.952	0.997	Leading	3.887
38	FLT38-3PH	0.999	Leading	2.833	1.000	Lagging	-0.758	0.991	Lagging	-7.094
39	FLT39-3PH	0.998	Leading	3.264	1.000	Lagging	-0.136	0.993	Lagging	-6.391
40	FLT40-3PH	1.000	Lagging	-0.880	0.998	Lagging	-3.523	0.981	Lagging	-10.453
41	FLT41-3PH	1.000	Leading	0.136	0.998	Lagging	-3.490	0.976	Lagging	-11.831
42	FLT42-3PH	1.000	Leading	1.456	1.000	Lagging	-1.413	0.988	Lagging	-8.201
43	FLT43-3PH	0.999	Leading	1.755	1.000	Lagging	-1.340	0.988	Lagging	-8.283
59	FLT59-3PH	1.000	Leading	0.301	0.997	Lagging	-3.751	0.980	Lagging	-10.649
60	FLT60-3PH	0.999	Leading	1.762	1.000	Lagging	-1.359	0.988	Lagging	-8.255
61	FLT61-3PH	1.000	Leading	1.639	1.000	Leading	0.427	0.988	Lagging	-8.398
62	FLT62-3PH	1.000	Leading	1.644	1.000	Lagging	-1.398	0.987	Lagging	-8.452
63	FLT63-3PH	1.000	Leading	1.558	1.000	Lagging	-1.511	0.987	Lagging	-8.574
64	FLT64-3PH	0.999	Leading	1.729	1.000	Lagging	-1.357	0.988	Lagging	-8.305
65	FLT65-3PH	1.000	Leading	0.311	0.996	Lagging	-4.489	0.980	Lagging	-10.738
66	FLT66-3PH	0.999	Leading	1.888	1.000	Lagging	-1.425	0.990	Lagging	-7.575
67	FLT67-3PH	0.999	Leading	1.755	1.000	Lagging	-1.340	0.990	Lagging	-7.693

Study Generator GEN-2016-053

The Power Factor Analysis shows that GEN-2016-053 has a power factor range of 0.988 leading to 0.987 lagging for the 2016 Winter Peak conditions, a power factor range of 0.991 leading to 0.960 lagging for the 2017 Summer Peak conditions, and a power factor range of 0.997 leading to 0.913 lagging for the 2025 Summer Peak conditions.

Table 5-5
Power Factor Analysis: GEN-2016-065

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.998	Leading	10.983	0.998	Leading	9.363	0.999	Leading	7.999
1	FLT01-3PH	0.998	Leading	10.582	0.998	Leading	8.650	0.999	Leading	7.377
2	FLT02-3PH	0.998	Leading	10.289	0.999	Leading	7.894	0.999	Leading	6.740
3	FLT03-3PH	0.998	Leading	10.722	0.998	Leading	8.987	0.999	Leading	7.931
4	FLT04-3PH	0.998	Leading	10.693	0.998	Leading	8.925	0.999	Leading	7.281
5	FLT05-3PH	0.998	Leading	10.782	0.998	Leading	9.072	0.999	Leading	7.671
6	FLT06-3PH	0.998	Leading	10.730	0.998	Leading	8.742	0.999	Leading	7.533
7	FLT07-3PH	0.998	Leading	8.753	0.999	Leading	6.115	1.000	Leading	4.871
8	FLT08-3PH	0.998	Leading	10.193	0.999	Leading	7.776	0.999	Leading	6.677
9	FLT09-3PH	0.998	Leading	10.833	0.999	Leading	7.850	0.999	Leading	7.597
10	FLT10-3PH	0.998	Leading	10.948	0.998	Leading	9.307	0.999	Leading	7.977
11	FLT11-3PH	0.998	Leading	10.439	0.999	Leading	8.511	0.999	Leading	7.198
21	FLT21-3PH	0.998	Leading	10.983	0.998	Leading	9.363	0.999	Leading	7.999
22	FLT22-3PH	0.998	Leading	10.983	0.998	Leading	9.363	0.999	Leading	7.999
23	FLT23-3PH	0.998	Leading	10.983	0.998	Leading	9.363	0.999	Leading	7.999
24	FLT24-3PH	0.999	Leading	6.568	1.000	Leading	1.064	1.000	Lagging	-0.655
25	FLT25-3PH	0.998	Leading	10.407	0.999	Leading	7.700	0.999	Leading	7.017
26	FLT26-3PH	0.999	Leading	6.585	1.000	Leading	1.835	1.000	Leading	0.035
36	FLT36-3PH	0.998	Leading	10.730	0.998	Leading	8.742	0.999	Leading	7.533
37	FLT37-3PH	0.998	Leading	9.053	0.999	Leading	5.235	1.000	Leading	4.264
38	FLT38-3PH	0.998	Leading	10.319	0.998	Leading	8.612	0.999	Leading	7.248
39	FLT39-3PH	0.998	Leading	10.407	0.998	Leading	8.728	0.999	Leading	7.382
40	FLT40-3PH	0.998	Leading	9.068	0.999	Leading	5.059	1.000	Leading	4.750
41	FLT41-3PH	0.997	Leading	11.149	0.998	Leading	9.714	0.999	Leading	8.522
42	FLT42-3PH	0.998	Leading	10.987	0.998	Leading	9.344	0.999	Leading	7.983
43	FLT43-3PH	0.997	Leading	12.038	0.998	Leading	11.001	0.998	Leading	9.546
59	FLT59-3PH	1.000	Leading	2.177	1.000	Leading	0.363	1.000	Lagging	-0.614
60	FLT60-3PH	1.000	Leading	0.464	1.000	Lagging	-0.242	1.000	Lagging	-1.812
61	FLT61-3PH	0.998	Leading	9.544	0.999	Leading	7.321	0.999	Leading	6.253
62	FLT62-3PH	0.999	Leading	8.353	0.999	Leading	6.985	1.000	Leading	3.981
63	FLT63-3PH	0.997	Leading	11.491	0.998	Leading	9.580	0.998	Leading	8.590
64	FLT64-3PH	0.998	Leading	9.733	0.999	Leading	8.402	0.999	Leading	7.085
65	FLT65-3PH	0.997	Leading	11.303	0.998	Leading	8.614	0.998	Leading	10.326
66	FLT66-3PH	0.999	Leading	7.083	1.000	Leading	3.017	1.000	Leading	2.033
67	FLT67-3PH	0.998	Leading	10.983	0.998	Leading	9.363	0.999	Leading	7.999

Study Generator GEN-2016-065

The Power Factor Analysis shows that GEN-2016-065 has a power factor range of 0.997 leading to unity for the 2016 Winter Peak conditions, a power factor range of 0.998 leading to unity for the 2017 Summer Peak conditions, and a power factor range of 0.998 leading to unity for the 2025 Summer Peak conditions.

Table 5-6
Power Factor Analysis: GEN-2016-066

Cont. No.	Case	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		Power Factor		Q (MVAR)	Power Factor		Q (MVAR)	Power Factor		Q (MVAR)
0	Base	0.998	Leading	10.983	0.998	Leading	9.363	0.999	Leading	7.999
1	FLT01-3PH	0.998	Leading	10.582	0.999	Leading	8.650	0.999	Leading	7.377
2	FLT02-3PH	0.998	Leading	10.289	0.999	Leading	7.894	0.999	Leading	6.740
3	FLT03-3PH	0.998	Leading	10.722	0.998	Leading	8.987	0.999	Leading	7.931
4	FLT04-3PH	0.998	Leading	10.693	0.998	Leading	8.925	0.999	Leading	7.281
5	FLT05-3PH	0.998	Leading	10.782	0.998	Leading	9.072	0.999	Leading	7.671
6	FLT06-3PH	0.998	Leading	10.730	0.999	Leading	8.742	0.999	Leading	7.533
7	FLT07-3PH	0.999	Leading	8.753	0.999	Leading	6.115	1.000	Leading	4.871
8	FLT08-3PH	0.998	Leading	10.193	0.999	Leading	7.776	0.999	Leading	6.677
9	FLT09-3PH	0.998	Leading	10.833	0.999	Leading	7.850	0.999	Leading	7.597
10	FLT10-3PH	0.998	Leading	10.948	0.998	Leading	9.307	0.999	Leading	7.977
11	FLT11-3PH	0.998	Leading	10.439	0.999	Leading	8.511	0.999	Leading	7.198
21	FLT21-3PH	0.998	Leading	10.983	0.998	Leading	9.363	0.999	Leading	7.999
22	FLT22-3PH	0.998	Leading	10.983	0.998	Leading	9.363	0.999	Leading	7.999
23	FLT23-3PH	0.998	Leading	10.983	0.998	Leading	9.363	0.999	Leading	7.999
24	FLT24-3PH	0.999	Leading	6.568	1.000	Leading	1.064	1.000	Lagging	-0.655
25	FLT25-3PH	0.998	Leading	10.407	0.999	Leading	7.700	0.999	Leading	7.017
26	FLT26-3PH	0.999	Leading	6.585	1.000	Leading	1.835	1.000	Leading	0.035
36	FLT36-3PH	0.998	Leading	10.730	0.999	Leading	8.742	0.999	Leading	7.533
37	FLT37-3PH	0.998	Leading	9.053	0.999	Leading	5.235	1.000	Leading	4.264
38	FLT38-3PH	0.998	Leading	10.319	0.999	Leading	8.612	0.999	Leading	7.248
39	FLT39-3PH	0.998	Leading	10.407	0.999	Leading	8.728	0.999	Leading	7.382
40	FLT40-3PH	0.998	Leading	9.068	1.000	Leading	5.059	1.000	Leading	4.750
41	FLT41-3PH	0.998	Leading	11.149	0.998	Leading	9.714	0.999	Leading	8.522
42	FLT42-3PH	0.998	Leading	10.987	0.998	Leading	9.344	0.999	Leading	7.983
43	FLT43-3PH	0.997	Leading	12.038	0.998	Leading	11.001	0.998	Leading	9.546
59	FLT59-3PH	1.000	Leading	2.177	1.000	Leading	0.363	1.000	Lagging	-0.614
60	FLT60-3PH	1.000	Leading	0.464	1.000	Lagging	-0.242	1.000	Lagging	-1.812
61	FLT61-3PH	0.998	Leading	9.544	0.999	Leading	7.321	0.999	Leading	6.253
62	FLT62-3PH	0.999	Leading	8.353	0.999	Leading	6.985	1.000	Leading	3.981
63	FLT63-3PH	0.997	Leading	11.491	0.998	Leading	9.580	0.999	Leading	8.590
64	FLT64-3PH	0.998	Leading	9.733	0.999	Leading	8.402	0.999	Leading	7.085
65	FLT65-3PH	0.998	Leading	11.303	0.999	Leading	8.614	0.998	Leading	10.326
66	FLT66-3PH	0.999	Leading	7.083	1.000	Leading	3.017	1.000	Leading	2.033
67	FLT67-3PH	0.998	Leading	10.983	0.998	Leading	9.363	0.999	Leading	7.999

Study Generator GEN-2016-066

The Power Factor Analysis shows that GEN-2016-066 has a power factor range of 0.997 leading to unity for the 2016 Winter Peak conditions, a power factor range of 0.998 leading to unity for the 2017 Summer Peak conditions, and a power factor range of 0.998 leading to unity for the 2025 Summer Peak conditions.

SECTION 6: LOW/NO WIND/SOLAR IRRADIANCE ANALYSIS

The objective of this task is to determine the impact of low/no wind conditions on wind farms or low/no solar irradiance on solar farms. The 2016 Winter Peak, 2017 Summer Peak, and 2025 Summer Peak power flows provided by SPP were examined for this analysis.

6.1 Approach

Low/no wind and low/no solar irradiance were examined for all wind farms and solar farms, respectively. Generators were disabled (independently), but the collector systems remained in-service. In order to maintain generation and load balance in the SPP area, the generation was scaled after disabling the respective generator. The amount of reactive power injected into the transmission network was recorded at the respective point of interconnection. This reactive power comes from the capacitance of the project's transmission lines and collector cables. A shunt reactor was added at the high side bus to bring the Mvar flow into the POI down to approximately zero.

6.2 Low/No Wind and Low/No Solar Irradiance Analysis

The reactance needed to bring the Mvar flow into the point of interconnect to zero Mvar was recorded for each season for all wind or solar farms. Refer to Table 6-1 for the Low/No Wind/Solar Irradiance Analysis results. The table lists the generators examined and the amount of reactive power needed for zero Mvar flow into the POI for each season.

Table 6-1
Low/No Wind/Solar Irradiance Analysis Results

Request	Size (MW)	POI Name	2016 WP	2017 SP	2025 SP
GEN-2016-004	202	BEPC Leland Olds 230kV (659106)	13.60	13.60	13.60
GEN-2016-044	400	Tap Groton (659160) - Leland Olds (659105) 345kV, (G16-044-TAP, 560079)	37.63	37.63	37.63
GEN-2016-052	52.8	Hilken 230kV (652466)	4.50	4.50	4.50
GEN-2016-053	52.8	Hilken 230kV (652466)	4.50	4.50	4.50
GEN-2016-065	156.4	Daglum 230kV (659448)	39.35	39.35	39.35
GEN-2016-066	162	Daglum 230kV (659448)	16.75	16.75	16.75

SECTION 7: CONCLUSIONS

Summary of Stability Analysis

Cluster Scenario

The Stability Analysis determined there were multiple contingencies that resulted in voltage instability and low post-fault voltage recovery when all generation interconnection requests were at 100% output.

To mitigate the voltage instability and low post-fault steady-state voltages, the following upgrades were provided by SPP and implemented in all seasons:

- Daglum to Dickson 230 kV circuit #1
- Groton to G16-044 Tap 345 kV circuit #2
- Emmons County to G16-044 Tap 345 kV circuit #1

After applying the above mitigation, the low post-fault steady-state voltages for the 2016 Winter Peak season were mitigated. However, there were several contingencies in the 2017 Summer Peak and 2025 Summer Peak seasons that still resulted in low post-fault steady-state voltages. The following upgrades were applied to the 2017 Summer Peak case and were applied to the 2025 Summer Peak case if they did not exist:

- Broadland to Split Rock 345 kV circuit #1
- MISO MVP Project (exists in 2025 Summer Peak case)

Note that the Broadland to Emmons County 345 kV line reactor near Broadland 345 kV was switched out of service during post-fault steady-state conditions (five seconds after the fault is cleared) to mitigate the low voltages observed at Broadland 345 kV in the 2017 and 2025 Summer Peak cases.

After implementing the above upgrades, the contingency analysis was re-simulated for all contingencies. With the upgrades, the Stability Analysis determined that there was no wind turbine tripping or system instability observed as a result of interconnecting all study projects at 100% output.

Stand-Alone Scenario

For GEN-2016-044, low post-fault steady-state violations were observed for several contingencies for all seasonal peak conditions examined. The following upgrades were implemented to mitigate the low voltages observed:

- Daglum to Dickson 230 kV circuit #1 (16WP, 25SP)
- Groton to G16-044 Tap 345 kV circuit #2 (16WP, 25SP)
- Emmons County to G16-044 Tap 345 kV circuit #1 (16WP, 25SP)
- Broadland to Split Rock 345 kV circuit #1(17SP)
- MISO MVP Project (17SP)

After implementing these changes, the voltage violations that were observed were mitigated.

For GEN-2016-065 and GEN-2016-066, voltage instability was observed for all seasonal peak conditions examined. The following upgrades were implemented to mitigate the low voltages observed:

- Daglum to Dickson 230 kV circuit #1 (All seasons)

After implementing the above line upgrade in all seasons, the voltage violations that were observed were mitigated.

Summary of the Short-Circuit Analysis

The Short-Circuit Analysis was performed on the 2017 Summer Peak and 2025 Summer Peak power flows for all study projects. Refer to Table 7-1 for a list of maximum fault currents observed for each study project for the 2017 Summer Peak case. Refer to Table 7-2 for a list of maximum fault currents observed for each study project for the 2025 Summer Peak case.

Table 7-1
List of Maximum Fault Currents Observed for Each Study Project for the 2017 Summer Peak Case

Study Project	POI Name	Fault Current at POI (kA)	Maximum Fault Current (kA)	Fault Location	Bus Voltage (kV)
GEN-2016-004	BEPC Leland Olds 230kV (659106)	23.75	52.77	COON CK7	115
GEN-2016-044	Tap Groton (659160) - Leland Olds (659105) 345kV, (G16-044-TAP, 560079)	8.06	24.22	RAUN 3	345
GEN-2016-052	Hilken 230kV (652466)	8.71	23.75	LELANDO4	230
GEN-2016-053	Hilken 230kV (652466)	8.71	23.75	LELANDO4	230
GEN-2016-065	Daglum 230kV (659448)	7.33	20.03	CENTER 4	230
GEN-2016-066	Daglum 230kV (659448)	7.33	20.03	CENTER 4	230

Table 7-2
List of Maximum Fault Currents Observed for Each Study Project for the 2025 Summer Peak Case

Study Project	POI Name	Fault Current at POI (kA)	Maximum Fault Current (kA)	Fault Location	Bus Voltage (kV)
GEN-2016-004	BEPC Leland Olds 230kV (659106)	23.91	52.94	COON CK7	115
GEN-2016-044	Tap Groton (659160) - Leland Olds (659105) 345kV, (G16-044-TAP, 560079)	8.28	24.73	RAUN 3	345
GEN-2016-052	Hilken 230kV (652466)	8.79	23.91	LELANDO4	230
GEN-2016-053	Hilken 230kV (652466)	8.79	23.91	LELANDO4	230
GEN-2016-065	Daglum 230kV (659448)	7.35	20.38	HESKETT 7	115
GEN-2016-066	Daglum 230kV (659448)	7.35	20.38	HESKETT 7	115

Summary of the Power Factor Analysis

The upgrades identified in the Stability Analysis were implemented in the power flow cases and utilized for the Power Factor Analysis. Refer to Table 7-3 for the power factor analysis results for each study generator.

Table 7-3
Power Factor Analysis Summary for Study Projects

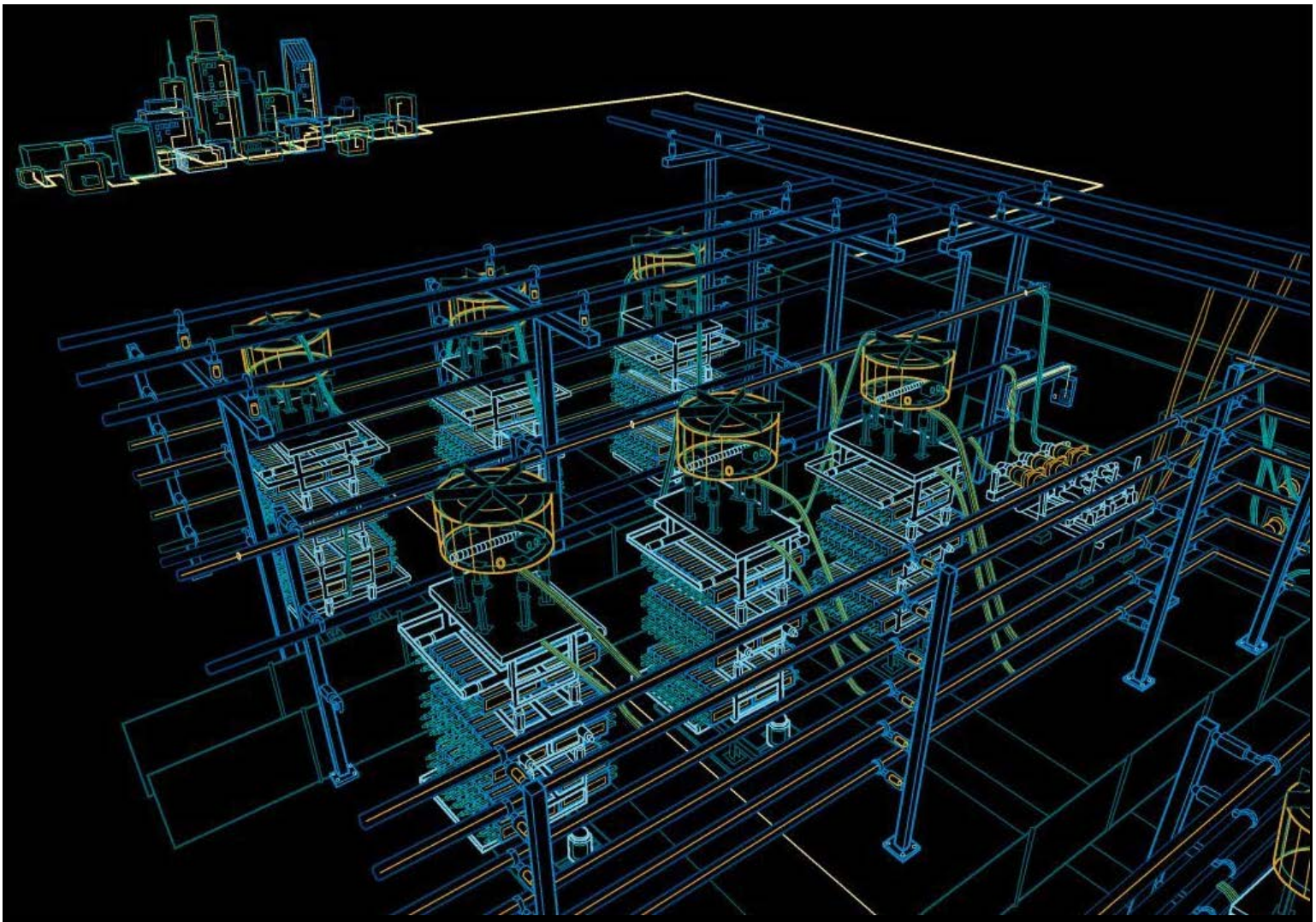
Study Project	Power Factor Range for Each Study Project[1]					
	16WP		17SP		25SP	
GEN-2016-004	-0.987	0.995	-0.910	-0.999	-0.920	1.000
GEN-2016-044	-0.987	0.997	-0.850	-0.941	-0.889	-0.952
GEN-2016-052	-0.987	0.988	-0.960	0.991	-0.913	0.997
GEN-2016-053	-0.987	0.988	-0.960	0.991	-0.913	0.997
GEN-2016-065	0.997	1.000	0.998	1.000	0.998	1.000
GEN-2016-066	0.997	1.000	0.998	1.000	0.998	1.000

[1]Lagging power factors are negative and leading power factors are positive

Summary of the Low/No Wind/Solar Irradiance Analysis

The amount of reactive power injected into the transmission network was recorded at the high side of the transformer near the point of interconnection for all study projects for each season. The maximum reactance needed for zero Mvar flow was -39.35 Mvar for GEN-2016-065. The minimum reactance needed for zero Mvar flow was -4.50 Mvar for GEN-2016-052 and GEN-2016-053.

11.17.14 J17: GROUP 17 DYNAMIC STABILITY ANALYSIS REPORT



Southwest Power Pool
System Impact Study DISIS-2016-001 (Group 17)
Final Report

Report No. r02

Jan 6, 2017

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Prepared for: Southwest Power Pool
Report No.: r02
Date: Jan 6, 2017
Revised: Jan 25, 2017

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Rev No.	*Revision Description*	*Date*	*Authored by*	*Reviewed by*	*Approved by*
1	Revised Table 2-2	1-13-17	V.V	L.C	W.W
2	Final Report	1-25-17	V.V	L.C	W.W

SUMMARY

Southwest Power Pool (SPP) has commissioned ABB Inc., to perform a System Impact Study for interconnection request DISIS-2016-001 (Group 17) which includes generation interconnection requests GEN-2015-089 (200 MW wind farm connected to 230 kV Utica Junction) and GEN-2016-054 (54.4 MW wind farm connected at 230kV Wessington Springs).

The objective of this study is to evaluate the collective as well as individual impact of the three projects on the existing and future planning system. The study is performed on three system scenarios provided by SPP:

- 2016 Winter Peak Case
- 2017 Summer Peak Case
- 2025 Summer Peak Case

All the simulation results showed no stability problems and no voltage violations for all three seasons. All the simulation results were summarized in Table 2-2 and Table 2-3. Also, for the contingencies simulated GEN-2015-089 and GEN-2016-054 remained on line and, therefore, will comply with FERC Order 661A low voltage ride-through.

System short-circuit current levels at up to five buses away from the point of interconnection were calculated and tabulated for SPP's reference.

Power Factor Analysis was performed to ensure the studied project meets FERC and SPP power factor requirements for wind farm interconnections. Table 4-1 summarizes the power factor analysis results. The detailed power factor analysis results for each studied contingency are provided in Appendix C. Per SPP and FERC requirements, the generating facility shall be designed to meet the requirement of 95% lagging (providing vars) and 95% leading (absorbing vars) to the Point of Interconnection.

The Low/No Wind analysis shows that a 29.98 MVAr / 2.15 MVAr shunt reactors are required to bring the MVAr flows at two POIs down to approximate zero under low/no wind conditions for GEN-2015-089 and GEN-2016-054 respectively. The reactor bank size is approximate and the final size will be determined in the final facility and collector system design.

The results of this analysis are based on available data and assumptions made at the time of conducting this study. If any of the data and/or assumptions made in developing the study model change, the results provided in this report may not apply.

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1 Introduction

Southwest Power Pool (SPP) has commissioned ABB Inc., to perform a System Impact Study for DISIS-2016-001 (Group 17) which includes generation interconnection requests GEN-2015-089 (200 MW wind farm connected to 230 kV Utica Junction) and GEN-2016-054 (54.4 MW wind farm connected at 230kV Wessington Springs) as shown in Table 1-1.

Table 1-1 Group 17 Generation Interconnection Requests

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2015-089	200	GE 2.0MW wind	WAPA Utica Junction 230kV (652526)
GEN-2016-054	3.4 uprate (total = 54.4MW)	GE 1.6MW wind	Wessington Springs 230kV (652607)

The objective of this study is to evaluate the impact of projects GEN-2015-089 and GEN-2016-054 on the existing and future planning system. The study is performed on three system scenarios provided by SPP:

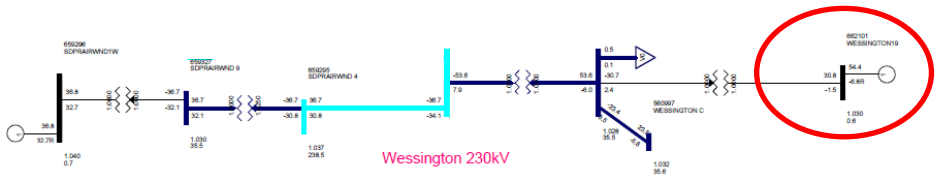
- 2016 Winter Peak Case
- 2017 Summer Peak Case
- 2025 Summer Peak Case

SPP provided the study cases for all three system scenarios with the three projects included. One line diagrams of the local area for all three seasons are shown in Figure 1-1. The studied generator is circled red.

Three system scenarios supplied by SPP included the following prior queued projects for Group 17:

Table 1-2 Group 17 Prior Queued Projects

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2006-002IS	51	wind	Wessington Springs 230kV (652607)
GEN-2009-006IS	90	wind	Mission 115kV (652482)
GEN-2009-007IS	100	wind	Mission 115kV (652482)
GEN-2009-020AIS	130.5	wind	Trip Junction 115kV (660055)
GEN-2012-009IS	99	wind	Fort Randall 115kV (6525510)



[Local system one-line redacted]

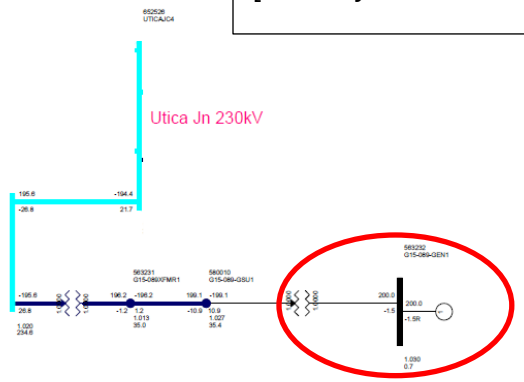


Figure 1-1(a) One Line Diagram for 2016 Winter Peak Case

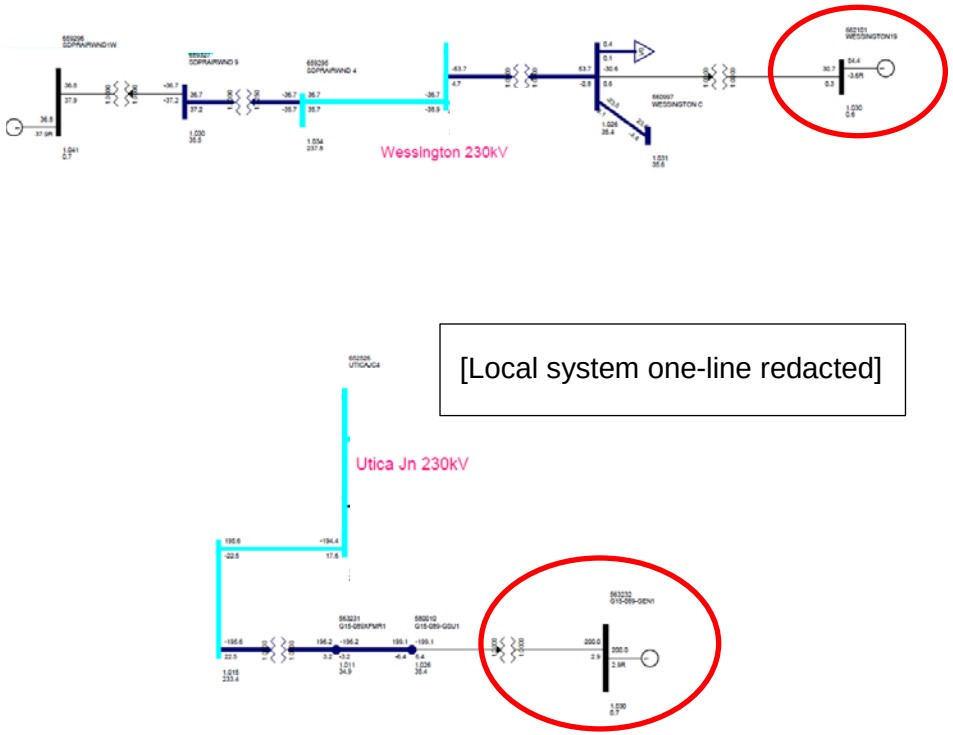
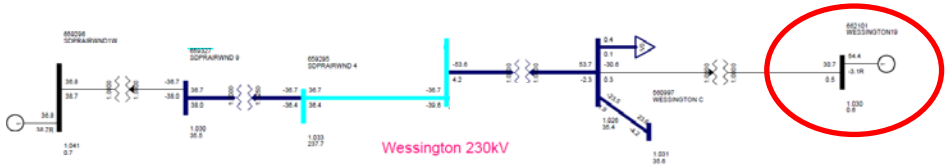


Figure 1-2 (b) One Line Diagram for 2017 Summer Peak Case



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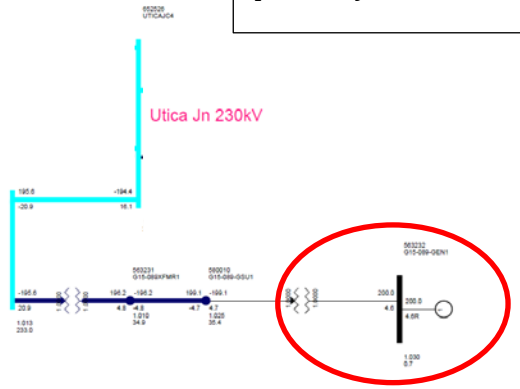

Figure 1-3 (c) One Line Diagram for 2025 Summer Peak Case

2 Study Methodology

In this study, ABB investigated the stability of the system for faults in the vicinity of the proposed plant as defined by SPP. The studied faults involve three-phase transformer faults with normal clearing, three-phase line faults with normal clearing, and single-line-to-ground (SLG) faults with stuck breaker.

2.1 Stability Analysis Methodology

Stability analysis is performed to determine whether the electric system would meet stability criteria following the addition of projects: GEN-2015-089 and GEN-2016-054.

Stability analysis was performed using Siemens-PTI's PSS/E dynamics program V32.2.0.

All the faults listed in Table 2-1 were simulated for 20 seconds.

Table 2-1: List of Faults of Stability Analysis

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-054
1	FLT1-3PH	3 phase fault on the Utica 230kV (652526) to Ft. Randall 230kV (652509) near Utica 230kV bus a. Apply fault at the Utica 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	
2	FLT2-3PH	3 phase fault on the Utica 230kV (652526) to Rasmussen 230 kV (652536) near Utica bus a. Apply fault at the Utica 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	
3	FLT3-3PH	3 phase fault on the Utica 230kV (652526) to Vfodnes 230 kV (652398) near Utica bus a. Apply fault at the Utica 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	
4	FLT4-3PH	3 phase fault on the Rasmussen 230 kV (652536) to Sioux City 230 kV (652565) near Rasmussen bus a. Apply fault at the Rasmussen 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-054
5	FLT5-3PH	3 phase fault on the FT Randall 230kV (652509) to FT. Thompson 230kV (652507) near Ft Randall bus a. Apply fault at the FT Randall 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	X
6	FLT6-3PH	3 phase fault on the Vfodnes 230kV (652398) to Sioux Falls 230kV (652523) near Vfodnes bus a. Apply fault at the Vfodnes 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	X
7	FLT7-3PH	3 phase fault on the Sioux Falls 230kV (652523) to Hanlon 230kV (652513) near Sioux falls bus a. Apply fault at the Sioux Falls 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	X
8	FLT8-3PH	3 phase fault on the Sioux Falls 230kV (652523) to Letcher 230kV (652606) near Letcher bus a. Apply fault at the Letcher 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	X
9	FLT9-3PH	3 phase fault on the FT Randall 230kV (652509) to Meadow Grove 230kV (640540) near FT Randall bus a. Apply fault at the FT Randall 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	
10	FLT10-3PH	3 phase fault on the Hanlon 230kV (652513) to Storla 230kV (659122) near Storla Bus a. Apply fault at the Storla 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X
11	FLT11-3PH	3 phase fault on the Storla 230kV (659122) to Wessington 230kV (652607) near Wessington bus a. Apply fault at Wessington 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-054
12	FLT12-3PH	3 phase fault on the Wessington 230kV (652607) to FT. Thompson 230kV (652507) near Wessington Bus a. Apply fault at the Wessington 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X
13	FLT13-3PH	3 phase fault on the FT. Thompson 230kV (652507) to Letcher 230kV (652606) near Letcher Bus a. Apply fault at the Letcher 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X
14	FLT14-3PH	3 phase fault on the Ft Randall 230kV (652509) to Love Platte 230kV (652516) near Love Platte bus a. Apply fault at the Love Platte 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	X
15	FLT15-3PH	3 phase fault on the FT. Thompson 230kV (652507) to Love Platte 230kV (652516) near Love Platte bus a. Apply fault at the Love Platte 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	X
16	FLT16-3PH	3 phase fault on the FT. Randall 230kV (652509) to Sioux City 230kV (652565) near Sioux City Bus a. Apply fault at the Sioux City Bus 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	
17	FLT17-3PH	3 phase fault on the Sioux City 230kV (652565) to Eagle 230kV (659900) near Eagle Bus a. Apply fault at the Eagle Bus 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	
18	FLT18-3PH	3 phase fault on the Pohoja 230kV (652578) to Sioux Falls 230kV (652523) near Pohoja Bus a. Apply fault at the Pohoja 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	X

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-054
19	FLT19-3PH	3 phase fault on the Sioux City 230kV (652565) to Twin Church 230kV (640386) near Sioux City Bus a. Apply fault at the Sioux City 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	
20	FLT20-3PH	3 phase fault on the Sioux City 230kV (652565) to Denison 230kV (652567) near Sioux City a. Apply fault at the Sioux City 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	
21	FLT21-3PH	3 phase fault on the FT. Thompson 230kV (652507) to Huron 230kV (652514) near FT. Thompson Bus a. Apply fault at the FT. Thompson 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X
22	FLT22-3PH	3 phase fault on the FT. Thompson 230kV (652507) to OAHE 230kV (652519) circuit 1 near FT. Thompson Bus a. Apply fault at the FT. Thompson 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.		X
23	FLT23-3PH	3 phase fault on the Meadow Grove 230kV (640540) to Columbus 230kV (640133) near Meadow Grove Bus a. Apply fault at the Meadow Grove 230kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	X
24	FLT24-3PH	3 phase fault on the Utica 230kV (652526) to Utica 115kV (652626) to Utica 13.2kV (652627) XFMR CKT 1, near Utica 230kV. a. Apply fault at the Utica 230kV bus. b. Clear fault after 6 cycles by tripping the faulted transformer.	X	X
25	FLT25-3PH	3 phase fault on the Sioux City 230kV (652565) to Sioux City 345kV (652564) XFMR CKT 1, near Sioux City 230kV bus. a. Apply fault at the Sioux City 230kV bus. b. Clear fault after 6 cycles by tripping the faulted transformer.	X	

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-054
26	FLT26-3PH	3 phase fault on the Ft Thompson 345kV (652506) to FT Thompson 230kV (652507) XFMR CKT 1, near Ft Thompson 230kV bus. a. Apply fault at the Ft Thompson 230kV bus. b. Clear fault after 6 cycles by tripping the faulted transformer.		X
27	FLT27-PH	3 phase fault on the Ft Thompson 345kV (652506) to G16-017-TAP 345kV (560074) line near Leland Bus a. Apply fault at the Leland 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	X
28	FLT28-3PH	3 phase fault on the Ft Thompson 345kV (652506) to GR Prairie 3 345kV (652532) line near Leland Bus a. Apply fault at the Leland 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	X
29	FLT29-3PH	3 phase fault on the Split Rock 345kV (601006) to White 345kV (652537) line near Split Rock Bus a. Apply fault at the Split Rock 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	X
30	FLT30-3PH	3 phase fault on the Split Rock 345kV (601006) to Nobles 345kV (601034) line near Split Rock Bus a. Apply fault at the Split Rock 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	X
31	FLT31-3PH	3 phase fault on the Split Rock 345kV (601006) to Sioux City 345kV (652864) line near Split Rock Bus a. Apply fault at the Split Rock 345kV bus. b. Clear fault after 6 cycles by tripping the faulted line.	X	X
32	FLT32-3PH	3 phase fault on the Utica 115kV (652626) to Napa 115kV (660026) line near Napa Bus a. Apply fault at the Napa 115kV bus. b. Clear fault after 7 cycles by tripping the faulted line.	X	

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-054
33	FLT33-3PH	3 phase fault on the Utica 115kV (652626) to KeyStone 115kV (659292) line near KeyStone Bus a. Apply fault at the KeyStone 115kV bus. b. Clear fault after 7 cycles by tripping the faulted line.	X	
34	FLT34-3PH	3 phase fault on the WH Swan 115kV (652463) to Ft. Randall (652510) line near WH Swan Bus a. Apply fault at the WH Swan 115kV bus. b. Clear fault after 7 cycles by tripping the faulted line.	X	
35	FLT35-PO	**Prior Outage of Ft. Thompson to Huron 230kV circuit 1**. 3 phase fault on the 345/230/13.8kV FT. Thompson Transformer. a. Prior outage Ft. Thompson (652507) 230kV to Huron (652514) 230kV (solve network for steady state solution) circuit 1. b. 3 phase fault on the 345/230/13.8kV Ft. Thompson (652607) transformer #3 (652506) 13.8kV (652274) near 230kV Ft. Thompson bus. c. Leave fault on for 6 cycles, then trip the faulted line in (b).		X
36	FLT36-PO	**Prior Outage of Utica to Vfodnes 230kV**. 3 phase fault on the Utica - Ft. Randall 230kV line. a. Prior outage Utica (652526) to Vfodnes (652398) 230kV line (solve network for steady state solution). b. 3 phase fault on the Utica (652526) to Ft. Randall (652509) 230kV, near Utica 230kV. c. Leave fault on for 6 cycles, then trip the faulted line in (b).	X	
37	FLT37-PO	**Prior Outage of Utica to Rasmussen 230kV**. 3 phase fault on the Utica - Vfodnes 230kV line. a. Prior outage Utica (652526) to Rasmussen (652536) 230kV line (solve network for steady state solution). b. 3 phase fault on the Utica (652526) to Vfodnes (652398) 230kV line, near Utica 230kV. c. Leave fault on for 6 cycles, then trip the faulted line in (b).	X	

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-054
38	FLT38-PO	**Prior Outage of Utica to Rasmussen 230kV**. 3 phase fault on the Utica - Ft. Randall 230kV line. a. Prior outage Utica (652526) to Rasmussen (652536) 230kV line (solve network for steady state solution). b. 3 phase fault on the Utica (652526) to Ft. Randall 230kV (652509) 230kV line, near Utica 230kV. c. Leave fault on for 6 cycles, then trip the faulted line in (b).	X	
39	FLT39-PO	**Prior Outage of Utica to Ft. Randall 230kV**. 3 phase fault on the Utica - Vfodnes 230kV line. a. Prior outage Utica (652526) to Ft. Randall 230kV (652509) 230kV line (solve network for steady state solution). b. 3 phase fault on the Utica (652526) to Vfodnes (652398) 230kV line, near Utica 230kV. c. Leave fault on for 6 cycles, then trip the faulted line in (b).	X	
40	FLT40-PO	**Prior Outage of Utica to Ft. Randall 230kV**. 3 phase fault on the Utica - Rasmussen 230kV line. a. Prior outage Utica (652526) to Ft. Randall (652509) 230kV line (solve network for steady state solution). b. 3 phase fault on the Utica (652526) to Rasmussen (652536) 230kV line, near Utica 230kV. c. Leave fault on for 6 cycles, then trip the faulted line in (b).	X	
41	FLT41-PO	**Prior Outage of Wessington to Ft. Thompson 230kV**. 3 phase fault on the Sioux Falls - Letcher 230kV line. a. Prior outage Wessington (652607) to Ft. Thompson (652507) 230kV line (solve network for steady state solution). b. 3 phase fault on the Sioux Falls (652523) to Letcher (652606) 230kV, near Sioux Falls 230kV. c. Leave fault on for 6 cycles, then trip the faulted line in (b).		X

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-054
42	FLT42-PO	**Prior Outage of Wessington to Ft. Thompson 230kV**. 3 phase fault on the Sioux Falls - Pohoja 230kV line. a. Prior outage Wessington (652607) to Ft. Thompson (652507) 230kV line (solve network for steady state solution). b. 3 phase fault on the Sioux Falls (652523) to Pohoja (652578) 230kV line, near Sioux Falls 230kV. c. Leave fault on for 6 cycles, then trip the faulted line in (b).		X
43	FLT43-PO	**Prior Outage of Wessington to Storla 230kV**. 3 phase fault on the Ft. Thompson - Huron 230kV line. a. Prior outage Wessington (652607) to Storla 230kV (659122) 230kV line (solve network for steady state solution). b. 3 phase fault on the Ft. Thompson (652607) to Huron (652514) 230kV line, near Ft. Thompson 230kV. c. Leave fault on for 6 cycles, then trip the faulted line in (b).		X
44	FLT44-PO	**Prior Outage of Wessington to Storla 230kV**. 3 phase fault on the Ft. Thompson - FT Randall 230kV line. a. Prior outage Wessington (652607) to Storla 230kV (659122) 230kV line (solve network for steady state solution). b. 3 phase fault on the Ft. Thompson (652507) to FT Randall 230kV (652509) 230kV line, near Ft. Thompson 230kV. c. Leave fault on for 6 cycles, then trip the faulted line in (b).		X
45	FLT45-PO	**Prior Outage of Wessington to Storla 230kV**. 3 phase fault on the Ft. Thompson - Letcher 230kV line. a. Prior outage Wessington (652607) to Storla 230kV (659122) 230kV line (solve network for steady state solution). b. 3 phase fault on the Ft. Thompson (652507) to Letcher 230kV (652606) 230kV line, near Ft. Thompson 230kV. c. Leave fault on for 6 cycles, then trip the faulted line in (b).		X

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-054
46	FLT46-PO	**Prior Outage of Wessington to Storla 230kV**. 3 phase fault on the Ft. Thompson - Love Platte 230kV line. a. Prior outage Wessington (652607) to Storla 230kV (659122) 230kV line (solve network for steady state solution). b. 3 phase fault on the Ft. Thompson (652507) to Love Platte (652516) 230kV line, near Ft. Thompson 230kV. c. Leave fault on for 6 cycles, then trip the faulted line in (b).		X
47	FLT47-SB	**Utica 230kV Stuck Breaker** a. Apply single phase fault at the Utica (652526) 230kV line to Ft. Randall (652509) 230kV line near Utica (652526) bus. b. Wait 16 cycles, and then trip Utica (652526) to FT. Randall (652509) 230kV. c. Trip Utica (652526) to VFodnes (652398) 230kV line and remove the fault.	X	
48	FLT48-SB	**Utica 230kV Stuck Breaker** a. Apply single phase fault at the Utica (652526) 230kV line to Rasmussen (652536) 230kV line near Utica (652526) bus. b. Wait 16 cycles, and then trip Utica (652526) to Rasmussen (652536) Line. c. Trip Utica (652526) 230kV to Utica (652626) 115kV to Utica (652627) 13.2kV transformer and remove the fault.	X	
49	FLT49-SB	**Utica 115kV Stuck Breaker** a. Apply single phase fault at the Utica (652626) 115kV bus on the Utica – Napa Jn (660026) 115kV line. b. Wait 16 cycles, and then trip Utica (652626) to Napa Jn (660026) Line. c. Trip Utica (652626) 115kV to Keystone (659292) 115kV line and remove the fault.	X	
50	FLT50-SB	**Wessington 230kV Stuck Breaker** a. Apply single phase fault at the Wessington (652607) 230kV line to Ft. Thompson (652507) 230kV line near Wessington bus.		X

Cont. No.	Cont. Name	Description	GEN-2015-089	GEN-2016-054
		b. Wait 16 cycles, and then trip Wessington (652607) to FT. Thompson (652507) 230kV line.		
51	FLT51-SB	**Wessington 230kV Stuck Breaker** a. Apply single phase fault on the Wessington (652607) – Storla (659122) 230kV line near Wessington 230kV bus. b. Wait 16 cycles, and then trip Storla (659122) to Wessington (652607) line.		X
52	FLT52-SB	**Ft. Thompson 345kV Stuck Breaker** a. Apply single phase fault on the 345kV Ft. Thompson (652506) bus to 345kV G16-017-TAP (560074) bus near 345kV Ft. Thompson bus. b. Wait 16 cycles, and then trip Ft. Thompson (652506) – G16-017-TAP (560074) 345kV line c. Trip 345kV (652506) Ft. Thompson- 230kV (652507) to Ft. Thompson 13.8kV (652274) transformer and remove the fault.		X
53	FLT53-PO	**Prior Outage of Utica to Vfodnes 230kV**. 3 phase fault on the Utica - Rasmussen 230kV line. a. Prior outage Utica (652526) 230kV to Vfodnes (652398) 230kV line (solve network for steady state solution). b. 3 phase fault on the Utica (652526) 230kV to Rasmussen (652536) 230kV, near Utica 230kV. c. Leave fault on for 6 cycles, then trip the faulted line in (b).	X	

Single-line-to-ground faults were simulated with the standard method of applying fault impedance to the positive sequence network to represent the effect of the negative and zero sequence networks on the positive sequence network. The SLG fault impedance was computed by assuming a positive sequence voltage at the fault location at approximately 60% of pre-fault voltage, which is a typical value.

The Southwest Pool Disturbance Performance Criteria Requirements in Appendix A were used to evaluate the system response during the initial transient period following a disturbance on the system. Generator response and bus voltages (115 kV and above) in Areas 330, 356, 600, 615, 620, 635, 640, 645, 652 and 661 were monitored to ensure the system performance meets criteria requirements. Rotor angles of the nearby synchronous machines were investigated to make sure they maintained synchronism and had adequate damping following system faults.

Any wind generator must comply with FERC Order 661A on low voltage ride through requirements for wind farms. Therefore, the wind generators should not be tripped off line for faults by under voltage relay actuation. Generator speed of pre-queued projects was also monitored to ensure they stay online under system contingencies. For contingencies that result in a prior queued project tripping off-line; the contingency shall be re-run with the prior queued project's voltage and frequency tripping disabled.

2.2 Study Results – Cluster Scenario

A distance relay on (circuit 1) bus 603009 to bus 603008 operated for faults 29, 30 and 31 (FLT29-3PH, FLT30-3PH and FLT31-3PH) on Zone 1. Relay tripping problem was observed for both cluster and standalone cases. Pre-project cases were created for all three study seasons to simulate the faults, and same results were observed.

All disturbances showed no instability problems for all three seasons. All fault results are summarized in Table 2-2, which show results for the 2016 Winter Peak case, the 2017 Summer Peak case, and the 2025 Summer Peak case, respectively. The "Volt CI Violation" in the table refers to "bus voltages on the Bulk Electric System is below 0.70 per unit, 2.5 seconds after the fault is cleared or bus voltages is above 1.20 per unit after the fault is cleared", and the "Volt CII Violation" refers to "simulation end bus voltages exceed the range of 0.9 pu and 1.1 pu". All voltage violations are highlighted with **red**.

Table 2-2 Study Results Summary – Cluster Scenario

Index	Fault Name	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		GEN-2015-089 & GEN-2016-054			GEN-2015-089 & GEN-2016-054			GEN-2015-089 & GEN-2016-054		
		Stable?	Volt CI Violation	Volt CII Violation	Stable?	Volt CI Violation	Volt CII Violation	Stable?	Volt CI Violation	Volt CII Violation
1	FLT1-3PH	Yes	no	no	Yes	no	no	Yes	no	no
2	FLT2-3PH	Yes	no	no	Yes	no	no	Yes	no	no
3	FLT3-3PH	Yes	no	no	Yes	no	no	Yes	no	no
4	FLT4-3PH	Yes	no	no	Yes	no	no	Yes	no	no
5	FLT5-3PH	Yes	no	no	Yes	no	no	Yes	no	no
6	FLT6-3PH	Yes	no	no	Yes	no	no	Yes	no	no
7	FLT7-3PH	Yes	no	no	Yes	no	no	Yes	no	no
8	FLT8-3PH	Yes	no	no	Yes	no	no	Yes	no	no
9	FLT9-3PH	Yes	no	no	Yes	no	no	Yes	no	no
10	FLT10-3PH	Yes	no	no	Yes	no	no	Yes	no	no
11	FLT11-3PH	Yes	no	no	Yes	no	no	Yes	no	no
12	FLT12-3PH	Yes	no	no	Yes	no	no	Yes	no	no
13	FLT13-3PH	Yes	no	no	Yes	no	no	Yes	no	no
14	FLT14-3PH	Yes	no	no	Yes	no	no	Yes	no	no
15	FLT15-3PH	Yes	no	no	Yes	no	no	Yes	no	no
16	FLT16-3PH	Yes	no	no	Yes	no	no	Yes	no	no
17	FLT17-3PH	Yes	no	no	Yes	no	no	Yes	no	no
18	FLT18-3PH	Yes	no	no	Yes	no	no	Yes	no	no
19	FLT19-3PH	Yes	no	no	Yes	no	no	Yes	no	no
20	FLT20-3PH	Yes	no	no	Yes	no	no	Yes	no	no
21	FLT21-3PH	Yes	no	no	Yes	no	no	Yes	no	no
22	FLT22-3PH	Yes	no	no	Yes	no	no	Yes	no	no
23	FLT23-3PH	Yes	no	no	Yes	no	no	Yes	no	no
24	FLT24-3PH	Yes	no	no	Yes	no	no	Yes	no	no
25	FLT25-3PH	Yes	no	no	Yes	no	no	Yes	no	no
26	FLT26-3PH	Yes	no	no	Yes	no	no	Yes	no	no
27	FLT26-3PH	Yes	no	no	Yes	no	no	Yes	no	no
28	FLT26-3PH	Yes	no	no	Yes	no	no	Yes	no	no
29	FLT29-3PH	Yes	no	no	Yes	no	no	Yes	no	no
30	FLT30-3PH	Yes	no	no	Yes	no	no	Yes	no	no
31	FLT31-3PH	Yes	no	no	Yes	no	no	Yes	no	no
32	FLT32-3PH	Yes	no	no	Yes	no	no	Yes	no	no
33	FLT33-3PH	Yes	no	no	Yes	no	no	Yes	no	no
34	FLT34-3PH	Yes	no	no	Yes	no	no	Yes	no	no
35	FLT35-PO	Yes	no	no	Yes	no	no	Yes	no	no
Index	Fault Name	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		

		GEN-2015-089 & GEN-2016-054			GEN-2015-089 & GEN-2016-054			GEN-2015-089 & GEN-2016-054		
		Stable?	Volt CI Violation	Volt CII Violation	Stable?	Volt CI Violation	Volt CII Violation	Stable?	Volt CI Violation	Volt CII Violation
36	FLT36-PO	Yes	no	no	Yes	no	no	Yes	no	no
37	FLT37-PO	Yes	no	no	Yes	no	no	Yes	no	no
38	FLT38-PO	Yes	no	no	Yes	no	no	Yes	no	no
39	FLT39-PO	Yes	no	no	Yes	no	no	Yes	no	no
40	FLT40-PO	Yes	no	no	Yes	no	no	Yes	no	no
41	FLT41-PO	Yes	no	no	Yes	no	no	Yes	no	no
42	FLT42-PO	Yes	no	no	Yes	no	no	Yes	no	no
43	FLT43-PO	Yes	no	no	Yes	no	no	Yes	no	no
44	FLT44-PO	Yes	no	no	Yes	no	no	Yes	no	no
45	FLT45-PO	Yes	no	no	Yes	no	no	Yes	no	no
46	FLT46-PO	Yes	no	no	Yes	no	no	Yes	no	no
47	FLT53-PO	Yes	no	no	Yes	no	no	Yes	no	no
48	FLT47-SB	Yes	no	no	Yes	no	no	Yes	no	no
49	FLT48-SB	Yes	no	no	Yes	no	no	Yes	no	no
50	FLT49-SB	Yes	no	no	Yes	no	no	Yes	no	no
51	FLT50-SB	Yes	no	no	Yes	no	no	Yes	no	no
52	FLT51-SB	Yes	no	no	Yes	no	no	Yes	no	no
53	FLT52-SB	Yes	no	no	Yes	no	no	Yes	no	no

2.3 Study Results – Standalone Scenario

Since there are two interconnection requests in this study group, standalone cases were created and studied for each individual interconnection request. Similar as the cluster scenario, all disturbances showed no instability problems for all three seasons. However, as described in cluster scenario, a distance relay on (circuit 1) bus 603009 to bus 603008 operated (on Zone 1) for faults 29, 30 and 31 (FLT29-3PH, FLT30-3PH and FLT31-3PH). Pre-project cases were created for all three study seasons to simulate the fault, and same results were observed.

All fault results are summarized in Table 2-3 and Table 2-4 which show results for the 2016 Winter Peak case, 2017 Summer Peak case and 2025 Summer Peak cases respectively. The "Volt CI Violation" in the table refers to "bus voltages on the Bulk Electric System is below 0.70 per unit, after the fault is cleared or bus voltages is above 1.20 per unit after the fault is cleared", and the "Volt CII Violation" refers to "simulation end bus voltages exceed the range of 0.9 pu and 1.1 pu". All voltage violations are highlighted with **red**.

Table 2-3 Study Results Summary – Standalone Scenario (GEN-2016-054)

Index	Fault Name	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		GEN-2016-054			GEN-2016-054			GEN-2016-054		
		Stable?	Volt CI Violation	Volt CII Violation	Stable?	Volt CI Violation	Volt CII Violation	Stable?	Volt CI Violation	Volt CII Violation
1	FLT5-3PH	Yes	no	no	Yes	no	no	Yes	no	no
2	FLT6-3PH	Yes	no	no	Yes	no	no	Yes	no	no
3	FLT7-3PH	Yes	no	no	Yes	no	no	Yes	no	no
4	FLT8-3PH	Yes	no	no	Yes	no	no	Yes	no	no
5	FLT10-3PH	Yes	no	no	Yes	no	no	Yes	no	no
6	FLT11-3PH	Yes	no	no	Yes	no	no	Yes	no	no
7	FLT12-3PH	Yes	no	no	Yes	no	no	Yes	no	no
8	FLT13-3PH	Yes	no	no	Yes	no	no	Yes	no	no
9	FLT14-3PH	Yes	no	no	Yes	no	no	Yes	no	no
10	FLT15-3PH	Yes	no	no	Yes	no	no	Yes	no	no
11	FLT18-3PH	Yes	no	no	Yes	no	no	Yes	no	no
12	FLT21-3PH	Yes	no	no	Yes	no	no	Yes	no	no
13	FLT22-3PH	Yes	no	no	Yes	no	no	Yes	no	no
14	FLT23-3PH	Yes	no	no	Yes	no	no	Yes	no	no
15	FLT24-3PH	Yes	no	no	Yes	no	no	Yes	no	no
16	FLT26-3PH	Yes	no	no	Yes	no	no	Yes	no	no
17	FLT27-3PH	Yes	no	no	Yes	no	no	Yes	no	no
18	FLT28-3PH	Yes	no	no	Yes	no	no	Yes	no	no
19	FLT29-3PH	Yes	no	no	Yes	no	no	Yes	no	no
20	FLT30-3PH	Yes	no	no	Yes	no	no	Yes	no	no
21	FLT31-3PH	Yes	no	no	Yes	no	no	Yes	no	no
22	FLT35-PO	Yes	no	no	Yes	no	no	Yes	no	no
23	FLT41-PO	Yes	no	no	Yes	no	no	Yes	no	no
24	FLT42-PO	Yes	no	no	Yes	no	no	Yes	no	no
25	FLT43-PO	Yes	no	no	Yes	no	no	Yes	no	no
26	FLT44-PO	Yes	no	no	Yes	no	no	Yes	no	no
27	FLT45-PO	Yes	no	no	Yes	no	no	Yes	no	no
28	FLT46-PO	Yes	no	no	Yes	no	no	Yes	no	no
29	FLT50-SB	Yes	no	no	Yes	no	no	Yes	no	no
30	FLT51-SB	Yes	no	no	Yes	no	no	Yes	no	no
31	FLT52-SB	Yes	no	no	Yes	no	no	Yes	no	no

Table 2-4 Study Results Summary – Standalone Scenario (GEN-2015-089)

Index	Fault Name	2016 Winter Peak			2017 Summer Peak			2025 Summer Peak		
		GEN-2015-089			GEN-2015-089			GEN-2015-089		
		Stable?	Volt CI Violation	Volt CII Violation	Stable?	Volt CI Violation	Volt CII Violation	Stable?	Volt CI Violation	Volt CII Violation
1	FLT1-3PH	Yes	no	no	Yes	no	no	Yes	no	no
2	FLT2-3PH	Yes	no	no	Yes	no	no	Yes	no	no
3	FLT3-3PH	Yes	no	no	Yes	no	no	Yes	no	no
4	FLT4-3PH	Yes	no	no	Yes	no	no	Yes	no	no
5	FLT5-3PH	Yes	no	no	Yes	no	no	Yes	no	no
6	FLT6-3PH	Yes	no	no	Yes	no	no	Yes	no	no
7	FLT7-3PH	Yes	no	no	Yes	no	no	Yes	no	no
8	FLT8-3PH	Yes	no	no	Yes	no	no	Yes	no	no
9	FLT9-3PH	Yes	no	no	Yes	no	no	Yes	no	no
10	FLT14-3PH	Yes	no	no	Yes	no	no	Yes	no	no
11	FLT15-3PH	Yes	no	no	Yes	no	no	Yes	no	no
12	FLT16-3PH	Yes	no	no	Yes	no	no	Yes	no	no
13	FLT17-3PH	Yes	no	no	Yes	no	no	Yes	no	no
14	FLT18-3PH	Yes	no	no	Yes	no	no	Yes	no	no
15	FLT19-3PH	Yes	no	no	Yes	no	no	Yes	no	no
16	FLT20-3PH	Yes	no	no	Yes	no	no	Yes	no	no
17	FLT23-3PH	Yes	no	no	Yes	no	no	Yes	no	no
18	FLT24-3PH	Yes	no	no	Yes	no	no	Yes	no	no
19	FLT25-3PH	Yes	no	no	Yes	no	no	Yes	no	no
20	FLT27-3PH	Yes	no	no	Yes	no	no	Yes	no	no
21	FLT28-3PH	Yes	no	no	Yes	no	no	Yes	no	no
22	FLT29-3PH	Yes	no	no	Yes	no	no	Yes	no	no
23	FLT30-3PH	Yes	no	no	Yes	no	no	Yes	no	no
24	FLT31-3PH	Yes	no	no	Yes	no	no	Yes	no	no
25	FLT32-3PH	Yes	no	no	Yes	no	no	Yes	no	no
26	FLT33-3PH	Yes	no	no	Yes	no	no	Yes	no	no
27	FLT34-3PH	Yes	no	no	Yes	no	no	Yes	no	no
28	FLT36-PO	Yes	no	no	Yes	no	no	Yes	no	no
29	FLT37-PO	Yes	no	no	Yes	no	no	Yes	no	no
30	FLT38-PO	Yes	no	no	Yes	no	no	Yes	no	no
31	FLT39-PO	Yes	no	no	Yes	no	no	Yes	no	no
32	FLT40-PO	Yes	no	no	Yes	no	no	Yes	no	no
33	FLT53-PO	Yes	no	no	Yes	no	no	Yes	no	no
34	FLT47-SB	Yes	no	no	Yes	no	no	Yes	no	no
35	FLT48-SB	Yes	no	no	Yes	no	no	Yes	no	no
36	FLT49-SB	Yes	no	no	Yes	no	no	Yes	no	no

3 Short Circuit Analysis

Short circuit analysis was performed on the 2017 Summer Peak and 2025 Summer Peak power flow case using the PSS/E program (Cluster Scenario model). Since the power flow model does not contain negative and zero sequence data, only three-phase symmetrical fault current levels were calculated at up to five buses away from the point of interconnection.

Table 3-1 tabulates all the three-phase fault current levels, and the calculated values were listed here for SPP's reference.

Table 3-1 (a): Three-Phase Fault Currents GEN-2015-089 – 2017 Summer Peak

Bus Number	Bus Name	3PH (Amp)	Bus Number	Bus Name	3PH (Amp)
640084	BLMFLD 7 115.00	6088.2	652544	BGBND56G 13.800	56423.6
659971	K301HINTON 869.000	10184.2	652545	BGBND78G 13.800	56592.3
659912	J6BOYER8 69.000	9671.3	652546	FTRDL12G 13.800	46619.8
652630	WATERTNCAP 4230.00	13637.9	652547	FTRDL34G 13.800	44051.1
652806	FTTHOM1-LNX3345.00	9479.9	652548	FTRDL56G 13.800	44054.8
652807	FTTHOM2-LNX3345.00	9479.9	652549	FTRDL78G 13.800	36538.1
643136	SHELLCRK T1913.800	26766	603009	GRANT 7 115.00	3890.7
640343	SHELCRK4 230.00	10830.7	635400	HIGHLND 3 345.00	10756.1
659980	K135CONCORD869.000	6761.6	652556	OAHE2-3G 13.800	89324.3
603149	ANSON4 115.00	33055.7	652557	OAHE4-5G 13.800	89324.2
652304	SIOUXC19 13.800	28535	652558	OAHE6-7G 13.800	89324.2
652305	SIOUXC29 13.800	28609.2	652559	OAHE 1G 13.800	45566.2
652308	SIOUXC39 13.800	18931.9	652561	DENISON5 161.00	5652.4
652821	SULLYBT-LNX3230.00	6322.9	652563	SPENCER5 161.00	8605.7
652310	SIOUXC49 13.800	19154.5	652564	SIOUXCY3 345.00	14568.9
635260	LEMARST5 161.00	9759.8	652565	SIOUXCY4 230.00	19258.7
659119	STORLA 9 13.200	16412.2	652566	SIOUXCY5 161.00	20381.6
640540	MEADOWGROVE4230.00	5589.1	652567	DENISON4 230.00	4526.3
605725	SPLT RK161 913.800	33562.1	640388	TWIN CH8 69.000	7998.9
563230	GEN-2015-089230.00	5354	659120	BRDLAND3 345.00	4017
563231	G15-089XFMR134.500	17758.1	652574	SIOUXCY8 69.000	17929.4
563232	G15-089-GEN10.6900	725821.2	652575	GAVINS1G 13.200	23383
652833	GRPRAR2-LNX3345.00	5836.4	652576	GAVINS2G 13.200	23383
660003	HURONWP7 115.00	10114.2	652577	GAVINS3G 13.200	25974.3
660004	MITCHEL7 115.00	5843.6	652578	PAHOJA 4 230.00	7213.6
660005	TRIPP 7 115.00	4138.2	652507	FTTHOMP4 230.00	19928.8
660006	YKNTJCT7 115.00	8933.6	652580	SPENCR 8 69.000	11501.7
660007	MENNOJT7 115.00	6604.6	652582	APPLEDORN 4 230.00	7083.5
660008	MITCLNW7 115.00	5466.7	652583	DENISON8 69.000	11429.4

Bus Number	Bus Name	3PH (Amp)	Bus Number	Bus Name	3PH (Amp)
660009	BTAP WP7 115.00	14902.2	603200	ANSON 7 115.00	30708
605191	LAWRENC8 69.000	15083.2	652252	MTVERNN8 69.000	2991.5
643117	ONEILL T1 913.800	4051.9	652588	CLEVELD4 230.00	4744.5
643118	ONEILL T2 913.800	4051.4	652589	OAHE 9 13.800	6213.9
659293	KEYSTN PS2394.2000	16782.6	652591	HANLON 7 115.00	5513
603011	MINEHAH7 115.00	12716.5	652592	HANLON 9 13.800	14601.6
660017	B_H WIND 934.500	7485.8	640305	ONEILL 7 115.00	3939.8
660018	B_H WIND 7115.00	3457.8	659250	SXF WBRANDN7115.00	13067.7
660026	NAPA JCT7 115.00	8349	659251	SXF CORSON 7115.00	10902.8
652864	SIOUXCY-LNX3345.00	14568.9	652600	ASH TAP 115.00	6938.4
659198	LETCHR PS227115.00	2599.2	659257	SXF SHINDLR7115.00	2987
643140	SPENCER T1 913.800	2216.2	659258	SXF HARSBRG7115.00	3689.6
640080	BELDEN 7 115.00	6894.1	659259	SXF CHANCLR7115.00	4508.2
643155	TWIN CH T4 913.800	21637.8	648508	PR BR1Y9 13.800	24173.3
643156	TWIN CH T6 913.800	22650.2	648509	PR BRZ19 34.500	14344.6
643157	TWIN CH T1 913.800	4424.7	652606	LETCHER4 230.00	4687.4
643158	TWIN CH T2 913.800	4417.7	652607	WESSINGTON 4230.00	6861.3
643159	TWIN CH T3 913.800	3596.5	635200	RAUN 3 345.00	23641.7
603225	FALLS 7 115.00	15146.9	652609	LETCHER7 115.00	6019
603228	SPLITRK CAP7115.00	34024.1	652614	CARPENTER 4 230.00	6854
656570	WISDOM5 161.00	8767.1	645451	S3451 3 345.00	19658.7
603013	PIPESTN7 115.00	9155.7	635213	NEAL 3G 22.000	187405.8
636010	LEHIGH 3 345.00	10446.8	635214	NEAL 4G 24.000	191426.2
652396	VFODNS19 12.500	20805.8	659281	HYDE 8 69.000	3402.6
652397	VFODNES7 115.00	6287.8	652626	UTICAJC7 115.00	8897.2
652398	VFODNES4 230.00	6950.7	652627	UTICAJC9 13.200	18233.8
652399	VFODNES8 69.000	4231.2	640342	SHELCRK3 345.00	10250.6
640113	CLRWATR7 115.00	5280.8	635223	PLYMOTH5 161.00	19959.5
652478	GREGORY7 115.00	2326.7	635224	PLYMOTH8 69.000	21176.2
640126	E.COL. 4 230.00	9717.7	635225	MORNSD 5 161.00	10334.7
640127	COLMB.E7 115.00	21549.5	635226	LEEDS 5 161.00	15871.5
603265	PROSE CAP7 115.00	32901.3	659292	KEYSTN PS237115.00	2587.2
640131	COLMB.W4 230.00	9803.2	640349	SPENCER7 115.00	4625.1
640132	COLMB.W9 34.500	9338.8	640350	SPENCER9 34.500	1403.3
640133	COLMBUS4 230.00	11376.5	659295	SDPRAIRWND 4230.00	5689.3
640134	KELLY 7 115.00	17911.6	648507	PR BR1X9 34.500	14376.1
640135	COLMBS19 13.200	25890.5	560997	WESSINGTON C34.500	13909.7
640136	COLMBUS7 115.00	19244.3	605036	SPK13.81 13.800	27508.7

Bus Number	Bus Name	3PH (Amp)	Bus Number	Bus Name	3PH (Amp)
603274	RENNER 7 115.00	11405.9	605037	SPK13.82 13.800	26633
662101	WESSINGTON190.5750	708129.2	652657	DENISON 9 13.800	19109.8
659907	J1CENTR8 69.000	8184.8	659327	SDPRAIRWND 934.500	33386
658030	DENISONWEST869.000	6546.8	648510	PR BR2X9 34.500	14492.1
583830	G14013G01431230.00	4232.7	635391	IRETONT8 69.000	5793.3
583831	G1413G1431X134.500	11141.7	648511	PR BR2Y9 13.800	24222.1
652603	EXIRA 5 161.00	6766.1	659324	HYDE 934.500	7057.1
658031	DENSOUMAIN8 69.000	6714	652031	KPS21-GY7 115.00	1507.5
659121	SPIRITM7 115.00	3396.8	652608	LETCHER9 13.200	16241.8
640163	EMERSON7 115.00	5611.3	640386	TWIN CH4 230.00	8615.3
640165	EMMET 7 115.00	2971.3	640387	TWIN CH7 115.00	10872.5
640306	ONEILL 8 69.000	4076.3	603012	LAWRENC7 115.00	27943.6
652463	WH SWAN7 115.00	12853.1	640389	TWIN CH9 34.500	3621.3
648512	PR BRZ29 34.500	14467.7	635201	RAUN 5 161.00	27688.4
640200	GR ISLD4 230.00	16536.1	603016	SPLT RK7 115.00	34527.3
659122	STORLA 4 230.00	6089.7	603017	WSX FLS7 115.00	14548.3
659123	STORLA 7 115.00	6714.2	656267	MANNINGTAP 869.000	4409.2
605726	SPLT RK230 936.200	7024.3	602004	SPLT RK4 230.00	12241.1
652474	AURORA 7 115.00	4389.3	602005	SPLT RK5 161.00	7955
652475	BONESTL7 115.00	3687.8	659256	SXF 57TH ST7115.00	2886.3
652476	EAGLEBT7 115.00	1978.3	659953	K412HINTONM869.000	11154.8
952509	G12_009IS 115.00	6578.2	640424	S.SIOUXCITY7115.00	7509.2
952510	G12_009IS_1 34.500	8760.3	580010	G15-089-GSU134.500	15857
952511	G12_009IS_2 0.6900	401406.7	580011	G10-051&1127230.00	6384.3
635385	HUDSON 8 69.000	5980.4	601006	SPLT RK3 345.00	13386.6
652484	NUNDRWD4 230.00	3560.1	659900	EAGLE 4 230.00	7114.2
652486	PHILIP 4 230.00	3235	659901	EAGLE 8 69.000	13754.4
640227	HOSKINS4 230.00	9891.3	640226	HOSKINS3 345.00	11805.4
652488	PHILTAP4 230.00	3831.8	652227	FLANDR19 12.470	4087.7
652491	IRVSIMM7 115.00	6678.3	652229	FLANDRU8 69.000	3053.9
652494	WINNER 7 115.00	2143.7	652255	BERSFR19 12.500	5113.3
640212	HARTGTN7 115.00	5721.4	652232	SIOUXF19 13.200	27648.7
652501	ARMOUR 7 115.00	4256.7	652233	SIOUXF29 13.200	29103.9
652502	BERSFRD7 115.00	3226.3	560074	G16-017-TAP 345.00	6724.2
652503	BLAIR 4 230.00	9084.8	652235	SIOUXFL8 69.000	3891.3
652505	FLANDRU7 115.00	4060.8	652237	WATERT19 13.800	38425.9
652506	FTTHOMP3 345.00	9479.9	652239	WATERT29 13.200	21505.8
560347	G10-051-TAP 230.00	7179.9	652240	WATERT39 13.200	21496.9

Bus Number	Bus Name	3PH (Amp)	Bus Number	Bus Name	3PH (Amp)
652509	FTRANDL4 230.00	10917.8	659921	J15SXCNTR8 69.000	6629.3
652510	FTRANDL7 115.00	13198.1	652245	CLEVELD8 69.000	4247.8
652511	GAVINS 7 115.00	9652.6	652246	ARMOUR 9 34.500	2769.4
652513	HANLON 4 230.00	5975.4	652281	HURON419 13.328	34545.4
652514	HURON 4 230.00	10834	652249	ARMOUR 8 69.000	2490.1
652515	HURON 7 115.00	15352.3	652251	MTVERNS8 69.000	3096.2
652516	LAKPLAT4 230.00	5694.3	643036	COLMB.ESTT3913.800	8529.9
652517	MANNING7 115.00	3211.5	652254	BERSFRD8 69.000	2935.6
652518	MTVERN 7 115.00	4393.8	643039	COLMB.WSTT1913.800	10270.8
652519	OAHE 4 230.00	13762.8	643040	COLMB.WSTT2913.800	12506.2
652520	OAHE 7 115.00	8519.4	659942	K217HAWARDE869.000	7578
652521	SULLYBT4 230.00	6322.9	659205	BRDLAND4 230.00	9834.1
652523	SIOUXFL4 230.00	12661.4	659196	CARPENTER 8 69.000	3227.9
652524	SIOUXFL7 115.00	24995.1	659946	K216LIBERTY869.000	7459.6
652525	TYNDALL7 115.00	3867.8	652273	FTTHMP19 13.800	26773.4
652526	UTICAJC4 230.00	7824.4	652274	FTTHMP29 13.800	26773.9
652528	WOONSKT7 115.00	5337.3	652276	FTTHOMP8 69.000	4435.1
652529	WATERTN3 345.00	9624	652277	LAKPLAT8 69.000	4122.6
652530	WATERTN4 230.00	13637.9	652278	HANLON18 69.000	5279.3
652531	WATERTN7 115.00	12490.1	652279	HANLON28 69.000	5279.3
659204	BROADLAND 913.800	23406.9	662100	WESSINGTON 934.500	16985
652535	REDFELD7 115.00	4136.6	652282	HURON429 13.328	34541.4
652536	RASMUSN4 230.00	6607.2	648506	PR BRZ 4 230.00	4232.7
652539	WATERSVC 20.000	23231.1	652284	HURON 8 69.000	3687.6
652540	BIGBND14 230.00	12105.1	652285	SULLYBT8 69.000	2423.8
652541	BIGBND24 230.00	11935.4	652286	TYNDALL8 69.000	2546.2
652542	BGBND12G 13.800	59503	652287	RASMUSN8 69.000	3248
652543	BGBND34G 13.800	58076.1			

Table 3-1 (b): Three-Phase Fault Currents GEN-2016-054 – 2017 Summer Peak

Bus Number	Bus Name	3PH (Amp)	Bus Number	Bus Name	3PH (Amp)
652291	REDFELD8 69.000	2885	652548	FTRDL56G 13.800	44054.8
652806	FTTHOM1-LNX3345.00	9479.9	659205	BRDLAND4 230.00	9834.1
652807	FTTHOM2-LNX3345.00	9479.9	652550	GRANITF4 230.00	12832.9
635223	PLYMOTH5 161.00	19959.5	587530	ASGI1605 69.000	2991.5
652304	SIOUXC19 13.800	28535	652556	OAHE2-3G 13.800	89324.3
652305	SIOUXC29 13.800	28609.2	652557	OAHE4-5G 13.800	89324.2
652308	SIOUXC39 13.800	18931.9	652558	OAHE6-7G 13.800	89324.2
652821	SULLYBT-LNX3230.00	6322.9	652559	OAHE 1G 13.800	45566.2
652310	SIOUXC49 13.800	19154.5	635200	RAUN 3 345.00	23641.7
659204	BROADLAND 913.800	23406.9	652561	DENISON5 161.00	5652.4
652463	WH SWAN7 115.00	12853.1	652563	SPENCER5 161.00	8605.7
640540	MEADOWGROVE4230.00	5589.1	652564	SIOUXCY3 345.00	14568.9
652829	WATERTN-LNX3345.00	9624	652565	SIOUXCY4 230.00	19258.7
563230	GEN-2015-089230.00	5354	652566	SIOUXCY5 161.00	20381.6
652549	FTRDL78G 13.800	36538.1	652567	DENISON4 230.00	4526.3
652833	GRPRAR2-LNX3345.00	5836.4	620314	BIGSTON4 230.00	9298.1
660002	REDFLD 7 115.00	3934.9	605725	SPLT RK161 913.800	33562.1
660003	HURONWP7 115.00	10114.2	652574	SIOUXCY8 69.000	17929.4
660004	MITCHEL7 115.00	5843.6	652578	PAHOJA 4 230.00	7213.6
660005	TRIPP 7 115.00	4138.2	560347	G10-051-TAP 230.00	7179.9
660007	MENNOJT7 115.00	6604.6	652582	APPLEDORN 4 230.00	7083.5
660008	MITCLNW7 115.00	5466.7	652583	DENISON8 69.000	11429.4
660009	BTAP WP7 115.00	14902.2	652588	CLEVELD4 230.00	4744.5
660012	HURON WP 869.000	6077.4	652589	OAHE 9 13.800	6213.9
660026	NAPA JCT7 115.00	8349	652591	HANLON 7 115.00	5513
652864	SIOUXCY-LNX3345.00	14568.9	652592	HANLON 9 13.800	14601.6
643140	SPENCER T1 913.800	2216.2	640305	ONEILL 7 115.00	3939.8
643155	TWIN CH T4 913.800	21637.8	659250	SXF WBRANDN7115.00	13067.7
662100	WESSINGTON 934.500	16985	652600	ASH TAP 115.00	6938.4
662101	WESSINGTON190.5750	708129.2	648506	PR BRZ 4 230.00	4232.7
659199	LETCHR PS2294.2000	16677.1	659259	SXF CHANCLR7115.00	4508.2
643156	TWIN CH T6 913.800	22650.2	652604	APPLEDORN 8 69.000	2556
563231	G15-089XFMR134.500	17758.1	652605	APPLEDORN 9 13.200	5980.1
652396	VFODNS19 12.500	20805.8	652606	LETCHER4 230.00	4687.4
652397	VFODNES7 115.00	6287.8	652607	WESSINGTON 4230.00	6861.3
652398	VFODNES4 230.00	6950.7	652608	LETCHER9 13.200	16241.8
652399	VFODNES8 69.000	4231.2	652609	LETCHER7 115.00	6019
952510	G12_009IS_1 34.500	8760.3	652614	CARPENTER 4 230.00	6854
640126	E.COL. 4 230.00	9717.7	659271	RCDC EAST 4230.00	2718.6

Bus Number	Bus Name	3PH (Amp)	Bus Number	Bus Name	3PH (Amp)
640131	COLMB.W4 230.00	9803.2	659258	SXF HARSBRG7115.00	3689.6
640133	COLMBUS4 230.00	11376.5	659281	HYDE 8 69.000	3402.6
640134	KELLY 7 115.00	17911.6	652626	UTICAJC7 115.00	8897.2
640135	COLMBS19 13.200	25890.5	652627	UTICAJC9 13.200	18233.8
583830	G14013G01431230.00	4232.7	652630	WATERTNCAP 4230.00	13637.9
652657	DENISON 9 13.800	19109.8	640343	SHELCRK4 230.00	10830.7
658088	WTREAST7 115.00	9617.5	659291	HYDE W0.6900	420418
658094	WTRPELI7 115.00	8539.7	659292	KEYSTN PS237115.00	2587.2
659119	STORLA 9 13.200	16412.2	640349	SPENCER7 115.00	4625.1
659120	BRDLAND3 345.00	4017	640350	SPENCER9 34.500	1403.3
658120	GARFLD 7 115.00	5940.2	659295	SDPRAIRWND 4230.00	5689.3
659122	STORLA 4 230.00	6089.7	659296	SDPRAIRWND1W0.6900	1965414
659123	STORLA 7 115.00	6714.2	648507	PR BR1X9 34.500	14376.1
587550	ASGI1607 115.00	1794.9	560997	WESSINGTON C34.500	13909.7
652475	BONESTL7 115.00	3687.8	648508	PR BR1Y9 13.800	24173.3
652476	EAGLEBT7 115.00	1978.3	652542	BGBND12G 13.800	59503
952509	G12_009IS 115.00	6578.2	648510	PR BR2X9 34.500	14492.1
652478	GREGORY7 115.00	2326.7	640404	WAYSIDE4 230.00	2874.5
652481	MIDLAND7 115.00	3320.1	587130	GEN-2016-017345.00	6687.6
652484	NUNDRWD4 230.00	3560.1	648511	PR BR2Y9 13.800	24222.1
652485	NUNDRWD7 115.00	6041.1	659324	HYDE 934.500	7057.1
652486	PHILIP 4 230.00	3235	659327	SDPRAIRWND 934.500	33386
652487	PHILIP 7 115.00	5316.3	603009	GRANT 7 115.00	3890.7
652488	PHILTAP4 230.00	3831.8	640386	TWIN CH4 230.00	8615.3
652489	PIERRE 7 115.00	6679.6	640387	TWIN CH7 115.00	10872.5
652491	IRVSIMM7 115.00	6678.3	603012	LAWRENC7 115.00	27943.6
652498	PHILIP9 13.200	13027.9	603016	SPLT RK7 115.00	34527.3
652500	ARLNGTN7 115.00	4270.4	652175	G09_001IST 345.00	6107.1
652501	ARMOUR 7 115.00	4256.7	652884	NUNDRWD-LNX3230.00	3560.1
652502	BERSFRD7 115.00	3226.3	602004	SPLT RK4 230.00	12241.1
652503	BLAIR 4 230.00	9084.8	659176	CARPENPS21 869.000	2823.9
652504	BROOKNG7 115.00	7046.7	659900	EAGLE 4 230.00	7114.2
652505	FLANDRU7 115.00	4060.8	659901	EAGLE 8 69.000	13754.4
652506	FTTHOMP3 345.00	9479.9	652224	BLAIR 8 69.000	2650.1
652507	FTTHOMP4 230.00	19928.8	652232	SIOUXF19 13.200	27648.7
652509	FTRANDL4 230.00	10917.8	652233	SIOUXF29 13.200	29103.9
652510	FTRANDL7 115.00	13198.1	560074	G16-017-TAP 345.00	6724.2
652512	GROTON 7 115.00	14680.9	652235	SIOUXFL8 69.000	3891.3
652513	HANLON 4 230.00	5975.4	652237	WATERT19 13.800	38425.9
652514	HURON 4 230.00	10834	652239	WATERT29 13.200	21505.8

Bus Number	Bus Name	3PH (Amp)	Bus Number	Bus Name	3PH (Amp)
652515	HURON 7 115.00	15352.3	652240	WATERT39 13.200	21496.9
652516	LAKPLAT4 230.00	5694.3	652242	WATERT18 69.000	3862.9
652518	MTVERN 7 115.00	4393.8	652243	FAITH 7 115.00	2390.8
652519	OAHE 4 230.00	13762.8	652246	ARMOUR 9 34.500	2769.4
652520	OAHE 7 115.00	8519.4	652249	ARMOUR 8 69.000	2490.1
652521	SULLYBT4 230.00	6322.9	652251	MTVERNS8 69.000	3096.2
652523	SIOUXFL4 230.00	12661.4	652252	MTVERNN8 69.000	2991.5
652524	SIOUXFL7 115.00	24995.1	659421	BRDLAND-LNX3345.00	4017
652525	TYNDALL7 115.00	3867.8	659424	LELAND2-LNX3345.00	17187.2
652526	UTICAJC4 230.00	7824.4	652259	EAGLEBE8 69.000	1690.1
652527	WHITLOK4 230.00	4460.8	652260	EAGLEBW8 69.000	2192.7
652528	WOONSKT7 115.00	5337.3	652540	BIGBND14 230.00	12105.1
652529	WATERTN3 345.00	9624	652266	NUNDRWD10 13.800	25478.9
652530	WATERTN4 230.00	13637.9	652267	NUNDRWD9 13.800	22741.6
652531	WATERTN7 115.00	12490.1	652273	FTTHMP19 13.800	26773.4
652532	GR PRAIRIE3 345.00	5836.4	652274	FTTHMP29 13.800	26773.9
652535	REDFELD7 115.00	4136.6	652276	FTTHOMP8 69.000	4435.1
652536	RASMUSN4 230.00	6607.2	652277	LAKPLAT8 69.000	4122.6
652539	WATERSVC 20.000	23231.1	652278	HANLON18 69.000	5279.3
659196	CARPENTER 8 69.000	3227.9	652279	HANLON28 69.000	5279.3
652541	BIGBND24 230.00	11935.4	652281	HURON419 13.328	34545.4
659198	LETCHR PS227115.00	2599.2	652282	HURON429 13.328	34541.4
652543	BGBND34G 13.800	58076.1	652001	G13_001IST 115.00	5204.9
652544	BGBND56G 13.800	56423.6	652284	HURON 8 69.000	3687.6
652545	BGBND78G 13.800	56592.3	652285	SULLYBT8 69.000	2423.8
652546	FTRDL12G 13.800	46619.8	652287	RASMUSN8 69.000	3248
652547	FTRDL34G 13.800	44051.1			

Table 3-1 (c): Three-Phase Fault Currents GEN-2015-089 – 2025 Summer Peak

Bus Number	Bus Name	3PH (Amp)	Bus Number	Bus Name	3PH (Amp)
640084	BLMFLD 7 115.00	6210.5	652545	BGBND78G 13.800	54853.2
659971	K301HINTON 869.000	10203.4	652546	FTRDL12G 13.800	46961.5
659912	J6BOYER8 69.000	9742.7	652547	FTRDL34G 13.800	44369.6
652630	WATERTNCAP 4230.00	14555.5	652548	FTRDL56G 13.800	44372.9
652806	FTTHOM1-LNX3345.00	9693.1	652549	FTRDL78G 13.800	44372.9
652807	FTTHOM2-LNX3345.00	9693.1	603009	GRANT 7 115.00	3912.5
643136	SHELLCRK T1913.800	26755.7	635400	HIGHLND 3 345.00	11327
640343	SHELCRK4 230.00	10854.9	652556	OAHE2-3G 13.800	89623.2
659980	K135CONCORD869.000	6762	652557	OAHE4-5G 13.800	89622.8
603149	ANSON4 115.00	33766	652558	OAHE6-7G 13.800	89622.8
652304	SIOUXC19 13.800	28502.6	652559	OAHE 1G 13.800	49406.9
652305	SIOUXC29 13.800	28577.3	652561	DENISON5 161.00	5688.1
652308	SIOUXC39 13.800	18936.8	652562	SPENCER 9 13.800	4009.5
652821	SULLYBT-LNX3230.00	6360.2	652563	SPENCER5 161.00	10222.6
652310	SIOUXC49 13.800	19159.8	652564	SIOUXCY3 345.00	14786.5
635260	LEMARST5 161.00	9848	652565	SIOUXCY4 230.00	19561.1
659119	STORLA 9 13.200	16386.9	652566	SIOUXCY5 161.00	20703.5
640540	MEADOWGROVE4230.00	5591.6	652567	DENISON4 230.00	4560.3
605725	SPLT RK161 913.800	33871	640388	TWIN CH8 69.000	7942.3
563230	GEN-2015-089230.00	5392.4	659120	BRDLAND3 345.00	4064.9
563231	G15-089XFMR134.500	17802.6	652574	SIOUXCY8 69.000	18024.7
563232	G15-089-GEN10.6900	727312	652575	GAVINS1G 13.200	23638.4
652833	GRPRAR2-LNX3345.00	6548.7	652576	GAVINS2G 13.200	23638.4
660003	HURONWP7 115.00	10196	652577	GAVINS3G 13.200	26333.5
660004	MITCHEL7 115.00	5867	652578	PAHOJA 4 230.00	7316.5
660005	TRIPP 7 115.00	4153.1	652507	FTTHOMP4 230.00	20471.5
660006	YKNTJCT7 115.00	9469.7	652581	SPENCER8 69.000	18943.8
660007	MENNOJT7 115.00	6677.7	652582	APPLEDORN 4 230.00	7147.3
660008	MITCLNW7 115.00	5486.4	652583	DENISON8 69.000	11569
660009	BTAP WP7 115.00	15103	603200	ANSON 7 115.00	31329.1
605191	LAWRENC8 69.000	15253	652252	MTVERNN8 69.000	2986.6
643117	ONEILL T1 913.800	4133.5	652588	CLEVELD4 230.00	4805.6
643118	ONEILL T2 913.800	4132.9	652589	OAHE 9 13.800	6436.1
659293	KEYSTN PS2394.2000	16754.6	652591	HANLON 7 115.00	5523.4
603011	MINEHAH7 115.00	12889.5	652592	HANLON 9 13.800	14567.8
660017	B_H WIND 934.500	7495.8	640305	ONEILL 7 115.00	3996.1
660018	B_H WIND 7115.00	3466.7	659250	SXF WBRANDN7115.00	13284.2
660026	NAPA JCT7 115.00	8742.8	659251	SXF CORSON 7115.00	11061.8
652864	SIOUXCY-LNX3345.00	14786.5	652598	OAHE 29 13.800	6436.1

Bus Number	Bus Name	3PH (Amp)	Bus Number	Bus Name	3PH (Amp)
659198	LETCHR PS227115.00	2603	652600	ASH TAP 115.00	9058.3
643140	SPENCER T1 913.800	2228.6	659257	SXF SHINDLR7115.00	2982.3
640080	BELDEN 7 115.00	6943	659258	SXF HARSBRG7115.00	3690.7
643155	TWIN CH T4 913.800	21595.2	659259	SXF CHANCLR7115.00	4523.1
643156	TWIN CH T6 913.800	22606.7	648508	PR BR1Y9 13.800	24155.7
643157	TWIN CH T1 913.800	4411.2	648509	PR BRZ19 34.500	14342.4
643158	TWIN CH T2 913.800	4404.2	652606	LETCHER4 230.00	4715.9
643159	TWIN CH T3 913.800	3584.8	652607	WESSINGTON 4230.00	6888.7
603225	FALLS 7 115.00	15354.8	635200	RAUN 3 345.00	24193.3
603228	SPLITRK CAP7115.00	34769	652609	LETCHER7 115.00	6041.6
656570	WISDOM5 161.00	10345.5	652614	CARPENTER 4 230.00	6960.9
603013	PIPESTN7 115.00	9158.2	645451	S3451 3 345.00	20227.4
636010	LEHIGH 3 345.00	11575	635213	NEAL 3G 22.000	189105.3
652396	VFODNS19 12.500	20722.9	635214	NEAL 4G 24.000	193143.8
652397	VFODNES7 115.00	6328.2	659281	HYDE 8 69.000	3403.8
652398	VFODNES4 230.00	7038.3	652626	UTICAJC7 115.00	9053.6
652399	VFODNES8 69.000	4234.7	652627	UTICAJC9 13.200	18272.2
640113	CLRWATR7 115.00	5338	640342	SHELCRK3 345.00	10288.4
652478	GREGORY7 115.00	2926	635223	PLYMOTH5 161.00	20262.4
640126	E.COL. 4 230.00	9737.7	635224	PLYMOTH8 69.000	21305.8
640127	COLMB.E7 115.00	21634.5	635225	MORNSD 5 161.00	10393.3
603265	PROSE CAP7 115.00	33606.2	635226	LEEDS 5 161.00	16020.6
640131	COLMB.W4 230.00	9822.6	659292	KEYSTN PS237115.00	2594.6
640132	COLMB.W9 34.500	9334.4	640349	SPENCER7 115.00	4674.4
640133	COLMBUS4 230.00	11403.9	640350	SPENCER9 34.500	1411.4
640134	KELLY 7 115.00	18023.2	659295	SDPRAIRWND 4230.00	5704.1
640135	COLMBS19 13.200	26003.6	648507	PR BR1X9 34.500	14372.4
640136	COLMBUS7 115.00	19369.2	560997	WESSINGTON C34.500	13922.5
659921	J15SXCNTR8 69.000	6675	605036	SPK13.81 13.800	27572.6
603274	RENNER 7 115.00	11539.2	605037	SPK13.82 13.800	26879.3
662101	WESSINGTON190.5750	708765.4	659310	WITTEN 4 230.00	2987.6
659907	J1CENTR8 69.000	8233.3	659312	LOWERBRULE 4230.00	11335
658030	DENISONWEST869.000	6661.5	652657	DENISON 9 13.800	19096
583830	G14013G01431230.00	4231.8	659327	SDPRAIRWND 934.500	33416.5
583831	G1413G1431X134.500	11132.4	648510	PR BR2X9 34.500	14488.7
652603	EXIRA 5 161.00	6902.2	635391	IRETONT8 69.000	5814.3
658031	DENSOUMAIN8 69.000	6810.6	648511	PR BR2Y9 13.800	24204.7
659121	SPIRITM7 115.00	6554.6	659324	HYDE 934.500	7059.4
640163	EMERSON7 115.00	5613.2	652031	KPS21-GY7 115.00	1722.9
659313	RELIANCE 4 230.00	5553.1	652608	LETCHER9 13.200	16258.2

Bus Number	Bus Name	3PH (Amp)	Bus Number	Bus Name	3PH (Amp)
640306	ONEILL 8 69.000	4228.2	640386	TWIN CH4 230.00	8647.6
652463	WH SWAN7 115.00	13164.5	640387	TWIN CH7 115.00	10892.7
648512	PR BRZ29 34.500	14465.5	603012	LAWRENC7 115.00	28633.6
640200	GR ISLD4 230.00	16740.8	640389	TWIN CH9 34.500	3589.7
659122	STORLA 4 230.00	6112	635201	RAUN 5 161.00	28052.7
659123	STORLA 7 115.00	6721.1	603016	SPLT RK7 115.00	35297.1
605726	SPLT RK230 936.200	7079.4	603017	WSX FLS7 115.00	14748.6
652474	AURORA 7 115.00	4550.5	656267	MANNINGTAP 869.000	4419.3
652475	BONESTL7 115.00	3996.8	602004	SPLT RK4 230.00	12495.2
652476	EAGLEBT7 115.00	2026.2	602005	SPLT RK5 161.00	8049.3
952509	G12_009IS 115.00	6650.3	659256	SXF 57TH ST7115.00	2880.5
952510	G12_009IS_1 34.500	8782.8	659953	K412HINTONM869.000	11184.8
952511	G12_009IS_2 0.6900	402194.4	640424	S.SIOUXCITY7115.00	7512.3
635385	HUDSON 8 69.000	6007.6	580010	G15-089-GSU134.500	15891.6
652484	NUNDRWD4 230.00	3568.6	580011	G10-051&1127230.00	6392.2
652486	PHILIP 4 230.00	3252.8	601006	SPLT RK3 345.00	13870.6
640227	HOSKINS4 230.00	9925.4	659900	EAGLE 4 230.00	7197
652488	PHILTAP4 230.00	3844	659901	EAGLE 8 69.000	13853
652491	IRVSIMM7 115.00	8550.4	640226	HOSKINS3 345.00	11870.2
652494	WINNER 7 115.00	3569.4	652227	FLANDR19 12.470	4341.7
640212	HARTGTN7 115.00	5813.7	652229	FLANDRU8 69.000	3649
652501	ARMOUR 7 115.00	4270.8	652255	BERSFR19 12.500	5288
652502	BERSFRD7 115.00	3947.7	652232	SIOUXF19 13.200	27774.7
652503	BLAIR 4 230.00	9925.1	652233	SIOUXF29 13.200	29236.6
652505	FLANDRU7 115.00	4392.8	560074	G16-017-TAP 345.00	6800.6
652506	FTTHOMP3 345.00	9693.1	652235	SIOUXFL8 69.000	3914.4
560347	G10-051-TAP 230.00	7192.5	652237	WATERT19 13.800	38741.1
652509	FTRANDL4 230.00	11244.2	652239	WATERT29 13.200	22073.5
652510	FTRANDL7 115.00	13527	652240	WATERT39 13.200	22065.4
652511	GAVINS 7 115.00	10560.2	640465	EMMETE.TAP 7115.00	3087.2
652513	HANLON 4 230.00	6026.9	652245	CLEVELD8 69.000	4344.1
652514	HURON 4 230.00	11038.8	652246	ARMOUR 9 34.500	2749.5
652515	HURON 7 115.00	15563.3	652281	HURON419 13.328	34642.8
652516	LAKPLAT4 230.00	5735.6	652249	ARMOUR 8 69.000	2489.9
652517	MANNING7 115.00	5229.5	652251	MTVERNS8 69.000	3093.3
652518	MTVERN 7 115.00	4396.1	643036	COLMB.ESTT3913.800	8531.6
652519	OAHE 4 230.00	14002.6	652254	BERSFRD8 69.000	3251.7
652520	OAHE 7 115.00	12110	643039	COLMB.WSTT1913.800	10253.6
652521	SULLYBT4 230.00	6360.2	643040	COLMB.WSTT2913.800	12487.5
652523	SIOUXFL4 230.00	12934.7	659942	K217HAWARDE869.000	7614.6

Bus Number	Bus Name	3PH (Amp)	Bus Number	Bus Name	3PH (Amp)
652524	SIOUXFL7 115.00	25693.6	659205	BRDLAND4 230.00	10002.7
652525	TYNDALL7 115.00	3917.1	659196	CARPENTER 8 69.000	3237.8
652526	UTICAJC4 230.00	7919.7	659946	K216LIBERTY869.000	7469.7
652528	WOONSKT7 115.00	5342	652273	FTTHMP19 13.800	26816.7
652529	WATERTN3 345.00	10304	652274	FTTHMP29 13.800	26817.3
652530	WATERTN4 230.00	14555.5	652276	FTTHOMP8 69.000	4438.2
652531	WATERTN7 115.00	14007.8	652277	LAKPLAT8 69.000	4129.6
659204	BROADLAND 913.800	23481.8	652278	HANLON18 69.000	5293.5
652535	REDFELD7 115.00	4202.3	652279	HANLON28 69.000	5293.5
652536	RASMUSN4 230.00	6636.3	662100	WESSINGTON 934.500	17006.1
652539	WATERSVC 20.000	23406	652282	HURON429 13.328	34639
652540	BIGBND14 230.00	12277.4	648506	PR BRZ 4 230.00	4231.8
652541	BIGBND24 230.00	10344.4	652284	HURON 8 69.000	3693.7
652542	BGBND12G 13.800	59685.9	652285	SULLYBT8 69.000	2423
652543	BGBND34G 13.800	58256.6	652286	TYNDALL8 69.000	2558
652544	BGBND56G 13.800	54845.3	652287	RASMUSN8 69.000	3242.5

Table 3-1 (d): Three-Phase Fault Currents GEN-2016-054 – 2025 Summer Peak

Bus Number	Bus Name	3PH (Amp)	Bus Number	Bus Name	3PH (Amp)
652291	REDFELD8 69.000	2898.2	652550	GRANITF4 230.00	13023.9
652806	FTTHOM1-LNX3345.00	9693.1	587530	ASGI1605 69.000	2986.6
652807	FTTHOM2-LNX3345.00	9693.1	652556	OAHE2-3G 13.800	89623.2
635223	PLYMOTH5 161.00	20262.4	652557	OAHE4-5G 13.800	89622.8
652304	SIOUXC19 13.800	28502.6	652558	OAHE6-7G 13.800	89622.8
652305	SIOUXC29 13.800	28577.3	652559	OAHE 1G 13.800	49406.9
652308	SIOUXC39 13.800	18936.8	635200	RAUN 3 345.00	24193.3
652821	SULLYBT-LNX3230.00	6360.2	652561	DENISON5 161.00	5688.1
652310	SIOUXC49 13.800	19159.8	652563	SPENCER5 161.00	10222.6
659204	BROADLAND 913.800	23481.8	652564	SIOUXCY3 345.00	14786.5
652463	WH SWAN7 115.00	13164.5	652565	SIOUXCY4 230.00	19561.1
640540	MEADOWGROVE4230.00	5591.6	652566	SIOUXCY5 161.00	20703.5
652829	WATERTN-LNX3345.00	10304	652567	DENISON4 230.00	4560.3
563230	GEN-2015-089230.00	5392.4	620314	BIGSTON4 230.00	16131.9
652549	FTRDL78G 13.800	44372.9	605725	SPLT RK161 913.800	33871
652833	GRPRAR2-LNX3345.00	6548.7	652574	SIOUXCY8 69.000	18024.7
660002	REDFLD 7 115.00	3994.8	652578	PAHOJA 4 230.00	7316.5
660003	HURONWP7 115.00	10196	560347	G10-051-TAP 230.00	7192.5
660004	MITCHEL7 115.00	5867	652582	APPLEDORN 4 230.00	7147.3
660005	TRIPP 7 115.00	4153.1	652583	DENISON8 69.000	11569
660007	MENNOJT7 115.00	6677.7	652588	CLEVELD4 230.00	4805.6
660008	MITCLNW7 115.00	5486.4	652589	OAHE 9 13.800	6436.1
660009	BTAP WP7 115.00	15103	652591	HANLON 7 115.00	5523.4
660012	HURON WP 869.000	6092	652592	HANLON 9 13.800	14567.8
660026	NAPA JCT7 115.00	8742.8	640305	ONEILL 7 115.00	3996.1
652864	SIOUXCY-LNX3345.00	14786.5	659250	SXF WBRANDN7115.00	13284.2
643140	SPENCER T1 913.800	2228.6	652598	OAHE 29 13.800	6436.1
643155	TWIN CH T4 913.800	21595.2	652600	ASH TAP 115.00	9058.3
662100	WESSINGTON 934.500	17006.1	648506	PR BRZ 4 230.00	4231.8
662101	WESSINGTON190.5750	708765.4	659259	SXF CHANCLR7115.00	4523.1
659199	LETCHR PS2294.2000	16681.3	652604	APPLEDORN 8 69.000	2543.4
643156	TWIN CH T6 913.800	22606.7	652605	APPLEDORN 9 13.200	5943.6
563231	G15-089XFMR134.500	17802.6	652606	LETCHER4 230.00	4715.9
652396	VFODNS19 12.500	20722.9	652607	WESSINGTON 4230.00	6888.7
652397	VFODNES7 115.00	6328.2	652608	LETCHER9 13.200	16258.2
652398	VFODNES4 230.00	7038.3	652609	LETCHER7 115.00	6041.6
652399	VFODNES8 69.000	4234.7	652614	CARPENTER 4 230.00	6960.9
952510	G12_009IS_1 34.500	8782.8	659271	RCDC EAST 4230.00	2728.6
640126	E.COL. 4 230.00	9737.7	659258	SXF HARSBRG7115.00	3690.7

Bus Number	Bus Name	3PH (Amp)	Bus Number	Bus Name	3PH (Amp)
640131	COLMB.W4 230.00	9822.6	659281	HYDE 8 69.000	3403.8
640133	COLMBUS4 230.00	11403.9	652626	UTICAJC7 115.00	9053.6
640134	KELLY 7 115.00	18023.2	652627	UTICAJC9 13.200	18272.2
640135	COLMBS19 13.200	26003.6	652630	WATERTNCAP 4230.00	14555.5
583830	G14013G01431230.00	4231.8	640343	SHELCRK4 230.00	10854.9
652657	DENISON 9 13.800	19096	659291	HYDE W0.6900	420621.2
658088	WTREAST7 115.00	11040.5	659292	KEYSTN PS237115.00	2594.6
658094	WTRPELI7 115.00	9522	640349	SPENCER7 115.00	4674.4
659119	STORLA 9 13.200	16386.9	640350	SPENCER9 34.500	1411.4
659120	BRDLAND3 345.00	4064.9	659295	SDPRAIRWND 4230.00	5704.1
658120	GARFLD 7 115.00	7409.6	659296	SDPRAIRWND1W0.6900	1966798.5
659122	STORLA 4 230.00	6112	648507	PR BR1X9 34.500	14372.4
659123	STORLA 7 115.00	6721.1	560997	WESSINGTON C34.500	13922.5
587550	ASGI1607 115.00	1792	648508	PR BR1Y9 13.800	24155.7
652475	BONESTL7 115.00	3996.8	659310	WITTEN 4 230.00	2987.6
652476	EAGLEBT7 115.00	2026.2	659311	WITTEN 9 13.800	15954.3
952509	G12_009IS 115.00	6650.3	659312	LOWERBRULE 4230.00	11335
652478	GREGORY7 115.00	2926	659313	RELIANCE 4 230.00	5553.1
652481	MIDLAND7 115.00	3424.9	648510	PR BR2X9 34.500	14488.7
652484	NUNDRWD4 230.00	3568.6	640404	WAYSIDE4 230.00	2889.8
652485	NUNDRWD7 115.00	6260.1	587130	GEN-2016-017345.00	6762.9
652486	PHILIP 4 230.00	3252.8	648511	PR BR2Y9 13.800	24204.7
652487	PHILIP 7 115.00	5391.3	659324	HYDE 934.500	7059.4
652488	PHILTAP4 230.00	3844	659327	SDPRAIRWND 934.500	33416.5
652489	PIERRE 7 115.00	8588	603009	GRANT 7 115.00	3912.5
652491	IRVSIMM7 115.00	8550.4	640386	TWIN CH4 230.00	8647.6
652495	WITTEN 7 115.00	4889	640387	TWIN CH7 115.00	10892.7
652498	PHILIP9 13.200	13098.1	603012	LAWRENC7 115.00	28633.6
652500	ARLNGTN7 115.00	4371.7	603016	SPLT RK7 115.00	35297.1
652501	ARMOUR 7 115.00	4270.8	652175	G09_001IST 345.00	6603.5
652502	BERSFRD7 115.00	3947.7	652884	NUNDRWD-LNX3230.00	3568.6
652503	BLAIR 4 230.00	9925.1	602004	SPLT RK4 230.00	12495.2
652504	BROOKNG7 115.00	7301.6	659176	CARPENPS21 869.000	2831.7
652505	FLANDRU7 115.00	4392.8	652542	BGBND12G 13.800	59685.9
652506	FTTHOMP3 345.00	9693.1	659900	EAGLE 4 230.00	7197
652507	FTTHOMP4 230.00	20471.5	659901	EAGLE 8 69.000	13853
652509	FTRANDL4 230.00	11244.2	652224	BLAIR 8 69.000	2646.3
652510	FTRANDL7 115.00	13527	652232	SIOUXF19 13.200	27774.7
652512	GROTON 7 115.00	19362.1	652233	SIOUXF29 13.200	29236.6
652513	HANLON 4 230.00	6026.9	560074	G16-017-TAP 345.00	6800.6

Bus Number	Bus Name	3PH (Amp)	Bus Number	Bus Name	3PH (Amp)
652514	HURON 4 230.00	11038.8	652235	SIOUXFL8 69.000	3914.4
652515	HURON 7 115.00	15563.3	652237	WATERT19 13.800	38741.1
652516	LAKPLAT4 230.00	5735.6	652239	WATERT29 13.200	22073.5
652518	MTVERN 7 115.00	4396.1	652240	WATERT39 13.200	22065.4
652519	OAHE 4 230.00	14002.6	652242	WATERT18 69.000	3949.1
652520	OAHE 7 115.00	12110	652243	FAITH 7 115.00	2422.2
652521	SULLYBT4 230.00	6360.2	652246	ARMOUR 9 34.500	2749.5
652523	SIOUXFL4 230.00	12934.7	652249	ARMOUR 8 69.000	2489.9
652524	SIOUXFL7 115.00	25693.6	652251	MTVERNS8 69.000	3093.3
652525	TYNDALL7 115.00	3917.1	652252	MTVERNN8 69.000	2986.6
652526	UTICAJC4 230.00	7919.7	659421	BRDLAND-LNX3345.00	4064.9
652527	WHITLOK4 230.00	4472.8	659424	LELAND2-LNX3345.00	17317
652528	WOONSKT7 115.00	5342	652259	EAGLEBE8 69.000	1716.5
652529	WATERTN3 345.00	10304	652260	EAGLEBW8 69.000	2231.4
652530	WATERTN4 230.00	14555.5	652540	BIGBND14 230.00	12277.4
652531	WATERTN7 115.00	14007.8	652266	NUNDRWD10 13.800	26296.5
652532	GR PRAIRIE3 345.00	6548.7	652267	NUNDRWD9 13.800	26296.5
652535	REDFELD7 115.00	4202.3	652273	FTTHMP19 13.800	26816.7
652536	RASMUSN4 230.00	6636.3	652274	FTTHMP29 13.800	26817.3
652539	WATERSVC 20.000	23406	652276	FTTHOMP8 69.000	4438.2
659196	CARPENTER 8 69.000	3237.8	652277	LAKPLAT8 69.000	4129.6
652541	BIGBND24 230.00	10344.4	652278	HANLON18 69.000	5293.5
659198	LETCHR PS227115.00	2603	652279	HANLON28 69.000	5293.5
652543	BGBND34G 13.800	58256.6	652281	HURON419 13.328	34642.8
652544	BGBND56G 13.800	54845.3	652282	HURON429 13.328	34639
652545	BGBND78G 13.800	54853.2	652001	G13_001IST 115.00	5316.4
652546	FTRDL12G 13.800	46961.5	652284	HURON 8 69.000	3693.7
652547	FTRDL34G 13.800	44369.6	652285	SULLYBT8 69.000	2423
652548	FTRDL56G 13.800	44372.9	652287	RASMUSN8 69.000	3242.5
659205	BRDLAND4 230.00	10002.7			

4 Power Factor Analysis

Since the studied project is a renewable energy project, power factor analysis was performed on three provided cluster scenarios upon SPP's request.

4.1 Power Factor Analysis Methodology

Power Factor Analysis was performed for the studied wind farm under system intact and contingency conditions. All N-1, three phase stability faults shown in Table 2-1 were analyzed as power flow contingencies. The power factor requirements for the wind farm were determined to maintain the voltage at the POI to the schedule voltage which is the higher of the POI voltage in the provided base case or 1.0 per unit. Fictitious var generator was added to the studied wind farm to maintain the scheduled voltage following all studied contingencies. The MW and Mvar injections from the studied wind farm at the POI were recorded and the power factors were calculated for all contingencies. The most lagging and most leading power factors determine the minimum power factor range capability required for the studied wind farm.

If more than one studied project share the same POI, the projects were grouped together and common power factor requirements were determined for this group of studied projects. With this method, none of the studied projects is required to provide more or less than its fair share of the reactive power requirements at the same POI. If a prior-queued project is connected at the same POI as the studied project, the prior-queued project was not grouped with the studied project since its reactive power requirements was determined in previous studies. However, the voltage schedules of the prior-queued project and the studied project at the same POI were coordinated and the local existing capacitor banks were set to their maximum capability, if necessary.

Per FERC and SPP requirements, if the power factor needed to maintain the scheduled voltage is less than 0.95 lagging or leading, the requirements is limited to 0.95 lagging or leading.

If the required power factor at the POI is beyond the capability of the studied wind turbine, the approximate size of the additional capacitors were determined.

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4.2 Study Results

Power Factor Analysis was performed to ensure the studied project meets FERC and SPP power factor requirements for wind farm interconnections

Table 4-1 summarizes the power factor analysis results. The detailed power factor analysis results for each studied contingency are provided in Appendix C. Per SPP and FERC requirements, the generating facility shall be designed to meet the requirement of 95% lagging (providing vars) and 95% leading (absorbing vars) to the Point of Interconnection.

Table 4-1 Power Factor Analysis Results

Request	Size	Generator	POI	Scenario	PF Analysis Worst Scenario		Final PF Requirement	
	(MW)	Model			Leading[1]	Lagging[2]	Leading[1]	Lagging[2]
GEN-2015-089	200	GE 2.0MW wind	WAPA Utica Junction 230kV (652526)	16WP	0.987	N/A	0.95	0.95
				17SP	0.987	N/A	0.95	0.95
				25SP	0.988	0.999	0.95	0.95
GEN-2016-054	3.4 upgrade(total = 54.5MW)	GE 1.6MW wind	Wessington Springs 230kV (652607)	16WP	0.964	1.0	0.95	0.95
				17SP	0.938	0.999	0.95	0.95
				25SP	0.978	0.988	0.95	0.95

Notes:

1. Leading is when the generator is absorbing reactive power from the transmission grid.
2. Lagging is when the generator is providing reactive power to the transmission grid.

5 Low Wind/No Wind Analysis

In this study, ABB investigated the GEN-2015-089 and GEN-2016-054 projects for low wind/no wind conditions, since the interconnected wind farms are connected to 230kV buses.

5.1 Low/No Wind Analysis Methodology

Low wind/No wind analysis is performed to determine the required shunt reactor size at the study project substation high side buses to bring the MVAr flows into the POIs down to approximately zero.

For each studied scenario, the studied wind generators and capacitor bank (none in this case) were switched out of service with the collector system as modeled remaining in service. The resulting reactive power injection into the transmission network coming from the capacitance of the project's transmission lines and collector cables was measured. Then, the required shunt reactor size was calculated to bring the MVAr flows into the POIs down to approximately zero.

5.2 Study Results

Table 5-1 summaries the Low/No Wind analysis results. It is shown that 29.98 MVAr / 2.15 MVAr shunt reactors at the substation high side buses (563230 / 662100) are required to bring the MVAr flows in the POIs down to approximately zero under low/no wind conditions for all three studied seasons. The reactor bank size is approximate to be finalized during final facility and collector system design.

Table 5-1 (a): Low/No Wind Analysis Results for POI of GEN-2015-089

Scenario	Reactive Power Injection at POI (MVAr)	Bus 652526 Volt (pu)	Required Shunt Reactor (MVAr)
16WP	30.86	1.0318	**28.98**
17SP	30.48	1.0255	**28.98**
25SP	30.31	1.0226	**28.98**

Table 5-1 (b): Low/No Wind Analysis Results for POI of GEN-2016-054

Scenario	Reactive Power Injection at POI (MVAr)	Bus 652607 Volt (pu)	Required Shunt Reactor (MVAr)
16WP	2.29	1.0345	**2.14**
17SP	2.30	1.0299	**2.17**
25SP	2.29	1.0291	**2.16**

6 Conclusions

Southwest Power Pool (SPP) has commissioned ABB Inc., to perform a Definitive Impact Study for DISIS-2016-001 (Group 17) which includes generation interconnection requests GEN-2015-089 (200 MW wind farm connected to 230 kV Utica Junction), GEN-2016-054 (54.4 MW wind farm connected at 230kV Wessington Springs

Request	Size (MW)	Wind Turbine Model	Point of Interconnection
GEN-2015-089	200	GE 2.0MW wind	WAPA Utica Junction 230kV (652526)
GEN-2016-054	3.4 uprate (total = 54.4MW)	GE 1.6MW wind	Wessington Springs 230kV (652607)

The objective of this study is to evaluate the collective as well as individual impact of the three projects on the existing and future planning system. The study is performed on three system scenarios provided by SPP:

- 2016 Winter Peak Case
- 2017 Summer Peak Case
- 2025 Summer Peak Case

All the simulation results showed no stability problems and no voltage violations for all three seasons. All the simulation results were summarized in Table 2-2 and Table 2-3. Also, for the contingencies simulated GEN-2015-089 and GEN-2016-054 remained on line and, therefore, will comply with FERC Order 661A low voltage ride-through.

System short-circuit current levels at up to five buses away from the point of interconnection were calculated and tabulated for SPP's reference.

Power Factor Analysis was performed to ensure the studied project meets FERC and SPP power factor requirements for wind farm interconnections. Table 4-1 summarizes the power factor analysis results. The detailed power factor analysis results for each studied contingency are provided in Appendix C. Per SPP and FERC requirements, the generating facility shall be designed to meet the requirement of 95% lagging (providing vars) and 95% leading (absorbing vars) to the Point of Interconnection.

The Low/No Wind analysis shows that a 29.98 MVAr / 2.15 MVAr shunt reactors are required to bring the MVAr flows at two POIs down to approximate zero under low/no wind conditions for GEN-2015-089 and GEN-2016-054 respectively. The reactor bank size is approximate and the final size will be determined in the final facility and collector system design.

The results of this analysis are based on available data and assumptions made at the time of conducting this study. If any of the data and/or assumptions made in developing the study model change, the results provided in this report may not apply.

APPENDIX A SOUTHWEST POWER POOL DISTURBANCE PERFORMANCE CRITERIA REQUIREMENTS

OVERVIEW

These Disturbance Performance Requirements ("Requirements") shall be applicable to the Bulk Electric System within the Southwest Power Pool Planning Area. Utilization of these Requirements applies to all registered entities within the Southwest Power Pool Planning Area. These Requirements shall not be applicable to facilities that are not part of Bulk Electric System. More stringent Requirements are at the sole discretion of each Transmission Owner.

Transient and dynamic stability assessments are generally performed to assure adequate avoidance of loss of generator synchronism and prevention of system voltage collapse within the first 20 seconds after a system disturbance. These Requirements provide a basis for evaluating the system response during the initial transient period following a disturbance on the Bulk Electric System by establishing minimum requirements for machine rotor angle damping and transient voltage recovery.

ROTOR ANGLE DAMPING REQUIREMENT

Machine Rotor Angles shall exhibit well damped angular oscillations [as defined below] and acceptable power swings following a disturbance on the Bulk Electric System for all NERC Category A, B and C events.

Well damped angular oscillations shall meet one of the following two requirements when calculated directly from the rotor angle:

1. Successive Positive Peak Ratio (SPPR) must be less than or equal to 0.95 where SPPR is calculated as follows:

$$SPPR = \frac{\text{Peak Rotor Angle of } 2^{nd} \text{ Positive Swing Peak}}{\text{Peak Rotor Angle of } 1^{st} \text{ Positive Swing Peak}} \leq 0.95$$

   -or- Damping Factor % = (1 – SPPR) x 100% ≥ 5%

   The machine rotor angle damping ratio may be determined by appropriate modal analysis (i.e. Prony Analysis) where the following equivalent requirement must be met:

   Damping Ratio ≥ 0.0081633

2. Successive Positive Peak Ratio Five (SPPR5) must be less than or equal to 0.774 where SPPR5 is calculated as follows:

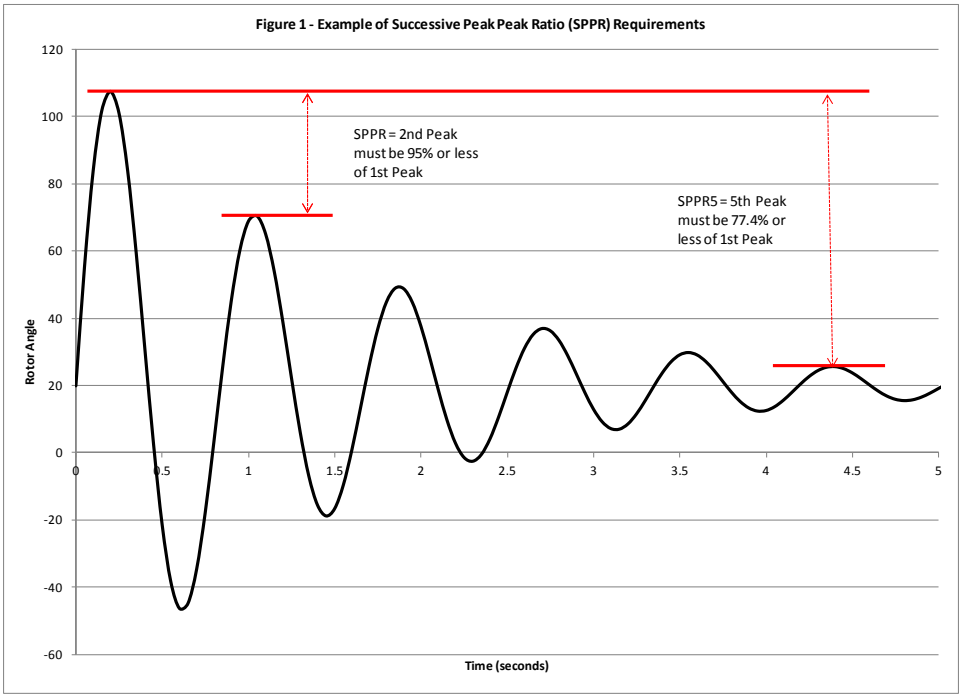
$$SPPR5 = \frac{\text{Peak Rotor Angle of } 5^{th} \text{ Positive Swing Peak}}{\text{Peak Rotor Angle of } 1^{st} \text{ Positive Swing Peak}} \leq 0.774$$

   -or- Damping Factor % = (1 – SPPR5) x 100% ≥ 22.6%

   The machine rotor angle damping ratio may be determined by appropriate modal analysis (i.e. Prony Analysis) where the following equivalent requirement must be met:

Damping Ratio ≥ 0.0081633

Qualitatively, these Requirements are shown in Figure 1 below.



TRANSIENT VOLTAGE RECOVERY REQUIREMENT

Any time after a disturbance is cleared; bus voltages on the Bulk Electric System shall not swing outside of the bandwidth of 0.70 per unit to 1.20 per unit. All post-transient voltages must fall between the 0.90 pu and 1.1 pu range at the end of the simulations. Check pre-fault voltage checks to ensure they fall within the 0.90 pu and 1.1 pu.

Qualitatively, this Requirement is shown in Figure 2 below.

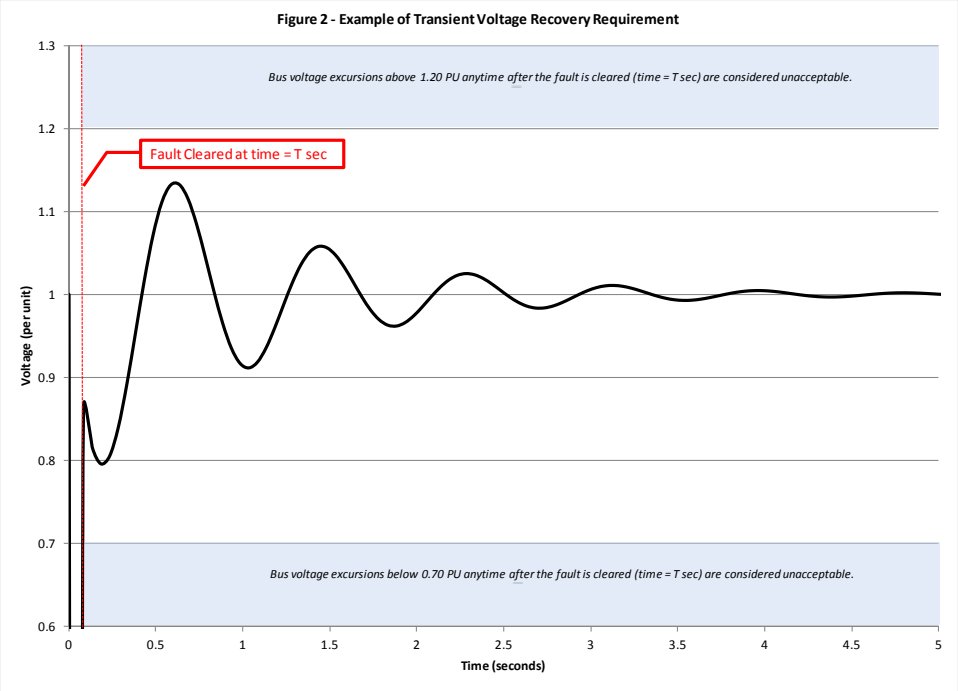


Figure 2 - Example of Transient Voltage Recovery Requirement
Bus voltage excursions above 1.20 PU anytime after the fault is cleared (time = T sec) are considered unacceptable.
Fault Cleared at time = T sec
Bus voltage excursions below 0.70 PU anytime after the fault is cleared (time = T sec) are considered unacceptable.
Voltage (per unit)
Time (seconds)
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5

APPENDIX B POWER FACTOR ANALYSIS RESULTS

All the contingency numbers shown in this appendix match with the fault numbers shown in Table 2-1.

B.1 GEN-2015-089 2016 Winter Peak Case

The GEN-2015-089 POI voltage is 1.0177 pu in the provided 2016 winter peak case. Therefore, the power factor requirements for the wind farm were determined to maintain the voltage at 1.0177 pu. The lowest lagging and leading power factors are highlighted in the table below.

Outage No.		MW	Mvar	PF	
System Intact	0	-194.4	21.7	0.994	leading
Contingency	5	-194.4	24.7	0.992	leading
Contingency	6	-194.4	22.2	0.994	leading
Contingency	7	-194.5	18.6	0.995	leading
Contingency	8	-194.5	13.3	0.998	leading
Contingency	14	-194.4	24.3	0.992	leading
Contingency	15	-194.4	24.9	0.992	leading
Contingency	18	-194.5	19	0.995	leading
Contingency	23	-194.5	7.6	0.999	leading
Contingency	24	-194.3	31.5	**0.987**	leading
Contingency	27	-194.4	23.1	0.993	leading
Contingency	28	-194.5	19.8	0.995	leading
Contingency	29	-194.4	23.7	0.993	leading
Contingency	30	-194.5	18.4	0.996	leading
Contingency	31	-194.5	17.2	0.996	leading

B.2 GEN-2016-054 2016 Winter Peak Case

The GEN-2016-054 POI voltage is 1.0312 pu in the provided 2016 winter peak case. Therefore, the power factor requirements for the wind farm were determined to maintain the voltage at 1.0312 pu. The lowest lagging and leading power factors are highlighted in the table below.

Outage No.		MW	Mvar	PF	
System Intact	0	-53.6	7.9	0.989	leading
Contingency	5	-53.6	5.5	0.995	leading
Contingency	6	-53.6	5.8	0.994	leading
Contingency	7	-53.6	14.8	**0.964**	leading
Contingency	8	-53.6	-0.2	**1**	lagging
Contingency	14	-53.6	6.2	0.993	leading
Contingency	15	-53.6	5.4	0.995	leading
Contingency	18	-53.6	9.2	0.986	leading

Outage No.		MW	Mvar	PF	
Contingency	23	-53.6	4.8	0.996	leading
Contingency	24	-53.6	7.9	0.989	leading
Contingency	27	-53.6	9	0.986	leading
Contingency	28	-53.6	5.7	0.994	leading
Contingency	29	-53.6	7.2	0.991	leading
Contingency	30	-53.6	6.7	0.992	leading
Contingency	31	-53.6	6.5	0.993	leading

B.2-1 GEN-2015-089 2017 Summer Peak Case

The GEN-2015-089 POI voltage is 1.0119 pu in the provided 2017 summer peak case. Therefore, the power factor requirements for the wind farm were determined to maintain the voltage at 1.0119 pu. The lowest lagging and leading power factors are highlighted in the table below.

Outage No.		MW	Mvar	PF	
System Intact	0	-194.4	17.6	0.996	leading
Contingency	5	-194.4	23.8	0.993	leading
Contingency	6	-194.4	17.1	0.996	leading
Contingency	7	-194.4	12.9	0.998	leading
Contingency	8	-194.4	17.9	0.996	leading
Contingency	14	-194.4	23.3	0.993	leading
Contingency	15	-194.4	23.8	0.993	leading
Contingency	18	-194.4	14.1	0.997	leading
Contingency	23	-194.5	2.1	1	leading
Contingency	24	-194.3	32.1	**0.987**	leading
Contingency	27	-194.4	22.3	0.993	leading
Contingency	28	-194.4	13.7	0.998	leading
Contingency	29	-194.4	16.3	0.996	leading
Contingency	30	-194.4	23	0.993	leading
Contingency	31	-194.4	20.9	0.994	leading

B.2-2 GEN-2016-054 2017 Summer Peak Case

The GEN-2016-054 POI voltage is 1.0268 pu in the provided 2017 summer peak case. Therefore, the power factor requirements for the wind farm were determined to maintain the voltage at 1.0268pu. The lowest lagging and leading power factors are highlighted in the table below.

Outage No.		MW	Mvar	PF	
System Intact	0	-53.7	4.7	0.996	leading
Contingency	5	-53.7	-1.4	1	lagging

Outage No.		MW	Mvar	PF	
Contingency	6	-53.7	3.1	0.998	leading
Contingency	7	-53.6	19.9	**0.938**	leading
Contingency	8	-53.7	-0.9	1	lagging
Contingency	14	-53.7	-0.6	1	lagging
Contingency	15	-53.7	-1.7	1	lagging
Contingency	18	-53.7	9.7	0.984	leading
Contingency	23	-53.7	4.6	0.996	leading
Contingency	24	-53.7	4.8	0.996	leading
Contingency	27	-53.7	9.9	0.984	leading
Contingency	28	-53.7	-2.1	**0.999**	lagging
Contingency	29	-53.7	-0.7	1	lagging
Contingency	30	-53.7	8.2	0.988	leading
Contingency	31	-53.7	9.9	0.983	leading

B.3-1 GEN-2015-089 2025 Summer Peak Case

The GEN-2015-089 POI voltage is 1.0098 pu in the provided 2025 summer peak case. Therefore, the power factor requirements for the wind farm were determined to maintain the voltage at 1.0098 pu. The lowest lagging and leading power factors are highlighted in the table below.

Outage No.		MW	Mvar	PF	
System Intact	0	-194.4	16.1	0.997	leading
Contingency	5	-194.4	21.9	0.994	leading
Contingency	6	-194.5	2.6	1	leading
Contingency	7	-194.4	13.1	0.998	leading
Contingency	8	-194.5	8.1	0.999	leading
Contingency	14	-194.4	21.3	0.994	leading
Contingency	15	-194.4	21.9	0.994	leading
Contingency	18	-194.4	13.8	0.997	leading
Contingency	23	-194.6	-8.9	**0.999**	lagging
Contingency	24	-194.3	30.2	**0.988**	leading
Contingency	27	-194.4	19.5	0.995	leading
Contingency	29	-194.5	5.2	1	leading
Contingency	30	-194.4	13.7	0.998	leading
Contingency	31	-194.4	10.2	0.999	leading
Contingency	29	-194.5	5.2	1	leading

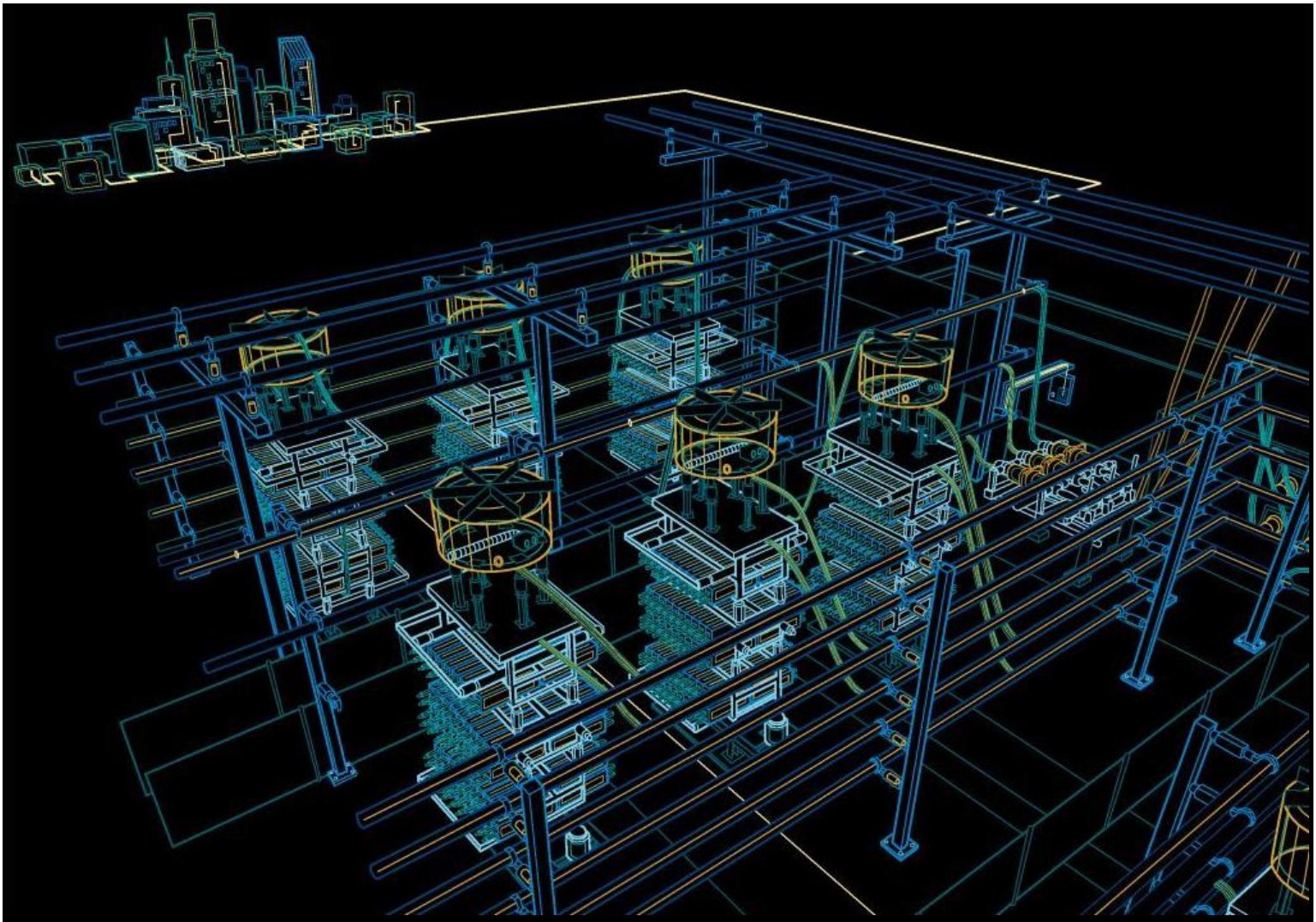
B.3-2 GEN-2016-054 2025 Summer Peak Case

The GEN-2016-054 POI voltage is 1.0152 pu in the provided 2025 summer peak case. Therefore, the power factor requirements for the wind farm were determined to maintain the voltage at 1.0152 pu. The lowest lagging and leading power factors are highlighted in the table below.

Outage No.		MW	Mvar	PF	
System Intact	0	-53.6	4.2	0.997	leading
Contingency	5	-53.6	-1.3	1	lagging
Contingency	6	-53.6	4.1	0.997	leading
Contingency	7	-53.6	11.3	**0.978**	leading
Contingency	8	-53.6	-5	0.996	lagging
Contingency	14	-53.6	-0.5	1	lagging
Contingency	15	-53.6	-1.7	1	lagging
Contingency	18	-53.6	11.2	0.979	leading
Contingency	23	-53.6	-0.2	1	lagging
Contingency	24	-53.6	4.3	0.997	leading
Contingency	27	-53.6	7.8	0.989	leading
Contingency	28	-53.6	-5.5	0.995	lagging
Contingency	29	-53.6	-8.5	**0.988**	lagging
Contingency	30	-53.6	4.1	0.997	leading
Contingency	31	-53.6	5.6	0.995	leading

APPENDIX C SIMULATION PLOTS FOR STABILITY ANALYSIS

11.17.15 J18: GROUP 18 DYNAMIC STABILITY ANALYSIS REPORT



Southwest Power Pool

DEFINITIVE IMPACT STUDY DISIS-2016-001 (GROUP 18)

Final Report

Report No. 02

24 January 2017

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Prepared for: Southwest Power Pool
Report No.: r02
Date: 24 January 2017
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Rev No.	*Revision Description*	*Date*	*Authored by*	*Reviewed by*	*Approved by*
01	**Revised FLT02-3PH and FLT25-SB results in 2017 summer peak case**	**01/16/2017**	**JA/UM**	**SL**	**WW**
02	**Final Report**	**01/24/2017**	**JA/UM**	**SL**	**WW**

SUMMARY

Southwest Power Pool (SPP) has commissioned ABB Inc., to perform a Definitive Impact Study for DISIS-2016-001 (GROUP 18) which includes generation interconnection request GEN-2016-007 (100 MW wind farm connected at WAPA Valley city 115 kV Bus).

Request	Size (MW)	Generator Model	POI
GEN-2016-007	100.0	VESTAS V126 GS 3.45MW WIND	WAPA Valley City 115kV (652454)

The objective of this study is to evaluate the impact of project GEN-2016-007 on the existing and future planning system. The study is performed on three system scenarios provided by SPP:

- 2016 Winter Peak Case
- 2017 Summer Peak Case
- 2025 Summer Peak Case

The scope of the study included stability analysis, short-circuit analysis, Power factor evaluation and low/no wind condition analysis. The following is a summary of study results.

Results of the Stability Analysis show no stability criteria violations for all studied disturbances for the three seasons.

System short-circuit current levels at up to seven buses away from the point of interconnection were calculated and tabulated for SPP's reference.

Power Factor Analysis was performed to ensure the studied project meets FERC and SPP power factor requirements for wind farm interconnections. The results show that the wind farm is required to meet the SPP pro-forma 95% lagging (providing vars) and 95% leading (absorbing vars) power factor requirements at the Point of Interconnection.

The Low/No wind analysis shows that 2.74MVAr of shunt reactor is required at the POI to bring the MVAr flow at the POI down to approximately zero under low wind conditions for all three studied seasons. The reactor bank size is approximate and the final size will be determined in the final facility and collector system design.

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1 Introduction

Southwest Power Pool (SPP) has commissioned ABB Inc., to perform a Definitive Impact Study for DISIS-2016-001 (GROUP 18) which includes generation interconnection request GEN-2016-007 (100 MW wind farm connected at WAPA Valley city 115 kV Bus) as shown in Table 1-1.

Table 1-1: GROUP 18 Generation Interconnection Requests

Request	Size (MW)	Generator Model	POI
GEN-2016-007	100.0	VESTAS V126 GS 3.45MW WIND	WAPA Valley City 115kV (652454)

The objective of this study is to evaluate the impact of project GEN-2016-007 on the existing and future planning system.

The scope of the study included stability analysis, short-circuit analysis, power factor evaluation and low/no wind conditions analysis.

The study is performed on three system scenarios provided by SPP:

- 2016 Winter Peak Case
- 2017 Summer Peak Case
- 2025 Summer Peak Case

In the process of the study, ABB prepared the fault definition list and sent to SPP for review on October 18, 2016. The fault definitions were approved on October 28, 2016 and ABB was requested to proceed with the studies.

SPP provided the study cases for all three system scenarios with GEN-2016-007 included.

The three system scenarios supplied by SPP included the following prior queued projects for GROUP 18:

Table 1-2: GROUP 18 Prior Queued Projects

Request	Size (MW)	Generator Model	Point of Interconnection
GEN-2002-008IS	40.5	wind	Edgeley 115kV [Pomona 115kV] (659280)
GEN-2005-003IS	115.0	wind	Nelson 115kV (652440)
GEN-2006-001IS	10.0	wind	Marshall 115kV (652508)
GEN-2006-006IS	10.0	wind	Marshall 115kV (652508)
GEN-2007-020IS	16.0	wind	Nelson 115kV (652440)
GEN-2008-008IS	5.0	wind	Nelson 115kV (652440)

The one line diagram of the local area for all three seasons for the study project is shown in Figure 1-1.

Figure 1-1 (a) One Line Diagram of Group 18 Area for 2016 Winter Peak Case

2015 MDWG FINAL WITH 2013 MMWG, UPDATED WITH 2014 SERC & MRO
MDWG 2016W WITH MMWG 2015W, MRO & SERC 2016 WINTER
WED, JAN 04 2017 15:58

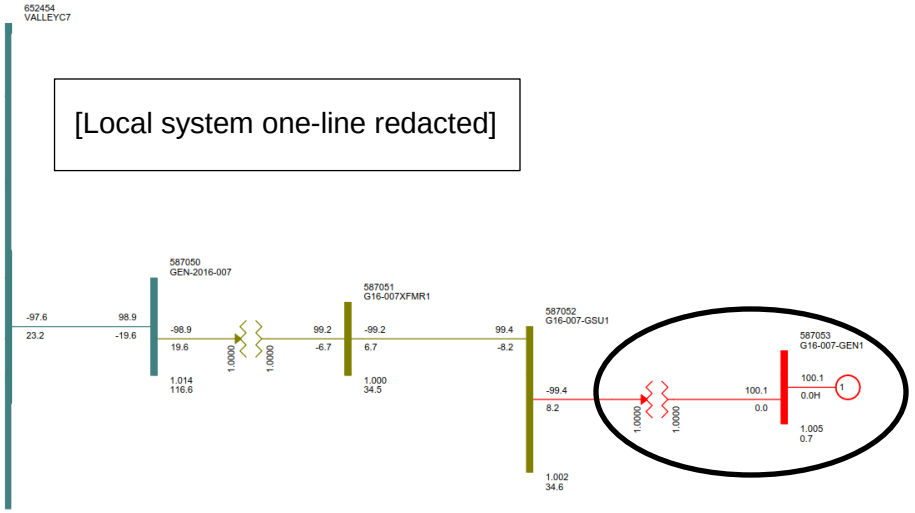

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Figure 1-1 (b) One Line Diagram of Group 18 Area for 2017 Summer Peak Case

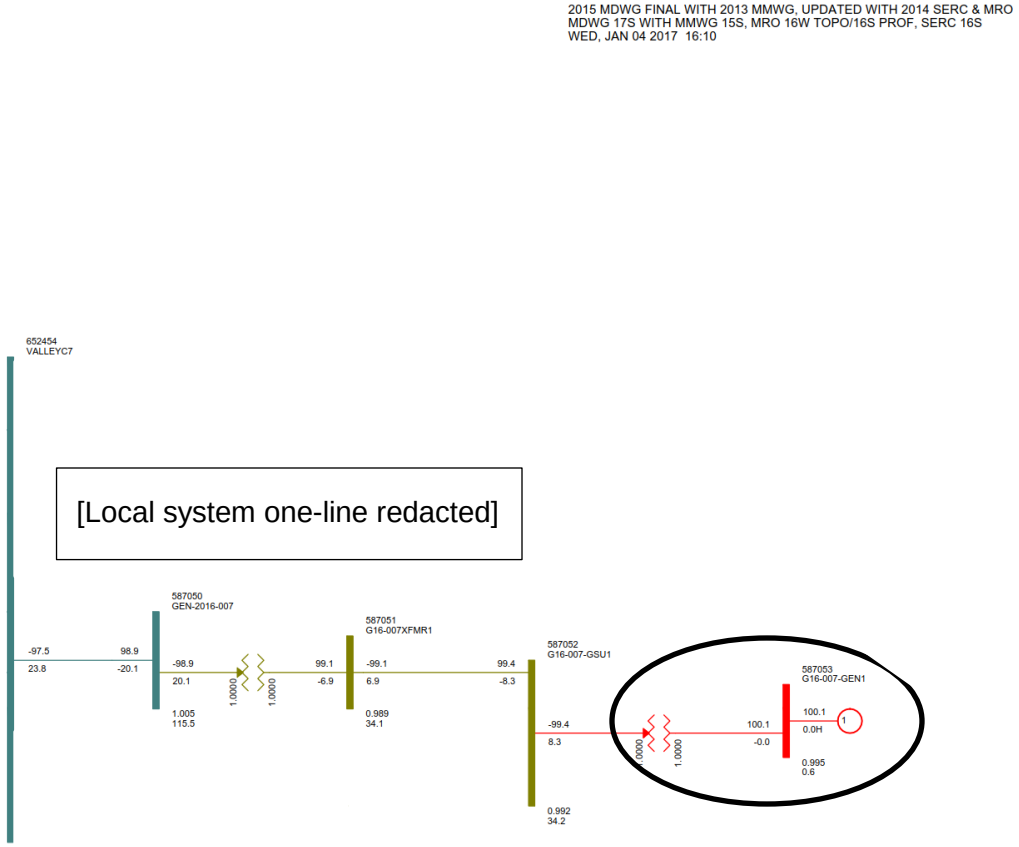

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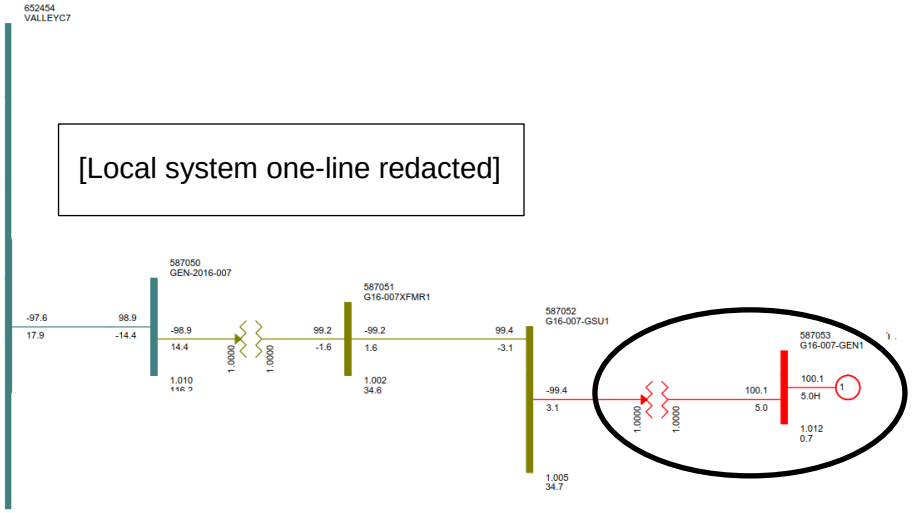
Figure 1-1 (c) One Line Diagram of Group 18 Area for 2025 Summer Peak Case

2015 MDWG FINAL WITH 2013 MMWG, UPDATED WITH 2014 SERC & MRO
MDWG 2025S WITH MMWG 2024S, MRO & SERC 2025 SUMMER
WED, JAN 04 2017 16:13



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2 STABILITY ANALYSIS

In this study, ABB investigated the stability of the system for faults in the vicinity of the proposed plant as defined by SPP. The studied faults involve three-phase transformer faults with normal clearing, three-phase line faults with normal clearing, and single-line-to-ground faults with stuck breaker (SB-1PH).

2.1 STABILITY ANALYSIS METHODOLOGY

Stability analysis is performed to determine whether the electric system would meet stability criteria following the addition of the GEN-2016-007 project. Stability analysis was performed using Siemens-PTI's PSS/E dynamics program V32.2.0. All the faults listed in Table 2 1 were simulated for 20 seconds.

Table 2-1: List of Faults for Stability Analysis

Cont. No.	Cont. Name	Description
1	FLT01-3PH	3 phase fault on the VALLEY CITY 115KV (652454) to ENDERLIN 115KV (652638) CKT 1, near VALLEY CITY. a. Apply fault at the VALLEY CITY 115KV bus. a. b. Clear fault after 7 cycles by tripping the faulted line (CKT 1).
2	FLT02-3PH	3 phase fault on the VALLEY CITY 115KV (652454) to JAMESTOWN 115KV (652445) CKT 1, near VALLEY CITY. a. Apply fault at the VALLEY CITY 115KV bus. a. b. Clear fault after 7 cycles by tripping the faulted line (CKT 1).
3	FLT03-3PH	3 phase fault on the ENDERLIN 115KV (652638) to ELLIOTT 115KV (652462) CKT 1, near ENDERLIN. a. Apply fault at the ENDERLIN 115KV bus. a. b. Clear fault after 7 cycles by tripping the faulted line (CKT 1).
4	FLT04-3PH	3 phase fault on the ELLIOTT 115KV (652462) to FORMAN 115KV (652438) CKT 1, near ELLIOTT. a. Apply fault at the ELLIOTT 115KV bus. a. b. Clear fault after 7 cycles by tripping the faulted line (CKT 1).
5	FLT05-3PH	3 phase fault on the JAMESTOWN 115KV (652445) to JAMESTOWN 230kV (652444) to JAMESTOWN 13.2kV (652208) XMFR CKT 1, near JAMESTOWN 115kV. a. Apply fault at the JAMESTOWN 115kV bus. a. b. Clear fault after 7 cycles by tripping the faulted transformer.

Cont. No.	Cont. Name	Description
6	FLT06-3PH	3 phase fault on the JAMESTOWN 115KV (652445) to CARINGTON 115KV (652428) CKT 1, near JAMESTOWN. a. Apply fault at the JAMESTOWN 115KV bus. a. b. Clear fault after 7 cycles by tripping the faulted line (CKT 1).
7	FLT07-3PH	3 phase fault on the JAMESTOWN 115KV (652445) to EDGELEY 115KV (652432) CKT 1, near JAMESTOWN. a. Apply fault at the JAMESTOWN 115KV bus. a. b. Clear fault after 7 cycles by tripping the faulted line (CKT 1).
8	FLT08-3PH	3 phase fault on the EDGELEY 115KV (652432) to ORDWAY115KV (652534) CKT 1, near EDGELEY. a. Apply fault at the EDGELEY 115KV bus. b. Clear fault after 7 cycles by tripping the faulted line (CKT 1).
9	FLT09-3PH	3 phase fault on the CARINGTON 115KV (652428) to BARLOW 115KV (652423) CKT 1, near CARINGTON. a. Apply fault at the CARINGTON 115KV bus. b. Clear fault after 7 cycles by tripping the faulted line (CKT 1).
10	FLT10-3PH	3 phase fault on the JAMESTOWN 230KV (652444) to BISMARK 230KV (652426) CKT 1, near JAMESTOWN. a. Apply fault at the JAMESTOWN 230KV bus. b. Clear fault after 6 cycles by tripping the faulted line (CKT 1).
11	FLT11-3PH	3 phase fault on the JAMESTOWN 230KV (652444) to GARRISON 230KV (652441) CKT 1, near JAMESTOWN. a. Apply fault at the JAMESTOWN 230KV bus. b. Clear fault after 6 cycles by tripping the faulted line (CKT 1).
12	FLT12-3PH	3 phase fault on the JAMESTOWN 230KV (652444) to FARGO 230KV (652435) CKT 1, near JAMESTOWN. a. Apply fault at the JAMESTOWN 230KV bus. b. Clear fault after 6 cycles by tripping the faulted line (CKT 1).
13	FLT13-3PH	3 phase fault on the JAMESTOWN 230KV (652444) to WEBER 230KV (661028) CKT 1, near JAMESTOWN. a. Apply fault at the JAMESTOWN 230KV bus. b. Clear fault after 6 cycles by tripping the faulted line (CKT 1).

Cont. No.	Cont. Name	Description
14	FLT14-3PH	3 phase fault on the JAMESTOWN 345KV (620369) to CENTRE 345KV (657791) CKT 1, near JAMESTOWN. a. Apply fault at the JAMESTOWN 345KV bus. b. Clear fault after 6 cycles by tripping the faulted line (CKT 1).
15	FLT15-3PH	3 phase fault on the JAMESTOWN 345KV (620369) to BUFFALO 345KV (620358) CKT 1, near JAMESTOWN. a. Apply fault at the JAMESTOWN 345KV bus. b. Clear fault after 6 cycles by tripping the faulted line (CKT 1).
16	FLT16-3PH	3 phase fault on the BUFFALO 345KV (620358) to BISON 345KV (601067) CKT 1, near BUFFALO a. Apply fault at the BUFFALO 345KV bus. b. Clear fault after 6 cycles by tripping the faulted line (CKT 1).
17	FLT17-3PH	3 phase fault on the LELAND OLDS 345KV (659422) to G16-044-TAP 345KV (560079) CKT 1, near LELAND OLDS a. Apply fault at the LELAND OLDS 345KV bus. b. Clear fault after 6 cycles by tripping the faulted line (CKT 1).
18	FLT18-3PH	3 phase fault on the LELAND OLDS 345KV (659424) to G16-017-TAP 345KV (560074) CKT 1, near LELAND OLDS a. Apply fault at the LELAND OLDS 345KV bus. b. Clear fault after 6 cycles by tripping the faulted line (CKT 1).
19	FLT19-3PH	3 phase fault on the ANTELOPE VALLEY 345KV (659420) to BROADLAND 345KV (659421) CKT 1, near ANTELOPE VALLEY a. Apply fault at the ANTELOPE VALLEY 345KV bus. b. Clear fault after 6 cycles by tripping the faulted line (CKT 1).
20	FLT20-PO	Prior Outage of VALLEY CITY (652454) to JAMESTOWN (652445) 115kV. 3 phase fault on the FORMAN (652438) –LUDDEN (659172) 115kV line. a. Prior outage VALLEY CITY (652454) to JAMESTOWN (652445) 115kV (solve network for steady state solution). b. 3 phase fault on the FORMAN (652438) –LUDDEN (659172) 115kV line near FORMAN 115kV. c. Leave fault on for 7 cycles, then trip the faulted line in (b).

Cont. No.	Cont. Name	Description
21	FLT21-PO	Prior Outage of VALLEY CITY (652454) to JAMESTOWN (652445) 115kV. 3 phase fault on the FORMAN (652438) –ROBERTS CO. (659171) 115kV line. a. Prior outage VALLEY CITY (652454) to JAMESTOWN (652445) 115kV (solve network for steady state solution). b. 3 phase fault on the FORMAN (652438) –ROBERTS CO. (659171) 115kV line near FORMAN 115kV. c. Leave fault on for 7 cycles, then trip the faulted line in (b).
22	FLT22-PO	Prior Outage of VALLEY CITY (652454) to ENDERLIN (652638) 115kV. 3 phase fault on the JAMESTOWN (652445) – CARRINGTON (652428) 115kV line. a. Prior outage VALLEY CITY (652454) to ENDERLIN (652638) 115kV (solve network for steady state solution). b. 3 phase fault on the JAMESTOWN (652445) – CARRINGTON (652428) 115kV line near JAMESTOWN 115kV. c. Leave fault on for 7 cycles, then trip the faulted line in (b).
23	FLT23-PO	Prior Outage of VALLEY CITY (652454) to ENDERLIN (652638) 115kV. 3 phase fault on the JAMESTOWN (652445) – CARRINGTON (652428) 115kV line. a. Prior outage VALLEY CITY (652454) to ENDERLIN (652638) 115kV (solve network for steady state solution). b. 3 phase fault on the JAMESTOWN (652445) – EDGELEY (652432) 115kV line near JAMESTOWN 115kV. c. Leave fault on for 7 cycles, then trip the faulted line in (b).
24	FLT24-SB	VALLEY CITY 115kV Stuck Breaker a. Apply single phase fault on the VALLEY CITY 115KV (652454) to ENDERLIN 115KV (652638) CKT 1, near VALLEY CITY. b. Wait 16 cycles, and then trip VALLEY CITY 115KV (652454) to ENDERLIN 115KV (652638) CKT 1 115kV line and remove fault.
25	FLT25-SB	VALLEY CITY 115kV Stuck Breaker a. Apply single phase fault on the VALLEY CITY 115KV (652454) to JAMESTOWN 115KV (652445) CKT 1, near VALLEY CITY. b. Wait 16 cycles, and then trip VALLEY CITY 115KV (652454) to JAMESTOWN 115KV (652445) CKT 1 115kV line and remove fault.

Cont. No.	Cont. Name	Description
26	FLT26-SB	ENDERLIN 115kV Stuck Breaker a. Apply single phase fault at the ENDERLIN (652638) 115kV bus on the ENDERLIN (652638) – ELLIOTT (652462) 115kV line. b. Wait 16 cycles, and then trip ENDERLIN (652638) – ELLIOTT (652462) 115kV line. c. Trip ENDERLIN (652638) to VALLEY CITY (652454) 115kV line and remove the fault.
27	FLT27-SB	JAMESTOWN 115kV Stuck Breaker a. Apply single phase fault at the JAMESTOWN (652445) 115kV bus on the JAMESTOWN (652445) – CARINGTON (652428) 115kV line. b. Wait 16 cycles, and then trip JAMESTOWN (652445) – CARINGTON (652428) 115kV line. c. Trip JAMESTOWN (652445) to VALLEY CITY 115KV (652454) line and remove the fault.
28	FLT28-SB	JAMESTOWN 115kV Stuck Breaker a. Apply single phase fault at the JAMESTOWN (652445) 115kV bus on the JAMESTOWN (652445) – CARINGTON (652428) 115kV line. b. Wait 16 cycles, and then trip JAMESTOWN (652445) – CARINGTON (652428) 115kV line. c. Trip JAMESTOWN (652445) to EDGELEY (652432) 115kV line and remove the fault.
29	FLT29-SB	JAMESTOWN 230kV Stuck Breaker a. Apply single phase fault at the JAMESTOWN (652444) 230kV bus on the JAMESTOWN (652444) – PICKERT (657759) 230kV line. b. Wait 16 cycles, and then trip JAMESTOWN (652444) – PICKERT (657759) 230kV line. c. Trip JAMESTOWN (652444) to BISMARK (652426) 230kV line and remove the fault.
30	FLT30-SB	JAMESTOWN 230kV Stuck Breaker a. Apply single phase fault at the JAMESTOWN (652444) 230kV bus on the JAMESTOWN (652444) – WEBER (661028) 230kV line. b. Wait 16 cycles, and then trip JAMESTOWN (652444) – WEBER (661028) 230kV line. c. Trip JAMESTOWN (652444) to BISMARK (652426) 230kV line and remove the fault.

Cont. No.	Cont. Name	Description
31	FLT31-SB	JAMESTOWN 230kV Stuck Breaker a. Apply single phase fault at the JAMESTOWN (652444) 230kV bus on the JAMESTOWN (652444) – PICKERT (657759) 230kV line. b. Wait 16 cycles, and then trip JAMESTOWN (652444) – PICKERT (657759) 230kV line. c. Trip JAMESTOWN (652444) 230kV to JAMESTOWN (652445) 115kV to JAMESTOWN (652208) 13.8kV transformer and remove the fault.
32	FLT32-SB	JAMESTOWN 230kV Stuck Breaker a. Apply single phase fault at the JAMESTOWN (652444) 230kV bus on the JAMESTOWN (652444) – WEBER (661028) 230kV line. b. Wait 16 cycles, and then trip JAMESTOWN (652444) – WEBER (661028) 230kV line. c. Trip JAMESTOWN (652444) 230kV to JAMESTOWN (652445) 115kV to JAMESTOWN (652208) 13.8kV transformer and remove the fault.
33	FLT33-SB	JAMESTOWN 230kV Stuck Breaker a. Apply single phase fault at the JAMESTOWN (652444) 230kV bus on the JAMESTOWN (652444) – GARRISON (652441) 230kV line. b. Wait 16 cycles, and then trip JAMESTOWN (652444) – GARRISON (652441) 230kV line. c. Trip JAMESTOWN (652444) to BISMARK (652426) 230kV line and remove the fault.
34	FLT34-SB	JAMESTOWN 230kV Stuck Breaker a. Apply single phase fault at the JAMESTOWN (652444) 230kV bus on the JAMESTOWN (652444) – GARRISON (652441) 230kV line. b. Wait 16 cycles, and then trip JAMESTOWN (652444) – GARRISON (652441) 230kV line. c. Trip JAMESTOWN (652444) 230kV to JAMESTOWN (652445) 115kV to JAMESTOWN (652208) 13.8kV transformer and remove the fault.
35	FLT35-SB	JAMESTOWN 345kV Stuck Breaker a. Apply single phase fault at the JAMESTOWN (620369) 345kV bus on the JAMESTOWN (620369) – CENTRE (657791) 345kV line. b. Wait 16 cycles, and then trip JAMESTOWN (620369) – CENTRE (657791) 345kV line. c. Trip JAMESTOWN (620369) 345kV to JAMESTOWN (620269) 115kV to JAMESTOWN (620169) 41.6kV transformer and remove the fault.

Cont. No.	Cont. Name	Description
36	FLT36-SB	JAMESTOWN 345kV Stuck Breaker a. Apply single phase fault at the JAMESTOWN (620369) 345kV bus on the JAMESTOWN (620369) – BUFFALO (620358) 345kV line. b. Wait 16 cycles, and then trip JAMESTOWN (620369) – BUFFALO (620358) 345kV line. c. Trip JAMESTOWN (620369) 345kV to JAMESTOWN (620269) 115kV to JAMESTOWN (620169) 41.6kV transformer and remove the fault.

Single-line-to-ground faults were simulated with the standard method of applying fault impedance to the positive sequence network to represent the effect of the negative and zero sequence networks on the positive sequence network.

The Southwest Pool Disturbance Performance Criteria Requirements in Appendix A were used to evaluate system response during the initial transient period following a disturbance on the system. Generator responses and bus voltages (115 kV and above) in Areas 330 (AECI), 356 (AMMO), 600 (XEL), 615 (GRE), 620 (OTP), 635 (MEC), 640 (NPPD), 645 (OPPD), 652 (WAPA) and 661 (MDU) were monitored to ensure that the system performance meets criteria. Rotor angles of nearby synchronous generators were plotted to verify whether the generators maintained synchronism and had adequate damping following system disturbances.

SPP requires generators relying on newer technologies to comply with low voltage ride through requirements as stipulated in FERC Order 661A. See Appendix G of the "Southwest Power Pool - Open Access Transmission Tariff, Sixth Revised Volume No. 1 - Attachment V Generator Interconnection Procedures (GIP)"[1]. According to these requirements, such generators should not be tripped off line for faults by under voltage relay actuation. Generator speeds of pre-queued projects were also monitored to ensure they stay online under system contingencies. For contingencies that result in a prior queued project tripping off-line, SPP requires those contingencies to be re-run with the prior queued project's voltage and frequency tripping disabled.

[1] http://sppoasis.spp.org/documents/swpp/transmission/studies/Attachment_V_GIP.pdf

2.2 STUDY RESULTS

No disturbances (including all n-1 and stuck breaker disturbances) showed instability problems or voltage violations for three seasons. The proposed wind farm ride through all faults without tripping. Fault results are summarized in Table 2-2, Table 2-3, and Table 2-4, which show results for the 2016 Winter Peak case, the 2017 Summer Peak case, and the 2025 Summer Peak case, respectively. The “Volt CI Violation” in the table refers to bus voltages exceeding the range of 0.7 pu. or 1.2 pu, 2.5 second after fault clearing, and the “Volt CII Violation” refers to end bus voltages exceeding the range of 0.9 pu. or 1.1 pu at the end of the simulation.

Note:

It is noted that Contingency (FLT-17) ‘loss of LELAND OLDS 345KV (659422) to G16-044-TAP 345KV (560079) CKT 1 observed the tripping of G16-044GEN1 (Bus #587293) generator on overvoltage in 2016 winter peak and 2017 summer peak cases. The tripping was also observed without the studied project. Since it is a pre-existing problem or in other words the tripping is not due to the studied project further investigations were not carried out in this study.

Table 2-2 Study Results Summary, 2016 Winter Peak

Index	Fault File Name	16WP Case		
		Stable?	Volt CI Violation	Volt CII Violation
1	FLT01-3PH	Stable	No	No
2	FLT02-3PH	Stable	No	No
3	FLT03-3PH	Stable	No	No
4	FLT04-3PH	Stable	No	No
5	FLT05-3PH	Stable	No	No
6	FLT06-3PH	Stable	No	No
7	FLT07-3PH	Stable	No	No
8	FLT08-3PH	Stable	No	No
9	FLT09-3PH	Stable	No	No
10	FLT10-3PH	Stable	No	No
11	FLT11-3PH	Stable	No	No
12	FLT12-3PH	Stable	No	No
13	FLT13-3PH	Stable	No	No
14	FLT14-3PH	Stable	No	No
15	FLT15-3PH	Stable	No	No
16	FLT16-3PH	Stable	No	No
17	FLT17-3PH	Stable	No	No
18	FLT18-3PH	Stable	No	No
19	FLT19-3PH	Stable	No	No
20	FLT20-PO	Stable	No	No
21	FLT21-PO	Stable	No	No
22	FLT22-PO	Stable	No	No
23	FLT23-PO	Stable	No	No
24	FLT24-SB	Stable	No	No
25	FLT25-SB	Stable	No	No
26	FLT26-SB	Stable	No	No
27	FLT27-SB	Stable	No	No
28	FLT28-SB	Stable	No	No
29	FLT29-SB	Stable	No	No
30	FLT30-SB	Stable	No	No
31	FLT31-SB	Stable	No	No

Index	Fault File Name	16WP Case Stable?	Volt CI Violation	Volt CII Violation
32	FLT32-SB	Stable	No	No
33	FLT33-SB	Stable	No	No
34	FLT34-SB	Stable	No	No
35	FLT35-SB	Stable	No	No
36	FLT36-SB	Stable	No	No

Table 2-3 Study Results Summary, 2017 Summer Peak

Index	Fault File Name	17SP Case Stable?	Volt CI Violation	Volt CII Violation
1	FLT01-3PH	Stable	No	No
2	FLT02-3PH	Stable	No	No
3	FLT03-3PH	Stable	No	No
4	FLT04-3PH	Stable	No	No
5	FLT05-3PH	Stable	No	No
6	FLT06-3PH	Stable	No	No
7	FLT07-3PH	Stable	No	No
8	FLT08-3PH	Stable	No	No
9	FLT09-3PH	Stable	No	No
10	FLT10-3PH	Stable	No	No
11	FLT11-3PH	Stable	No	No
12	FLT12-3PH	Stable	No	No
13	FLT13-3PH	Stable	No	No
14	FLT14-3PH	Stable	No	No
15	FLT15-3PH	Stable	No	No
16	FLT16-3PH	Stable	No	No
17	FLT17-3PH	Stable	No	No
18	FLT18-3PH	Stable	No	No
19	FLT19-3PH	Stable	No	No
20	FLT20-PO	Stable	No	No
21	FLT21-PO	Stable	No	No
22	FLT22-PO	Stable	No	No
23	FLT23-PO	Stable	No	No
24	FLT24-SB	Stable	No	No
25	FLT25-SB	Stable	No	No
26	FLT26-SB	Stable	No	No
27	FLT27-SB	Stable	No	No
28	FLT28-SB	Stable	No	No
29	FLT29-SB	Stable	No	No
30	FLT30-SB	Stable	No	No
31	FLT31-SB	Stable	No	No
32	FLT32-SB	Stable	No	No
33	FLT33-SB	Stable	No	No
34	FLT34-SB	Stable	No	No
35	FLT35-SB	Stable	No	No

Index	Fault File Name	17SP Case		
		Stable?	Volt CI Violation	Volt CII Violation
36	FLT36-SB	Stable	No	No

Table 2-4 Study Results Summary, 2025 Summer Peak

Index	Fault File Name	25SP Case		
		Stable?	Volt CI Violation	Volt CII Violation
1	FLT01-3PH	Stable	No	No
2	FLT02-3PH	Stable	No	No
3	FLT03-3PH	Stable	No	No
4	FLT04-3PH	Stable	No	No
5	FLT05-3PH	Stable	No	No
6	FLT06-3PH	Stable	No	No
7	FLT07-3PH	Stable	No	No
8	FLT08-3PH	Stable	No	No
9	FLT09-3PH	Stable	No	No
10	FLT10-3PH	Stable	No	No
11	FLT11-3PH	Stable	No	No
12	FLT12-3PH	Stable	No	No
13	FLT13-3PH	Stable	No	No
14	FLT14-3PH	Stable	No	No
15	FLT15-3PH	Stable	No	No
16	FLT16-3PH	Stable	No	No
17	FLT17-3PH	Stable	No	No
18	FLT18-3PH	Stable	No	No
19	FLT19-3PH	Stable	No	No
20	FLT20-PO	Stable	No	No
21	FLT21-PO	Stable	No	No
22	FLT22-PO	Stable	No	No
23	FLT23-PO	Stable	No	No
24	FLT24-SB	Stable	No	No
25	FLT25-SB	Stable	No	No
26	FLT26-SB	Stable	No	No
27	FLT27-SB	Stable	No	No
28	FLT28-SB	Stable	No	No
29	FLT29-SB	Stable	No	No
30	FLT30-SB	Stable	No	No
31	FLT31-SB	Stable	No	No
32	FLT32-SB	Stable	No	No
33	FLT33-SB	Stable	No	No
34	FLT34-SB	Stable	No	No
35	FLT35-SB	Stable	No	No
36	FLT36-SB	Stable	No	No

Figure 2-1 shows the response of the studied generator following contingency FLT01-3PH for 2016 Winter Peak case. The active and reactive power output, terminal voltage and speed are plotted to show the generator response.

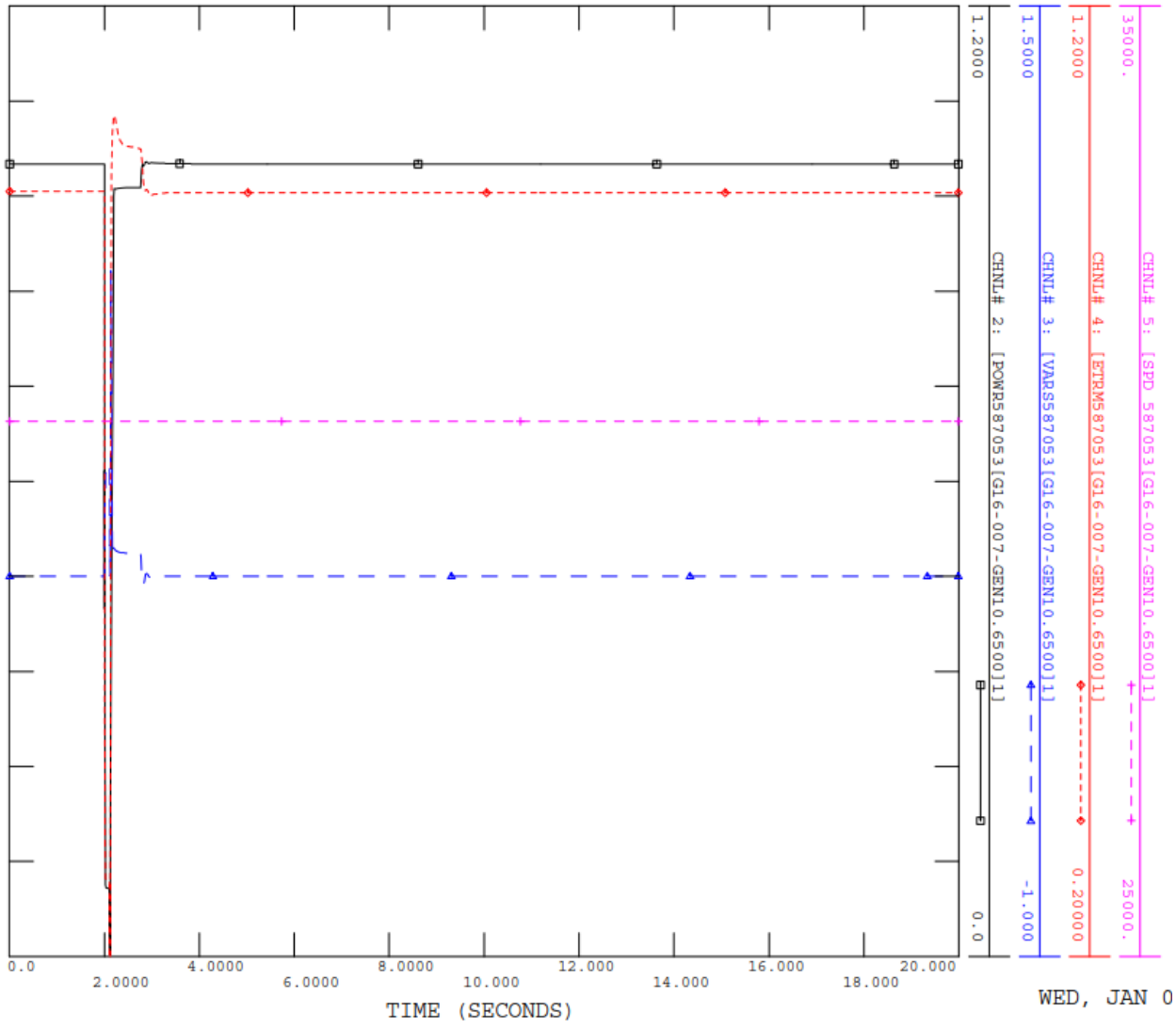


Figure 2-1: GEN-2016-007 Response Following Fault FLT01-3PH for 2016 Winter Peak Case

In all three seasons (2016 Winter Peak, 2017 Summer Peak and 2025 Summer Peak) the initial simulations showed oscillations at wind generator bus 658020 for faults near Jamestown 230 kV and Jamestown 345 kV Bus (Contingencies - FLT10-3PH, FLT11-3PH, FLT12-3PH FLT13-3PH, FLT14-3PH, FLT15-3PH, FLT16-3PH, FLT17-3PH, FLT18-3PH, FLT19-3PH, FLT29-3SB, FLT30-3SB, FLT31-3SB, FLT32-3SB, FLT33-3SB, FLT34-3SB, FLT35-3SB, and FLT36-3SB). This is a Group 18 prior queued project and the POI is Marshall 115kV. No oscillations were observed at studied project. All these faults were re-run without the studied project and results

still exhibit the oscillations. Figure 2-2 shows the response of the prior queued generator at bus 658020 following a contingency FLT10-3PH for 2016 winter peak case.

Since the generator at bus 658020 is far remote from the study project and the oscillations resulting from faults near the Jamestown 230kV and 345kV were determined to be pre-existing, the generator is netted at its schedule dispatch using PSS/E activity 'GNET' for these contingencies.

All the simulation plots are included in Appendix B.

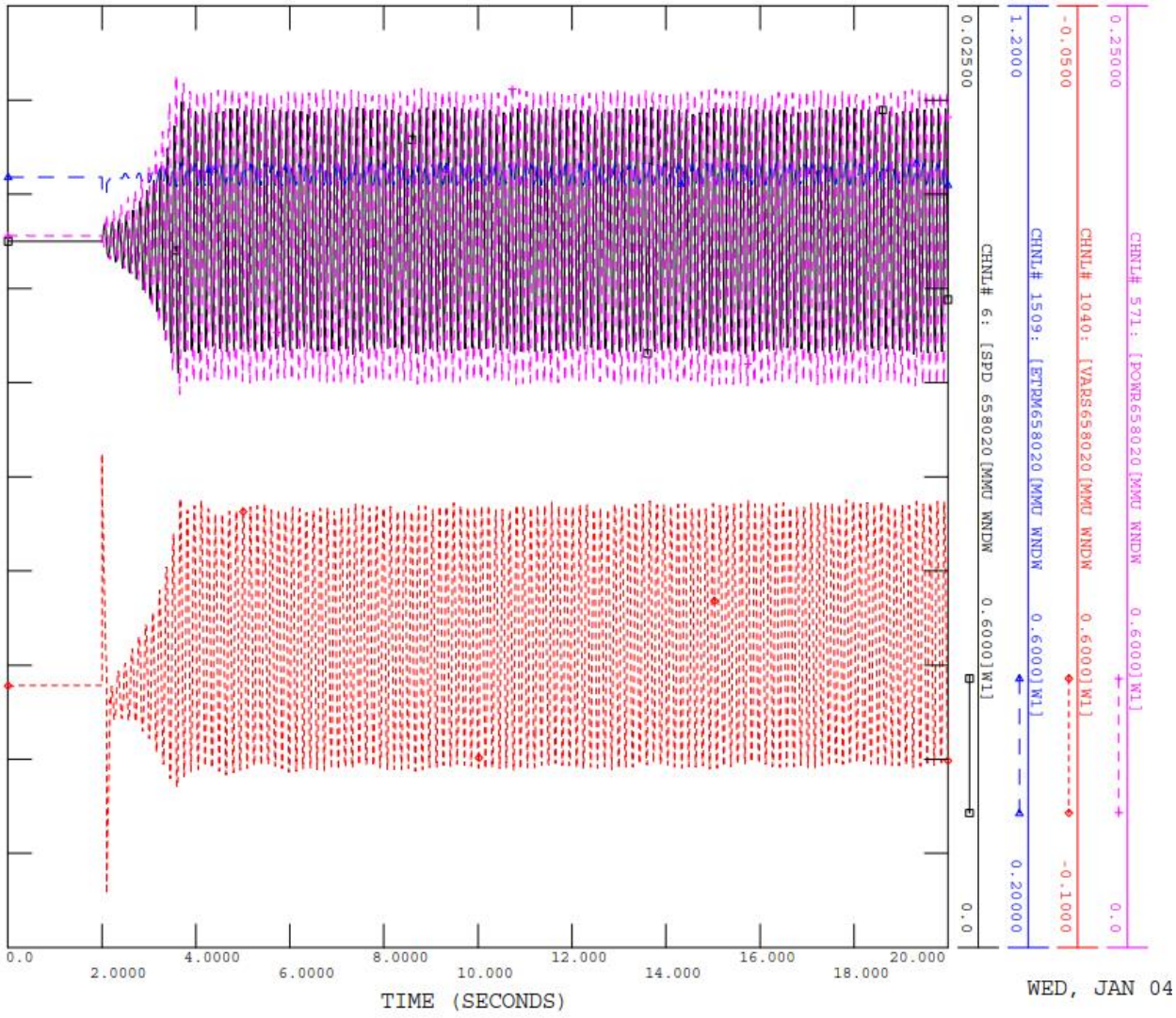


Figure 2-2 Prior Queued project at Marshall 115kV POI Response - Fault FLT10-3PH for 2016 Winter Peak Case

3 SHORT CIRCUIT ANALYSIS

Short circuit analysis was performed on the 2017 Summer Peak and 2025 Summer Peak power flow cases using the PSS/E program. Three-phase symmetrical fault current levels were calculated at up to seven buses away from the point of interconnection. Table 3-1 tabulates the calculated three-phase fault current levels at buses rated 69 kV and above.

Table 3-1: Three-Phase Fault Currents

2025 SP			2017 SP		
Number	**Name**	**3PH(Amp)**	**Number**	**Name**	**3PH(Amp)**
652423	BARLOW 7 115.00	2649.9	652423	BARLOW 7 115.00	2675.9
652426	BISMARK4 230.00	13558.1	652426	BISMARK4 230.00	13112.3
652428	CARNGTN7 115.00	2653.8	652428	CARNGTN7 115.00	2679.3
652432	EDGELEY7 115.00	3366.3	652432	EDGELEY7 115.00	3272.2
652433	EDGELEY8 69.000	2249.8	652433	EDGELEY8 69.000	2239.6
652435	FARGO 4 230.00	9894.8	652435	FARGO 4 230.00	9886.6
652438	FORMAN 7 115.00	6438.8	652438	FORMAN 7 115.00	6123.0
652441	GARRISN4 230.00	10861.1	652441	GARRISN4 230.00	10807.8
652444	JAMESTN4 230.00	8152.5	652444	JAMESTN4 230.00	8107.4
652445	JAMESTN7 115.00	9852.8	652445	JAMESTN7 115.00	9835.2
661028	WEBER 4 230.00	4859.4	661028	WEBER 4 230.00	4842.9
652454	VALLEYC7 115.00	4363.2	652454	VALLEYC7 115.00	4328.0
587050	GEN-2016-007115.00	3963.3	587050	GEN-2016-007115.00	3930.4
652204	VALLEYC8 69.000	2549.5	652204	VALLEYC8 69.000	2557.1
652462	ELLIOTT7 115.00	3697.7	652462	ELLIOTT7 115.00	3628.0
657804	MPC-VCY8 69.000	2549.5	657804	MPC-VCY8 69.000	2557.1
659280	POMONA 7 115.00	2544.5	659280	POMONA 7 115.00	2495.2
652638	ENDERLIN 7 115.00	3287.1	652638	ENDERLIN 7 115.00	3250.3
657759	PICKERT4 230.00	4327.4	657759	PICKERT4 230.00	4302.4
652534	ORDWAY 7 115.00	7913.5	652534	ORDWAY 7 115.00	4917.3

4 POWER FACTOR ANALYSIS

Since the studied project is a renewable energy project, power factor analysis was performed on three provided cluster scenarios upon SPP's request.

4.1 POWER FACTOR ANALYSIS METHODOLOGY

Power Factor Analysis was performed for the studied wind farm under system intact and contingency conditions. All N-1, three phase stability faults shown in Table 2-1 were analyzed as power flow contingencies. The power factor requirements for the wind farm were determined to maintain the voltage at the POI to the schedule voltage which is the higher of the POI voltage in the provided base case or 1.0 per unit. Fictitious VAR generator was added to the studied wind farm to maintain the scheduled voltage following all studied contingencies. The MW and Mvar injections from the studied wind farm at the POI were recorded and the power factors were calculated for all contingencies. The most lagging and most leading power factors determine the minimum power factor range capability required for the studied wind farm.

If more than one studied project share the same POI, the projects were grouped together and common power factor requirements were determined for this group of studied projects. With this method, none of the studied projects is required to provide more or less than its fair share of the reactive power requirements at the same POI. If a prior-queued project is connected at the same POI as the studied project, the prior-queued project was not grouped with the studied project since its reactive power requirements was determined in previous studies. However, the voltage schedules of the prior-queued project and the studied project at the same POI were coordinated and the local existing capacitor banks were set to their maximum capability, if necessary.

Per FERC and SPP requirements, if the power factor needed to maintain the scheduled voltage is less than 0.95 lagging or leading, the requirements is limited to 0.95 lagging or leading.

If the required power factor at the POI is beyond the capability of the studied wind turbine, the approximate size of the additional capacitors were determined.

4.2 STUDY RESULTS

Power Factor Analysis was performed to ensure the studied project meets FERC and SPP power factor requirements for wind farm interconnections.

Table 4-1 summarizes the power factor analysis results. The detailed power factor analysis results for each studied contingency are provided in Appendix C. Per SPP and FERC requirements, the generating facility shall be designed to meet the requirement of 95% lagging (providing vars) and 95% leading (absorbing vars) to the Point of Interconnection.

Table 4-1 Power Factor Analysis Results

Request	Size	Generator	POI	Scenario	PF Analysis Worst Scenario		Final PF Requirement	
	(MW)	Model			Leading[1]	Lagging[2]	Leading[1]	Lagging[2]
GEN-2016-007	100	Vestas V126 GS 3.45MW wind	WAPA Valley City 115kV (652454)	16WP	0.973	N/A	0.95	0.95
				17SP	0.972	N/A	0.95	0.95
				25SP	0.983	N/A	0.95	0.95

Notes:

1. Leading is when the generator is absorbing reactive power from the transmission grid.
2. Lagging is when the generator is providing reactive power to the transmission grid.

5 LOW WIND/NO WIND ANALYSIS

In this study, ABB investigated the GEN-2016-007 project for low wind conditions, since the interconnected wind farm is connected at an 115kV bus.

5.1 LOW/NO WIND ANALYSIS METHODOLOGY

Low wind/No wind analysis is performed to determine the required shunt reactor size at the study project substation high side bus to bring the MVAr flow into the POI down to approximately zero.

For each studied scenario, the studied wind generator and capacitor bank (none in this case) was switched out of service with the collector system as modeled remaining in service. The resulting reactive power injection into the transmission network coming from the capacitance of the project's transmission lines and collector cables was measured. Then, the required shunt reactor size was calculated to bring the MVAr flow into the POI down to approximately zero.

5.2 STUDY RESULTS

Table 5-1 summarizes the Low wind conditions analysis results. It is shown that 2.74 MVAr shunt reactor at the substation high side bus (652454) is required to bring the MVAr flow in the POI down to approximately zero under low/no wind conditions for all three studied seasons. The reactor bank size is approximate and the final size will be determined in the final facility and collector system design.

Table 5-1 Low/No Wind Analysis Results

Scenario	Reactive Power Injection at POI (MVAr)	Bus 531424 Volt (pu)	Required Shunt Reactor (MVAr)
16WP	2.8	1.0137	**2.74**
17SP	2.8	1.0099	**2.74**
25SP	2.8	1.0025	**2.74**

6 CONCLUSIONS

Southwest Power Pool (SPP) has commissioned ABB Inc., to perform a Definitive Impact Study for DISIS-2016-001 (GROUP 18) which includes generation interconnection request GEN-2016-007 (100 MW wind farm connected at the Valley city 115 kV bus).

Request	Size (MW)	Generator Model	POI
GEN-2016-007	100.0	VESTAS V126 GS 3.45MW WIND	WAPA Valley City 115kV (652454)

The objective of this study is to evaluate the impact of project GEN-2016-007 on the existing and future planning system. The study is performed on three system scenarios provided by SPP:

- 2016 Winter Peak Case
- 2017 Summer Peak Case
- 2025 Summer Peak Case

The scope of the study included stability analysis, short-circuit analysis, Power factor evaluation and low/no wind condition analysis. The following is a summary of study results.

Results of the Stability Analysis show no stability criteria violations for all studied disturbances for the three seasons.

System short-circuit current levels at up to seven buses away from the point of interconnection were calculated and tabulated for SPP's reference.

Power Factor Analysis was performed to ensure the studied project meets FERC and SPP power factor requirements for wind farm interconnections. The results show that the wind farm is required to meet the SPP pro-forma 95% lagging (providing vars) and 95% leading (absorbing vars) power factor requirements at the Point of Interconnection.

The Low/No wind analysis shows that 2.74MVAr of shunt reactor is required at the POI to bring the MVAr flow at the POI down to approximately zero under low wind conditions for all three studied seasons. The reactor bank size is approximate and the final size will be determined in the final facility and collector system design.

The results of this analysis are based on available data and assumptions made at the time of conducting this study. If any of the data and/or assumptions made in developing the study model change, the results provided in this report may not apply.

APPENDIX A SOUTHWEST POWER POOL DISTURBANCE PERFORMANCE CRITERIA REQUIREMENTS

OVERVIEW

These Disturbance Performance Requirements ("Requirements") shall be applicable to the Bulk Electric System within the Southwest Power Pool Planning Area. Utilization of these Requirements applies to all registered entities within the Southwest Power Pool Planning Area. These Requirements shall not be applicable to facilities that are not part of Bulk Electric System. More stringent Requirements are at the sole discretion of each Transmission Owner.

Transient and dynamic stability assessments are generally performed to assure adequate avoidance of loss of generator synchronism and prevention of system voltage collapse within the first 20 seconds after a system disturbance. These Requirements provide a basis for evaluating the system response during the initial transient period following a disturbance on the Bulk Electric System by establishing minimum requirements for machine rotor angle damping and transient voltage recovery.

ROTOR ANGLE DAMPING REQUIREMENT

Machine Rotor Angles shall exhibit well damped angular oscillations [as defined below] and acceptable power swings following a disturbance on the Bulk Electric System for all NERC Category A, B and C events.

Well damped angular oscillations shall meet one of the following two requirements when calculated directly from the rotor angle:

1. Successive Positive Peak Ratio (SPPR) must be less than or equal to 0.95 where SPPR is calculated as follows:

$$SPPR = \frac{\text{Peak Rotor Angle of } 2^{nd} \text{ Positive Swing Peak}}{\text{Peak Rotor Angle of } 1^{st} \text{ Positive Swing Peak}} \leq 0.95$$

   -or- Damping Factor % = (1 – SPPR) x 100% ≥ 5%

   The machine rotor angle damping ratio may be determined by appropriate modal analysis (i.e. Prony Analysis) where the following equivalent requirement must be met:

   Damping Ratio ≥ 0.0081633

2. Successive Positive Peak Ratio Five (SPPR5) must be less than or equal to 0.774 where SPPR5 is calculated as follows:

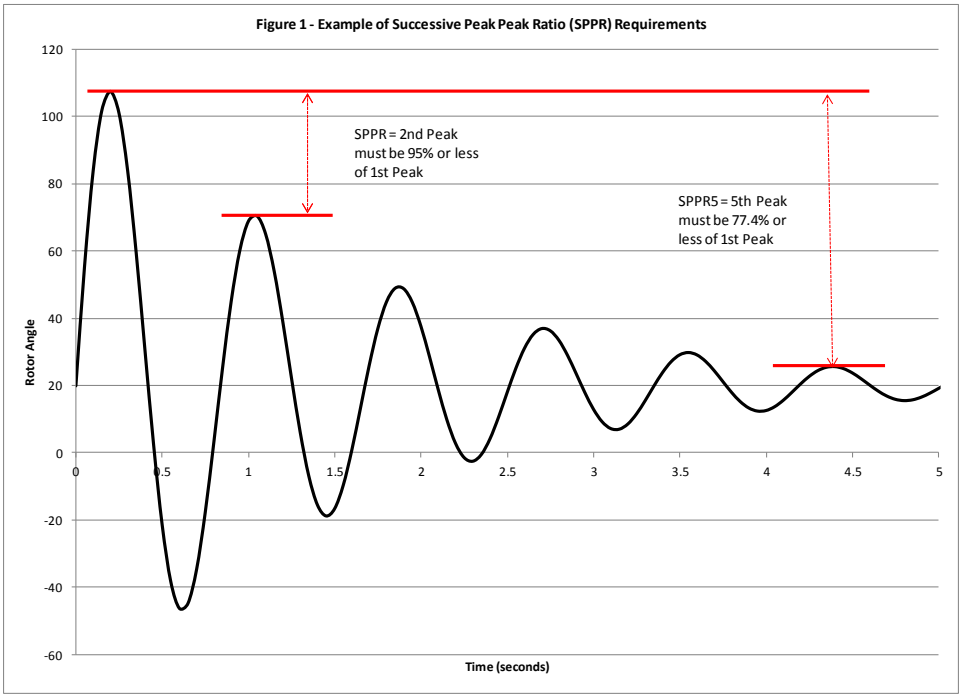
$$SPPR5 = \frac{\text{Peak Rotor Angle of } 5^{th} \text{ Positive Swing Peak}}{\text{Peak Rotor Angle of } 1^{st} \text{ Positive Swing Peak}} \leq 0.774$$

   -or- Damping Factor % = (1 – SPPR5) x 100% ≥ 22.6%

   The machine rotor angle damping ratio may be determined by appropriate modal analysis (i.e. Prony Analysis) where the following equivalent requirement must be met:

Damping Ratio ≥ 0.0081633

Qualitatively, these Requirements are shown in Figure 1 below.



TRANSIENT VOLTAGE RECOVERY REQUIREMENT

Any time after a disturbance is cleared; bus voltages on the Bulk Electric System shall not swing outside of the bandwidth of 0.70 per unit to 1.20 per unit. All post-transient voltages must fall between the 0.90 pu and 1.1 pu range at the end of the simulations. Check pre-fault voltage checks to ensure they fall within the 0.90 pu and 1.1 pu.

Qualitatively, this Requirement is shown in Figure 2 below.

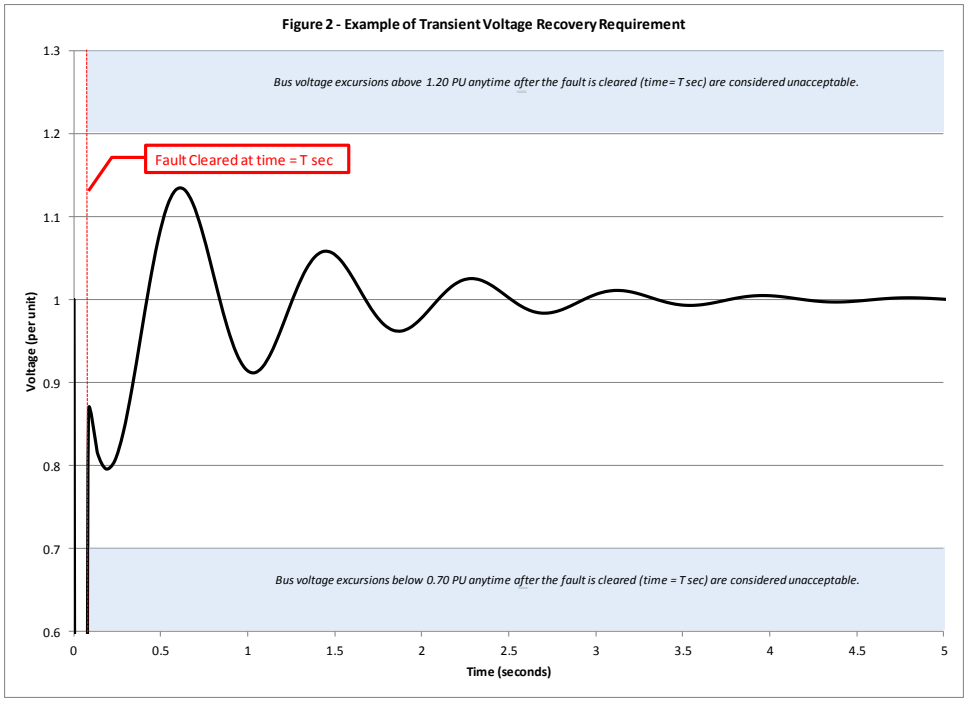


Figure 2 - Example of Transient Voltage Recovery Requirement
Bus voltage excursions above 1.20 PU anytime after the fault is cleared (time= T sec) are considered unacceptable.
Fault Cleared at time = T sec
Bus voltage excursions below 0.70 PU anytime after the fault is cleared (time = T sec) are considered unacceptable.
Voltage (per unit)
Time (seconds)
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5

APPENDIX B POWER FACTOR ANALYSIS RESULTS

All the contingency numbers shown in this appendix match with the fault numbers shown in Table 2-1.

C.1 GEN-2016-007 2016 Winter Peak Case

The GEN-2016-007 POI voltage is 1.0107 pu in the provided 2016 winter peak case. Therefore, the power factor requirements for the wind farm were determined to maintain the voltage at 1.0107 pu. The lowest lagging and leading power factors are highlighted in the table below.

Outage No.		MW	Mvar	PF	
System Intact	0	-97.6	23.2	**0.973**	leading
Contingency	1	-97.6	21.8	0.976	leading
Contingency	2	-97.6	16.6	0.986	leading
Contingency	3	-97.6	17.3	0.985	leading
Contingency	4	-97.6	17	0.985	leading
Contingency	5	-97.6	20.1	0.979	leading
Contingency	6	-97.6	22.7	0.974	leading
Contingency	7	-97.6	22.6	0.974	leading
Contingency	8	-97.6	22.8	0.974	leading
Contingency	9	-97.6	21.5	0.976	leading
Contingency	10	-97.6	21.2	0.977	leading
Contingency	11	-97.6	21.2	0.977	leading
Contingency	12	-97.6	21.6	0.976	leading
Contingency	13	-97.6	21.5	0.977	leading
Contingency	14	-97.6	18.4	0.983	leading
Contingency	15	-97.6	14.2	0.99	leading
Contingency	16	-97.6	18	0.983	leading
Contingency	17	-97.6	22.5	0.974	leading
Contingency	18	-97.6	22.7	0.974	leading
Contingency	19	-97.6	22.2	0.975	leading

C.2 GEN-2016-007 2017 Summer Peak Case

The GEN-2016-007 POI voltage is 1.0011 pu in the provided 2017 summer peak case. Therefore, the power factor requirements for the wind farm were determined to maintain the voltage at 1.0011 pu. The lowest lagging and leading power factors are highlighted in the table below.

Outage No.		MW	Mvar	PF	
System Intact	0	-97.5	23.8	**0.972**	leading
Contingency	1	-97.5	20.7	0.978	leading
Contingency	2	-97.6	15.4	0.988	leading
Contingency	3	-97.6	18.1	0.983	leading
Contingency	4	-97.6	17.9	0.984	leading
Contingency	5	-97.5	21.5	0.976	leading
Contingency	6	-97.5	22.7	0.974	leading
Contingency	7	-97.5	22	0.975	leading
Contingency	8	-97.5	22.5	0.975	leading
Contingency	9	-97.5	22.4	0.975	leading
Contingency	10	-97.5	22	0.975	leading
Contingency	11	-97.5	22.1	0.975	leading
Contingency	12	-97.5	21.8	0.976	leading
Contingency	13	-97.5	22.3	0.975	leading
Contingency	14	-97.6	17.4	0.984	leading
Contingency	15	-97.6	17.6	0.984	leading
Contingency	16	-97.6	18.4	0.983	leading
Contingency	17	-97.5	22	0.976	leading
Contingency	18	-97.5	21.3	0.977	leading
Contingency	19	-97.5	21.8	0.976	leading

C.3 GEN-2016-007 2025 Summer Peak Case

The GEN-2016-007 POI voltage is 1.0040 pu in the provided 2025 summer peak case. Therefore, the power factor requirements for the wind farm were determined to maintain the voltage at 1.0040 pu. The lowest lagging and leading power factors are highlighted in the table below.

Outage No.		MW	Mvar	PF	
System Intact	0	-97.6	17.9	0.984	leading
Contingency	1	-97.6	15.8	0.987	leading
Contingency	2	-97.7	12.2	0.992	leading
Contingency	3	-97.6	13.1	0.991	leading
Contingency	4	-97.6	12.6	0.992	leading
Contingency	5	-97.7	15.3	0.988	leading
Contingency	6	-97.6	16.6	0.986	leading
Contingency	7	-97.6	17.1	0.985	leading
Contingency	8	-97.6	18.2	**0.983**	leading
Contingency	9	-97.6	16.2	0.987	leading
Contingency	10	-97.6	15.8	0.987	leading
Contingency	11	-97.6	15.5	0.988	leading
Contingency	12	-97.6	16.3	0.986	leading
Contingency	13	-97.6	16.1	0.987	leading
Contingency	14	-97.6	11.9	0.993	leading
Contingency	15	-97.7	10	0.995	leading
Contingency	16	-97.6	13.4	0.991	leading
Contingency	17	-97.6	17.2	0.985	leading
Contingency	18	-97.6	16.3	0.986	leading
Contingency	19	-97.6	16.2	0.987	leading

APPENDIX C SIMULATION PLOTS FOR STABILITY ANALYSIS

11.18 K: IMPACT OF THE PROPOSED WIND FARM ON THE WOLF CREEK PLANT

Background

A reliable source of offsite power is required by Nuclear Power plants to maintain the defense in depth needed to assure that the health and safety of the public will be protected in the event that a Updated Safety Analysis Report (USAR) Design Basis Event occurs. Loss of Offsite Power is a contributor to core damage frequency. The importance of Offsite Power to safety is the reason why Wolf Creek's Operating License requires that, in the event that Offsite Power can no longer provide the needed power to safety shut the plant down, the plant must begin shutting down within 1 hour, be subcritical within 6 hours, and in cold shutdown within 36 hours. Most, if not all other nuclear plants in the United States were licensed with four or more offsite power lines that feed the plant substations. However, Wolf Creek was licensed with only three 345kV Lines supplying offsite power, making it an outlier in the industry. Additionally, the LaCygne line into Wolf Creek is Wolf Creek's strongest line. Through a search of the Nuclear industry with the help of Electric Power Research Institute (EPRI) and Institute of Nuclear Power Operations (INPO), only Cooper Plant was found to have a Wind Farm on one of its offsite power lines. However, Cooper has five (5) 345kV Transmission lines. When Wolf Creek obtained their license to operate, the line to LaCygne Power Plant from Wolf Creek was a direct connection. It has now been cut into two line segments, which has increased the frequency of loss of the line by 10.8% and failure rate for all LaCygne Line outages by 22.2%. Since the reliability of the LaCygne-Waverly-Wolf Creek line would be further reduced from the original license from either the additional line tap or tying into the existing Waverly Switching, it will be an adverse change. Because it would be an adverse change, it must either be approved by the NRC prior to any modifications to the line or studies must be performed to demonstrate that the cumulative increase (factoring in the existing Waverly Wind Farm along with the proposed new Wind Farm) in the frequency of occurrence of the loss of offsite power must be less than 10% and the increase in the likelihood of a malfunction causing the loss of offsite power must also be less than minimal. In addition to the Nuclear Safety considerations, studies must be performed to determine commercial impacts to the Wolf Creek plant as well.

Required Studies

1. A study must be performed to determine the cumulative effect of the new proposed Wind Farm connection, the additional Generator tie line, and the existing Waverly Wind Farm to quantify the increase in frequency of occurrence of the loss of the ability of the transmission network to supply offsite power and the increase in the likelihood of a malfunction causing the loss of offsite power. If the results are above the allowable Nuclear Regulatory Commission (NRC) guidelines, the addition of the new Wind Farm will require NRC approval prior to

allowing any changes and may come in the form of new licensing requirements. This process typically takes about one (1) year.

Cost:

$100k for the Study

If the study determines that the adverse impact of the new Wind Farm exceeds the NRC allowable, then it will cost an additional $200k for the NRC review process –no assurance of approval.

2. A harmonic study must be performed to ensure that the Wind Farm will not introduce harmonics onto the electrical grid that will negatively impact the performance of Wolf Creek equipment.
   Cost: $100k (assuming results are favorable)
3. System studies to evaluate: 1) The impact of the Wind Farm on the Wolf Creek Generator stability limits; 2) Plant protective relays (including the Reactor Coolant Pump undervoltage and underfrequency protection); 3) Wolf Creek Switchyard voltage impact; 4) Impact on available short circuit; and 5) Specific analysis of the new Out of Step protection. The studies also need to include as a minimum the following conditions: 1) With all 345-kV lines in service and the Wolf Creek unit fully loaded, the system can successfully withstand loss of any one 345-kV line from the Wolf Creek Substation under three-phase fault conditions with the fault cleared in normal clearing sequence; and 2) With all 345-kV lines in service and the Wolf Creek unit fully loaded, the system can successfully withstand loss of any two elements caused by a single phase fault being cleared by back-up breaker operation in back-up clearing sequences.
   Cost: $300K

Operational Considerations

1. Upon the loss of either the Benton or Rose Hill lines or the breakers at LaCygne that feed the line to Wolf Creek are opened, then the Wind Farm output must be reduced to 0 MW.
2. If additional equipment is required for the Wind Farm to mitigate harmonic concerns, a method to monitor the status of the mitigation equipment must be installed and with an agreement to isolate the Wind Farm immediately in the event that the harmonic mitigation equipment is not functional.

Design Requirements

1. The Wind Farm collector sub, generator tie line, and switching station, must be designed, fabricated, constructed, tested, and use performance standards that meet the latest applicable IEEE, ANSI, and NEMA standards
2. The design of all overhead lines must meet or exceed the requirements of the National Electric Safety Code (4) for heavy loading district, Grade B

construction, and is based on a lightning performance of less than one outage per 100 miles per year.

Other

1. Wolf Creek expended a significant amount of man-hours supporting the Waverly Wind Farm Project. In order to reduce the burden on Wolf Creek, a contractor would need to be hired either to manage the project or take over duties of a Wolf Creek Engineer so that the Wolf Creek Engineer could support the project.
   Cost: $250K

Potential additional man-hours expended to coordinate and present to the Southwest Power Pool unique nuclear requirements in support of the transmission network ability to supply reliable offsite power.